E C O T O X

ECOTOXicology Database System
ECOTOX Code Appendix

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Appendix A. Concentration Types

Code	Description	Definition
Organic		
A	Active ingredient	Chemical substance in a product that is responsible for the pesticidal (toxic) effect (Ware, 1978). Reported as "A" when the author refers to the concentration as active ingredient, active principle, active substance (A.S.), acid equivalent or various grades of reagents (ie., Analytical, Reagent or Technical). When coding, a value in the publication may be reported as “AI kg/ha”, "AE kg/ha" or “kg AI/ha”; this type of value is reported as ‘A =’ for CONC TYPE.
F	Formulation	Way in which basic pesticide (toxicant) is prepared for practical use (Ware, 1978). Generally reserved for commercial preparation prior to actual use and does not include the final dilution (Insect-Pest Management and Control, 1971) (e.g.; Baythroid, 2,4-D). Also included in this category are organic compounds with no pesticidal activity (e.g.; PCB, dioxin).
Metal/Organomentals		
D	Dissolved	Those constituents of an unacidified sample that pass through a 0.45 um membrane filter (e.g. soluble metal) (APHA et.al. 1992).
L	Labile	The labile or free ion metal concentration determined by various analytical methods. When coding, the specific labile forms or complexes are not differentiated
T	Total	The concentration of metals determined on an unfiltered sample after vigorous digestion, or the sum of the concentrations of metals in both dissolved and suspended fractions (APHA et.al. 1992). Heavy metals and single elements (e.g. Na, Cl, Br) are coded as T.
Inorganic non-metals		
T	Total	The dissociated, charged form of nitrogen or hydrogen related chemicals. This can take on numerous forms, e.g.; ammonium (NH+4), nitrite (NO-2), etc. (Rand and Petrocelli, 1985).T is the default for publications that do not state whether Total or Unionized concentrations are reported.
U	Unionized	The undissociated, uncharged form of ammonia or hydrogen sulfide. The ammonia molecule, NH_3, is the unionized form. (In aqueous solution, ammonia assumes an equilibrium between NH_3 and NH^+_4.) The NH_3 is the toxic entity of the ammonia compound (Rand and Petrocelli, 1985).

Appendix B. Chemical Grade and Standards Codes*

* Code all grades as "A" for concentration type for organic chemicals

Code	Description
AASG	Atomic Absorption Spectrometry Grade
AAPS	Atomic Absorption Primary Standard
ARST	Analytical Reference Standard
ACS	American Chemical Society Grade
AG	Agricultural Grade
ACG	Agrochemical Grade
AN	Analar Grade
AL	Analysis Grade
A	Analytical Grade
A or GU	Analytical or Guaranteed Grade
A or HPLC	Analytical or HPLC Grade
A or R	Analytical or Reagent Grade
A or S	Analytical or Spectrophotometric Grade
A or T	Analytical or Technical Grade
AN or R	Analar or Reagent Grade
AR	A.R. Grade (Analytical Reagent Grade)
B	Biological Grade
BC	BioChemika Grade
CCG	Cell Culture Grade
CT	Certified Grade
CG	Chemical Grade
CH	Chromatographic Grade
CL	Clinical Grade
C	Commercial Grade

Code	Description
C or AN	Commercial or Analar Grade
C or T	Commercial or Technical Grade
DS	Dry Standard Grade
EM	Eastman Grade
EL	Electrophoresis Grade
ER	ExcelaR Grade
EX	Experimental Grade
EXT	Extra Grade
F	Field Grade
FCASS	Fisher Certified Atomic Absorption Standard
FFL	Free flowing Grade
FG	Feed grade
FO	Formulated Grade
GC	Gas Chromatography Grade
GCR	Gas Chromatograph Standard
GR	GR Grade
GU	Guaranteed Grade
GUR	Guaranteed Reagant Grade
HPLC	High Performance Liquid Chromatography Grade
HG	Histological Grade
I	Industrial Grade
L	Laboratory Grade
NG	Nanograde
MD	Medical Grade
MK	Merck Grade
MRG	Merck Reagent Grade

Code	Description
MLT	Military Grade
MBG	Molecular Biology Grade
ME	Monsanto Electrical Grade
NAF	National Formulary Grade
NP	Normapur Grade
NR	Not Reported
OP	Optima
PA	Proanalysis Grade, Pro Analsi Quality, analysenrein or p.a.
PAN	Pestanal Grade
PS	Primary Standard
PST	Pesticide Grade
PRG	Pesticide Residue Grade
PH	Pharmaceutical Grade
PRA	Practical Grade
PRM	Premium Grade
PR	Production Grade
PG	Pure Grade
PFG	Purified Grade
R	Reagent Grade, Purissium, Purum, Puriss or Puris
R OR PRA	Reagent or Practical Grade
RFG	Reference Grade
RE	Research Grade

Code	Description
RE or A	Research or Analytical Grade
RS	Residue Grade
RST	Reference Standard
SC	Scintillation Grade
SO	Solvent Grade
SPG	Special Grade
SPC	Spectrochemical Grade
S	Spectrophotometric Grade
ST	Standard
STD	Standard Solution for AA
SYG	Synthesis Grade
TA	Technical Acid Grade
TAR	Technical or Analytical or Reagent Grade
T	Technical Grade, Technical product, Technical formulation
T or P	Technical or Purified Grade
T or PU	Technical or Pure Grade
ULV	ULV Grade
UP	Ultrapure Grade
USP	United States Pharmacopeia Grade
UV	Ultraviolet Grade

Appendix C. Chemical Formulation Codes*

* Code as “A” for concentration type for organic chemicals

Code	Description
AE	Acid Equivalent
ASL	Aerosol
ASG	Agricultural Suspension
AQ	Aqueous Solution
AS	Aqueous Suspension
BT	Bait
CES	Capsule suspension
CP*	Chemically Pure
CRI	Chromatographically Impure
CRP*	Chromatographically Pure
C	Commercial
CO	Concentrate
CG	Concentrate Granules
CL	Clinical
CR	Controlled Release
CRY	Crystal
DC	Detached Crystals
DSC	Dispersible concentrate
DG	Dispersible Granule (also known as “dry flowable”)
DP	Dispersible Powder
D	Dust
EC	Emulsifiable Concentrate
EF	Emulsifiable Formulation
ES	Emulsifiable Solution, Agent
EG	Emulsified Granular
E	Emulsion, Oil in water emulsions (EW)

Code	Description
EN	Encapsulated
FFO	Field Formulated
FK	Flake
FF	Flowable Formulation
FG	Finely Ground
FO	Formulated
FS	Flowable concentrate for seed treatment
GS	Gaseous
GL	Gel
G	Granule, Granular
GU	Guaranteed
HG	Heavy Granular
LD	Liquid
LDCO	Liquid concentrate
MO	Miscible Oil
N	Nanograde
ND	Neutralized, Desensitized
NF	Nonionized Form
NR	Not Reported
OC	Oil Concentrate
OD	Oil Dispersion
OS	Oil Soluble
ODA	Organic Dispersal Agent
PAR	Particulate
PEL	Pellet
PO	Powder
PRE	Prepared in Lab

Code	Description
PU	Pure
PF*	Purified
RC	Recrystallized
RF	Registered Formulation
SRF	Slow Release Formulation
SD	Solid
S	Solution
SC	Suspension concentrate (also known as Flowable concentrate)
SF	Sand Formulated
SG	Soluble Granule
SO	Soluble Concentrate
SP	Soluble Powder
SPCO	Spray Concentrate
SPL	Spray Liquid
SPO	Spray Powder
TB	Tablet

Code	Description
UD	Unneutralized, Desensitized
ULV	Ultra-Low Volume, also Ultra-Low Volume Concentrate or Liquid
V/V	Volume per Volume
W/V	Weight per volume
WG	Water Dispersible Granule (also known as wettable granule)
WMC	Water Miscible Concentrate
WS	Water Soluble
WSC	Water Soluble Concentrate
WSP	Water Soluble Powder
WP	Wettable Powder or Water dispersible powder, Wettable
WSS	Wettable Solid
WHO	World Health Organization
W/W	Weight per weight

Appendix D. Radiolabel Isotope Codes

Code	Description
Ag-110	Silver
Am-241	Americium
As-73	Arsenic
As-74	Arsenic
As-76	Arsenic
B-10	Boron
Ba-133	Barium
Be-7	Beryllium
C-12	Carbon
C-13	Carbon
C-14	Carbon
Cd-109	Cadmium
Cd-110	Cadmium
Cd-111	Cadmium
Cd-113	Cadmium
Cd-115	Cadmium
Ca-45	Calcium
Cf-252	Californium
Ce-144	Cerium
Cl-36	Chlorine
Cm-244	Curium
Co-60	Cobalt
Co-64	Cobalt
Co-57	Cobalt
Cr-51	Chromium
Cs-137	Cesium
Cs-134	Cesium
Cu-64	Copper
Cu-63	Copper
Cu-65	Copper

Code	Description
Eu-152	Europium
F-18	Fluorine
I-131	Iodine
Fe-59	Iron
H-2	Hydrogen (Deuterium)
H-3	Hydrogen (Tritium)
Hg-197	Mercury
Hg-203	Mercury
I-125	Iodine
I-131	Iodine
Mn-54	Manganese
N-15	Nitrogen
Na-22	Sodium
Ni-59	Nickel
Ni-62	Nickel
Ni-63	Nickel
Np-235	Neptunium
NR	Not Reported
P-32	Phosphorus
Pb-210	Lead
Pb-203	Lead
Po-208	Polonium
Po-210	Polonium
Pu-239	Plutonium
Pu-237	Plutonium
Pu-242	Plutonium
Ra-226	Radium
Ru-106	Ruthenium
S-35	Sulfur
Sb-125	Antimony

Code	Description
Se-75	Selenium
Sn-113	Tin
Sr-90	Strontium
Sr-85	Strontium
Tc-95	Techninium
Tc-99	Technicium
Te-128	Tellurium
Tl-115	Thallium
Th-232	Thorium

Code	Description
Th 238	Thorium
U-238	Uranium
U-232	Uranium
U-235	Uranium
V-48	Vanadium
V-49	Vanadium
Yes	Unknown radiolabel
Zn-65	Zinc

Appendix E. Organism Source Codes

Code	Definition
LAB	**Lab**oratory: An organism cultured or bred for use in any experimental or scientific procedure. This includes organisms from breeding establishments, supplying establishments and user establishments.
MLT	**M**u**lt**iple Sources: Organisms obtained from a combination of laboratory and wild sources.
NR	**N**ot **r**eported
WLD	**Wild**: An organism collected from the natural environment; not cultivated or specifically bred for the use in any experimental or scientific procedure.

Historical codes used prior to January 15, 2015:

CBC – Captive breeding colony – code as LAB
COM – Commercial – code as LAB
DOM – Domestic strain – code as LAB
GAM – Game farm strain – code as LAB
GOV – Government agency source – code as LAB

Appendix F. Lifestage Codes (at beginning of exposure)

I. Animal lifestage codes

Code	Description	Definition
AD	Adult	
AL	Alevin	
BL	Blastula	
CC	Cocoon	
CO	Copepodid	
CP	Copepodite	
CS	Cleavage stage	
CY	Cyst	
EG	Egg	
EL	Elver	
EM	Embryo	
EY	Eyed stage, eyed embryo	
FI	Fingerling	
FT	Froglet	
FY	Fry	
GA	Gastrula	
GE	Gestation	
GL	Glochidia	
GM	Gamete	
IG	Imago	
IM	Immature	
IN	Instar	
IT	Intermolt	
JV	Juvenile; fledgling, hatchling, weanling	
LC	Lactational	
LE	Egg laying	Egg laying stage of oviparous animals. (http://en.wikipedia.org/wiki/)
LP	Larva-pupa	
LR	Prolarvae	
LV	Larvae	
LO	Lobes	
MA	Mature	

Code	Description	Definition
ME	Megalopa	
ML	Morula	
MO	Molt	
MX	Multiple	
MY	Mysis	
NB	New born	
ND	Naiad	
NE	Neonate	
NH	New, newly, or recent hatch	
NL	Neurala	
NR	Not reported	
NU	Nauplii	
NY	Nymph	
OO	Oocyte, ova	
PA	Parr	
PC	Pre-hatch	
PD	Pre-molt	
PE	Post emergence	
PG	Post spawning	
PI	Post molt	
PJ	Pre-, sub-, semi-, near adult, or peripubertal	
PK	Post smolt	
PN	Post nauplius	
PHT	Post hatch	
PO	Pollen, pollen grain	
PP	Postpartum	In females, the period that is shortly after giving birth Also parturition. (http://www.ncbi.nlm.nih.gov)
PPU	Prepupal	Inactive stage in the development of some insects, between the larval and the pupal stages (http://wordnetweb.princeton.edu)
PQ	Pre-larvae	
PS	Pre smolt	
PT	Protolarvae	
PU	Pupa	

Code	Description	Definition
PV	Post larvae	
PW	Pre-spawning	
PY	Post embryo	
PZ	Protozoea	
SA	Subadult	
SC	Yolk-sac larvae, sac larvae	
SF	Sac fry, yolk sac fry	
SI	Sexually immature	
SM	Sexually mature	
SMT	Smolt	
SO	Sporeling	
SP	Sperm	
SR	Spore	
ST	Spat	
SU	Swim-up	
SW	Spawning	
TA	Tadpole	
TZ	Trophozoite	The feeding stage, also known as vegetative stage, of a protozoan (as distinct from reproductive or encysted stages).(http://cancerweb.ncl.ac.uk/omd/)
UY	Underyearling	
VI	Virgin	
YA	Young adult	
YE	Yearling	
YO	Young	
YY	Young of the year	
ZO	Zoea	
ZS	Zysgospore	A thick-walled spore of some algae and fungi that is formed by the union of two similar sexual cells, usually serves as a resting spore, and produces the sporophytic phase (http://www.merriam-webster.com/dictionary/zygospore)
ZY	Zygote	

II. Plant lifestage codes

Code	Description	Definition
BS	Bud blast stage	
EX	Exponential (Log)Growth Phase	
FB	Mature, full-bloom stage (fruit trees)	
FG	Female gametophyte	
FO	Flower opening	
GP	Lag growth phase	
GS	Germinated seed	
IB	Incipient bud	
MD	Mature dormant	
MG	Male gametophyte	
MX	Multiple stages	
MT	Mature, no specified stage	
PB	Mature, post-bloom stage (fruit trees)	
PH	Mature, pit-hardening stage (fruit trees)	
RC	Rooted cuttings	
RP	Mature reproductive	
RST	Rootstock	
SB	Shoot	
SE	Scape elongation	
SD	Seed	
SG	Mature, side-green stage (fruit trees)	
SL	Seedling	
SN	Sapling	
SY	Stationary growth phase	
TC	Tissue culture callus	
TU	Tuber	
VG	Mature vegetative	

Appendix G. Soil Type Codes

Standard Artificial Soils:

OECD 1984	Organization for Economic Cooperation and Development 1984
OECD 1993	Organization for Economic Cooperation and Development 1993
EEC	Council of European Communities
ISO 1994	International Standard Organization 1994

Standard Artificial Soil Characteristics		
Soil Type	Organic Matter	pH
OECD 1984	10 % peat	6.0
OECD 1993	10 % peat	6.0
EEC	10 % peat	6.0
ISO 1994	10 % peat	6.0

Appendix H. Test Location Codes

Code	Definition
FieldA	**Field, A**rtificial - a simulated or artificial field study is conducted in “an artificially bounded system that is a simplification of a specific ecosystem” (Rand, 1995), e.g. aviaries, pens, outdoor pots, concrete ponds, polyethylene lined ponds, raceways.
FieldN	**Field, N**atural - a natural field study is one “in which both the test system [...] and exposure to the stressor are ‘naturally’ derived” (Rand, 1995); e.g. sprayed agricultural field or orchard plots, field surveys.
Lab	**Lab**oratory indoor setting, including environmental chamber, greenhouse, lath house, garden frame or indoor pots
NR	**N**ot **R**eported; unable to determine whether laboratory or field

Appendix I. Valid Duration Units

Code	Definition
s	**s**econd
mi	**mi**nute
h	**h**our
d	**d**ay
wk	**w**eek
mo	**mo**nth
yr	**y**ea**r**
lf	**l**i**f**etime; no associated numeric value
NR	Not reported
alv	**a**l**e**v**in
abs	until **abs**cission
ac	**a**ge **c**lass
ant	until **ant**hesis
b0.25	**0.25 b**loom stage
blm	**bl**oo**m** stage
brd	**Br**oo**d** or litter
brs	**br**eeding **s**eason
bs	**b**ud blast **s**tage
bt	to **b**oot s**t**age
cd	**c**olony **d**iameter
cfs	to **c**ommercial **f**lower **s**tage
clv	**cl**ea**v**age
crs	**cr**ab **s**tage
cs	**c**ell **s**tage
dapu	**d**ays **a**fter **pu**pation
dd	**d**egree **d**ays
dh	**d**egree **h**ours
dge	**d**ays **ge**station
dpe	**d**ays **p**ost-**e**mergence
dpel	**d**ays **p**ost **e**gg **l**aying
dpfg	**d**ays **p**ost **f**led**g**ing
dpfl	**d**ays **p**ost **fl**owering

Code	Definition
dpgm	**d**ays **p**ost **g**er**m**ination
dph	**d**ays **p**ost **h**atch
dphv	**d**ays **p**ost **h**ar**v**est
dpf	**d**ays **p**ost **f**ertilization
dpmm	**d**ays **p**ost **m**eta**m**orphosis
dpn	**d**ays **p**ost-**n**atal
dpo	**d**ays **p**ost **o**viposition
dpm	**d**ays **p**ost-**m**oult
dpp	**d**ays **p**ost **p**lanting/sowing
dpr	**d**ays **p**ost-**r**elease
dpref	**d**ays **pre**-**f**ertilization
dps	**d**ays **p**ost **s**pawn
dpu	**d**ays **p**ost-swim **u**p
dpw	**d**ays **p**ost s**w**imming
dpys	**d**ays **p**ost **y**olk **s**ac absorption
dbh	**d**ays pre-hatch/**b**efore **h**atch
ea	to **ea**ring or heading
eb	**e**arly **b**loom stage
ej	**e**gg to **j**uvenile
ep	**e**gg to **p**upation
eslk	to **e**arly **s**i**lk** stage
el	nth **e**gg **l**aid
em	to **em**ergence
epa	**e**gg to **p**re-**a**dult
eso	**e**nd of **s**h**o**oting stage
ey	**ey**ed stage (time to eyed stage of fish eggs)
f5	**5**0% **f**lowering
fb	**f**ull **b**loom stage
fd	**f**ron**d**
fi	Floral initiation **(f**lower **i**nitiation)
fl	**fl**ower stage
flg	**fl**ed**g**ing
fr	to **fr**uit stage
frt	to **fe**r**t**ilization
fry	**fry**

Code	Definition
fs	**f**lowering **s**tage
gds	**G**allien and **D**urocher **s**tage
ge	**ge**neration
ges	**ges**tation
gm	to **g**er**m**ination
go	gosner stage
gs	**g**rowing **s**eason
gts	**g**as**t**rula **s**tage
hbf	**h**ours pre-fertilization/**b**efore **f**ertilization
hbh	**h**ours pre-hatch/**b**efore **h**atch
hpe	**h**ours **p**ost **e**mergence
hpel	**h**ours **p**ost **e**gg **l**aying
hpf	**h**ours **p**ost **f**ertilization
hph	**h**ours **p**ost **h**atch
hpp	**h**ours **p**ost **p**lanting/sowing
hpr	**h**ours **p**ost-**r**elease
hv	**h**ar**v**est
ht	until **h**a**t**ch
i2	**i**ntermolt to **2**nd molt
inst	**inst**antaneous
ins	**ins**tar
it	**i**n**t**ermolt to molt
kh	**k**nee-**h**igh stage
lfd	**l**ea**f** **d**rop
lgp	to **l**a**g** **p**hase
lhv15-20	**l**eaf **h**ar**v**est, **15-20** cm
lhv 20-25	**l**eaf **h**ar**v**est, **20-25** cm
log	to **log** phase
ls	**l**eaf **s**tage
ls4	**4**-6 **l**eaf **s**tage
ls6	**6** **l**eaf **s**tage
ls9	**9**-10 **l**eaf **s**tage
LSI	**L**arval **S**tage **I**ndex
lva	**l**ar**v**a to **a**dult
lvp	**l**ar**v**a to **p**upa

Code	Definition
lvsa	**l**ar**v**a to **s**ub**a**dult
ma	to **ma**turity
mmph	until **m**eta**m**or**ph**osis
mpf	**m**inutes **p**ost **f**ertilization
mpgm	**m**onths **p**ost-**g**ermination
mope	**mo**nths **p**ost-**e**mergence
mph	**m**inutes **p**ost **h**atch
mpp	**m**onths **p**ost **p**lanting/sowing
mopf	**mo**nths **p**ost-**f**ertilization
moph	**mo**nths **p**ost-**h**atch
mopm	**mo**nths **p**ost-**m**etamorphosis
mopres	**mo**nths **pre**-**s**molt
mopswm	**mo**nths **p**ost **sw**i**m**-up
myp	**My**sis to **p**ost-larvae
nf	**N**ieuwkoop-**F**aber-stage
pa	**p**upa to **a**dult
pan	**pan**icling stage
pd	1st **pod** set
pgm	**p**ost **g**er**m**ination
pm	**p**ost **m**olt
pr	**pr**iming (The harvesting of ripened tobacco leaves)
pro	**pro**pagation stage
rhv3	**r**oot **h**ar**v**est, **3** grams
slk	to **s**i**lk** stage
sms	**s**o**m**ite **s**tage
so	**s**h**o**oting stage
spref	**s**econds before fertilization/**pre**-**f**ertilization
spf	**s**econds **p**ost **f**ertilization
ss	**s**quaring **s**tage
sss	**s**eed **s**et **s**tage
sst	**s**ub**st**age
stg	**st**a**g**e
su	**su**mmer
swm	**sw**i**m**-up
tls	**t**i**l**ler **s**tage

Code	Definition
tr	1st **tr**ifoliate leaf
ts	time to **ta**ssle
ubi	**u**ntil **bi**rth
vg	**v**e**g**etative stage
wbh	**w**eeks pre-hatch/**b**efore **h**atch
wkpm	**w**ee**k**s **p**ost **m**etamorphosis
wkprf	**w**ee**k**s **pr**e-**f**ertilization
wpe	**w**eeks **p**ost **e**mergence
wph	**w**eeks **p**ost **h**atch
wphv	**W**eeks **p**re **h**ar**v**est
wpp	**w**eeks **p**ost **p**lanting/sowing
wps	**w**eeks **p**ost **s**wim-up
yc	**y**ear **c**lass
yph	**y**ears **p**ost-**h**atch
ZGS	**Z**adoks **G**rowth **S**tage
zm	**z**oeae-**m**egalop
zmy	**z**oeae to **my**sis
-n	**n**egative values represent pretreatment times
-x	pretreatment time unknown
/	NOT TO BE USED AFTER 10/15/99, USE QUALITATIVE CODES (ABOVE) INSTEAD: used when the duration is qualitative rather than quantitative; information is recorded as text in the Remarks (eg., 12th egg after hatch but not end of study)

Appendix J. Exposure Type Codes

Code	Definition
D see Appendix J.1	**D**iet - exposure through consumption; includes diet and/or water intake; this code will be automatically assigned if one of the diet categories from Appendix J.1 is used
I see Appendix J.2	**I**njection -insertion of the toxicant into the skin, vessels, muscle, subcutaneous tissue, or any body cavity; this code will be automatically assigned if one of the injection categories from Appendix J.2 is used
M see Appendix J.3	**M**ultiple-exposure to the toxicant through two or more different routes.
see Appendix J.4	**Aquatic ONLY** Exposure Type Codes
NR	**N**ot **R**eported
T see Appendix J.5	**T**opical - exposure includes dermal, eggshell, immersion or soaking; this code will be automatically assigned if one of the topical categories from Appendix J.5 is used
V see Appendix J.6	En**v**ironmental - exposure includes field in situ and specific application types as well as incidental exposures; this code will be automatically assigned if one of the environmental categories from Appendix J.6 is used

Appendix J.1 Diet (D) Exposure Codes

Code	Definition
DT	diet, unspecified
FD	chemical incorporated into the food
DR	chemical incorporated into drinking water
CH	choice of treated or untreated food or water
GV	Gavage (oral intubation)
GE	Gestational (Exposed during gestation)
LC	Lactation (Exposed via mother's milk)
OR	oral via capsule

Appendix J.2 Injection (I) Codes

Code	Definition
IJ	injection, unspecified
IA	Intra-arterial (injected via the artery)
IAC	Intra-abdominal cavity
IB	Albumin injection
IC	Air sac (air cell) injection
ICL	Intra-coelom
ID	Intradermal (An intradermal injection is given into the skin)
IF	intramedial forebrain bundle
IG	intragastrical (injected directly into the digestive system including directly into the stomach)
IH	intrahemocoel
II	intrastriatal
IK	Intracranial
IM	intramuscular
IO	intra-amniotic
IP	intraperitoneal
IL	intra placental
ILP	Intralymphatic
IQ	Intraduodenal
IR	intraprostomial
IS	intrasegmentally (insects)
IE	intratesticular
IU	intraaccumbens
IV	intravenous
IW	Intraesophageal
IY	Intracardiac
IZ	Intra-spinal cord
OP	Osmotic pump, subcutaneous pump, peristalic pump, mini pump
SC	subcutaneous
SD	subdermal
YK	yolk

Appendix J.3 Multiple (M) Application Codes

Code	Definition
MU	multiple routes between application groups (e.g. dermal and injection)

Appendix J.4 AQUATIC ONLY Exposure Type Codes

Aquatic Lab Exposure Types (EXP TYP)

Code	Definition
[C]	Topical Exposure (Use specific code from App. J.5)
[D]	Diet or Oral exposure (includes simultaneous diet and water exposure) (Use specific code from App. J.1)
F	Flow-through
[I]	Injection (Use specific code from App. J.2)
L	Leaching (used for leachate and sediment exposures, if water conc reported)
P	Pulse (intermittent or fluctuating dosing)
R	Renewal
S	Static (recirculating exposures are noted in Exp Design); algae tests where the time is <= 24 hr, static may be assumed, and coded as such by the reviewer

Aquatic Field Exposure Types (EXP TYP)

Code	Definition
B	Tidal
[D]	Diet (Use specific code from App. J.1)
E	Lentic (static water system without measurable flow rate, e.g. ponds, lakes, troughs, irrigation ditches)
[I]	Injection (Use specific code from App. J.2)
O	Lotic (flowing water system, e.g. streams)

[ ] = Old code. The codes will require maintenance to update records with new codes.

Appendix J.5 Topical (T) Application Codes

Code	Definition
DM	dermal
FC	Filmcoating (dust free colored coating of seeds)
MM	immersion

Code	Definition
OC	ocular
PC	percutaneous
SA	surface area dose
SH	eggshell
TP	topical, general

Appendix J.6 Environmental (V) Exposure Codes *[Also used as Aquatic Field Test Application Type]*

Code	Definition
AE	aerial (unknown type)
AG	aerial-granular
AS	aerial spray application
CM	culture medium application
DA	direct application
DU	dusted
DW	dropwise application
EN	environmental, unspecified
FS	foliar spray
FU	fumigation
GG	ground granular
GM	growth medium application
GS	ground spray
HP	hydroponic solution application
HS	hand spray
IN	in situ
MI	misted
MT	multiple routes within environmental exposures, e.g. Aerial spray and soil slurry to the same plots.
PR	present in soil (polluted soils are brought into the lab and tested)
PT	painted
PU	pump
SO	dipped or soaked
SP	spray
SS	soil slurry

Code	Definition
WA	watered

Appendix K. Application Frequency Codes

Code	Definition
ADL	**Ad l**ibitum; without limit or restraint
CON	**Con**tinual; non-pulsed
D/WK, 10-13WK	X times per week for 10 to 13 weeks
DLY	**D**ai**ly**; dosing regime not specified
DLY for X D	Daily for X days
DLY for 5 D	Daily for 5 days
DLY for 2 H	Daily for 2 hours
2 DLY for X D	**2 times daily for X days**
EOD	**E**very **o**ther **d**ay
E X D	**E**very **X d**ays
EXD for 10 D	**E**very **X d**ays **for 10 d**ays
E X D for 60 D	**Every X days for 60 days**
E X H	**E**very **X h**ours
E x H for 20 D	Every X hours for 20 days
E x MI	Every x minutes
E X MO	**Every X months**
E X WK	**E**very **X w**eeks
G per D	**G**rams **per d**ay
H	Hour
HED	X hours every day
X H E12H	X hours every 12 hours
X H E3D	X hours every 3 days
X H E5D	X hours every 5 days
X H E7D	X hours every 7 days
X H E10D	X hours every 10 days
X H EOD	X hours every other day
X H per D	X hours per day
H/D for 8 D	X hours per day for 8 days
X H WKY	X hours weekly
X H, 2X/WK	X hours, 2 times per week
X H, 4X/WK	X hours, 4 times per week
X H, 5/WK	X hours, 5 times per week
X MI	X minutes

Code	Definition
X MI E8H	X minutes every 8 hours
X MI EOD	X minutes every other day
X MI per D	X minutes per day
X MI, 1X/WK	X minutes, 1 time per week
X MI, 2X/WK	X minutes, 2 times per week
X MI, 3D	X minutes per day, for 3 Days
X MI, 4D	X minutes per day for 4 days
X MI, 3X/WK	X minutes, 3 times per week
X MI, 5X/WK	X minutes, 5 times per week
RES	**Res**tricted
STG	**Stag**e
WKY	**Weekly**
X	Dosed **x** time(s) per study period; e.g. 1 time = 1X
X,20 D apt	x times 20 days apart
XH/D,5D/WKfor3W	X hours per day, 5 days a week for 3 weeks
X E2D	X times every 2 days
X E 3.3-5 D	X times every 3.3 to 5 days
X E10D	X times every 10 days
X E7D	X times every 7 days
X E 7-15 D	X times every 7 to 15 days
X for 1 H	X times for 1 hour
X for 1 MI	X times for 1 minute
Xfor10H,5D apt	X times for 10 hours, 5 days apart
X for 10 MI	X times for 10 minutes
X for 12 D	X times for 12 days
X for 12 H	X times for 12 hours
X for 14 H	X times for 14 hours
Xfor0.5H,48H apt	X times for 0.5 hours, 48 hours apart
Xfor1H,48H apt	X times for 1 hour, 48 hours apart
Xfor2H,48H apt	X times for 2 hours, 48 hours apart
Xfor2.5H,8H apt	X times for 2.5 hours, 8 hours apart
Xfor4H,8H apt	X times for 4 hours, 8 hours apart
Xfor4H,12H apt	X times for 4 hours, 12 hours apart
Xfor4H,48H apt	X times for 4 hours, 48 hours apart
Xfor6H,12H apt	X times for 6 hours, 12 hours apart

Code	Definition
Xfor12H,12H apt	X times for 12 hours, 12 hours apart
Xfor12H,14D apt	X times for 12 hours, 14 days apart
Xfor12H,24H apt	X times for 12 hours, 24 hours apart
Xfor12H,48H apt	X times for 12 hours, 48 hours apart
Xfor12H,3D apt	X times for 12 hours, 3 days apart
Xfor12H,4D apt	X times for 12 hours, 4 days apart
Xfor12H,6D apt	X times for 12 hours, 6 days apart
Xfor12H,7D apt	X times for 12 hours, 7 days apart
Xfor12H,8D apt	X times for 12 hours, 8 days apart
Xfor14D,14D apt	X times for 14 days, 14 days apart
X for 15 MI	X times for 15 minutes
Xfor1.5H,24Hapt	X times for 1.5 hours, 24 hours apart
X for 18 H	X times for 18 hours
X for 2 D	X times for 2 days
X for 2 H	X times for 2 hours
Xfor2H,24H apt	X times for 2 hours, 24 hours apart
X for 20 MI	X times for 20 minutes
X for 24 H	X times for 24 hours
Xfor24H,11D apt	X times for 24 hours, 11 days apart
Xfor24H,12H apt	X times for 24 hours, 12 hours apart
Xfor24H,24H apt	X times for 24 hours, 24 hours apart
Xfor24H,48H apt	X times for 24 hours, 48 hours apart
Xfor24H,4D apt	X times for 24 hours, 4 days apart
Xfor24H,5D apt	X times for 24 hours, 5 days apart
Xfor24H,6D apt	X times for 24 hours, 6 days apart
Xfor24H,72H apt	X times for 24 hours, 72 hours apart
X for 3D	X times for 3 days
X for 3 H	X times for 3 hours
Xfor3H,15D apt	X times for 3 hours, 15 days apart
Xfor3H, 6D apt	X times for 3 hours, 6 days apart
Xfor3H,6H apt	X times for 3 hours, 6 hours apart
Xfor3H,24H apt	X times for 3 hours, 24 hours apart
Xfor3H,48H apt	X times for 3 hours, 48 hours apart
Xfor3H,96H apt	X times for 3 hours, 96 hours apart
X for 3.5 H	X times for 3.5 hours

Code	Definition
X for 30 MI	X times for 30 minutes
X for 4 H	X times for 4 hours
Xfor4H,24H apt	X times for 4 hours, 24 hours apart
Xfor4H,4D apt	X times for 4 hours, 4 days apart
Xfor4H,7D apt	X times for 4 hours, 7 days apart
X for 48 H	X times for 48 hours
X for 5 D	X times for 5 days
X for 5 D, 5 D apt	X times for 5 days, 5 days apart
X for 5 H	X times for 5 hours
Xfor5H,3or5Dapt	X times for 5 hours, 3 or 5 days apart
X for 5 MI	X times for 5 minutes
X for 6 H	X times for 6 hours
Xfor6H,14D apt	X times for 6 hours, 14 days apart
Xfor6H,24H apt	X times for 6 hours, 24 hours apart
Xfor6H,3D apt	X times for 6 hours, 3 days apart
Xfor6H,48H apt	X times for 6 hours, 48 hours apart
Xfor6H,6D apt	X times for 6 hours, 6 days apart
Xfor6H,7D apt	X times for 6 hours, 7 days apart
Xfor6H,72H apt	X times for 6 hours, 72 hours apart
Xfor6H,96H apt	X times for 6 hours, 96 hours apart
X for 60 MI	X times for 60 minutes
X for 8 D	X times for 8 days
X for 84 H	X times for 84 hours
X for 96 H	X times for 96 hours
X for 90 MI	X times for 90 minutes
Xfor90MI,2H apt	X times for 90 minutes, 2 hours apart
X in 12 H	X times in 12 hours
X in 14 D	X times in 14 days
X in 24-72 H	X times in 24 to 72 hours
X in 48 H	X times in 48 hours
X per FI	**X** times **per f**lower **i**nitiation
X per h	**X** times **per h**our
X per d	**X** times **per d**ay
X per wk	**X** times **per w**ee**k**
X/WK for 90 d	X times per week for 90 days

Code	Definition
X per mo	**X** times **per mo**nth
X per yr	**X** times **per y**ear
X/Y for 3 Y	**X** times **per year** for 3 **y**ears
X per 12d	**X** times **per 12 d**ays
X per 14d	**X** times **per 14 d**ays
X per 24 H	X times per 24 hours
X per 2d	**X** times **per 2 d**ays
X per 2 wk	**X** times **per 2 w**eek**s**
X per 3d	**X** times **per 3 d**ays
X per 4d	**X** times **per 4 d**ays
X per 5 D	X times per 5 days
X per 6 H	X times per 6 hours
X per 6 WK	X times per 6 weeks
X per D, 10 X	X times per day, 10 times
X per D for12WK	X times per day for 12 weeks
XperD for 3 D	X times per day for 3 days
XperD for 30 D	X times per day for 30 days
X/D for 6 D	X times per day for 6 days
XperD for 7 D	X times per day for 7 days
XperD for 90 D	X times per day for 90 days
X per D, 1 WK	X times per day for 1 week
X per D, 5 D/WK	X times per day, 5 days per week
X per D, 6 D/WK	X times per day, 6 days per week
X/WK for 3 WK	X times per week for 3 weeks
X/WK for 4 WK	x times per week for 4 weeks
X/WK for 5 WK	x times per week for 5 weeks
XperWK for 6 WK	X times per week for 6 weeks
X per WK, EOW	X times per week, every other week
X per wk/10 wk	X times per week per 10 weeks
X D, 1X per H	X days, one time per hour
X S, 1	X seconds, 1 time
X, 1/11D	X times, 1 time per 11 days
X, 1/3or4 D	X times, 1 time per 3 or 4 days
X, 1/3to 5 D	X times, 1 time per 3 to 5 days
X, 1X/D	**X** times, **1 time** per **d**ay

Code	Definition
X, 1X/Y	**X** times, **1 time** per **y**ear
X,1 X per 15 D	X times, 1 time per 15 days
X, 1X/2D	X times, 1 time per 2 days
X,1X per 2to3D	X times, 1 time per 2 to 3 days
X, 1/2 to 4 WK	X times, 1 time per 2 to 4 weeks
X, 1X/2WK	X times, 1 time per 2 weeks
X, 1X/20 D	X times, 1 time per 20 days
X,1X per 3 D	X times, 1 time per 3 days
X, 1X per 3 WK	X times, 1 time per 3 week
X,1X per 4 D	X times, 1 time per 4 days
X, 1X/4WK	X times, 1 time per 4 weeks
X, 1X per9-13D	X times, 1 time per 9-13 days
X, 2X per D	X times, 2 times per day
X, 2X per WK	X times, 2 times per week
X, 4X per D	X times, 4 times per day
X, 5X per WK	X times, 5 times per week
X, 7 D apt	X times, 7 days apart
X,10 D apt	X times 10 days apart
X, 1 X E 15 D	X times, 1 time every 15 days
X, 2X in 14 H	X times, 2 times in 14 hours
X, 2 H apt	X times, 2 hours apart
X, 24 H per 14 D	X times, 24 hours per 14 days
X, 48 H apt E14D	X times, 48 hours apart every 14 days
X, 96 H apart	X times, 96 hours apart
NR	**N**ot **R**eported

Appendix L. Exposure Media Codes

Aquatic Media Type

Code	Definition
FW	Fresh Water
SW	Salt Water
NR	Not Reported; unable to determine whether laboratory or field

Terrestrial Media Type

Code	Definition
AGR	Agar
AQU	Aqueous
ART	Artificial soil (This includes soils that are created from individual soil components. For example, if clay, sand and organic matter are combined, as in OECD soils, these soils are coded as artificial.)
CUL	Culture Medium
FAB	Fabric or similar material (includes cotton balls, gauze, etc)
FLT	Filter paper
HUM	Humus
HYP	Hydroponic
LIT	Litter
MAN	Manure
MIN	Mineral soil
MIX	Media Mixture (with comment)
NAT	Natural soil (This includes natural soils that are amended with nutrients.)
NONE	No substrate
NR	Not reported
POP	Plaster of Paris
SED	Sediment
SLG	Sludge
UKS	Unspecified soil type

Appendix M. Control Type and Dose ID Codes

Code	Definition
B	**B**aseline or background control: parameters of actual or representative test species measured before and after administration of test chemical, though not as part of the same test scenario. **Note TERRESTRIAL FULL DOSE RESPONSE DATA ONLY:** pretreatment values, collected during the same test scenario as the observed responses, are recorded as exposure concentrations with a negative exposure duration; not as baseline control parameters.
C	**C**oncurrent control: controls are run simultaneously with the exposure, e.g. in the laboratory where a chemical free test chamber is used or in field studies where the control data are obtained upstream from the exposure data; also includes field tests where the controls are run in a separate system, i.e. pond A and pond B or field A and field B but the ponds are in the same geographic area and have similar media.
D	Exposure **D**ose level identifier
E	**E**ndpoint link identifier
H	**H**istorical control: applicable to natural field system testing, data collected prior to exposure often during an independent long-term survey of the area; see also **B - B**aseline
K	Data for control is presented but without accompanying methodology to identify procedures used
M	**M**ultiple controls were reported, e.g. historic and concurrent
NR	**N**ot **r**eported; there is no information about presence or absence of controls in the publication
O	The '**O'** code should be used when a control is run in a different system (e.g. defined by different dilution water or soil properties) than the exposure treatments. This also includes laboratory studies where different solvents are used for control versus treatment (e.g. Water was used as a solvent for test compound, controls were injected with saline, or a blood sample from an unexposed female used for a control for an exposed male).
P	**P**ositive controls, an exposure that causes a desired effect in the experiment, and document that the test and equipment are working, were used.
R	Range of doses
V	Carrier or sol**v**ent; organisms exposed to carrier or solvent as the only control
Z	Author states that no controls were used in the study

Appendix N. Exposure Dose and Observation/Response Value Units

Code	Description
a-amino N/24h	alpha aminonitrogen per 24 hours
absrb	absorbance
acre foot	acre foot
act	activity
act/g pro	activity per gram protein
act/g TI	activity per gram tissue
activ/noactiv	activated to non-activated ratio
acts/3 mi	acts per 3 minutes
ad	adults
ad/jv	adults per juvenile
AE	Acid equivalent; followed by the unit, e.g. AE kg/ha
ae g/L	acid equivalents grams per liter
ae g/100 m2	acid equivalents grams per 100 square meters
ae g/200 L	acid equivalents grams per 200 liters
ae kg/ha	acid equivalents kilograms per hectare
ae lb/acre	acid equivalents pounds per acre
ae lb/100 gal	acid equivalent pounds per 100 gallons
ae lb/gal	acid equivalent pounds per gallons
ae M	acid equivalents molar
ae mg/kg	acid equivalents milligrams per kilograms
ae mg/kg/d	acid equivalents milligrams per kilogram per day
ae mg/m2	acid equivalents milligrams per square meter
ae mg/L	acid equivalents milligrams per liter
ae mg/org	acid equivalents milligrams per organism

Code	Description
ae mmol/kg soil	acid equivalents millimoles per kilogram soil
ae oz/100gal/acre	acid equivalents ounces per 100 gallons per acre
ae ppb	acid equivalents parts per billion
ae ug/L	acid equivalents micrograms per liter
ae ug/ml	acid equivalents micrograms per milliliter
AI	active ingredient; followed by the unit, e.g. AI kg/ha
AI cm3/eu	active ingredient cubic centimeters per experimental unit
AI fl oz/acre	active ingredient fluid ounces per acre
AI g/2000 cm3 soil	active ingredient grams per 2000 cubic centimeters soil
AI g/454.6 L/0.4 ha	active ingredient grams per 454.6 liters per 0.4 hectares
AI g/60000 sd	active ingredient grams per 60000 seeds
AI g/acre	active ingredient grams per acre
AI g/bushel	active ingredient grams per bushel
AI g/cm	active ingredient grams per centimeter
AI g/2.54 cm dbh	active ingredient grams per 2.54 centimeter of diameter at breast height
AI g/cm caliper	active ingredient grams per centimeter caliper
AI g/30.5 cm ht	active ingredient grams per 30.5 centimeters plant height
AI g/cm of dbh	active ingredient grams per centimeter of diameter breast height

Code	Description
AI g/2.54 cm tkdi	active ingredient grams per 2.54 centimeters trunk diameter
AI g/cm2	active ingredient grams per square centimeter
AI g/dm3	active ingredient grams per cubic decimeter
AI g/dn(Cyprus)	Active Ingredient grams per dunam, dunum or donum (Cyprus1338m2)
AI g/dn(Iraq)	Active Ingredient grams per dunam, dunum or donum (Iraq 2500m2)
AI g/dn(Std)	Active Ingredient grams per dunam, dunum or donum (Std 1000m2)
AI g/eu	active ingredient grams per experimental unit
AI g/ft org	active ingredient grams per foot of organism
AI g/ha	active ingredient grams per hectare
AI g/0.405 ha	active ingredient grams per 0.405 hectare
AI g/hl	active ingredient grams per hectoliter
AI g/in dia	active ingredient grams per inch diameter
AI g/kg	active ingredient grams per kilogram
AI g/kg bdwt	active ingredient grams per kilogram body weight
AI g/kg plt	active ingredient grams per kilogram pellet
ai g/kg sd	active ingredient grams per kilogram seed
AI g/kg soil	active ingredient grams per kilogram soil
AI g/L soil	active ingredient grams per liter soil
AI g/m	active ingredient grams per meter
AI g/304.8 m	active ingredient grams per 304.8 meters

Code	Description
ai g/m2	active ingredient grams per square meter
AI g/m2 canopy	active ingredient grams per square meter canopy
AI g/m3	active ingredient grams per cubic meter
AI g/ml	active ingredient grams per milliliter
AI g/t	active ingredient grams per ton
AI g/10kg sd	Active ingredient gram per 10 kilograms seed
AI g/10 L	active ingredient grams per 10 liters
AI g/10 m	active ingredient grams per 10 meter
AI g/100 gal	active ingredient grams per 100 gallons
AI g/100 g sd	active ingredient grams per 100 grams of seed
AI g/100 kg	active ingredient grams per 100 kilograms
AI g/100 kg sd	Active ingredient gram per 100 kilograms seed
AI g/100 L	active ingredient grams per 100 liters
AI g/200 L	active ingredient grams per 200 liters
AI g/1000 L	active ingredient grams per 1000 liters
AI g/100 m	active ingredient grams per 100 meters
ai g/100m2	active ingredient grams per 100 square meters
AI g/400 m2	active ingredient grams per 400 square meters
AI g/100000 sd	active ingredient grams per 100000 seed
AI g/2 L/ha	active ingredient grams per 2 liter per hectare
AI g/2.5 cm dbh	Active ingredient grams per 2.5 centimeter of diameter breast height
AI g/25 ml/m	active ingredient grams per 25 milliliters per meter

Code	Description
AI g/3 ml/m	active ingredient grams per 3 milliliters per meter
AI g/300 L	active ingredient grams per 300 liters
AI g/305 m	active ingredient grams per 305 meters
AI g/378 L	active ingredient grams per 378 liters
AI g/378.5 L	Active ingredient grams per 378.5 liters
AI g/379 L	active ingredient grams per 379 liters
AI g/500 g	active ingredient grams per 500 grams
AI g/500g soil	active ingredient grams per 500 grams soil
AI g/6 L	active ingredient grams per 6 liters
AI g/1100 L	active ingredient grams per 1100 liters
AI g/93 m2	active ingredient grams per 93 square meters
AI g/unit	active ingredient grams per unit
AI gal/acre	active ingredient gallons per acre
AI gal/100gal/a	active ingredient gallons per 100 gallons per acre
AI g/kg food	active ingredient grams per kilogram food
AI kg/acre	active ingredient kilograms per acre
AI kg/eu	active ingredient kilograms per experimental unit
AI kg/feddan	AI kilograms per feddan, or faddan (1 feddan = 1.038 acres)
AI kg/ha	active ingredient kilograms per hectare
AI kg/0.4 ha	active ingredient kilograms per 0.4 hectares
AI kg/L	active ingredient kilograms per liter
AI kg/100 L	active ingredient kilograms per 100 liters

Code	Description
AI kg/378 L	active ingredient kilograms per 378 liters
AI kg/378.5 L	active ingredient kilograms per 378.5 liters
ai kg/379 l	active ingredient kilograms per 379 liters
AI kg/100 kg sd	active ingredient kilograms per 100 kilograms seed
AI kg/1000 m	active ingredient kilograms per 1000 meters
AI kg/1122 L/ha	active ingredient kilograms per 1122 liters per hectare
AI kg/2338 L/ha	active ingredient kilograms per 2338 liters per hectare
AI kg/3.74 L/ha	active ingredient kilograms per 3.74 liters per hectare
AI kg/3741 L/ha	active ingredient kilograms per 3741 liters per hectare
AI L/42.1 L/ha	active ingredient liters per 42.1 liters per hectare
AI L/eu	active ingredient liters per experimental unit
AI L/feddan	active ingredient liters per feddan
ai L/ha	active ingredient liters per hectare
AI lb/acre	active ingredient pounds per acre
AI lb/cwt sd	active ingredient pounds per hundred weight seed
AI lb/eu	active ingredient pounds per experimental unit
AI lb/100 ft2	active ingredient pounds per 100 square feet
AI lb/10 gal	active ingredient pounds per 10 gallons
AI lb/100 gal	active ingredient pounds per 100 gallons
AI lb/gal/acre	active ingredient pounds per gallon per acre
AI lb/11 gal/ac	Active Ingredient pounds per 11 gallons per acre
AI lb/100gal/ac	active ingredient pounds per 100 gallons per acre

Code	Description
AI M	active ingredient molar
AI mg/0.1 m2	active ingredient milligrams per 0.1 square meters
AI mg/100 kg	active ingredient milligrams per 100 kilograms
AI mg/1800 g	active ingredient milligrams per 1800 grams
AI mg/2 L fd	active ingredient milligrams per 2 liters food
AI mg/300 ml	active ingredient milligrams per 300 millilters
AI mg/4.41 m2	active ingredient milligrams per 4.41 square meters
AI mg/cm2	active ingredient milligrams per square centimeter
AI mg/cm3	active ingredient milligrams per cubic centimeter
AI mg/100 cm3	active ingredient milligrams per 100 cubic centimeters
AI mg/d	active ingredient milligrams per day
AI mg/eu	active ingredient milligrams per experimental unit
AI mg/g	active ingredient milligrams per gram
AI mg/g fd	Active ingredient milligrams per gram food
AI mg/ha	active ingredient milligrams per hectare
ai mg/kg	active ingredient milligrams per kilogram
AI mg/kg bdwt	active ingredient milligrams per kilogram body weight
AI mg/kg bdwt/d	active ingredient milligrams per kilograms body weight per day
AI mg/kg bdwt EU	active ingredient milligrams per kilogram body weight of experimental unit
AI mg/kg dry soil	active ingredient milligrams per kilogram dry soil
AI mg/kg fd	active ingredient milligrams per kilogram food
AI mg/kg/d	active ingredient milligrams per kilogram per day

Code	Description
ai mg/kg org	active ingredient milligrams per kilogram organism
ai mg/L	active ingredient milligrams per liter
Ai mg/L fd	active ingredient milligrams per liter food
AI mg/m	active ingredient milligrams per meter
ai mg/ml	active ingredient milligrams per milliliter
AI mg/m2	active ingredient milligrams per square meter
AI mg/org	active ingredient milligrams per organism
AI mg/sd	active ingredient milligrams per seed
AI mL/eu	active ingredient milliliter per experimental unit
AI ml/ha	active ingredient milliliters per hectare
AI ml/kg	Active Ingredient milliliters per kilogram
AI ml/100 kg	active ingredient milliliters per 100 kilograms
AI ml/kg diet	Active Ingredient milliliters per kilogram diet
AI ml/kg sd	active ingredient milliliters per kilograms seed
AI ml/L	active ingredient milliliters per liter
AI ml/100 gal	active ingredient milliliters per 100 gallons
AI mL/100 L	active ingredient milliliters per 100 liters
AI ml/1000 L	active ingredient milliliters per 1000 liters
AI ml/378 L	active ingredient milliliters per 378 liters
AI ml/500 g	active ingredient milliliter per 500 grams
AI ml/org	active ingredient milliliter per organism
AI ml/m2	active ingredient milliliters per square meter

Code	Description
ai ml/100m2	active ingredient milliliters per 100 square meters
AI ml/m2 canopy	active ingredient milliliters per square meter canopy
AI ml/m	active ingredient milliliters per meter
AI ml/mi	active ingredient milliliters per minute
AI ml/t	active ingredient milliliters per ton
AI mM	active ingredient milliMolar
AI mmol/dm3	active ingredient millimoles per cubic decimeter
AI mol/eu	active ingredient moles per experimental unit
AI mol/kg	Active ingredient moles per kilogram
AI ng	active ingredient nanograms
AI ng/cm2 lf	active ingredient nanograms per square centimeter leaf
AI ng/eu	active ingredient nanograms per experimental unit
AI ng/kg fd	active ingredient nanograms per kilogram food
AI ng/g	active ingredient nanograms per gram
AI ng/L	active ingredient nanograms per liter
AI ng/mg bdwt	active ingredient nanograms per milligrams body weight
AI ng/mL	active ingredient nanograms per milliliter
AI ng/org	active ingredient nanograms per organism
AI ng/org/d	active ingredient nanograms per organism per day
AI ng/ul diet	Active ingredient nanograms per microliter diet

Code	Description
AI oz/acre	active ingredient ounces per acre
AI oz/25lbs bdwt	active ingredient ounces per 25 pounds body weight
AI oz/40 gal	active ingredient ounces per 40 gallons
AI oz/100 gal	active ingredient ounces per 100 gallons
AI oz/1000 ft	active ingredient ounces per 1000 feet
AI oz/1000 ft2	active ingredient ounces per 1000 square feet
ai oz/bu sd	active ingredient ounces per bushel of seed
AI oz/cwt sd	active ingredient ounces per hundredweight seed
AI oz/in dbh	active ingredient ounces per inches diameter at breast height
AI oz/100 lb sd	active ingredient ounces per 100 pounds seed
AI oz/lb seed	active ingredient ounces per pound seed
AI 0/00	active ingredient parts per thousand
AI ppb	active ingredient parts per billion
AI ppm	active ingredient parts per million
AI ppm soil w/w	active ingredient parts per million soil weight per weight basis
AI ppmw/soil vol	active ingredient parts per million by weight per soil volume
AI ppm food	active ingredient parts per million food
AI ppm H2O	active ingredient parts per million water
AI pt/acre	active ingredient pints per acre
AI ug	active ingredient micrograms
AI ug/0.5 ul	active ingredient micrograms per 0.5 microliters

Code	Description
AI ug/10 ul	active ingredient micrograms per 10 microliters
AI ug/100 cm2	active ingredient micrograms per 100 square centimeters
ai ug/cm2	active ingredient micrograms per square centimeter
AI ug/cm2 diet	active ingredient micrograms per square centimeters diet
AI ug/cm2 media	active ingredient micrograms per square centimeter of media
AI ug/eu	active ingredient micrograms per experimental unit
AI ug/g bdwt	active ingredient micrograms per gram body weight
AI ug/g dry fd	active ingredient micrograms per gram dry food
AI ug/g dry soil	active ingredient micrograms per gram dry soil
AI ug/g eu	active ingredient micrograms per gram experimental unit
AI ug/g org	active ingredient micrograms per gram organism
AI ug/g soil	active ingredient micrograms per gram soil
AI ug/kg bdwt/d	active ingredient micrograms per kilogram body weight per day
AI ug/kg fd	active ingredient micrograms per kilogram food
AI ug/sd	active ingredient micrograms per seed
AI ug/kg soil	active ingredient micrograms per kilogram soil
AI ug/L	active ingredient micrograms per liter
AI ug/mg bdwt	active ingredient micrograms per milligram body weight
AI ug/mg 100 ml solv	active ingredient micrograms per milligram in 100 milliliters of solvent
AI ug/ml	active ingredient micrograms per milliliter
AI ug/org	active ingredient micrograms per organism
AI ug/ul	active ingredient micrograms per microliter
AI ul/L	active ingredient microliters per Liter
AI ul/ml	active ingredient microliters per milliliter
AI uM	active ingredient microMolar
AI umol/kg dry soil	active ingredient micromoles per kilogram dry soil
AI %	Active Ingredient percent
AI % fd	Active ingredient percent food
AI % v/v	active ingredient percent volume per volume
AI % w/v	active ingredient percent weight per volume
AI % w/w	active ingredient percent weight per weight
AI %/100 kg sd	active ingredient percent per 100 kilograms seed
AI %/786 L	active ingredient percent per 786 liters
AI %/ha	active ingredient percent per hectare
AI %/L	active ingredient percent per L
AI %/wt sd	Active ingredient percent per weight seed
ALB:YK	albumen to yolk ratio
amend:unamend	ratio of amended to unamended treatments
AU	arbitrary units

Code	Description
B'	Chromatid break
B''	Isochromatid break
BB unit	BB unit
b/ml	billions per milliliter
beats/mi	beats per minute
beats*ml/mi2	beats * milliliter per square minutes
bees/d	bees per day
BO:LI	bone to liver ratio
Bq	becquerels
Bq/g	becquerels per gram
Bq/L	becquerels per liter
Bq/kg	becquerels per kilogram
Bq/mg	becquerels per milligram
Bq/ml	becquerels per milliliter
Bq/org	becquerels per organism
births	births
bits	bits
BR:BL	ratio of brain to blood
branches/org	number of branches per organism
bt/mi	beats per minute
BU	Bessey Units
buds/org	buds per organism
bushels	bushels
bushel/acre	bushels per acre
burrows	burrows
C	Centigrade, degrees
cal	calories
cal/d	calories per day
castings	earthworm castings
casts/eu	casts per experimental unit
casts/m2/d	casts per square meter per day
casts/pl	casts per plot
cc	cocoons

Code	Description
cc/ad	cocoons per adult
cc/10 ad	cocoons per 10 adults
cc/eu	cocoons per experimental unit
cc/cntr	cocoons per container
cc/org	cocoons per organism
cc/org/8wk	cocoons per organism per 8 weeks
cc/org/wk	cocoons per organism per week
cc/sad	cocoons per surviving adult
cc/unit	cocoons per unit
cells	cells
cells/1e+6	cells per 1 X 10 +6 cells
cells/50 mg	cells per 50 milligrams
cells/100 clm	cells per 100 coelomocytes
cells/area	cells per area
cells/mg TI	cells per milligram tissue
cell/mi x10x3	cells per minute x10x3
cells/ml	cells per milliliter
cells/mm2	cells per square millimeter
cell/mm3	cells per cubic millimeter
cells/mm	**cortex** cells per millimeter cortex
cells/mm	**folium** cells per millimeter folium
cell:nuclei	ratio of cells to nuclei
cells/TI	cells per tissue
cell/u.a	cells per unit area
cellx10x2/ul	cells x10x2 per microliter
cell/8 srtl cel	cells per 8 Sertoli cells
cfu/mg	colony forming units per milligram
cfu/ml	colony forming units per milliliter
chem/d	chemical per day
CHLA:CHLB	ratio of chlorophyll a to chlorophyll b
CI	color index
Ci/L	curies per liter

Code	Description
Ci/mol	curies per mole
Ci/mmol	curies per millimole
clusters	clusters
clutches	clutches
cm	centimeter
cm/d	centimeters per day
cm/g soil	centimeters per gram soil
cm/g bdwt/h	centimeters per gram bodyweight per hour
cm H2O	centimeters of water
cm/cm3	centimeters per cubic centimeter
cm2	centimeters squared
cm2/kg	centimeters squared per kilogram
cm2/org	centimeters squared per organism
cm2/100bees	centimeters squared per 100 bees
cm3	cubic centimeters
cm3/0.7 ha	cubic centimeters per 0.7 hectare
cm3/4L	cubic centimeters per 4 liters
cm3/dm3	cubic centimeters per cubic decimeter
cm3/eu	cubic centimeters per experimental unit
cm3/feddan	cubic centimeters per feddan, or faddan (1 feddan = 1.038 acres)
cm3/ft	cubic centimeters per foot
cm3/ha	cubic centimeters per hectare
cm3/hL	cubic centimeters per hectoliter
cm3/org	cubic centimeters per organism
cm3/100 L	cubic centimeters per 100 liters

Code	Description
cm3 O2 evolved	cubic centimeters of oxygen evolved
cm3 O2/g/h	cubic centimeters of O2 per gram per hour
cm/wk	centimeters per week
cmol/kg	centimoles of charges per kilogram
cmol/kg dry soil	centimoles per kilograms dry soil
cpm	counts per minute
cpm 1e-4	counts per minute * 1 X 10-4
cpm X 1000	counts per minute X 1000
cpm/1e+5 cells	counts per minute per 1X10+5 cells
cpm/cc	counts per minute per cocoon
cpm/g TI	counts per minute per gram tissue
cpm/L	counts per minute per liter
cpm/mg	counts per minute per milligram
cpm/mg DNA	counts per minute per milligram DNA
cpm/mg pro	counts per minute per milligram protein
cpm/mg RNA	counts per minute per milligram RNA
cpm/mg UA	counts per minute per milligram uronic acid
cpm/ml	counts per minute per millimeter
cpm/org	counts per minute per organism
CRB:BR	ratio of cerebellum to brain
CRM:BR	ration of cerebrum to brain
cRNA/mgRNA/DNA	(counts per minute RNA per milligram RNA) per milligram DNA
cwt/acre	hundredweights per acre
CWU	CW units
cyc/deg	cycles per degree

Code	Description
d	day
DB/mg pro	lipid aliphatic double bounds per milligram protein
dead:live	ratio of dead to live organisms
degree	degree
divisions/cell	divisions per cell
dm2	decimeters squared
dm3/ha	cubic decimeter per hectare
DNA:protein	DNA to protein ratio
DNA:RNA	DNA to RNA ratio
dpm	disintegrations per minute
dpm 1e-3/ml	disintegrations per minute * 1 X 10-3 per milliliter
dpm/167 mg TI	disintegrations per minute per 167 milligrams tissue
dpm/EU	disintegrations per minute per experimental unit
dpm/g	disintegrations per minute per gram of tissue
dpm/g*100	disintegrations per minute per gram*100
dpm/800g soil	disintegrations per minute per 800 grams of soil
dpm/mg	disintegrations per minute per milligram
dpm/mg FA	disintegrations per minute per milligram fatty acid
dpm/mg GH	disintegrations per minute per milligram growth hormone
dpm/mg GH*100	disintegrations per minute per milligram growth hormone*100
dpm/mg pro	disintegrations per minute per milligram protein
dpm/ml	disintegrations per minute per milliliter
dpm/n	disintegrations per minute per N
dpm treat:cntl	ration of disintegrations per minute treated to control

Code	Description
Draize score	Draize score
dS/m	deciSiemens per meter
e/100hd	eggs per 100 hen days
e/hd	eggs per hen day
ea/eu	ears per experimental unit
egg cap/org	egg capsules per organism
eggs	egg(s)
eggs/BDAY	eggs per bird-day
eggs/d	eggs per day
eggs/fm	eggs per female
eggs/fm/d	eggs per female per week
eggs/fm/wk	eggs per female per week
eggs/100 ad	eggs per 100 adults
eggs/8 wks	eggs per 8 weeks
eggs/org	eggs per organism
eggs/org/d	eggs per organism per day
eggs/org/wk	eggs per organism per week
eggs/pair	eggs per pair
eggs/raft	eggs per raft
em/FM	embryos per female
eggs/fm/8 wk	eggs per female per 8 weeks
enz act	enzyme activity or enzyme activity unit
enz act/mg	enzyme activity per milligram
eq/l	equivalents per liter
eu	enzyme unit
EU/g	enzyme unit (amount of enzyme needed to catalyze)/g
failures	failures
FD:Gain	ratio of weight of food consumed to weight gained
FD:WTR	food to water ratio
female	female

Code	Description
FER	feed efficiency ratio
fl	femtoliters
fl oz/cwt	fluid ounces per hundredweight
fl oz/10 gal	fluid ounces per 10 gallons
fl oz/100 gal	fluid ounces per 100 gallons
fl oz/1000 ft	fluid ounces per 1000 feet
fl oz/1000 ft2	fluid ounces per 1000 square feet
fl oz/50 gal/acre	fluid ounces per 50 gallons per acre
fl oz/acre	fluid ounces per acre
fl oz/in dbh	fluid ounces per inches diameter at breast height
fl oz mat/cwt	fluid ounces material per hundredweight
FM:ML	females to males ratio
FT:PLC	fetus to placenta ratio
fet	fetuses
fetuses/litter	fetuses per litter
fg/org	femtograms per organism
final:initial	ratio of initial parameter to final parameter
fledge/pair	fledglings per pair or young fledged per pair
FM	females
FM/lit	females per litter
fmol	femtomol
fmol/mg	femtomol per milligram
fmol/mg pro	femtomol per milligram protein
fr	frames (bees)
FU/g	fluorescence units per gram
G'	Chromatid gap
G''	Isochromatid gap
g	grams
g food	grams food
g%	gram percent

Code	Description
g% w/v	gram percent on a weight per volume basis
g/0.25 acre	grams per 0.25 acres
g/10 acre	grams per 10 acres
g/0.4 ha	grams per 0.4 hectare
g/10 m	grams per 10 meters
g/0.5 m2	grams per 0.5 meters squared
g/100 cm3	grams per 100 cubic centimeters
g/10 ft	grams per 10 feet
g/100g	grams per 100 grams
g/100g BW	grams per 100 grams body weight
g/100g BW/d	grams per 100 grams body weight per day
g/100g bdwt/h	grams per 100 grams per bodyweight/hour
g/100g diet	grams per 100 grams diet
g/100g org	grams per 100 grams organism
g/100 g sd	grams per 100 grams seed
g/100kg org	grams per 100 kilograms organism
g/100 kg sd	grams per 100 kilograms seed
g/d/100 g bdwt	grams per day per 100 grams body weight
g/d/100kg org	grams per day per 100 kilograms organism
g/100 le	grams per 100 leaves
g/100 L	grams per 100 liters
g/189.25 L	grams per 189.25 liters
g/10 L soil	grams per 10 liters soil
g/100 m	grams per 100 meters
g/100ml	grams per 100 milliliters
g/946 ml	grams per 946 milliliters
g/100 sd	grams per 100 seeds
g/100 stl	grams per 100 stolons
g/1000 ft	grams per 1000 feet
g/1000 ft3	grams per 1000 cubic feet

Code	Description
g/1000 g	grams per 1000 grams
g/1000 g food	grams per 1000 grams food
g/1000gr	grams per 1000 grains
g/1000 kg food	grams per 1000 kilograms food
g/1000 lb	grams per 1000 pounds
g/1000 org	grams per 1000 organisms
g/1600 org	grams per 1600 organisms
g/13.125 ft2	grams per 13.125 square feet
g/15 cm	grams per 15 centimeters
g/1.8kg sd	grams per 1.8 kilograms seed
g/2 L	grams per 2 liters
g/200 m2	grams per 200 square meters
g/200 ml	grams per 200 milliliters
g/2500cm2	grams per 2500 centimeters squared
g/305 m	grams per 305 meters
g/4 d	grams per 4 days
g/45.4 kg seed	grams per 45.4 kilograms seed
g/400m	grams per 400 meters
g/454 g seed	grams per 454 grams seed
g/4719 cm3 soil	grams per 4719 cubic centimeters soil
g/5 kg soil	grams per 5 kilograms soil
g/5 m2	grams per 5 meters squared
g/50 ml	grams per 50 milliliters
g/50 org	grams per 50 organisms
g/50 seeds	grams per 50 seeds
g/500 g diet	grams per 500 grams diet
g/500 ml	grams per 500 milliliters
g/60 cm	grams per 60 centimeters
g/70d	grams per 70 days
g/acre	grams per acre
g/BDAY	grams per bird-day

Code	Description
g/bdwt e0.75	grams per body weight * 1e0.75
g/bee	grams per bee
g/bushel	grams per bushel
g/cc	grams per cocoon
g/cm	grams per centimeter
g/cm dbh	grams per centimeter diameter at breast height
g/cm2	grams per square centimeter
g/d	grams per day
g/d/org	grams per day per organism
g/d/wght	grams per day per weight
g/dl	grams per deciliter
g/dm3	grams per cubic decimeter
g d/m3	grams day per cubic meter
g/dn(Std)	grams per dunam, dunum or donum (Std 1000m2)
g/eu	grams per experimental unit
g/eu/d	grams per experimental unit per day
g/feddan	grams per feddan, or faddan (1 feddan = 1.038 acres)
g/fish	grams per fish
g/fruit	grams per fruit
g/ft2	grams per square foot
g/ft org	grams per foot of organism
g/gal	grams per gallon
g/100 gal	grams per 100 gallons
g/g bdwt	grams per gram body weight
g/g bdwt/d	grams per gram body weight per day
g/10g diet	grams per 10 grams diet
g/g dry humus	grams per gram dry humus
g/g fd	grams per gram food
g/g org	grams per gram organism
g GAIN/kg fd	grams weight gained per kilogram food

Code	Description
g/h	grams per hour
g h/m3	grams hours per cubic meter
g H2O/dm2/h	grams H2O per squared decameter per hour
g/ha	grams per hectare
g/hL	grams per hectoliter
g/hd	grams per hen day
g/jv	grams per juvenile
g/kg	grams per kilogram
g/7 kg	grams per 7 kilograms
g/kg*e0.75 bdwt	grams per kg * 1e0.75 body weight
g/kg/d	grams per kilogram per day
g/kg bdwt	grams per kilogram body weight
g/kg bdwt/d	grams per kilogram body weight per day
g/45.4 kg bdwt/d	grams per 45.4 kilograms body weight per day
g/kg bdwt/h	grams per kilogram body weight per hour
g/kg dry fd	grams per kilogram dry food
g/kg fd	grams per kilogram food
g/kg sd	grams per kilograms seed
g/3 kg seed	grams per 3 kilograms seed
g/27 kg sd	grams per 27 kilograms seed
g/kg soil	grams per kilogram soil
g/1.2 kg soil	grams per 1.2 kilogram soil
g/1.4 kg soil	grams per 1.4 kilogram soil
g/1.6 kg soil	grams per 1.6 kilogram soil
g/1.8 kg soil	grams per 1.8 kilogram soil
g/L	grams per liter
g/3.79 L	grams per 3.79 liters
g/37.9L/0.1ha	grams per 37.9 liters per 0.1 hectare
g/10 L	grams per 10 liters
g/10.2 L	grams per 10.2 liters
g/13.5 L	grams per 13.5 liters

Code	Description
g/16 L	grams per 16 liters
g/250 L	grams per 250 liters
g/379 L	grams per 379 liters
g/1000 L	grams per 1000 liters
g/lb seed	grams per pound of seed
g/L soil	grams per liter soil
g/2.25 m2	grams per 2.25 square meters
g/300 g seed	grams per 300 grams seed
g/L/m2	grams per liter per square meter
g/linear ft	grams per linear foot
g/FM	grams per female
g/LE	grams per leaf
g/LIT	grams per litter
g/ml	grams per milliliter
g/ML	grams per male
g/m	grams per meter
g/30.5 m	grams per 30.5 meters
g/ml/100 L	grams per milliliter per 100 liters
g/ml/eu	grams per milliliter per experimental unit
g/m2	grams per square meter
g/m3	grams per cubic meter
g/4719 m3 soil	grams per 4719 cubic meters soil
g/org	grams per organism
g/org/d	grams per organism per day
g/org/42 d	grams per organism per 42 days
g/org/eu	grams per organism per experimental unit
g/org/wk	grams per organism per week
g/org/yr	grams per organism per year
g/plot	grams per plot
g/quadrant	grams per quadrant
g/sample	grams per sample

Code	Description
g/shell	grams per shell
g/ton	grams per ton
g/ug	grams per microgram
g/wk	grams per week
g GAIN/g fd/d	grams weight gained per gram food per day
g TI/100 g bdwt	grams tissue per 100 grams bodyweight
Gain:FD	ratio of weight gained to weight of food consumed
gal/100 gal	gallons per 100 gallons
gal/acre	gallons per acre
gamma/day	gamma/day (Von Bertalanffy growth)
gamma/g TI	gamma counts per gram tissue
gg	gamma gamma
gila:neuron	gila to neuron ratio
grade	grade
grain/panicle	grains per panicle
granules/kg bwt	granules per kilogram body weight
h	hour
H'	Shannon-Weiner Diversity index
HA units	Hemagglutinating units
hatchability	hatchability
hsk:gr	ratio plant husk to grain
Hz	Hertz
Hz/s	Hertz per second
ICU/kg diet	International chick unit per kilogram diet
in	inches
in2	inches squared
inclusion	internuclear inclusion body
index	index

Code	Description
IU	International Units (One IU is the amount of enzyme consuming or forming 1 umol substrate or 1 umol product per minute under standard conditions.) May also be noted as "SI units" (Système International d'unités)
IU/d	International units per day
IU/100 g bdwt	International Units per 100 grams body weight
IU/g	International Units per gram
IU/g diet	International units per gram diet
IU/g TI	International Units per gram tissue
IU/kg	International Units per kilogram
IU/kg bdwt	International units per kilogram body weight
IU/kg diet	International units per kilogram diet
IU/L	International Units per liter
IU/mg	International Units per milligram
IU/mg Hb	International units per milligram hemoglobin
IU/mg pro	International Units per milligrams protein
IU/mg TI	International units per milligram tissue
IU/ml	International Units per milliliter
IU/orgwt	International Units per organ weight
J/beat	Joules per beat
J/d	Joules per day
jv	juveniles
jv/ad	juveniles per adult
jv/cc	juveniles per cocoon
jv/eu	juveniles per experimental unit

Code	Description
jv/fm	juveniles per female
jv/ftcc	juveniles per fertile cocoon
jv/lit	juveniles per litter
jv/mated fm	juvenile per mated female
jv/nest	juveniles per nest
jv/org/wk	juveniles per organisms per week
jv/org	juveniles per organism
k2/d	elimination rate constant 2 per day
K units	Karmen units
KA units	King/Armstrong units
KA/g	King/Armstrong units per gram
ka/d	elimination rate constant a per day
kBq	kilobecquerels
kBq/L	kilobecquerels per liter
kBq/dm3	kilobecquerels per cubic decimeter
kBq/eu	kilbecquerels per experimental unit
kBq/kg soil	kiloBecquerels per kilogram soil
kBq/ml	kilbecquerels per milliliter
K/ml	karmen units per milliliter
kcal	kilocalories
kcal/d	kilocalories per day
kcal/100g	kilocalories per 100 grams
kg	kilograms
kg/500 m2	kilograms per 500 square meters
kg conc/d	kilograms of concentrate per day
kg plt/ha	kilograms pellet per hectare
kg silage/d	kilograms of silage per day
kg/0.5 m2	kilograms per 0.5 square meters

Code	Description
kg/50 m	kilograms per 50 meters
kg/9.3 m2	kilograms per 9.3 square meters
kg/9.9 m2	kilograms per 9.9 square meters
kg/11 m	kilograms per 11 meters
kg/100 m2	kilograms per 100 square meters
kg/ac	kilograms per acre
kg/10 ac	kilograms per 10 acres
kg/cwt sd	kilograms per hundredweight seed
kg/d	kilograms per day
kg/eu	kilograms per experimental unit
kg/feddan	kilograms per feddan, or faddan (1 feddan = 1.038 acres)
kg/ha	kilograms per hectare
kg/ha/yr	kilograms per hectare per year
kg/hL	kilograms per hektoliter
kg/L	kilograms per liter
kg/3.78 L	kilograms per 3.78 liters
kg/mi2/mo	kilograms per square mile per month
kg/mm	kilograms per millimeter
kg/mu	kilograms per mu
kg/org	kilograms per organism
kg/org/d	kilograms per organism per day
kg/ton tubers	kilograms per ton of tubers
kg/wk	kilograms per week
kJ/d/org	kilojoules per day per organism
kmol/m3	kilomoles per cubic meter
KA/100ml	king/armstrong units per 100 milliliters
KI:BR	kidney to brain ratio
Kunit/ml	k unit per milliliter

Code	Description
L	liters
lamellae/axon	lamellae per axon
layers	Layers
L/1.4 m3 soil	liters per 1.4 cubic meters soil
L/160 m soil	liters per 1.5 cubic centimeters soil
L/10 ac	liters per 10 acres
L/160 m soil	liters per 160 meters soil
L/161 m soil	liters per 161 meters soil
l/24 h	liters per 24 hours
L/ha	liters per hectare
l/hl	liters per hectoliter
L/0.4 ha	liter per 0.4 hectares
L/feddan	liters per feddan, or faddan (1 feddan = 1.038 acres)
l/l	liter per liter
L/80 kg N/ha	liters per 80 kilograms nitrogen per hectare
L/100 lbs sd	liters per 100 pounds seed
L/1041 L/ha	liters per 1041 liters per hectare
L/m2	liters per square meter
L/m3	liters per cubic meter
L/mg	liters per milligram
lb	pounds
lb/5 gal/acre	pounds per 5 gallons per acre
lb/11 gal/acre	pound per 11 gallons per acre
lb/90 ft2	pounds per 90 square feet
lb/acre	pounds per acre
lb/ac ft	pounds per acre foot
lbs ae/ac	pounds acid equivalent per acre
lb/cwt sd	pounds per hundred weight seed
lb/d	pounds per day
lb/eu	pounds per experimental unit

Code	Description
lb/ft2	pounds per square foot
lb/gal	pounds per gallon
L/kg	liters per kilogram
lb/100 lb sd	pounds per 100 pounds seed
lb/org/d	pounds per organism per day
lb/plot	pounds per plot
L/g	liters per gram
L/km	liters per kilometer
LGTH/s	length per second
LGTH:THIK	ratio of length to thickness
LI:BR	liver to brain ratio
L/1000 bu	Liters per 1000 bushels
lit	litters
lit/pr	litters per pair
litter %	litter percent
ln(Wf/Wi)	natural log(mean survivor weight/mean initial weight)
log rel	log relative activity/intensity
log s	log time in seconds
log2	log squared
log2 titers	log2 titers
log 10 ug/g org	log 10 micrograms per gram organism
LU:BR	lung to brain ratio
M	Molar
m3	cubic meters
m/m	mass per mass
maturity index	maturity index
MBq	Megabecquerel
mBq	millibecquerels
mBq/ml	millibecquerels per milliliter
mCi	milliCuries
mCi	microCurie per kilogram
mCi mg	milliCuries milligram
mCi/mg	milliCuries per milligram

Code	Description
mCi/ml	millicuries per milliliter
mCi/mmol	milliCuries per millimoles
mg CO2/dm2/h	milligrams carbon dioxide per squared decameter per hour
metric t/ha	metric tons per hectare
mM	milliMolar (millimoles per liter)
m enz act/mg	millienzyme activity per milligram
meq	milliequivalents
meq/g	milliequivalents per gram
meq/kg	milliequivalents per kilogram
meq/L	milliequivalents per liter
meq/100 g	milliequivalents per 100 grams
mg	milligrams
mg$^{1/3}$	milligrams to 1/3 power
mg %	milligrams percent
mg at/L* **	milligrams atom per liter ***Use mmol/L***
mg C/g OM	milligrams carbon per gram organic matter
mg/0.5 cm3	milligrams per 0.5 cubic centimeters
mg CO2/h/g	milligrams carbon dioxide per hour per gram
mg CO2/hr/g ndl	milligrams carbon dioxide per hour per gram of needles
mg CO2/100g soil	milligrams carbon dioxide per 100 grams of soil
mg NH3/ g org	milligrams ammonia per gram of organism
mg NH3/g org/h	milligrams ammonia per gram of organism per hour
mg O2/g org	milligrams oxygen per gram of organism
mg O2/g org/h	milligrams oxygen per gram of organism per hour
mg P/100 g	milligrams phosphorus per 100 grams

Code	Description
mg pro/g	milligrams protein per gram
mg urea /g org	milligrams urea per gram of organism
mg urea/g org/h	milligrams urea per gram of organism per hour
mg/%	milligrams per percent
mg/10 g bdwt	milligrams per 10 grams body weight
mg/10 g food	milligrams per 10 grams food
mg/10 L	milligrams per 10 liters
mg/100g	milligrams per 100 grams
mg/100g org	milligrams per 100 grams organism
mg/100g bw	milligrams per 100 grams body weight
mg/100g bw/d	milligrams per 100 grams body weight per day
mg/100g sd	milligrams per 100 grams seed
mg/100g soil	milligrams per 100 grams soil
mg/100kg bdwt	milligrams per 100 kilograms body weight
mg/100kg org	milligrams per 100 kilograms of organism
mg/100 lbs	milligrams per 100 pounds
mg/100lb/d	milligrams per 100 pounds per day
mg/100 mg TI	milligrams per 100 milligrams tissue
mg/100ml	milligrams per 100 milliliters
mg/100ml diet	milligrams per 100 milliliters diet
mg/100ul	milligrams per 100 microliters
mg/10g	milligrams per 10 grams
mg/10g org	milligrams per 10 grams organism
mg/12h	milligrams per 12 hours
mg/150ml	milligrams per 150 milliliters
mg/200 ml	milligrams per 200 milliliters

Code	Description
mg/2.5 cm dia	milligrams per 2.5 centimeter diameter
mg/24h	milligrams per 24 hours
mg/24h/kg	milligrams per 24 hours per kilogram
mg/250g bdwt	milligrams per 250 grams body weight
mg/250 ml	milligrams per 250 milliliters
mg/3 kg	milligrams per 3 kilograms
mg/3 kg soil	milligrams per 3 kilograms soil
mg/3 L soil	milligrams per 3 liters soil
mg/300 g	milligrams per 300 grams
mg/454g	milligrams per 454 grams
mg/500 ml	milligrams per 500 milliliters
mg/500 g soil	milligrams per 500 grams soil
mg/70g	milligrams per 70 grams
mg/bee	milligrams per bee
mg/cc	milligrams per cocoon
mg/cntr	milligrams per container
mg/cm	milligrams per centimeter
mg/cm2	milligrams per square centimeter
mg/50 cm2	Milligrams per 50 centimeters squared
mg/cm2*torr	milligrams per square centimeter X Torr
mg/cm2/d	milligrams per square centimeter per day
mg/cm3	milligrams per cubic centimeter
mg/d	milligrams per day
mg/d/bdwt	milligrams per day per body weight
mg/d/wght	milligrams per day per weight
mg/d/100 mg org	milligrams per day per 100 grams organisms
mg/d/100 lbs	milligrams per day per 100 pounds
mg/dl	milligrams per deciliter

Code	Description
mg/dm2/h	milligrams per square decimeter per hour
mg/dm3	milligrams per cubed decimeter
mg/dose	milligrams per dose
mg/egg	milligrams per egg
mg/eu	milligrams per experimental unit
mg/fish	milligrams per fish
mg/g	milligrams per gram
mg/g ash	milligrams per gram ash
mg/g bdwt	milligrams per gram body weight
mg/g bdwt/d	milligrams per gram body weight per day
mg/g dry wt	milligrams per gram dry weight
mg/g/ clay	milligrams per gram clay
mg/g CRTN	milligrams per gram creatinine
mg/g fd	milligrams per gram food
mg/15 g fd	milligrams per 15 grams food
mg/100 g food	milligrams per 100 grams food
mg/g fluid	milligrams per gram fluid
mg/g humus	milligrams per gram humus
mg/g in solvent	milligrams per gram in solvent
mg/g N	milligrams per gram nitrogen
mg/g org	milligrams per gram of organism
mg/g pod	milligrams per gram of pod
mg/g soil	milligrams per gram of soil
mg/g/d	milligrams per gram per day
mg/g MIT	micrograms per gram mitochondria
mg/g pro	milligrams per gram protein
mg/g TI	milligrams per gram tissue
mg/g TI/h	milligrams per gram tissue per hour

Code	Description
mg/gland/g bdwt	milligrams per gland per gram body weight
mg/h	milligrams per hour
mg/h/g bdwt	milligrams per hour per gram body weight
mg/ha	milligrams per hectare
mg h/L	milligrams hours per liter
mg H2O/d*cm2*T	milligrams water per day*square centimeters*Torr
mg H2O/d*cm2*torr	milligrams water per day X square centimeter X Torr
mg/in2/d	milligrams per square inch per day
mg/jv	milligrams per juvenile
mg/kg	milligrams per kilogram
mg/kg bdwt	milligrams per kilogram body weight
mg/kg bdwt/d	milligrams per kilogram body weight per day
mg/kg bdwt/wk	milligrams per kilogram body weight per week
mg/kg dw org/d	milligrams per kilogram dry weight organism per day
mg/kg dry fd	milligrams per kilogram dry food
mg/kg dry soil	milligrams per kilograms dry soil
mg/kg diet	milligrams per kilogram diet
mg/kg dry wt	milligrams per kilogram dry weight
mg/kg egg	milligrams per kilogram egg
mg/kg fd	milligrams per kilogram food
mg/kg litter	milligrams per kilogram litter
mg/kg media	milligrams per kilogram media
mg/kg org	milligrams per kilogram organism
mg/kg soil	milligrams per kilogram soil
mg/kg d soil	milligrams per kilogram dry soil

Code	Description
mg/kg TI	micrograms per milligrams tissue
mg/kg/d	milligrams per kilogram per day
mg/kg/fish	milligrams per kilogram per fish
mg/kg/h	milligrams per kilograms per hour
mg/kg/L	milligrams per kilogram per liter
mg/kg org/d	milligrams per kilogram organism per day
mg/kg seed	milligrams per kilogram seed
mg/kg/wk	milligrams per kilogram per week
mg/kg wt	milligrams per kilogram weight
mg/kg wet fd	milligrams per kilogram wet food
mg/kg wet wt	milligrams per kilogram wet weight
mg/kg wet wt media	milligrams per kilogram wet weight media
mg/kg wt/d	milligrams per kilogram weight per day
mg/L	milligrams per liter
mg/L 10 mi	milligrams per liter 10 minutes
mg/L/d	milligram per liter per day
mg/L/h	milligrams per liter per hour
mg/L media	milligrams per liter media
mg/m3	milligrams per cubic meter
mgdryfd/gwetbdwt/d	Milligrams dry food per gram wet body weight per day
mg/mg	milligrams per milligram
mgdryfd/mgwetbdwt/d	milligrams dry food per milligrams wet body weight per day
mg/mg node	milligrams per milligram nodules
mg/mi	milligrams per minute

Code	Description
mg/10 ml	milligrams per 10 milliliters
mg/ml	milligrams per milliliter
mg/60 ml	milligrams per 60 milliliters
mg/ml fd	milligrams per milliliter food
mg/mm2	milligrams per square milliliter
mg/ml/g wt	milligrams per milliliter per gram weight
mg/org	milligrams per organism
mg/org/d	milligrams per organism per day
mg/org/wk	milligrams per organism per week
mg N/100 ml	milligrams nitrogen per 100 milliliter
mg/orwt	milligrams per organ weight
mg P/h/g TI	milligrams phosphorus per hour per gram tissue
mg/quintal	miligrams per quintal
mg/TI	milligrams per tissue
mg TI/g bdwt	milligrams tissue per gram body weight
mg TI/kg bdwt	milligrams tissue per kilogram body weight
mg/wk	milligrams per week
mg CO2/m2/sec	milligrams carbon dioxide per squared meter per second
mg%	milligram %
mg/vol	milligrams per volume
mi	minute
mi/12 h	minutes per 12 hours
mi/d	minutes per day
mi/org	minutes per organism
mi/nmol Rh	minutes per nanomoles per nanomol rhodopsin
micronaires	micronaires
microns	microns
mIU/kg bdwt/h	milliInternational Units per kilogram body weight per hour

Code	Description
mIU/kg/h	milliInternational Units per kilogram per hour
MK:SR	milk to serum ratio
ml	milliliters
ML	males
ML/total	males per total population
ml/10 L	milliliter per 10 liters
ml/10.2 L	milliliters per 10.2 liters
ml/15.1 L	milliliters per 15.1 liters
ml/25 ft	milliliters per 25 feet
ml/25 L	milliliters per 25 liters
ml/10 L/100 m2	milliliters per 10 liters per 100 square meters
ml/946 ml	milliliters per 946 milliliters
ml/2000 L	milliliters per 2000 liters
ml/100g	milliliters per 100 grams
ml/100 gal	milliliters per 100 gallons
ml/100g BW	milliliters per 100 grams body weight
ml/100g bdwt/d	milliliters per 100 grams body weight per day
ml/100 kg sd	milliliters per 100 kilograms seed
ml/100 L	milliliters per 100 liter
ml/100 m2	milliliters per 100 square meters
ml/16h	milliliters per 16 hours
ml/1000 eu	milliliters per 1000 experimental units
ml/1000 ft	milliliters per 1000 foot
ml/1000 L	milliliters per 1000 liters
ml/1000 org	milliliters per 1000 organisms
ml/2.5 cm eu	milliliters per 2.5 centimeters experimental unit
ml/2.54 cm tkdi	milliliters per 2.54 cm trunk diameter
ml/20 L	milliliters per 20 liters
ml/24 h	milliliters per 24 hours
ml/25 ml	milliliters per 25 milliliters

Code	Description
ml/250 ml	milliliters per 250 milliliters
ml/3.79 L	milliliters per 3.79 liters
ml/3.8 L	milliliters per 3.8 liters
ml/300 g bdwt	milliliters per 300 grams body weight
ml/8.5 L	milliliters per 8.5 liters
ml/45 mi	milliliters per 45 minutes
ml/50 kg seed	milliliters per 50 kilograms seed
ml/500 ml	milliliters per 500 milliliters
ml/70d	milliliters per 70 days
ml/92.9 m2	milliliters per 92.9 square meters
ml/929 cm2	milliliters per 929 square centimeters
ml/body wt	milliliters per body weight
ml/cm circ	milliliters per centimeter circumference
ml/cntr	milliliters per container
ml/d	milliliters per day
ml/d/100g BW	milliliters per day per 100 grams bodyweight
ml/d/kg BW	milliliters per day per kilogram body weight
ml/d/org	milliliters per day per organism
ml/dm2	milliliters per square decimeter
ml/eu	milliliters per experimental unit
ml/eu/d	milliliters per experimental unit per day
ml/ft	milliliters per foot
ml/ft3	milliliter per cubic foot
ml/g	milliliters per gram
ml/g bdwt	milliliters per gram body weight
ml/g food	milliliters per gram food
ml/g/h	milliliters per gram per hour
ml/gal	milliliters per gallon
ml/g soil	milliliters per gram soil

Code	Description
ml/h	milliliters per hour
ml/h/g bdwt	milliliters per hour per gram body weight
ml/ha	milliliters per hectare
ml/hl	milliliter per hectoliter
ml/injection	milliliters per injection
ml/kg	milliliters per kilogram
ml/kg bdwt	milliliters per kilograms body weight
ml/kg diet	milliliters per kilogram diet
ml/kg sd	milliliters per kilograms seed
ml/kg soil	milliliters per kilogram soil
ml/kg/d	milliliters per kilogram per day
ml/kg dry seed	milliliters per kilogram dry seed
ml/kg org/d	milliliters per kilogram organism per day
ml/L	milliliters per liter
ml/8 L	milliliters per 8 liters
ml/189.25 L	milliliters per 189.25 liters
ml/100 lb sd	milliliters per 100 pounds seed
ml/L/org	milliliters per liter per organism
ml/L/1000 ft2	milliliters per liter per 1000 square foot
ML/lit	males per litter
ml/m2	milliliters per square meter
ml/m3	milliliters per cubic meter
ml/m	milliliters per meter
ml/mi/kg	milliliters per minute per kilogram
ml/mi/100g	milliliters per minute per 100 grams
ml CO2/mi	milliliters CO2 per minute
ml O2	milliliters O2
ml O2/mg TI	milliliters O2 per milligram tissue
ml/org	milliliters per organism

Code	Description
ml/org/d	milliliters per organism per day
ml/plot	milliliters per plot
ml/quintal	mililiters per quintal
ml/s	milliliters per second
ml/wk	milliliters per week
mlcl/actin mlcl	molecules per actin molecule
ML:FM	ratio of males to females
mm	millimeters
mm x 100	millimeters x 100
mmg	micronmilligrams
mmHG	millimeters mercury
mmHG/s	millimeters mercury per second
mmHg/beat/mi*-3	millimeters mercury per beat per minute * 1 X 10-3
mm/d	millimeters per day
mm/org	millimeters per organism
mm/ug pro	millimeters per microgram protein
mM/kg	millimolar per kilogram
mm2	square millimeters
mm2/mm3 X 1e-9	square millimeters per cubic millimeter X 1 X 10 -9
mm2/org/d	square millimeters per organism per day
mm3	cubic millimeters (abbreviated in some literature as cmm)
mm3/100g dry soil	cubic millimeters per 100 grams dry soil
mm3/dm3	cubic millimeters per cubic decimeter
mm3/L	cubic millimeters per liter
mm3/mg/h	cubic millimeters per milligram per hour
mm3/mm3	cubic millimeters per cubic millimeter
mmol	millimoles
mmol/d	millimoles per day

Code	Description
mmol/dm3	millimoles per cubic decimeter
mmol/g	millimoles per gram
mmol/g dry wt	millimoles per gram dry weight
mmol/100 g	millimoles per 100 grams
mmol/100 g bdwt	millimoles per 100 grams body weight
mmol/g food	millimoles per gram food
mmol/h/g TI	millimoles per hour per gram tissue
mmol/kg	millimoles per kilogram
mmol/kg bdwt	millimoles per kilogram body weight
mmol/kg bdwt/d	millimoles per kilogram body weight per day
mmol/kg dry bdwt/d	millimoles per kilogram dry body weight per day
mmol/kg egg	millimoles per kilogram egg
mmol/kg/d	millimoles per kilogram per day
mmol/kg dry fd/d	millimoles per kilogram dry food per day
mmol/kg/h	millimoles per kilogram per hour
mmol/kg soil	millimoles per kilogram soil
mmol/L	millimoles per liter (**equivalent to mg at/L)
mmol/L soil	millimoles per liter soil
mmol/m2	millimoles per square meter
mmol/m2/s	millimoles per square meter per second
mmol/m3	millimoles per cubic meter
mmol/mi/mg	millimoles per minute per milligram
mmol/mg/mi	millimoles per milligram per minute
mmol/ml/h	millimoles per milliliter per hour
mmol NO2/kg	millimoles nitrogen dioxide per kilogram
mmol H2O/m2/s	millimoles water per square meter per second

Code	Description
mmu	absolute milli-mass units
mN	millinormal
mo	month
mol	Moles
mol/1000 ft3	moles per 1000 cubic feet
mol/9.29 m2	moles per 9.29 square meters
mol/dm3	moles per cubic decimeter
mol/egg	moles per egg
mol/L	moles per liter
mol/L/day	moles per liter per day
mol/g	moles per gram
mol/g bdwt	moles per gram body weight
mol/g soil	moles per gram soil
mol/kg	moles per kilogram
mol/kg bdwt	moles per kilogram body weight
mol/m3	moles per cubic meter
mol/ml	moles per milliliter
mol/org	moles per organism
mol NO2/h/g	moles NO2 per hour per gram
molal	molality
mole%	mole percent
morph/org	ectomycorrhizal morphotypes per organism
mOsm	milliosmoles
mOsm/kg	milliosmoles per kilogram
mosmols/l	mosmoles (conc osmotic particles in solution) per liter
mouse unit/ml	mouse units per milliliter
MPa	megaPascals
mp/mg pro/15mi	microsomal proteins/milligram protein per 15 minutes
m/s	meters per second
mS/cm	milli Siemens per centimeter
ms	milliseconds

Code	Description
munits	milliunits
mU/d	microunits per day
mU/g	milliUnits per gram organism
mU/ml	milliunit per milliliter
mU/24 h/kg	milliunit per 24 hours per kilogram
mu/mg	milliunit per milligram
mu/mi/ml	milliunit per minute per milliliter
mumole/0.5 ul	millimicromoles per 0.5 microliter
mu/24 h	milliunit per 24 hours
munits/org	milliunits per organism
mW	milliwatts
N	normal
NA	not applicable
nCi	nanoCuries
nCi/g org	nanoCuries per gram organism
nCi/L	nanoCuries per liter
neq/g	nanoequivalents per gram
ng	nanograms
ng days/L	nanogram days per liter
ng eq/ml	nanograms equivalents per milliliter
ng/0.3 L	nanograms per 0.3 liters
ng/g org/d	nanograms per gram organism per day
ng/100g bdwt	nanograms per 100 grams per bodyweight
ng/24h	nanograms per 24 hours
ng ATP/g dry soil	nanograms ATP per grams dry soil
ngTEQ/kg bdwt/d	nanograms Toxic Equivalency Concentration per kilogram body weight per day
ng/cm	nanograms per centimeter

Code	Description
ng/cm2	nanograms per square centimeter
ng/d	nanograms per day
ng/dl	nanograms per deciliter
ng/egg	nanograms per egg
ng/eu	nanograms per experimental unit
ng/fish	nanograms per fish
ng/g	nanograms per gram
ng/g bdwt	nanograms per gram body weight
ng/g/d	nanograms per gram per day
ng/g diet	nanograms per gram diet
ng/g dry fd	nanograms per gram dry food
ng/g dry wt	nanograms per gram dry weight
ng/g dw soil	nanograms per gram dry weight soil
ng/g egg	nanograms per gram egg
ng/g soil	nanograms per gram soil
ng/g TE	nanograms per gram Toxic Equivalences
ng/g TI	nanograms per gram tissue
ng/g wet wt	nanograms per gram wet weight
ng/g wet wt diet	nanograms per gram wet weight diet
ng/g org	nanograms per gram organism
ng/g TI/4 h	nanograms per gram tissue per 4 hours
ng/gland	nanograms per gland
ng/h	nanograms per hour
ng/kg	nanograms per kilogram
ng/kg bdwt/d	nanograms per kilogram body weight per day
ng/kg/day	nanograms per kilogram per day
ng/kg fd	nanograms per kilogram food
ng/kg/wk	nanograms per kilogram per week
ng/L	nanograms per liter
ng/mg	nanograms per milligram
ng/mg bdwt	nanograms per milligram body weight
ng/mg/mi	nanograms per milligram per minute
ng/mg fd	nanograms per milligram food
ng/mg pro	nanograms per milligram protein
ng/mi/kg bdwt	nanograms per minute per kilograms body weight
ng/min	nanograms per minute
ng/mi/org	nanograms per minute per organism
ng/ml	nanograms per milliliter
ng/0.5 ml	nanograms per 0.5 milliliters
ng/100 ml	nanograms per 100 milliliters
ng/ml/h	nanograms per milliliter per hour
ng/ml/mi	nanograms per milliliter per minute
ng/ml blood/d	nanograms per milliliter blood per day
ng/ml fd	nanograms per milliliter food
ng/mm/day	nanograms per millimeter per day
ng/org	nanograms per organism
ng/org/d	nanograms per organism per day
ng/orwt	nanograms per organ weight
ng/TI	nanograms per tissue
ng/ul	nanograms per microliter
ng/20 ul fd	nanograms per 20 microliters food
nkat/mg pro	nanokatals per milligrams protein

Code	Description
nl/cm2	nanoliters per square centimeters
nl/L	nanoliters per liter
nl/org	nanoliters per organism
nM	nanomolar (nanomoles per liter)
nM/L	nanomolar per liter
nM/g	nanomolar per gram
nM DSMN:uM LYSI	nanomoles desmosine to micromoles lysine ratio
nmol	nanomoles
nmol/100 mg pro	nanomoles per 100 milligrams protein
nmol/100mg pro/h	nanomoles per 100 milligrams protein per hour
nmol ATP/g soil	nanomoles adenosine triphosphate per gram of soil
nmol DOPA/g/h	nanomoles DOPA per gram per hour
nmol enz/hr	nanomoles enzyme per hour
nmol H2O2/mi/mg	nanomoles of peroxide per minute per milligram protein
nmol/egg	nanomoles per egg
nmol mdhyde/g	nanomoles malonaldehyde per gram
nmol PBG/h/ml	nanomoles porphobilinogen per hour per milliliter
nmol PBG/g TI/h	nanomoles porphobilinogen per gram tissue per hour
nmol/cm2	nanomoles per square centimeter
nmol/g	nanomoles per gram
nmol/g bw	nanomoles per gram body weight
nmol/g dry wt	nanomoles per gram dry weight
nmol/g lipid	nanomoles per gram lipid
nmol/g pro	nanomoles per gram protein
nmol/g pro/mi	nanomoles per gram per protein per minute

Code	Description
nmol/g ro/4 h	nanomoles per gram root per 4 hours
nmol/g/30mi	nanomoles per gram per 30 minutes
nmol/g/4 mi	nanomoles per gram
nmol/g/mi	nanomoles per gram per minute
nmol/g/h	nanomoles per gram per hour
nmol/g humus	nanomoles per gram per humus
nmol/g soil	nanomoles per gram soil
nmol/g TI	nanomoles per gram tissue
nmol/g TI/h	nanomoles per g tissue per hour
nmol/g wet wt	nanomoles per gram wet weight
nmol/h/mg pro	nanomoles per hour per milligram protein
nmol/h/ml RBC	nanomoles per hour per milliliter red blood cells
nmol/kg	nanomoles per kilogram
nmol/kg bdwt	nanomoles per kilogram body weight
nmol/kg/m	nanomoles per kilogram per minute
nmol/L	nanomoles per liter
nmol/l RBC/h	nanomoles per milliliter red blood cells per hour
nmol MDA/mg pro	nanomoles malonaldehyde per milligram protein
nmol/mg	nanomoles per milligram
nmol/mg/h	nanomoles per milligram per hour
nmol/mg/15mi	nanomoles per milligram protein per 15 minutes
nmol/ml	nanomoles per milliliter
nmol/mg pro	nanomoles per milligram protein
nmol/mg pro/mi	nanomoles per milligram protein per minute
nmol/mg/20mi	nanomoles per milligram per 20 minutes

Code	Description
nmol/mg/mi	nanomoles per milligram per minute
nmol/mgpro/30mi	nanomoles per milligram protein per 30 minutes
nmol/mg TI	nanomoles per milligram tissue
nmol/mi/g	nanomoles per minute per gram
nmol/mi/mg	nanomoles per minute per milligram
nmol/mi/mg pro	nanomoles per minute per milligram protein
nmol/mi/ml	nanomoles per minute per milliliter
nmol/mi/ml RBC	nanomoles per minute per milliliter red blood cells
nmol/mlpro/30mi	nanomoles per milliliter protein per 30 minutes
nmol/mol	nanomoles per mole
nmol/nm p450/mi	nanomoles per nanomole cytochrome P450 per minute
nmol/org/h	nanomoles per organism per hour
nmol/org/0.5 h	nanomoles per organism per 0.5 hours
nmol/org/h	nanomoles per organism per hour
nmol/TI	nanomoles per tissue
no	number
no >15cm	number that are greater than 15 centimeters
no/1 mi	number per 1 minute
no/2.8 mm2	number per 2.8 square millimeters
no/5 mi	number per 5 minutes
no/10 mi	number per 10 minutes
no/12 h	number per 12 hours
no/15 mi	number per 15 minutes
no/30 mi	number per 30 minutes
no/100 blsm clt	number per 100 blossom cluster

Code	Description
no/100u2	number per 100 square microns
no/200 cells	number per 200 cells
no/1000 sperm	number per 1000 sperm
no/1000 um2	number per 1000 square micrometers
no/1500x field	number per 1500x field
no/5000 cells	number per 5000 cells
no/area	number per area
no/cell	number per cell
no/cm	number per centimeter
no/d	number per day
no/eu	number per experimental unit
no/fm	number per female
no follicles	number of follicles
no/g	number per gram
no/g soil	number per gram soil
no/h	number per hour
no/ha	number per hectare
no/litter	number of organisms per litter
no/m	number per meter
no/m2	number per square meter
no/mm3	number per cubic millimeter (also known as no/cmm)
no/mi	number per minute
no/mm2	number per square millimeter
no/mm2 * 1e-4	number per square millimeter X 1 X 10-4
no/mm3 * 1e-4	number per cubic millimeter X 1 X 10 -4
no/mm3 * 1e-8	number per cubic millimeter X 1 X 10 -8
no/neuron * 1e-3	number per neuron X 1 X 10 -3
no/mo	number per month
no/nuclei	number per nuclei
no/org	number per organism

Code	Description
no/panicle	number per panicle
no/plot	number per plot
no/preg FM	number per pregnant female
no/sec	number per second
no/section	number per section
no/seed	number per seed
no/sertoli cells	number per sertoli cells
no/so	number per shoot
no/trap	number per trap
no/100 WBC	number per 100 white blood cells
no/100um2	number per 100 square micrometers
no/1000	number per 1000
no/1000 RBCE	number per 1000 red blood cells
no/33 lbs	number per 33 pounds
no errors	no errors
no sites	number of sites
NR	not reported
nuclei:nucleoi	ratio of nuclei to nucleoi
OD	optical density
OD/100% RBC	optical density of 100% red blood cells
OD/50 mg pro	optical density per 50 milligrams protein
OD/g pro	units of optical density change per gram protein
OD/mg pro	optical density per milligram protein
OD/mi/mg pro	optical density per minute per milligram protein
OD/WGHT	optical density per unit weight
ODx10x3	optical density x10x3
open bol/org	open bolls per organism
org	organisms
org/10 m	organisms per 10 meters

Code	Description
org/100g soil	organisms per 100g soil
org/0.25ft2	organisms per 0.25 square feet
org/0.25m2	organisms per 0.25 square meters
org/0.3m	organisms per 0.3 meters
org/50cm2	organisms per 50 square centimeters
org/60 leaves	organisms per 60 leaves
org/200 m2	organisms per 200 square meters
org/200cm3	number of organisms per 200 cubic centimeters of soil
org/cm ro	organisms per centimeter root
org/cntr	organisms per container
org conc/soil c	organism concentration per soil concentration
org/d/cntr	organisms per day per container
org/eu	organisms per experimental unit
org/ft2	organisms per square foot
org/fm	organisms per female
org/g	organisms per gram
org/g dry soil	organisms per gram dry soil
org/g humus	organisms per gram humus
org/g root	organisms per gram root
org/g soil	organisms per gram soil
org/ha	organisms per hectare
org/kg soil	organisms per kilogram soil
org/km2	organisms per square kilometer
org/lit	organisms per litter
org/m	organisms per meter
org/m2	organisms per square meter
org/mi	organisms per minute
org/plot	organisms per plot
org/sample	organisms per soil sample

Code	Description
org/sector	number of organisms per sector
org/site	organisms per site
org/trap	organisms per trap
org/trap/d	organisms per trap per day
org/tree	organisms per tree
org/w>150 mmHg	organisms with blood pressure >150 millimeters mercury
org/w>160 mmHg	organisms with blood pressure >160 millimeters mercury
org/wk	organisms per week
OT	optical transmission
OT/1 cm WDTH	optical transmission per 1 centimeter bone width
OT/1 mm CCT	optical transmission per 1 millimeter combined cortical thickness
OT/10 cm BO	optical transmission per 10 centimeters bone
OT/10 kg WGHT	optical transmission per 10 kilograms weight
OV:BR	ovary to brain ratio
oz/acre	ounces per acre
oz/2.5 gal	ounces per 2.5 gallons
oz/100 lb seed	ounces per 100 pound seed
oz/1000 ft	ounces per 1000 feet
oz/305 m	ounces per 305 meters
oz/ft2	ounces per square feet
oz/org	ounces per organism
%	percent
% AE	percent acid equivalent
%act	percent activity
% arb	percent arbuscularity
% ash	percent ash
% of bdwt	percent of body weight
% cell volume	percent cell volume
% CEC	% of soil cation exchange capacity

Code	Description
% change	percent change
% clitellate	percent clitellate
% CNTL RI	percent of control Ratcliff Index
% corn	percent corn pollen
% cortex	percent of cortex
% dev CNTL	percent deviation from control
% dry wght	percent dry weight
% dose ret	percent dose retained
% dose/g TI	percent of dose per gram of tissue
% dose/h	percent dose per hour
% DT	percent of digestive tract
% earliness	percent earliness (percent of total cotton yield obtained during the first picking)
% FATL	percent of total fatty acids
% fertile	percent fertile
%FM	percent female
% g/g bdwt	percent gram per gram body weight
% ingested	percent of ingested
% intake	percent of intake
%lit	percent of litter
% mg	percent milligrams
% mg/g bdwt	percent milligrams per gram body weight
% ML	percent male
% NaCl	percent sodium chloride
% of CNTL	percent of control
% of diet	percent of diet
% of initial	percent of initial quantity
% of max yld	percent of maximum yield
% org	percent of organisms
% prod	percent production [(# eggs/# hen days)*100]
% PRTL	percent of total protein
% RBC	percent red blood cells
% sat	percent saturation

Code	Description
% sperm	percent sperm
% tolerance	percent tolerance
% total oil	percent of total oil content
% g	percent grams
% g/g	percent gram per gram
%/g	percent per gram
%*g	percent multiplied by weight in grams
% / min	percent per minute
%/ml	percent per milliliter
%/org/d	percent per organism per day
% of total	percent of total
% PLIPD	percent of total phospholipid
% RI	percent Ratcliff Index
% soil	percent soil
% TIME	percent of time
% total dose	percent total dose
% vol	percent volume
% wet wght	percent wet weight
%/d	percent per day
%/g TI	percent per gram tissue
%/wk	percent per week
% WSF	percent water soluble fraction
[% inhib]	[percent inhibition]
% S/ppm Zn	percent sulfur per parts per million zinc
%succ br/rm	percent successful broods per female
% wght	percent of weight
% wght/org	percent weight per organism
% v/v	percent volume per volume
%v/w	percent volume per weight
% w/w	percent weight per weight
% w/v	percent weight per volume
pair	pair

Code	Description
pc	permeability constant
PCI	plastochron index
pCi/g	picoCuries per gram
pCi/L	picoCuries per liter
pCi/ml	picoCuries per milliliter
pecks/s	pecks per second
pellet/d	pellets per day
pellet/org/d	pellets per organism per day
pellets	pellets
pg	picograms
pg/cell	picograms per cell
pg/cm2	picograms per square centimeter
pg/dm3	picograms per cubic decimeter
pg/g	picograms per gram
pg/g diet	picograms per gram diet
pg/g egg	picograms per gram of egg
pg/g TI	picograms per gram tissue
pg/g wet wt	picograms per gram wet weight
pg/L	picograms per liter
pg/kg bdwt/d	picograms per kilogram body weight per day
pg/kg egg	picograms per kilogram egg
pg/mg org	picograms per milligram organism
pg/mg TE	picograms per milligram Toxic Equivalences
pg/ml	picograms per milliliter
pg/mi	picograms per minute
pg/org	picograms per organism
pg/TI	picograms per tissue
pg TE/g egg	picograms Toxic Equivalent per gram egg
pH	pH
PIg/L	PI grams per liter
PLC:BL	placenta to blood ratio
PL:BL	plasma to blood ratio

Code	Description
pM	picoMolar
pmol	picomoles
pmol/cell	picomoles per cell
pmol/egg	picomoles per egg
pmol/hr/mg	picomoles per hour per milligram
pmol/g	picomoles per gram
pmol/g bdwt	picomoles per gram body weight
pmol/g egg	picomoles per gram egg
pmol/g/mi	picomoles per gram per minute
pmol/L	picomoles per liter
pmol/kg egg	picomoles per kilogram egg
pmol/mg/30 mi	picomoles per milligram protein per 30 minutes
pmol/ml	picomoles per millimeter
pmol/mg	picomoles per milligram
pmol/mg/d	picomoles per milligram per day
pmol/mg pro/mi	picomoles per milligram protein per minute
pmol/mg pro/h	picomoles per milligram protein per hour
pmol/mg/mi	picomoles per milligram per minute
pmol/mg/ 10 mi	picomoles per milligram per 10 minutes
pmol/mg/h	picomoles per milligram per hour
pmol/mg/nmol R	picomoles per milligram per nanomol rhodopsin
pmol/mi/g TI	picomoles per minute per gram tissue
pmol/mi/mg pro	picomoles per minute per milligram protein
pmol/nl	picomoles per nanoliter
pmol/nm p450/mi	picomoles per nanomole cytochrome P450 per minute
pmol/org	picomoles per organism
ppb	parts per billion

Code	Description
ppb food	parts per billion food
ppb H2O	parts per billion water
ppb/2H/org	parts per billion per two hours per organism
pphr	parts per hundred rubber
ppm	parts per million
ppm dry wt	parts per million dry weight
ppm dw fd	parts per million dry weight food
ppm wet wt fd	parts per million wet weight food
ppm food	parts per million food
ppm/g bdwt	parts per million per gram body weight
ppm H2O	parts per million water
ppm-hour	parts per million hour
ppm/100g bdwt/d	parts per million per 100 grams body weight per day
ppm/d/kg bdwt	parts per million per day per kilogram body weight
ppm/L	parts per million per liter
ppm/organi	parts per million per organism
ppm soil	parts per million soil
ppm/d	parts per million per day
ppm/eu	parts per million per experimental unit
ppmw	parts per million by weight
ppmw diet	parts per million by weight diet
ppmw H2O	parts per million by weight in water
prdt/mi/mg pro	product formed per minute per milligram protein
0/00	parts per thousand
ppt	parts per trillion
pt	pints
pt/100 ft2	pints per 100 square feet
pt/100 gal	pints per 100 gallons
pt/acre	pints per acre
ptm	parts per thousand million

Code	Description
PSU	practical salinity units
q/ha	quintals per hectare (1 quintal = 100 kilograms)
qt/100 gal	**quarts per 100 gallons**
qt/acre	**quarts per acre**
qt/gal	**quarts per gallon**
[RA]	[ratio: use the number, no unit needed]
R	weight/(length x width) an index of eggshell quality
RA 1e-3	ratio * 1e-3
RA/wk	ratio per week
rate/100 org	rate per 100 organisms
rate/mi	rate per minute
rev	revolutions
rev/h	revolutions per 5 hours
RF units	RF units
rgv	relative gray value
RI	Ratcliffe index (shell wt/egg length x width mm2)
RNA:protein	RNA to protein ratio
ro/so	root to shoot ratio
rpm	revolution per minute
RR	Centric fusions
RSA/TI	relative specific activity per tissue
RV:TV	ratio of right ventricle to total ventricle
s	seconds
SA	Specific activity
s/12 rpm	seconds per 12 revolutions per minute
s/16 rpm	seconds per 16 revolutions per minute
s/8 rpm	seconds per 8 revolutions per minute
sd/org/d	seeds per organism per day

Code	Description
s/g	seconds per gram
s/h	seconds per hour
sessions	sessions
SFU	sigma Frankel units
sgth:thik	Strength to thickness ratio
sgth:wght	Strength to weight ratio
sigma u/100ml	sigma units per 100 milliliters
SL unit	SL unit
SL:ME	Slice to median ratio
so/ft2	shoots per square foot
so:gr	ratio shoot to grain
so:ro	ratio shoot to root
SP:BR	spleen to brain ratio
spots/le	spots per leaf
species	species
spines/ u area	spines per unit area
str:gr	ratio plant straw to grain
succ br	successful broods
succ br/fm	successful broods per female
T3:T4	Ratio of triidothyronine (T3) to thyroxine (T4)
Tbsp/eu	Tablespoons per experimental unit
Tbsp/gal	Tablespoons per gallon
tsp/mound	teaspoons per mound
tons/ha	tons per hectare
t/ha gr/t/ha gr + str	tons per hectare grain plus straw
taxa	taxa
TE:BR	testes to brain ratio
tillers/m2	tillers per square meter
tons/acre	tons per acre
top:root	ratio plant tops to roots
treated:cntl	ratio treated to control
trials	trials
TS:BR	thymus to brain ratio

Code	Description
U/100 mg TI	Units per 100 milligram tissue
u2	square microns
u2/300,000 u2	square micrometers per 300,000 micrometers squared
u3	cubic microns
u act	unit activity (an increase in absorbance at 555 nm of 0.100, with a 1.0 cm light path, per milliliter of erythrocytes per hour, at 38 C).
u act/h	unit activity per hour
u eq/g pro/mi	microatom equivalents per gram protein per minute
u/co2/50mg/10mi	units per carbon dioxide per 50 milligrams per 10 minutes
u/d	units per day
u/mg N2	units per mg N2
u/mg TI	units per milligram tissue
units/ml RBC	units per milliliter red blood cells
U of fl	units of fluorescence
u/g	units per gram
U/kg	units per kilogram
U/kg dry diet	units per kilogram dry diet
u/mg	units per milligram
units/ml	units per milliliter
u/TI	units per tissue
U/0.2 ml	units per 0.2 milliliters
u-atoms/egg	microatoms per egg
uBq	microBecquerels
uCi	microcuries
uCi/100g org	microcuries per 100 grams organism
uCi/3.6mg	microcuries per 3.6 milligrams
uCi/30mg	microcuries per 30 milligrams

Code	Description
uCi/L	microcuries per liter
uCi/g	microcuries per gram
uCi/g org	microcuries per gram organism
uCi/g soil	microcuries per gram soil
uCi/kg	microcuries per kilogram
uCi/mg	microcuries per milligram
uCi/ml	microcuries per millimeter
uCi/nmol	microcuries per nanomoles
uCi/org	microcuries per organism
uCi/ug	microcuries per microgram
uCi/ul	microcuries per microliter
ueq/L	microequivalents per liter
ueq/g	microequivalents per gram
ug	micrograms
ug-atoms/L	micrograms atoms per liter
ug%	micrograms percent
ug chl/cm2	micrograms chlorophyll per square centimeter
ug chl/ mg leaf	micrograms chlorophyll per milligram of leaf
ug CO2/g dry soil/h	micrograms carbon dioxide per grams dry soil per hour
ug enz/g/h	microgram enzyme per gram per hour
ug frmzn/100g	micrograms formazan formed per 100 grams tissue (formazans: Coloured azo compounds formed by the reduction of tetrazolium salts. Employing this reaction, oxidoreductase activity can be determined quantitatively in tissue sections by allowing the enzymes to act on their specific substrates in the presence of tetrazolium salts.
ug GHA/1e+6 c/h	micrograms gamma-glutamylhydroximate per 1X10 +6 cells per hour

Code	Description
ug N/g	micrograms nitrogen per gram.)
ug NANA/TI	micrograms N-acetyl neuraminic acid per tissue
ug O/g pro/mi	micrograms oxygen per gram protein per minute
ug PAP/g/20 mi	micrograms peroxidase-anti-peroxidase (PAP) per gram per 20 minutes
ug PAP/g/30 mi	micrograms peroxidase-anti-peroxidase (PAP) per gram per 30 minutes
ug Pi/mg	micrograms Pi/milligram
ug Pi/mg MIT	micrograms Pi/milligram mitochondria
ug POH/mg pro/m	micrograms phenol per milligrams protein per minute
ug pro ld/ne	ug proteolipid per nerve pair
ug TE/kg	micrograms Toxic Equivalent per kilogram
ug TEQ/kg bw/wk	micrograms Toxic Equivalency Concentration per kg bdwt per week
ug TTC/mg pro/h	micrograms triphenyl tetrazolium chloride reduced per milligram
ug/0.1 ml/d/org	micrograms per 0.1 milliliter per day per organism
ug/0.5g	micrograms per 0.5 grams
ug/10 g bdwt	micrograms per 10 grams body weight
ug/10 L	micrograms per 10 liters
ug/100g	micrograms per 100 grams
ug/100 g bdwt	micrograms per 100 grams body weight
ug/100 g bdwt/d	micrograms per 100 grams body weight per day
ug/100g/d	micrograms per 100 grams per day
ug/100g org/d	micrograms per 100 grams organism per day
ug/100 mg	micrograms per 100 milligrams
ug/100 mg TI	micrograms per 100 milligram tissue
ug/100mg/30mi	micrograms per 100 milligrams per 30 minutes
ug/100mg/h	micrograms per 100 milligrams per hour
ug/100ml	micrograms per 100 milliliters
ug/100ml RBC	micrograms per 100 milliliters red blood cells
ug/2 org/d	micrograms per 2 organisms per day
ug/200mg/20mi	micrograms per 200 milligrams per 20 minutes
ug/200mg/30mi	micrograms per 200 milligrams per 30 minutes
ug/24h	micrograms per 24 hours
ug/2.5 ul/h	micrograms per 2.5 microliters per hour
ug/24h/org	micrograms per 24 hours per organism
ug/250 g bdwt	micrograms per 250 grams body weight
ug/3.5L	micrograms per 3.5 liters
ug/300 g bdwt	micrograms per 300 grams body weight
ug/ 4d	micrograms per 4 days
ug/50 g bdwt	micrograms per 50 grams body weight
ug/50ul	micrograms per 50 microliters
ug/72h	micrograms per 72 hours
ug/500g	micrograms per 500 grams
ug/bee	micrograms per bee
ug/cell	micrograms per cell
ug/cm2	micrograms per centimeter squared
ug/cm2/d	micrograms per square centimeter per day
ug/cm3	micrograms per cubic centimeter
ug/d	micrograms per day

Code	Description
ug/d/org	micrograms per day per organism
ug/disk	micrograms per disk
ug/dl	micrograms per deciliter
ug/dm3	micrograms per cubic decimeter
ug/egg	micrograms per egg
ug/em	micrograms per embryo
ug/eu	micrograms per experimental unit
ug/eu/d	micrograms per experimental unit per day
ug/fish	micrograms per fish
ug/g	micrograms per gram
ug/g/30 min	micrograms per gram per 30 minutes
ug/g agar	micrograms per gram agar
ug/g ash	micrograms per gram ash
ug/g bdwt	micrograms per gram body weight
ug/g bdwt/d	micrograms per gram body weight per day
ug/g bdwt/h	micrograms per gram body weight per hour
ug/g bdwt/wk	micrograms per gram body weight per week
ug/g CREA	micrograms per gram creatinine
ug/g dry cmpst	micrograms per gram dry compost
ug/g dry wt	micrograms per gram dry weight
ug/g dry soil	micrograms per gram dry soil
ug/g dry soil/h	micrograms per gram dry soil per hour
ug/g diet	micrograms per gram diet
ug/g dry fd	micrograms per gram dry food
ug/g dry fd/d	micrograms per gram dry food per day
ug/g eu	micrograms per gram experimental unit

Code	Description
ug/g egg	micrograms per gram egg
ug/g food	micrograms per gram food
ug/g lipid diet	micrograms per gram lipid in diet
ug/g npro	micrograms per gram nonprotein
ug/g OC	micrograms per gram Organic Carbon
ug/g om	micrograms per gram organic matter
ug/g org	micrograms per gram organism
ug/g org/d	micrograms per gram organism per day
ug/g org/wk	micrograms per gram organism per week
ug/g org x 1E2	micrograms per gram organism x 1E2
ug/g pro	micrograms per gram protein
ug/g soil	micrograms per gram soil
ug/g tissue	micrograms per gram tissue
ug/g wet fd/d	micrograms per gram wet food per day
ug/g wet wt	micrograms per gram wet weight
ug/g wt wt diet	micrograms per gram wet weight diet
ug/g/d	micrograms per gram per day
ug/g/kg bdwt	micrograms per gram per kilogram body weight
ug/g/wk	micrograms per gram per week
ug/h	micrograms per hour
ug/h/100 g	micrograms per hour per 100 grams
ug/h/100 ml	micrograms per hour per 100 milliliters
ug/kg	micrograms per kilogram
ug/kg bdwt	micrograms per kilogram body weight
ug/kg bdwt/d	micrograms per kilogram body weight per day

Code	Description
ug/kg bdwt/h	micrograms per kilogram body weight per hour
ug/kg bdwt/wk	micrograms per kilogram body weight per week
ug/kg/d	micrograms per kilogram per day
ug/kg dry soil	micrograms per kilogram dry soil
ug/kg dry wt org	micrograms per kilogram dry weight organism
ug/kg/egg	micrograms per kilogram egg
ug/kg fd	micrograms per kilogram food
ug/kg LD	micrograms per kilogram lipid
ug/kg/mi	micrograms per kilogram per minute
ug/kg/wk	micrograms per kilogram per week
ug/kg org	micrograms per kilogram organism
ug/kg org/d	micrograms per kilogram organism per day
ug/kg soil	micrograms per kilogram soil
ug/kg TI	micrograms per kilograms tissue
ug/L	micrograms per liter
ug/L/d	micrograms per liter per day
ug/l fd	micrograms per liter food
ug/m2	micrograms per square meter
ug/m3	micrograms per cubic meter
ug/mg	micrograms per milligram
ug/mg bdwt	micrograms per milligram body weight
ug/mg food	micrograms per milligram food
ug/mg MIT	micrograms per milligram mitochondria
ug/mg org	micrograms per milligram organism

Code	Description
ug/mg pro	micrograms per milligrams protein
ug/mg pro/hr	micrograms per milligram protein per hour
ug/mg TI	micrograms per milligram tissue
ug/mi	micrograms per minute
ug/mi/mg pro	micrograms per minute per milligram protein
ug/min/ml	micrograms per minute per milliliter
ug/ml	micrograms per milliliter
ug/ml H2O	micrograms per milliliter water
ug/mm3	micrograms per cubic millimeter
ug/org	micrograms per organism
ug/org/d	micrograms per organism per day
ug/org dry wt	micrograms per organism dry weight
ug/org/wk	micrograms per organism per week
ug/sample	micrograms per sample
ug/tank/wk	micrograms per tank per week
ug TE/kg	micrograms Toxic Equivalent per kilogram
ug/TI	micrograms per tissue
ug/ul	micrograms per microliter
ug dry fd/d	micrograms dry food per day
uIU/ml	microInternational units per milliliter
ul	microliter
ul3	cubic microliters
ul/0.5 m2	microliters per 0.5 square meters
ul/100 g bdwt	microliters per 100 grams body weight
ul/100ml	microliter per 100 millimeter
ul/20ml	microliter per 20 millimeter

Code	Description
ul/300 ml	microliters per 300 milliliters
ul/720 ml	microliter per 720 milliliter
ul/beat	microliters per beat
ul/beat/kg	microliters per beat per kilogram
ul/cm2	microliter per square centimeter
ulCO2/50mgTI/10	microliters carbon dioxide per 50 milligrams tissue per 10 minutes
ul Eq/ml	microliters equivalents per milliliter
ul O2/g/h	microliters O2 per gram per hour
ul O2/hr/g	microliters oxygen per hour per gram
ul O2/mi/g	microliters oxygen per minute per gram
ul/d	microliters per day
ul/egg	microliters per egg
ul/eu	microliters per experimental unit
ul/g	microliters per gram
ul/g bdwt	microliters per gram body weight
ul/g/d	microliters per gram per day
ul/g/h	microliters per gram per hour
ul/g dry soil	microliters per gram dry soil
ul/kg	microliters per kilograms
ul/kg bdwt	microliter per kilogram body weight
ul/kg fd	microliters per kilogram food
ul/L	microliter per liter
uL/100 L	microliters per 100 liters
ul/L/h	microliters per liter per hour
ul/m2	microliters per square meter
ul/mg	microliters per milligram
ul/ml	microliter per milliliter
ul/ml fd	microliters per milliliter food

Code	Description
ul/200 ml	microliters per 200 milliliters
ul/org	microliter per organism
uM	microMolar
um/s	micrometers per second
um2	micromoles squared
um3	cubic micromoles
um3	cubic micrometers or cubic microns
um3/cell	cubic micrometers per cell
uM/cm3	micromoles per squared centimeter
uM/h/l RBC	micromoles per hour per liter red blood cells
umol/g dry wt fd	micromoles per gram dry weight food
umol/g LD	micromoles per gram lipid
um/g/30mi	micromoles per gram per 30 minutes
uM/100g	microMolar per 100 grams
uM/h/mg pro	micromolar per hour per milligram protein
uM/kg	micromolar per kilogram
uM/kg wght	micromolar per kilogram weight
uM/kg/mi	microMolar per kilogram per minute
uM/L	microMolar per liter
uM/mg pro	micromoles per milligram protein
uM/min/g	micromoles per minute per gram
uM/ml	micromolar per milliliter
uM B-naph/h/ml	micromoles beta-naphthalene per hour per milliliter
um B-naph/h/mgP	micromoles beta-naphthalene per hour per milligram protein
uM BAPNA/mi/mgP	micromoles of BAPNA (benzoylarginie-p-nitroanilide) inhibited per minute per milligram protein

Code	Description
uM BAPNA/mi/ml	micromoles of BAPNA (benzoylarginie-p-nitroanilide) inhibited per minute per milliliter
uM BTEE/mi/mgP	micromoles BTEE (N-benzyl-L-tyrosine ethyl ester) per minute per milligram protein
uM P/g	micromoles Phosphorus per gram
uM SAPNA/mi/mgP	micromoles of SAPNA (succinyl-1-(ala)3-p-nitroanilide) inhibited per minute per milligram protein
uM SAPNA/mi/ml	micromoles of SAPNA (succinyl-1-(ala)3-p-nitroanilide) inhibited per minute per milliliter
uM TAME/mi/mgP	micromoles TAME (toluenesulfonyl-L-arginine methyl ester) per minute per milligram protein
umol	micromoles
umol ASCA/mg pro	micromoles ascorbic acid per milligram protein
umol C2H4/g/h	micromoles of ethylene produced per gram per hour
umol C2H4/org/h	micromoles of ethylene produced per organism per hour
umol CO2/m2/s	micromoles CO2 per square meter per second
umol CO2/g/s	micromoles CO2 per gram per second
umol CO2/g ch/s	micromoles carbon dioxide per gram chlorophyll per second
umol HA/mg pro	micromoles hippuric acid per milligram protein
umol GH/mgpro/m	micromoles reduced glutathione per milligram protein per minute
umol NADPH/mg P	micromoles NADPH per milligram protein per minute
umol P/g/20 mi	micromol phosphorus per gram per 20 minutes

Code	Description
umol P/g/h	micromoles phosphorus per gram per hour
umol P/mg pro/h	micromoles phosphorus per milligram protein per hour
umol Pbg/h/g	micromoles of porphobilinogen per hour per gram tissue
umol Pi/mgp/30m	micromoles Pi per milligram protein per 30 minutes
umol Pi/mgpro/h	micromoles Pi per milligram protein per hour
umol pyv mg p/h	micromoles pyruvate per milligram protein per hour
umol/100g	micromoles per 100 grams
umol/100g org	micromoles per 100 grams organism
umol/100 ml	micromoles per 100 milliliters
umol/10g/h	micromoles per 10 grams per hour
umol/10mg/h	micromoles per 10 milligrams per hour
umol/20mi/g	micromoles per 20 minutes per gram
umol/cm2	micromoles per square centimeter
umol/dl/h	micromoles per decaliter per hour
umol/dm3	micromoles per cubic decimeter
umol/eu	micromoles per experimental unit
umol/g	micromoles per gram
umol/g ash	micromoles per gram ash
umol/g diet	micromoles per gram diet
umol/g org	micromoles per gram organism
umol/g pro/h	micromoles per gram protein per hour
umol/g soil	micromoles per gram soil
umol/g TI	micromole per gram tissue
umol/g TI/h	micromoles per gram tissue per hour

Code	Description
umol/g wet wt	micromoles per gram wet weight
umol/g/h	micromoles per gram per hour
umol/g/mi	micromoles per gram per minute
umol/g/15 mi	micromoles per gram per 15 minutes
umol/h/g pro	micromoles per hour per grams protein
umol/h/g TI	micromoles per hour per gram tissue
umol/h/TI	micromoles per hour per tissue
umol/h/mg pro	micromoles per hour per milligram protein
umol/h/mg TI	micromols per hour per milligram tissue
umol/kg	micromoles per kilogram
umol/kg bdwt	micromoles per kilogram body weight
umol/kg dry soil	micromoles per kilogram dry soil
umol/kg egg	micromoles per kilogram egg
umol/kg media	micromoles per kilogram media
umol/kg org	micromoles per kilogram organism
umol/kg/d	micromoles per kilogram per day
umol/kg/h	micromole per kilogram per hour
umol/kg/mi	micromoles per kilogram per minute
umol/L	micromoles per liter
umoles/l agar	micromoles per liter agar
umol/l RBC/mi	micromoles per liter red blood cells per minute
umol/m	micromoles per meter
umol/mg	micromoles per milligram
umol/mg/15 mi	micromoles per milligram per 15 minutes

Code	Description
umol/mg pro	micromoles per milligram protein
umol/mgpro/20 mi	micromoles per milligram protein per 20 minutes
umol/mgpro/30mi	micromoles per mg protein per 30 minutes
umol/mg pro/h	micromoles per milligram protein per hour
umol/mg/h	micromoles per milligram per hour
umol/mg/mi	micromoles per milligram per minute
umol/ml	micromoles per milliliter
umol/mi	micromoles per minute
umol/mi/g	micromoles per minute per gram
umol/mi/g TI	micromoles per minute per gram of tissue
umol/mi/h	micrograms per minute per hour
umol/mi/l	micromoles per minute per liter
umol/mi/mg	micromoles per minute per milligram
umol/mi/mg pro	micromoles per minute per milligram protein
umol/mi/ml	micromoles per minute per milliliter
umol/ml/h	micromole per milliliter per hour
umol/ml/mi	micrograms per milliliter per minute
umol/mol	micromoles per mole
umol/mol C	micromoles per mole Carbon
umol/org	micromoles per organism
umol/TI	micromoles per tissue
umol/g TI/h	micromoles per gram tissue per hour
umolNH3/1e+6c/h	micromoles NH3 per 1X10+6 cells per hour
uS/cm	micro Siemens per centimeter

Code	Description
units	units
units/100ml	units per 100 milliliters
units/g diet	units per gram diet
units/l	units per liter
units/mg pro	units per milligram protein
unit/mg pro/mi	enzyme unit per milligram protein per minute
uu/mg	microunits per milligram
USP/org	USP unit per organism
uU/ml	microunits per milliliter
uu/mi/ml	microunits per minute per milliliter
uu/ml	microunits per milliliter
uV	microvolts
V	response value
V/N	response value per number of response sites
V/quadrant	response value per quadrant
v/v	volume per volume
W units	Wrobleski units
WER	water efficiency ratio
wght/lit	weight per litter
wk	week
Wijs number	Wijs' number
WO:LI	whole organism to liver ratio
[1/h]	[one per hour: use **/h**]
[10x2/mm3]	[10x2 cubic millimeters:use **/mm3**]
[10x3/mm3]	[10x3 cubic millimeters:use **/mm3**]
[10x6/ml3]	[10x6 cubic milliliters: use **/mm3**]
[10x6/mm3]	[10x6 cubic millimeters:use **/mm3**]
[10x6/ul]	[10x6 microliters:use **/ul**]
[10x9/l]	[10x9 liters:use **/l**]

Code	Description
1e+1 kg	1 x 10+1kilograms
1e+1 ug/g	1 X 10 +1 micrograms per gram
1e+2 cal/g	1 X 10 +2 calories per gram
1e+2 mm	1 X 10 +2 millimeters
1e+2 no/mm2	1 x 10 +2 per square millimeter
1e+2 no/mm3	1 X 10 +2 per cubic millimeter
1e+2 ug/g	1 X 10 +2 micrograms per gram
1e+3 cell/mg TI	1 X 10 +3 cells per milligram tissue
1e+3 cells	1 X 10 +3 cells
1e+3 cells/mm3	1 X 10 +3 cells per cubic millimeter
1e+3 cm/d	1 X 10 +3 centimeters per day
1e+3 counts	1 X 10 +3 counts
1e+3 cpm	1 X 10 +3 counts per minute
1e+3dpm/mg DNA	1 x 10+3 disintegrations per minute per milligram DNA
1e+3dpm/mg RNA	1 x 10+3 disintegrations per minute per milligram RNA
1e+3 dpm/TI	1 X 10 +3 disintegrations per minute per tissue
1e+3 no	1 X 10 +3 number
1e+3 no/cm	1 X 10 +3 number per centimeter
1e+3 no/cm3	1 X 10 +3 number per cubic centimeter
1e+3 no/g TI	1 X 10 +3 number per gram tissue
1e+3 no/mg SP	1 X 10 +3 number per milligram spleen
1e+3 org/acre	1 X 10+3 organisms per acre
1e+3 RA	1 X 10 +3 ratio
1e+3 sigma u/g	1 X 10+3 sigma units per gram

Code	Description
1e+3 um2	1 X 10 +3 square micrometers
1e+3RNA/TCA/DNA	1 X 10 +3 (counts per minute TCA per milligram RNA) per milligram DNA
1e+3/ml	1 X 10+3/milliliter
1e+3/mm3	1 X 10+3/cubic millimeter
1e+3 no	1 x 10+3 number
1e+3 no/ul	1 x 10+3 number per microliter
1e+3/ul	1 X 10+3/microliter
1e+4 IU/g	1 X 10 +4 International units per gram
1e+4 IU/TI	1 X 10 +4 International units per tissue
1e+4 no/mg TI	1 x 10+4 number per milligram tissue
1e+4 no/ml	1 X 10 +4 number per milliliter
1e+4 ug/g	1 x 10+4 micrograms per gram
1e+4 ug/TI	1 X 10+4 micrograms per tissue
1e+4/mm	1 x 10+4/millimeter
1e+4/mm3	1 x 10+4 per cubic millimeter
1e+12 no/L	1 X 10+12 number/liter
1e+5 no	1 X 10 +5 number
1e+5 no/g TI	1 X 10 +5 number per gram tissue
1e+6 cells	1 X 10 +6 cells
1e+6 cells/mm3	1 X 10 +6 cells per cubic millimeter
1e+6 cm	1 X 10 + 6 centimeters
1e+6 cpm	1 X 10 +6 counts per minute
1e+6 cpm/g TI	1 X 10 +6 counts per minute per gram tissue
1e+6/ml	1 X 10+6/milliliter
1e+6/mm3	1 X 10+6/cubic millimeter
1e+6/ul	1 X 10+6/microliter
1e+6 no	1 x 10+6 number

Code	Description
1e+6 no/ml	1 X 10 +6 number per milliliter
1e+6 no/ul	1 x 10+6 number per microliter
1e+6 no/cm3	1 X 10 +6 number per cubic centimeter
1e+6 no/g TI	1 x 10+6 number per gram tissue
1e+6 no/mg TI	1 X 10 +6 number per milligram tissue
1e+6 no/mm3	1 X 10 +6 number per cubic millimeter
1e+6 no/org	1 x 10+6 number per organism
1e+7/ml sperm	1 X 10+7 cells per milliliter sperm
1e+8/mm3	1 x 10+8/cubic millimeters
1e+8 no	1 x 10+8 number
1e+9 no	1 X 10 +9 number
1e+9 no/l	1 X 10 +9 number per liter
1e+9 no/ml	1 X 10 +9 number per milliliter
1e-1 mg/mg/d	1 X 10 -1 milligrams per milligrams per day
1e-2 mm	1 x 10-2 millimeters
1e-2 Nm	1 x 10-2 namometers
1e-2 no/ul	1 X 10 -2 number per microliter
1e-2 ug/g	1 X 10 -2 micrograms per gram
1e-2 J/beat/kg	1 x 10 -2 Joules per beat per kilogram
1e-3 cm/d	1 X 10 -3 centimeters per day
1e-3 cpm	1 x10-3 counts per minute
1e-3*dyn*s*cm-5	1 X 10 -3 X dynes X seconds X centimeters -5
1e-3 mg/mg/d	1 X 10 -3 milligrams per milligrams per day
1e-3 RA	1 X 10 -3 molar
1e-4dpm/g	1 x 10-4 disintegrations per minute per gram

Code	Description
1e-4dpm/mg Pi	1 x 10-4 disintegrations per minute per milligram Pi
1e-4 in	1 X 10 -4 inches
1e-4 no	1 X 10 -4 number
1e-5/mm3	1 X 10 -5/cubic millimeter
1e-6 mol/mi/gTI	1 X 10 -6 moles per minute per gram tissue

Appendix O. Ionic Fraction Codes

Code	Description
2,4-Dichlorophenoxyacetic	24D
Actinium	Ac
Aluminum	Al
Americium	Am
Ammonia (un-ionized)	NH_3
Ammonium (total)	NH_4
Ammonium nitrate	NO3N
Ammonium nitrite	NO2N
Antimonate	SbO4
Antimony	Sb
Argon	Ar
Arsenite	AsO2
Arsenate	AsO4
Arsenic	As
Astatine	At
Azide	N3
Barium	Ba
Berkelium	Bk
Beryllium	Be
Bismuth	Bi
Borate	BO3
Borate	B2O3
Borate	B4O7
Boron	B
Bromate	BrO3
Bromine	Br
Cadmium	Cd
Calcium	Ca
Californium	Cf
Carbon	C
Cerium	Ce
Cesium	Cs
Chlorine	Cl

Code	Description
Chlorine produced oxidant	CPOX
Chlorate	ClO3
Chlorite	ClO2
Chromium	Cr
Dichromate	Cr2O7
Chromium (+3)	Cr3
Chromium (+6)	CrVI
Chromium trioxide	CrO3
Chromate	CrO4
Cobalt	Co
Copper	Cu
Curium	Cm
Cyanide	CN
Diethyldithiocarbamate	DETC
Diquat	DQT
Dysprosium	Dy
Einsteinium	Es
Erbium	Er
Europium	Eu
Fermium	Fm
Fluorine	F
Francium	Fr
Gadolinium	Gd
Gallium	Ga
Germanium	Ge
Gold	Au
Hafnium	Hf
Hydrogen Cyanide	HCN
Hydrogen sulfide ion	HS-
Helium	He
Holmium	Ho
Hydrogen	H
Indium	In

Code	Description
Iodine	I
Iridium	Ir
Iron	Fe
Krypton	Kr
Lanthanum	La
Lawrencium	Lr
Lead	Pb
Lithium	Li
Lutetium	Lu
Magnesium	Mg
Manganate	MnO4
Manganese	Mn
Mendelevium	Md
Mercury	Hg
Methylene Blue Active Substances	MeBAS
Methylmercury	MeHg
Molybdnate	MoO4
Molybdenum	Mo
Neodymium	Nd
Neon	Ne
Neptunium	Np
Nickel	Ni
Niobium	Nb
Nitrate	NO3-
Nitrite	NO2
Nitrogen	N
Nobelium	No
Not reported	NR
Osmium	Os
Oxygen	O
Palladium	Pd
Paraquat	PQT
Pentachlorophenol	PCP
Petroleum hydrocarbon	PHC
Perchlorate	ClO4

Code	Description
Phosphorus	P
Platinum	Pt
Plutonium	Pu
Polonium	Po
Potassium	K
Praseodymium	Pr
Promethium	Pm
Protactinium	Pa
Radium	Ra
Radon	Rn
Rhenium	Re
Rhodium	Rh
Rubidium	Rb
Ruthenium	Ru
Samarium	Sm
Scandium	Sc
Selenate	SeO4
Selenite	SeO3
Selenium	Se
Silicate	SiO2
Silicon	Si
Silver	Ag
Sodium	Na
Sodium Azide	NaN3
Strontium	Sr
Sulfate	SO4
Sulfur	S
Tantalum	Ta
Technetium	Tc
Tellurium	Te
Terbium	Tb
Thallium	Tl
Thiocyanate	SCN
Thiosulfate	S2O3
Thorium	Th
Thulium	Tm

Code	Description
Tin	Sn
Titanium	Ti
Total Residual Bromine	TRBr
Total Residual Chlorine	TRCl
Total Residual Oxidant	TROX
Triethyl lead	Pb3E
Tributyltin	TBT
Tributyltin oxide	TBTO
Triphenyltin	TPT
Tungstate	WO4

Code	Description
Uranium	U
Uranium oxide (Uraninite)	UO2
Vanadium	V
Wolfram	W
Xenon	Xe
Ytterbium	Yb
Yttrium	Y
Zinc	Zn
Zirconium	Z

Appendix P. Chemical Analysis Methods

Code	Definition	Description
M	**M**easured	Clearly states in the paper that the concentrations reported by the author were measured.
U	**U**nmeasured	Author clearly identifies that the concentrations are based on nominal values, or the author presents concentration information, but does not report information that chemical analysis was conducted.
NR	**N**ot **R**eported	Author describes methods for analyzing chemical concentrations, but it is not clear that the values presented are based on measured or nominal concentrations.
X	Unmeasured (some measured values reported in article)	Author clearly identifies that some of the concentrations are based on nominal values while other concentrations are based on measured values, with the original nominal values also reported. Record the measured values for the concentrations reported as measured and the unmeasured values for the concentrations reported as nominals in the dose data field.
Z	Chemical analysis reported	Author identifies that chemical analysis was completed AND states that the concentrations were within a percentage of nominal, but only nominal concentrations are reported.

Appendix Q. Sample Unit Codes for Section V.5. Results Information

Code	Definition
AB	**Ab**ove ground portion (plants)
AD	**Ad**ult
AL	**Al**evin
BH	**B**ot**h** male and female organisms exposed or observed
BR	**Br**ood
C1	First Clutch, brood or litter
C2	Second Clutch, brood or litter
C3	Third Clutch, brood or litter
CC	**C**o**c**oons
CL	**C**e**l**ls
CB	**C**om**b**s
CO	**Co**lony
CT	**C**on**t**ainers
DC	**D**e**c**eased organism
EG	**Eg**g
EM	**Em**bryo
EU	**E**xperimental **u**nit
F0	**F0** generation
F1	**F1** generation
F2	**F2** generation
F3	**F3** generation
F4	**F4** generation
F5	**F5** generation
FET	Fetus
FB	Mature, **f**ull-**b**loom (fruit trees)

Code	Definition
FD	**F**ron**d**(s)
FF	**F**ields (as in agriculture)
FFE	**F**emale **fe**tus
FG	**F**emale **g**ametophyte
FI	**Fi**ngerling
FL	**Fl**ower(s)
FM	**F**e**m**ale organisms
FR	**Fr**uit
FT	**F**rogle**t**
FX	multiple generations
FY	**Fr**y
G1	females, 1st generation
G2	females, 2nd generation
G3	females, 3rd generation
G4	females, 4th generation
G5	females, 5th generation
G6	females, 6th generation
GR	**Gr**ains
GS	**G**erminated **s**eed
HC	**H**oney **c**omb
HT	**Ha**tchling
IM	**Im**mature
JV	**J**u**v**enile
KR	**K**er**n**al
LE	**Le**af
LE1	1st **le**af
LE2	2nd **le**af
LE3	3rd **le**af

Code	Definition
LE4	4th **le**af
LE5	5th **le**af
LE6	6th **le**af
LE7	7th **le**af
LE8	8th **le**af
LT	**Lit**ters
LV	**L**ar**v**ae
M1	males, 1st generation
M2	males, 2nd generation
M3	males, 3rd generation
M4	males, 4th generation
M5	males, 5th generation
M6	males, 6th generation
MD	**M**ature **d**ormant
MFE	**M**ale **fe**tus
MG	**M**ale **g**ametophyte
ML	**Mal**e organisms
MT	**Mat**ure, no specified stage
MU	**Mu**ltiple
MX	males, multiple generations
NF	Non-pregnant females
NR	**N**ot **R**eported
NT	**N**es**t**
NU	**Nauplii**
NY	**Ny**mph(s)
OR	**Or**ganism
PA	**Pa**rr
PB	Mature, **p**ost-**b**loom (fruit trees)
PC	**P**lant **c**utting (unspecified)
PF	Pregnant females

Code	Definition
PH	Mature, **p**it-**h**ardening (fruit trees)
PL	**P**lo**t**s
PO	**Pollen, pollen grain**
PR	**P**ai**r**
PU	**Pu**pa(e)
PV	**P**ost-lar**v**a
RB	Mature **r**eproductive, 2nd generation
RC	Mature **r**eproductive, 3rd generation
RO	**Ro**ot
RP	Mature **rep**roductive
RS	**R**oot **s**egments
SA	**S**ub**a**dult
SC	2nd generation (M2), no spec.stage
SD	**S**ee**d**
SG	Mature, **s**ide-**g**reen (fruit trees)
SF	**S**ac **F**ry, yolk-sac fry
SHL	Shell
SL	**S**eed**l**ing
SM	Samples
SO	**S**h**o**ot
SOT	**S**h**o**ot **t**ip
SPR	**Sp**o**r**e
SV	**S**ur**v**ivor
TA	**Ta**dpole
TC	**T**issue **c**ulture callus
TU	**Tu**bers
VC	**V**egetative **c**lone
VG	Mature **v**e**g**etative

Appendix R. Effect Group Codes and Definitions

GROUP/EFFECT CODE(S)	DEFINITION
ACC/ACC	**Acc**umulation: Effects, measurements and endpoints which characterize the process by which chemicals are taken into and stored in plants or animals. Includes lethal body burden.
BEH/AVO, BEH, FDB	**Beh**avior: Overt activity of an organism represented by three *effect* groups - avoidance, general behavior, and feeding behavior. All measurements related to reproductive behavior are listed under the major effect group REP.
BCM/BCM, ENZ, HRM,	**B**io**c**he**m**ical: measurement of biotransformation or metabolism of chemical compounds, modes of toxic action, and biochemical responses in plants and animals including three *effect* groups - biochemical, enzyme and hormone effects.
CEL/CEL, GEN, HIS	**Cel**lular Effects: measurements and endpoints regarding changes in structure and chemical composition of cells and tissues of plants or animals as related to their functions; the three *effect* groups include cellular, genetic and histological effects.
GRO/DVP, GRO, MPH	**Gro**wth: a broad category which encompasses measures of weight and length and includes effects on development, growth and morphology. Development covers toxicant effects on tissue organization in growing progeny. Growth represents length and weight changes at any point in the life cycle. Morphology measurements and endpoints address the structure (bones) and form (organ/tissue development) of an organism at any stage of its life history.
MOR/MOR	**Mor**tality: measurements and endpoints where the cause of death is by direct action of the chemical.
PHY/INJ, IMM, ITX, PHY	**Phy**siology: measurements and endpoints regarding basic activity in cells and tissues of plants or animals. Four *effect* groups include injury, immunity, intoxication and general physiological response.
POP/POP	**Pop**ulation: measurements and endpoints relating to a group of organisms or plants of the same species occupying the same area at a given time.
REP/ REP, **AEG**	**Rep**roduction: measurements and endpoints to track the effect of toxicants on the reproductive cycle. All measurements related to reproduction and care of progeny are included in this category, including behavioral and physiological measurements. Measurements related to development of progeny are found under the major *effect* group GRO, minor *effect* group DVP. The *effect* group AEG includes measurements of avian or reptilian eggs.
SYS/PRS	Eco**sys**tem: measurements and endpoints to track the effects of toxicants on ecosystem processes. Includes microbial processes.
NOC/NOC	**No** Group **C**ode: measurements related to multiple or delayed effects or endpoints reported without a specific effect.

Appendix S. Group Effect, Effect and Measurement Codes and Definitions

Note: Codes in < > need maintenance and should not be used for coding at this time.

ACC Accumulation Group

ACC	Accumulation Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
GACC	Accumulation, General	Biological accumulation is the accumulation of elements and compounds of harmful substances in the tissues of living organisms.	http://stats.oecd.org
ASML	Assimilation of test chemical	The conversion of nutriment into a useable form (e.g. liquid or solid) that is incorporated into the tissues and organs following the processes of digestion.	www.biology-online.org/dictionary/Assimilation
<BDBN>	Body Burden	The total amount of a chemical, metal or radioactive substance present at any time after absorption in the body of man or animal.	www.biology-online.org/dictionary/Body_burden
ELIM	Elimination	General term for loss or disappearance of a substance from an organism by either passive or active transport mechanism, e.g. diffusion and metabolic transformation.	ECOTOX
LBCN	Lethal Body Concentration	Also Lethal Body Burden. The body residue of a chemical that is associated with mortality.	ECOTOX
RATO	Ratio	The relationship in quantity, amount, or size between two or more things.	http://www.merriam-webster.com/dictionary/ratio
<RCVY>	Recovery of Lead Shot	No definition available.	
RSDE	Residue	Amount of test chemical remaining in tissue after exposure. This includes body burden or body concentrations. This also includes autoradiography results.	ECOTOX
TSLC	Translocation	The conduction of the test substance from one part of an organism to another.	ECOTOX

ACC	**Accumulation Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
UPTK	Uptake	The fraction of total available chemical in a medium (food, water) that is transferred to the organism (measured as the incoming - outgoing concentrations) OR a process by which materials are transferred into and onto an organism.	ECOTOX

BEH Behavior Group

AVO	**Avoidance Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
GAVO	Avoidance, General	Unknown or multiple types of avoidance responses.	ECOTOX
CHEM	Chemical Avoidance	Avoidance or attraction to a chemical gradient.	ECOTOX
FOOD	Food Avoidance	Avoidance or attraction to a chemical gradient in food.	ECOTOX
STIM	Stimulus Avoidance	Learning to avoid a noxious stimulus indicates that prior experience of the stimulus is remembered by the animal and appropriate action taken in the future to avoid or reduce potential damage.	http://en.wikipedia.org/wiki/Pain_in_invertebrates
WATR	Water Avoidance	Avoidance or attraction to a chemical gradient in water.	ECOTOX

BEH	**Behavior Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
DTCH	Ability to Detach from Substrate	Change in ability of an organism to detach from or attach to a substrate.	ECOTOX
ACTP	Accuracy of Learned Task, Performance	The act of performing; the carrying into execution or action; execution; achievement; accomplishment	www.biology-online.org/dictionary/Performance
ATSK	Acquired task	Ability to learn a new task.	ECOTOX
ACTV	Activity, General	The state of being active : behavior or actions of a particular kind	http://www.merriam-webster.com/dictionary/activity

BEH	**Behavior Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
ADOT	Adopt/adoption	Adopt: to take by choice into a relationship; *especially* **:** to take voluntarily (an offspring) as one's own child	www.merriam-webster.com/dictionary/adopted?show=0&t=1349804956
AGCL	Aggregation/Clumping	Grouped with the other organisms; aggregating in a group.	ECOTOX
AGGT	Aggression	Hostile, injurious, or destructive behavior or outlook especially when caused by frustration.	http://www.m-w.com/
ALRT	Alert	Quick to perceive and act	www.merriam-webster.com/dictionary/alert
ATCL	Antennal Cleaning	Grooming behavior of insects	jeb.biologists.org/content/55/3/749.full.pdf
APCH	Approach	To make advances to especially in order to create a desired result, to come very near to.	http://www.m-w.com/
ATTK	Attack, attacking	To begin to affect or to act on injuriously	http://www.merriam-webster.com/dictionary/attack
BATH	Bathing	To immerse in liquid; wet.	http://www.thefreedictionary.com/Bathing
BWAX	Bees Wax Produced	A yellow to brown wax secreted by honeybees to build honeycombs	http://beeswax.askdefine.com/
GBHV	Behavioral Changes, General	Change in activity in response to stimuli	facultyfiles.deanza.edu/gems/heyerbruce/G.Behave.pdf
BITE	Bite or biting	To wound, pierce, or sting especially with a fang or a proboscis	http://www.merriam-webster.com/medical/bite
BOBB	Bobbing	To move or cause to move up and down repeatedly	http://www.collinsdictionary.com/dictionary/english/bobbing
BOWW	Bow, bowing	To bend the knee or body or incline the head, as in reverence, submission, salutation, recognition, or acknowledgment.	http://dictionary.reference.com/browse/bow
BBBH	Burrow or Burial Behavior	Vigorous burrowing, shoveling and flicking movements...to displace… material	http://www.usm.edu/neurolab/ShockProbe.html

BEH	**Behavior Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
CNBL	Cannibalism	Eating other individuals of one's own species.	www.biology-online.org/dictionary/Cannibalism
CASE	Case Leaving Behavior	Change in number of organisms emerging from a casing.	
COMA	Colony Maintenance (Bees)	Maintenance of honey bee colonies, commonly in hives, by bees	http://apiculture.askdefine.com/
COMB	Comb Built	Natural comb built by the bees without any comb foundation being supplied to them	http://www.resistantbees.com/index.php?r=085
CMST	Compactness of Swimming Track	No definition available.	
CRTP	Continual reinforcement task performed	Performance of a task under continual reinforcement.	ECOTOX
CRDN	Coordination	Harmonious functioning of muscles or groups of muscles in the execution of movements.	http://www.m-w.com/
DHST	Diameter of Helix of Swimming Track	No definition available.	
DIGG	Dig/digging	To advance by removing or pushing aside material.	www.merriam-webster.com/dictionary/dig
DPLY	Displaying Behavior	Responses or reactions or movements made by an organism in any situation.	http://www.biology-online.org/dictionary/Behavior
LOCO	Distance Moved, Change in Direct Movement	A change in place or position.	http://www.thefreedictionary.com/movement
DUMV	Diurnal movements	Response to the sun's movement across the sky.	ebooks.cambridge.org/chapter.jsf?bid=CBO9780511752308&cid=CBO9780511752308A015
DRMT	Dormant, Adverse Condition Response	A state when organisms are in unfavourable conditions, and slow down their metabolic processes to a minimum to retain resources until conditions are more favourable.	www.biology-online.org/dictionary/Dormancy
ECMB	Empty Combs	Combs without bees	www.cd3wd.com/cd3wd_40/INPHO/.../EN/X0070E0A.HTM
EQUL	Equilibrium	Change in ability to maintain balance.	ECOTOX

BEH	Behavior Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
EXTN	Extinction	The disappearance of a conditioned response as a result of nonreinforcement.	http://medical-dictionary.thefreedictionary.com/Extinction+(biology)
FLTR	Filtration Rate	The speed or frequency with which filtration occurs per unit of time, population, or other standard of comparison.	http://medical-dictionary.thefreedictionary.com/glomerular+filtration+rate
FRTP	Fixed ratio task performed	A response is reinforced only after a specified number of responses.	http://psychology.about.com/od/findex/g/def_fixedratio.htm
FLHM	Flehmen response	the collection of pheromone signals through the curling of the upper lip during exploration of the oral and anogenital areas of other animals during social encounters	http://www.hhmi.org/news/katz2.html
FLIT	Flight	Behaviors include flag, evade, retreat, flee, freeze, defensive upright posture, defensive sideways posture and oblique.	ECOREF 58432
FTTR	Flutter	To move with quick wavering or flapping motions.	http://www.merriam-webster.com/dictionary/flutter
FLYG	Flying Behavior	Moving in the air with, or as with, wings; moving lightly or rapidly; intended for rapid movement.	www.biology-online.org/dictionary/Flying
FOOT	Foot Retraction	In mussles, the foot being pulled into the shell	ECOTOX
FRZG	Freezing Behavior	The act of stopping motion brought on by a stimulus.	ECOTOX
GRAB	Grab, grabbing	To take or seize by or as if by a sudden motion or grasp.	www.merriam-webster.com/dictionary/grab
GPST	Grip strength	The duration of hanging on thin wire or special apparatus with the fore and hind limbs	http://www.oecd.org/dataoecd/38/46/34030071.pdf
GROM	Grooming	An animal's cleaning and caring for the body surface. This includes preening, the cleaning and oiling of feathers with the bill or of hair with the tongue.	www.biology-online.org/dictionary/Grooming
HDLF	Head lift	Lifting of the head by an organism.	ECOTOX

BEH	**Behavior Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
HONY	Honey Produced	Honey is the natural sweet substance, produced by honeybees from the nectar of plants or from secretions of living parts of plants, or excretions of plant-sucking insects on the living parts of plants, which the bees collect, transform by combining with specific substances of their own, deposit, dehydrate, store and leave in honeycombs to ripen and mature.	ftp://ftp.fao.org/docrep/fao/012/i0842e/i0842e10.pdf
HMVT	Horizontal movements	Measured or contained in a plane of the horizon.	www.biology-online.org/dictionary/Horizontal
JUMP	Jumping	To spring into the air: leap; especially: to spring free from the ground or other base by the muscular action of feet and legs.	http://www.m-w.com/
KILL	Kill	One organism killing another organism.	ECOTOX
MIGR	Migration	the process by which people or animals migrate to another place or country	http://www.macmillandictionary.com/us/dictionary/american/migration
MOTL	Motility	The ability to move spontaneously.	http://medical-dictionary.thefreedictionary.com/motility
NMVM	Movements, Number of	Natural or appropriate motion; progress; advancement	www.biology-online.org/dictionary/Movement
NGRX	Negative geotaxis reflex	The time to turn 180 degrees when placed head downward on an inclined plane.	http://www.oecd.org/dataoecd/38/46/34030071.pdf
WINK	Nictitation	To open and close the eyelids or an eyelid rapidly. Synonym: nictation.	www.thefreedictionary.com/blink
NRES	No response	No response to the toxicant.	
NCMV	Nocturnal movements	Movements made during the night.	ECOTOX
NACT	Non-social activity	Behaviors include explore, scan, dig, push-dig, wash, self-groom, scratch, jump and eat.	ECOREF 58432
STRS	Observed Stress	The sum of the biological reactions to any adverse stimulus, physical, mental or emotional, internal or external	www.biology-online.org/dictionary/Stress
ORNT	Orientation	The act or process of orienting; one's position in relation to true north, to points on the compass, or to a specific place or object.	http://dictionary.reference.com/browse/orientation

BEH	Behavior Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
PALR	Palmar grasp	Flexion of the fingers caused by stimulation of the palm of the hand.	http://medical-dictionary.thefreedictionary.com/palmar+grasp+reflex
PHTR	Phototactic Response	A locomotory movement, that occurs when a whole organism moves in response to the stimulus of light.	http://en.wikipedia.org/wiki/Phototaxis
PLAR	Placing reflex	Flexion followed by extension of the leg.	Dorlands Medical Dictionary
POLC	Pollen collected	Collection of a mass of microspores in a seed plant appearing usually as a fine dust.	Webster's
POST	Posture	The position of the limbs or the carriage of the body as a whole.	www.biology-online.org/dictionary/Posture
PRVU	Predator Vulnerability	Susceptible to attack.	www.thefreedictionary.com/Vulnerability
PNPY	Prey penetration	The ability of a predator to penetrate or capture a prey organism	ECOTOX
RSPT	Response Time to a Stimulus	The time that elapses between a stimulus and the response to it.	www.biology-online.org/dictionary/Response_Time
REST	Rest	A state of motionlessness or inactivity or a bodily state characterized by minimal functional and metabolic activities.	http://www.m-w.com/
RSNR	Resting and not ruminating	Lying down and not chewing cud.	
RSRU	Resting and ruminating	Lying down and chewing cud.	ECOTOX
RVSE	Reversals	To turn completely about in position or direction.	http://www.m-w.com/
RRSP	Righting Response	A reflex process in which an animal immediately tries to turn over after being placed in a supine position.	www.ebi.ac.uk/QuickGO/GTerm?id=GO:0060013
RUBB	Rub	To move along the surface of a body with pressure.	www.biology-online.org/dictionary/Rub
RUNN	Run	To go faster than a walk; specifically: to go steadily by springing steps so that both feet leave the ground for an instant in each step	www.merriam-webster.com/dictionary/run
SCRT	Scratch	to scrape, dig, rub, tear or mark a surface of with something sharp or jagged such as claws or nails	http://www.m-w.com/

BEH	**Behavior Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
SEBH	Search/explore/forage behavior	An active movement by which an organism seek resources. To wander or rove in search of food	http://www.colostate.edu/Depts/Entomology/courses/en507/student_papers_1995/bradbury.html and http://cancerweb.ncl.ac.uk/omd/
SLEP	Sleep/Sleeping	The natural periodic suspension of consciousness during which the powers of the body are restored.	Webster's
INST	Sleeping Time, Induced	Sleep time was defined as the time required for the animal to regain spontaneous movements	www.ncbi.nlm.nih.gov/pmc/articles/PMC3038564/
SMEL	Smell/Sniff	To perceive the odor or scent of through stimuli affecting the olfactory nerves.	Webster's
SACT	Social Activity	Behaviors include attend, nose, groom, sniff, investigate, follow, push-under, push-past, crawl-over and crouch.	ECOREF 58432
SRED	Spread, Spreading	To stretch out.	ECOTOX
SDNR	Standing and not ruminating	Standing and not chewing cud.	ECOTOX
SDRU	Standing and ruminating	Standing and chewing cud.	ECOTOX
STLT	Startle	To frighten or surprise suddenly.	Webster's
STPY	Stereotypy	Frequent almost mechanical repetition of the same posture, movement, or form of speech (as in schizophrenia).	http://www.m-w.com/
SRCH	Stretch	To enlarge or distend especially by force.	Webster's
SURF	Surfacing	The act or an instance of rising to the surface of a body of water.	http://dictionary.reference.com/browse/surfacing
SWIM	Swimming	To move in water by movements of the limbs, fins, tail, etc.	http://dictionary.reference.com/browse/swim
THML	Temperature Tolerance	Change in tolerance to temperature change.	ECOTOX
TUBE	Tube Building	The process of constructing open-ended, cylindrical tubes using mucus or silk to bind together detritus	ECOTOX
VACL	Valve Closure	Change in the ability to open or close a shell valve upon mechanical stimulation and/or gaping response.	ECOTOX

BEH	Behavior Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
VRTP	Variable Interval Reinforcement Task Performed	Variable interval (VI) schedules deliver reinforcement for the first response after a random average length of time passes since the last reinforcement.	http://en.wikipedia.org/wiki
VMVT	Vertical or rearing movements	To rise up on the hind legs.	http://www.m-w.com/
VORX	Vestibulo-ocular reflex	The vestibulo-ocular reflex (VOR), is eye movement that functions to stabilize gaze by countering movement of the head. In VOR the semicircular canals of the inner ear measure rotation of the head and provide a signal for the oculomotor nuclei of the brainstem, which innervate the eye muscles. The muscles counter-rotate the eyes in such a way that a rightward head rotation causes an equal leftward rotation of both eyes, with the result that gaze direction stays stationary.	http://www.britannica.com/EBchecked/topic/626984/vestibulo-ocular-reflex-VOR
VIBR	Vibrissae placing	Specialized hairs, usually employed for tactile sensation, but can also refer to the stiff feathers near the mouths of some birds. Touching a vibrissa causes it to bend, and the blood in the sinus is pushed to one side or the other. The blood amplifies the movement and allows the mechanoreceptors at the base of the vibrissa to detect extremely small deflections.	www.websters-online-dictionary.org/definitions/Vibrissa
VCLF	Visual Cliff	A visual cliff involves an apparent, but not actual drop from one surface to another.	http://psychology.about.com/od/vindex/f/visual-cliff.htm
VISP	Visual placing	The reaction of an organism in response to a visual stimuli. For example: The fast movement of a finger towards a mouse normally elicits an immediate reaction from the mouse. In addition, the mouse is held a few centimeters above a grid (a wire mouse cage top) and should extend its front limbs in an attempt to grasp the grid. This response is known as visual placing.	http:/cmhd.mshri.on.ca/pdf
NVOC	Vocalizations, Number of	The use of uttered sounds for auditory communication	www.thefreedictionary.com/vocalization
WALK	Walk	to move along on foot, advance by steps	www.merriam-webster.com/dictionary/walk
WTCH	Watch, watching	To keep something under close observation.	http://www.merriam-webster.com/dictionary/watch

BEH	**Behavior Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
WEBB	Web-building	The network of silken thread spun by most spiders and used as a resting place and as a trap for small prey.	http://www.merriam-webster.com/dictionary/spiderweb
YAWN	Yawn	To open the mouth wide usually as an involuntary reaction to fatigue or boredom.	Webster's

FDB	**Biochemical Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
BGNG	Begging Behavior	An animal solicits being given resources by another animal. This is usually a young animal soliciting food from their parents, brood hosts or other adults.	http://en.wikipedia.org/wiki/Begging_in_animals
FECL	Fecal Production	Solid excretory product evacuated from the bowels.	http://www.thefreedictionary.com/excretory+product
FDNG	Feeding Behavior (Activity)	Getting food or nourishment.	www.biology-online.org/dictionary/Feeding
GFDB	Feeding Behavior, General	Behavioural responses or sequences associated with eating including modes of feeding, rhythmic patterns of eating, and time intervals.	www.biology-online.org/dictionary/Feeding_behaviour
FEFF	Feeding Efficiency	In animal husbandry, feed conversion ratio (FCR), feed conversion rate, or feed conversion efficiency (FCE), is a measure of an animal's efficiency in converting feed mass into increases of the desired output.	http://en.wikipedia.org/wiki/Feed_conversion_ratio
FTIM	Feeding Time	Time spent eating	ECOTOX
FCNS	Food Consumption (Amount or Rate)	Amount of food eaten or rate	ECOTOX
FSTR	Food Storage	The search, selection, and transportation of food to a definite place by animals to be used (usually during the foodless season) by the animals or their offspring.	http://encyclopedia2.thefreedictionary.com/Food+Storage,+Animal
LTBD	Litter Breakdown	Breakdowm of the undecomposed plant and animal material found on the forest floor.	www.biology-online.org/dictionary/Litter
PRBE	Predatory Behavior	Aggressive behavior involving attack on prey by a predator.	www.ebi.ac.uk/QuickGO/GTerm?id=GO:0002120

FDB	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
STRK	Strikes	To make an attack; to aim a blow	www.biology-online.org/dictionary/Strike
WCON	Water Consumption	Amount of water consumed	ECOTOX

BCM Biochemical Group

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
DPHZ	1, 1-Diphenyl-2-picryl hydrazyl	It is a dark-colored crystalline powder composed of stable free-radical molecules. DPPH has two major applications, both in laboratory research: one is a monitor of chemical reactions involving radicals and another is a standard of the position and intensity of electron paramagnetic resonance signals.	http://en.wikipedia.org/wiki/DPPH
DHCA	1,25-Dihydrocholecalciferol	25 dihydroxyvitamin D3. The form of vitamin D3 that is biologically active in intestinal transport and calcium resorption by bone. Also Calcitriol.	www.biology-online.org/dictionary/Calcitriol
11HE	11-Hexadecenoic acid	A fatty acid with the formula C16H30O2. Also: C16:1n-5, AC1NSMOV, (E)-hexadec-11-enoic acid.	http://pubchem.ncbi.nlm.nih.gov/compound/5312413#section=Canonical-SMILES
HD12	12-hydroxydodecanoic acid	12-hydroxydodecanoic acid, also: 12 hydroxy lauric acid, omega-hydroxylauric acid	http://www.ncbi.nlm.nih.gov
RRRA	13-cis-Retinoic acid to 9,13-di-cis-Retinoic acid ratio	The ratio of 13-cis-Retinoic acid to 9,13-di-cis-Retinoic acid	ECOTOX
FA18	18:1(n-5) fatty acid	A fatty acid with 18 carbon atoms.	ECOTOX
1ACC	1-Aminocyclopropane-1-carboxylic acid	1-Aminocyclopropane-1-carboxylic acid (ACC) is a disubstituted cyclic alpha-amino acid in which a three-membered cyclopropane ring is fused to the C(alpha)-atom of the amino acid.	http://en.wikipedia.org/wiki
1HPY	1-Hydroxypyrene	Main metabolite compound of polycyclic aromatic hydrocarbons with four to six rings.	ECOREF#50442

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
2AAF	2-Acetylaminofluorene	2-Acetylaminofluorene is a hepatic carcinogen whose mechanism of activation involves N-hydroxylation to the aryl hydroxamic acid followed by enzymatic sulfonation to sulfoxyfluorenylacetamide. It is used to study the carcinogenicity and mutagenicity of aromatic amines. Also: Fluoren-2-ylacetamide, N-2-Fluorenylacetamide, 2AAF	http://www.ncbi.nlm.nih.gov
DPPA	2,3-Diphosphoglyceric acid	A by- product of glycolysis can bind with hemoglobin.	http://www.hhp.ufl.edu/classes/ess/Spring/Pet3351jd/pdf3351/3351Chapter10.PDF
20SP	20S Proteasome	Catalytic core of the proteasome complex, is responsible for the breakdown of key proteins involved with apoptosis, DNA repair, endocytosis, and cell cycle control.	http://www.emdmillipore.com/US/en/product/20S-Proteasome-Activity-Assay,MM_NF-APT280
7POD	7-pentoxyresorufin O-dealkylase	A major cytochrome P-450 enzyme which is inducible by phenobarbital in both the liver and small intestine. It is active in the metabolism of compounds like pentoxyresorufin, testosterone, and androstenedione.	http://www.ncbi.nlm.nih.gov/mesh/?term=pentoxyresorufin%20O-dealkylase
25HC	25-Hydroxycholecalciferol	A sterol $C_{27}H_{44}O_2$ that is a metabolite of cholecalciferol formed in the liver, is the circulating form of vitamin D, and has some activity in maintaining calcium homeostasis and preventing rickets.Synonym: calcidiol, calcifediol	www.merriam-webster.com/medical/25-hydroxycholecalciferol
DOPC	3,4-Dihydroxyphenylacetic acid	(DOPAC) is a metabolite of the neurotransmitter dopamine. Dopamine can be metabolized into one of three substances. One such substance is DOPAC. Another is 3-methoxytyramine (3-MT). Both of these substances are degraded to form homovanillic acid (HVA).	http://en.wikipedia.org/wiki/3,4-Dihydroxyphenylacetic_acid
DCDA	3,4-Dihydroxyphenylacetic acid to Dopamine ratio	The ratio of 3,4-Dihydroxyphenylacetic acid to Dopamine.	ECOTOX
MHPS	3-methoxy-4-hydroxyphenylethyleneglycol sulfate	A catecholamine metabolite.	pharmrev.aspetjournals.org/cgi/content/full/56/3/331
MHNR	3-Methoxy-4-hydroxyphenylglycol to Norepinephrine ratio	The ratio of 3-Methoxy-4-hydroxyphenylglycol to Norepinephrine found in a sample.	ECOTOX

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
3MTA	3-Methoxytyramine	(3-MT), also known as 3-methoxy-4-hydroxyphenethylamine, is a metabolite of the neurotransmitter dopamine formed by the introduction of a methyl group to dopamine by the enzyme catechol-O-methyl transferase (COMT).	http://en.wikipedia.org/wiki/3-Methoxytyramine
3MDO	3-Methoxytyramine to Dopamine ratio	The ratio of 3-Methoxytyramine to Dopamine.	ECOTOX
3NTT	3-nitrotyrosine to tyrosine ratio	Ratio of 3-nitrotyrosine to tyrosine in a sample.	ECOTOX
3PPG	3-Phosphoglycerate	3-Phosphoglycerate is an intermediate in the glycolysis, gluconeogenesis, and Calvin cycle pathways and in metabolism of serine, cysteine, and glycine. 3-Phosphoglycerate is acted on by the glycolytic enzymes phosphoglycerate kinase and phosphoglycerate mutase and the important photosynthesis enzyme, ribulose-1,5-bisphosphate carboxylase (rubisco).	http://www.pearsonhighered.com/mathews/ch13/3pg.htm
HMPG	4-Hydroxy-3-methoxyphenylglycol	Synthesized from endogenous epinephrine and norepinephrine in vivo. It is found in brain, blood, CSF, and urine, where its concentrations are used to measure catecholamine turnover	http://medicaltermfinder.com/definition-of-4-hydroxy-3-methoxyphenylglycol.html
4ORA	4-Oxo-retinoic acid	An oxidative metabolite of retinoic acid. A highly active endogenous active retinoid.	http://www.niwi.knaw.nl/elecpubl/imwo/niob/niobb.htm
5HAA	5-Hydroxyindole Acetic Acid	An acid produced by serotonin metabolism, measured in the blood and urine to aid in the diagnosis of certain kinds of tumors. Abbreviated 5-HIAA.	http://medical-dictionary.thefreedictionary.com/5-hydroxyindoleacetic+acid
5HSR	5-Hydroxyindole Acetic Acid to Serotonin ratio	The ratio of 5-Hydroxyindole Acetic Acid to Serotonin. Also the ratio of 5-Hydroxyindole Acetic Acid to 5-Hydroxytryptamine ratio. Also: 5-HIAA 5-HT ratio.	ECOTOX
6BHC	6-beta-Hydroxycortisol	6-beta-Hydroxycortisol is a cortisol metabolite. Synonyms: 6-beta-Hydrocortisol; 6-beta,17-dihydroxycorticosterone; 6,11-beta,17,21-tetrahydroxypregn-4-ene-3,20-dione	ECOTOX and http://pubchem.ncbi.nlm.nih.gov
6KPA	6-keto-prostaglandin F1 alpha	6-keto prostaglandin F1α (6-keto PGF1α) is the inactive, non-enzymatic hydrolysis product of PGI2. 6-keto PGF1α serves as a useful marker of PGI2 biosynthesis *in vivo*. When [3H]-PGI2 is injected into healthy human males, 6.6% of the radioactivity is recovered from urine as [3H]-6-keto PGF1α.	ECOTOX and https://www.caymanchem.com/product/15210

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
7BRF	7-Benzyloxyoxyresorufin	7-Benzyloxyresorufin-O-Dealkylase : A major cytochrome P-450 enzyme which is inducible by phenobarbital in both the liver and small intestine. It is active in the metabolism of compounds like pentoxyresorufin, testosterone, and androstenedione. CYP2B1 also mediates the activation of cyclophosphamide and ifosfamide to mutagens. EC 1.-.	http://medicaltermfinder.com/definition-of-7-benzyloxyresorufin-o-dealkylase.html
7ERF	7-Ethoxyresorufin	A compound used as the substrate in the measurement of cytochrome P450 (CYP1A1) induction using the ethoxyresorufin-O-deethylase (EROD) assay system in cell culture and environmental samples, produced in response to exposure to aryl hydrocarbons. The compound is catalysed by the enzyme to produce the same fluorescent product, resorufin.	http://en.wikipedia.org/wiki/Resazurin
7MRF	7-Methoxyresorufin	A substrate used to differentiate isozymes of cytochrome P-450	http://www.sigmaaldrich.com/catalog/product/sigma/69125?lang=en&region=US
7PRF	7-Pentoxyresorufin	Fluorogenic cytochrome P-450 substrate that generates red fluorescent product upon enzyme cleavage	http://www.anaspec.com/products/product.asp?id=51414
8ODG	8-hydroxydeoxyguanosine	A biomarker of oxidative stress on DNA	ECOREF#76203
8O2D	8-Oxo-2'-deoxyguanosine	8-Oxo-2'-deoxyguanosine (8-oxo-dG) is an oxidized derivative of deoxyguanosine. 8-oxo-dG is one of the major products of DNA oxidation. Concentrations of 8-oxo-dG within a cell are a measurement of oxidative stress.	http://en.wikipedia.org/wiki
CODR	9-cis-4-oxo-13,14-dihydro-retinoic acid	A recently discovered retinoic acid metabolite.	ECOTOX 80509
1CLA	9 trans, 11 cis-conjugated linoleic acid	9(E),11(Z)-Octadecadienoic acid, or 9 trans, 11 cis-conjugated linoleic acid, is a conjugated linoleic acid.	ECOTOX

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
10HC	10-Hydroxycamptothecin	10-Hydroxycamptothecin is a DNA topoisomerase I inhibitor with potent anti-tumor activity. An agents obtained from higher plants that has demonstrable cytostatic or antineoplastic activity. Also: 10-hydroxycamptothecine, Hydroxycamptothecin,10-Hydroxy camptothecin, 10-Hydroxy-Camptothecin.	http://pubchem.ncbi.nlm.nih.gov/summary/summary.cgi?sid=103170545&loc=es_rss, http://www.nlm.nih.gov/cgi/mesh/2014/MB_cgi, http://www.nlm.nih.gov/cgi/mesh/2014/MB_cgi?mode=&term=Antineoplastic+Agents,+Phytogenic and http://www.selleckchem.com/products/10-hydroxycamptothecin.html
2CLA	10 trans, 12 cis-conjugated linoleic acid	10(E),12(Z)-Octadecadienoic acid, or 10 trans, 12 cis-conjugated linoleic acid, is a conjugated linoleic acid.	ECOTOX
3CLA	11 cis, 13 trans-conjugated linoleic acid	11(Z),13(E)-Octadecadienoic acid, or 11 cis, 13 trans-conjugated linoleic acid, is a conjugated linoleic acid.	ECOTOX
78GR	78 kDa glucose-regulated protein	A member of the HSP family of molecular chaperones required for endoplasmic reticulum integrity and stress-induced autophagy. Plays a central role in regulating the unfolded protein response (UPR), and is an obligatory component of autophagy in mammalian cells. May play an important role in cellular adaptation and oncogenic survival. Also: GRP-78, GRP78, BiP, Endoplasmic reticulum lumenal Ca(2+)-binding protein grp78, Heat shock 70 kDa protein 5, heat shock 70kD protein 5 (glucose-regulated protein, 78kD), Immunoglobulin heavy chain-binding protein, HSPA5, MIF2.	http://www.phosphosite.org/proteinAction.do?id=9327 and http://www.uniprot.org/uniprot/P11021
A1GL	Alpha-1 globulin	The alpha-1 protein fraction is comprised of alpha1-antitrypsin, thyroid-binding globulin, and transcortin.	Gammopathies, Monoclonal Versus Polyclonal. "Understanding and interpreting serum protein electrophoresis." Am Fam Physician 71.1 (2005): 105-112.

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
A2GL	Alpha-2 globulin	The alpha-2 protein fraction is comprised of ceruloplasmin, alpha-2 macroglobulin, and haptoglobin.	Gammopathies, Monoclonal Versus Polyclonal. "Understanding and interpreting serum protein electrophoresis." Am Fam Physician 71.1 (2005): 105-112.
AAIB	alpha-Aminoisobutyrate	Aminoisobutyrate: an anionic form of aminoisobutyric acid.	www.homeopathswithoutborders.gr/index.php?option=com_content&view=article&catid=59:health-concepts&id=31085
ACAH	Acetaldehyde	A colourless, flammable liquid used in the manufacture of acetic acid, perfumes, and flavors. It is also an intermediate in the metabolism of alcohol. It has a general narcotic action and also causes irritation of mucous membranes. Large doses may cause death from respiratory paralysis.	www.biology-online.org/dictionary/Acetaldehyde
ACTE	Acetone	In the body, a chemical that is formed when the body uses fat instead of glucose for energy. The formation of acetone means that cells lack insulin or cannot effectively use available insulin to burn glucose for energy. It passes through the body into the urine as ketone bodies, the simplest ketone. It is normally present in urine in small amounts but can increase in those who have diabetes mellitus. Results in having “fruity” acetone breath.	ECOREF#73878 http://medical-dictionary.thefreedictionary.com/acetone
ACHL	Acetylcholine	The acetic acid ester of choline, which is a neurotransmitter at cholinergic synapses in the central, sympathetic, and parasympathetic nervous systems; used in the form of the chloride salt as a miotic.	http://medical-dictionary.thefreedictionary.com/acetylcholine
ACRR	Acetylene Reduction Rate/plant Roots Nodulated	No definition available.	
ACCL	Acetylcholine to choline ratio	The ratio of actetylcholine to choline.	ECOTOX
ACID	Acid Produced	Amount of acid produced	ECOTOX
ADRT	Acid resistant thiol	Thiols which dissociate only at alkaline pHs	ECOREF#89702

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
CDST	Acid Soluble Thiol	No definition available.	
AIHP	Acid-insoluble hydroxyproline	Specific proline residues on the amino side of a glycine residue in collagen become hydroxylated at C4, before the polypeptides become helical, by the activity of prolyl hydroxylase. This enzyme has a ferrous ion at the active site and a reducing age.	
ACHP	Acid-soluble hydroxyproline	Specific proline residues on the amino side of a glycine residue in collagen become hydroxylated at C4, before the polypeptides become helical, by the activity of prolyl hydroxylase. This enzyme has a ferrous ion at the active site and a reducing age.	
ACTN	Actin	A protein found especially in microfilaments (as those comprising myofibrils) and active in muscular contraction, cellular movement, and maintenance of cell shape	www.merriam-webster.com/medical/actin
ARP1	Actin-related protein 1	Participates in a diverse array of cellular processes. They modulate assembly of conventional actin, contribute to microtubule-based motility catalyzed by dynein, and serve as integral components of large protein complexes required for gene expression.	http://www.ncbi.nlm.nih.gov/pubmed/10611965
CAMP	Adenosine 3',5'-cyclic Monophosphate	A cyclic nucleotide, adenosine 3′,5′-cyclic monophosphate, that serves as an intracellular, and sometimes extracellular, “second messenger” mediating the action of many peptide or amine hormones.	http://medical-dictionary.thefreedictionary.com/adenosine
ADPT	Adenosine diphosphate (ADP)	A nucleotide, the 5′-pyrophosphate of adenosine, involved in energy metabolism; it is produced by the hydrolysis of adenosine triphosphate (ATP) and converted back to ATP by the metabolic processes oxidative phosphorylation and substrate-level phosphorylation.	http://medical-dictionary.thefreedictionary.com/adenosine+diphosphate+(ADP)
ADAT	Adenosine diphosphate (ADP) to Adenosine triphosphate (ATP)	The ratio of Adenosine diphosphate (ADP) to Adenosine triphosphate (ATP).	ECOTOX
ADOX	Adenosine diphosphate to oxygen ratio	The ratio of adenosine diphosphate to oxygen.	
AMPT	Adenosine monophosphate (AMP)	A nucleotide, the 5′-phosphate of adenosine, involved in energy metabolism and nucleotide synthesis. Called also adenylic acid.	http://medical-dictionary.thefreedictionary.com/adenosine+monophosphate
AMDT	Adenosine phosphates (AMP+ADP+ATP)	Total of Adenosine monophosphate, adenosine diphosphate and adenosine triphosphate in a sample. (AMP+ADP+ATP)	ECOTOX

BCM	**Biochemical Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
ATPT	Adenosine Triphosphate	An organic compound that is composed of adenosine (an adenine ring and a ribose sugar) and three phosphate groups. (ATP) The universal energy currency for metabolism	http://www.biology-online.org/dictionary/Adenosine_Triphosphate
ATAD	Adenosine Triphosphate (ATP) to Adenosine diphosphate (ADP)	The ratio of Adenosine Triphosphate (ATP) to Adenosine diphosphate (ADP)	ECOTOX
ATAM	Adenosine Triphosphate (ATP) to Adenosine monophosphate (AMP)	The ratio of Adenosine Triphosphate (ATP) to Adenosine monophosphate (AMP)	ECOTOX
ATPP	Adenosine triphosphate to Phosphocreatine ratio	Ratio of Adenosine triphosphate to Phosphocreatine in a sample.	ECOTOX
ADCD	Adenylic acid	A condensation product of adenosine and phosphoric acid; a nucleotide found among the hydrolysis products of all nucleic acids. 3'-adenylic acid (adenosine 3'-monophosphate) and 5'-adenylic acid (adenosine 5'-monophosphate) differ in the place of attachment of the phosphoric Acid to the d-ribose; deoxyadenylic acid differs in having H instead of OH at the 2' position of d-ribose.	www.biology-online.org/dictionary/Adenylic_acid
ADNA	Adrenic Acid	Adrenic Acid (C22:4n-6), also all cis-7,10,13,16-docosatetraenoic acid, is a poly unsaturated fatty acid.	ECOTOX
AFB1	Aflatoxin B1	Out of about 20 known aflatoxins, the molds Aspergillus flavus and A. parasiticus produce exclusively aflatoxin B1, B2, G1 and G2, and all the other aflatoxins are derivates of these four. The derivates are developed either by metabolism in humans, animals and microorganisms or by environmental reactions. Aflatoxins belong to the strongest mycotoxins, which act primarily in a hepatotoxic and carcinogenic way. B1 is without doubt the most toxic aflatoxin. Contaminations with aflatoxins occur mostly with nuts and grain.	www.usbio.net/item/A0925-08

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
AB12	Aflatoxin B1 and B2	Out of about 20 known aflatoxins, the molds Aspergillus flavus and A. parasiticus produce exclusively aflatoxin B1, B2, G1 and G2. B1 is without doubt the most toxic aflatoxin, followed by G1, B2 and G2. Of special importance for human beings are the chronical intoxications by aflatoxins. To the diseases, which develop after such chronical intoxications, belong primary liver carcinoma, hepatitis, Reye's syndrome and Kwashiorkor. Besides the generation of primary liver carcinoma, aflatoxins are presumably also responsible for other sorts of tumors, like intestinal cancer.	www.usbio.net/item/A0925-08
AFB2	Aflatoxin B2	A fungal toxin which is a powerful liver carcinogen, found particularly in undeveloped and developing countries; produced by aspergillus flavus and a. Parasiticus	www.biology-online.org/dictionary/Aflatoxin
AFG1	Aflatoxin G1	Aflatoxin G1 is a mycotoxin produced by strains of the fungi Aspergillus flavus and A. parasiticus.	http://www.cfsan.fda.gov
AFG2	Aflatoxin G2	A mycotoxin, which may be produced by mold species of the genus Aspergillus. Synonyms: AFG2, Dihydroaflatoxin G1.	http://www.biopure.at/biopure-index/datasheets/mdc/Aflatoxin_G2.htm
ALAN	Alanine	A nonessential amino acid; is involved in the energy-producing breakdown of glucose. (Ala)	www.biology-online.org/dictionary/Alanine
AAGO	Alanine aminotransferase to glutamate oxaloacetate ratio	Ratio of Alanine aminotransferase to glutamate oxaloacetate AAT/GOT	ECOTOX
ALBE	Albumen Energy	The nutritive and protective gelatinous substance, mostly an albumin, which surrounds the yolk; the nutritive matter around the embryo in a seed.	http://dictionary.reference.com/browse/albumen
ALBM	Albumin	Any of a group of simple water-soluble proteins that are coagulated by heat and are found in blood plasma, egg white, etc	http://dictionary.reference.com/browse/albumen
ALGL	Albumin:Globulin ratio	The ratio of Albumin to Globulin in a sample.	ECOTOX
APHT	Alkaline phosphate	No definition available.	
ALKD	Alkaloids, Total	Any of various organic compounds normally with basic chemical properties and usually containing at least one nitrogen atom in a heterocyclic ring, occurring chiefly in many vascular plants and some fungi. Many alkaloids, such as nicotine, quinine, cocaine, and morphine, are known for their poisonous or medicinal attributes.	The American Heritage Dictionary of the English Language, Fourth Edition (2000)

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
AKLD	Alkoxylipids	Lipids with long alkyl or 1-alkenyl chains–called alkoxylipids or ether lipids–are widely distributed in human and animal tissues. These compounds comprise neutral alkoxylipids, i. e. 1-O-alkyl or 1-O-(1-alkenyl)-2,3-di-O-acylglycerols, and alkoxylipids which are linked by a phosphate residue at C-3 to aminoethanol, choline or serine. Alkoxylipids are employed in biomedical investigations, e.g. as substrates in acyl-hydrolase systems or in fat absorption studies.	Mangold, H. K. (1979), Synthesis and Biosynthesis of Alkoxylipids. Angew. Chem. Int. Ed. Engl., 18: 493–503. doi: 10.1002/anie.197904933
ALLT	Allantoic Acid	A crystalline acid C 4H 8N 4O 4 obtained by hydrolysis of allantoin; di-ureido-acetic acid	www.merriam-webster.com/dictionary/allantoic%20acid
ALLA	Allantoin	A chemical compound (5-ureidohydantoin), $C_4H_6N_4O_3$, that occurs as a white crystallizable substance found in many plants and in the allantoic and amniotic fluids and fetal urine of primates; used medicinally to promote tissue growth.	http://medical-dictionary.thefreedictionary.com/allantoin
APCY	Allophycocyanin	Allophycocyanin (APC) is a large protein (approximate molecular weight 80 kd) containing many fluors.	http://www.drmr.com/abcon/APC.html
APCR	Allophycocyanin to chlorophyll a ratio	The ratio of allophycocyanin to chlorophyll a in a sample.	ECOTOX
ATRA	all-trans-retinoic acid	A form of vitamin A and a drug used for the treatment of acute promyelocytic leukemia.	http:en.wikipedia.orgwikiAll-trans_retinoic_acid
A2UG	Alpha 2u-globulin	Alpha 2u-globulin is an androgen-dependent urinary protein; synthesized by hepatic tissue; released into plasma and filtered through kidneys into urine. Major urinary proteins (MUPs), also known as alpha2u-globulins, are a subfamily of proteins found in high abundance in the urine and other secretions of many mammals.	http://www.ncbi.nlm.nih.gov and www.wikipedia.org/wiki

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
AABA	alpha-Aminobutyric Acid	α-Aminobutyric acid (AABA) is an isomer of the amino acid aminobutyric acid with chemical formula C4H9NO2. It has two other isomers, gamma-aminobutyric acid (GABA) and beta-aminobutyric acid. It is a key intermediate in the biosynthesis of ophthalmic acid or ophthalmate. AABA is used as an amino acid by cells as the building block of proteins, therefore it is often referred to as amino acid aminobutyric acid, or simply aminobutyric acid. In contrast, GABA is a neurotransmitter and not used in protein synthesis, and it is almost always referred to as GABA	http://en.wikipedia.org/wiki/Alpha-Aminobutyric_acid
ACAR	alpha-Carotene	A carotenoid abundant in carrots, sweet potatoes, cantalope, which has vitamin A and immunostimulatory activity.	http://medical-dictionary.thefreedictionary.com/alpha+carotene
ACXN	alpha-Cryptoxanthin	Alpha-cryptoxanthin is a naturally occurring carotenoid pigment with provitamin A activity whose structure is very similar to that of beta-carotene (HMDB00561). These dietary hydroxycarotenoids have been identified in human serum, milk, and ocular tissues.	http://www.hmdb.ca/metabolites/HMDB02268
AGLB	alpha-Globulins	Any of a group of globular proteins that are generally insoluble in water and present in blood, eggs, milk, and as a reserve protein in seeds. Blood serum globulins comprise four types: α1-, α2-, and β-globulins, which serve as carrier proteins; and γ-globulins (gamma globulins), which include the immunoglobulins responsible for immune responses.	"globulin." A Dictionary of Biology. 2004. Encyclopedia.com. 7 Jul. 2014 <http://www.encyclopedia.com>.
AGPT	alpha-glycerophosphate	Glycerophosphate is a salt or ester of either of the glycerophosphoric acids.	www.merriam-webster.com/medical/glycerophosphate
KTBA	alpha-ketobutyric acid	A product of the lysis of cystathionine. It is also one of the degradation products of threonine. It can be converted to propionyl-CoA (and subsequently methylmalonyl CoA, which can be converted to succinyl CoA, a CAC intermediate), and thus enter the citric acid cycle.	http://en.wikipedia.org
KGTA	alpha-ketoglutarate	alpha-ketoglutarate (also called oxo-glutarate) is an important biological compound. It is the keto acid produced by de-amination of glutamate, and is an intermediate in the Krebs cycle. Synonyms: alpha-oxoglutaric acid, 2-oxoglutarate.	http://en.wikipedia.org

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Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
ALAC	alpha-Linolenic acid	alpha-Linolenic acid (ALA) is an organic compound found in many common vegetable oils. In terms of its structure, it is named all-cis-9,12,15-octadecatrienoic acid. Also: 18:3 (n−3), C18:3omega3.	http://en.wikipedia.org/wiki/Alpha-Linolenic_acid
PINE	Alpha-pinene	Either of two colourless liquid hydrocarbons, alpha-pinene and beta-pinene, occurring as major components of the essential oil of pine trees and used as a chemical raw material. Both compounds belong to the isoprenoid series and have the molecular formula C10H16.	http://dictionary.reference.com/browse/pinene
APRO	alpha-Proteins	Protein: Any of a group of complex organic macromolecules that contain carbon, hydrogen, oxygen, nitrogen, and usually sulfur and are composed of one or more chains of amino acids. Proteins are fundamental components of all living cells	www.thefreedictionary.com/protein
ASYC	Alpha-synuclein	a protein found in the brain. It is predominantly a presynaptic neuronal protein	http://en.wikipedia.org/wiki/Alpha_synuclein
ATCO	alpha-Tocopherol concentration	Most prevalent form of vitamin E in the body and that administered as a supplement; often used synonymously with vitamin E. Also used as the acetate and acid succinate esters; is an antioxidant.	http://medical-dictionary.thefreedictionary.com/alpha-tocopherol
ATGT	alpha-Tocopherol and gamma - Tocopherol	Tocopherol are any of a group of closely related, fat-soluble alcohols that behave similarly to vitamin E and are present in milk, lettuce, and wheat germ oil and certain other vegetable oils.	The American Heritage Medical Dictionary, 2007, 2004 by Houghton Mifflin Company. http://medical-dictionary.thefreedictionary.com/tocopherol
ATUB	alpha-Tubulin	The alpha form of a Tubulin which is one of several members of a small family of globular proteins.	en.wikipedia.org
ALTL	Alternariol	A principle Alternaria mycotoxin	http://www.micotoxinas.com.br/altertoxins.htm
ALTN	Alternariol monomethyl ether	A principle Alternaria mycotoxin	http://www.micotoxinas.com.br/altertoxins.htm
ALCO	Aluminum Content	The concentration of aluminum found in a sample.	ECOTOX
AMAN	Amino Acid Nitrogen	The nitrogen associated with the amino acids in the body.	ECOTOX

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
AMAC	Amino Acid(s), General Term	A molecule consisting of the basic amino group (NH2), the acidic carboxylic group (COOH), a hydrogen atom (-H), and an organic side group (R) attached to the carbon atom, thus, having the basic formula of NH2CHRCOOH	www.biology-online.org/dictionary/Amino_acid
ESAA	Amino Acids, Essential	Essential or indispensable amino acids cannot be synthesized in the body and can only be obtained through food. They are histidine, isoleucine, leucine, lysine, methionine, phenylalanine, threonine, tryptophan, and valine.	www.biology-online.org/dictionary/Amino_acid
NEAA	Amino Acids, Nonessential	Non-essential or dispensable amino acids are synthesized in the body. They are alanine, arginine, aspartic acid, asparagine, cysteine, glutamic acid, glutamine, glycine, proline, serine, and tyrosine.	www.biology-online.org/dictionary/Amino_acid
TTAA	Amino Acids, Total	Measure of total amino acids - any organic comp containing an amino and a carboxyl group.	
TFAA	Amino Acids, Total Free	No definition available.	
AMNN	Amino Nitrogen	Nitrogen combined with hydrogen in the amino group. Also known as ammonia nitrogen.	www.answers.com/topic/amino-nitrogen
AMMO	Ammonia	A pungent colorless gaseous alkaline compound of nitrogen and hydrogen NH_3 that is very soluble in water and can easily be condensed to a liquid by cold and pressure.	www.merriam-webster.com/medical/ammonia
NH4I	Ammonium ion	The ammonium cation is a positively charged polyatomic cation of the chemical formula NH4+. It has a molecular mass of 18.04 and is formed by protonation of ammonia (NH3). The resulting ion has a pKa of 9.25. Ammonium and aminium are also general names for positively charged or protonated substituted amines and quaternary ammonium cations N+R4, where one or more hydrogen atoms are replaced by organic radical groups (which could be symbolized as R).	http://en.wikipedia.org/wiki/Ammonium_ion
NHPN	Ammonium ion Nitrogen ratio	The ratio of Ammonium ion (NH4+) to nitrogen in a sample.	ECOTOX
AMYD	Amyloid	A glycoprotein deposited extracellularly in tissues in amyloidosis.	www.biology-online.org/dictionary/Amyloid
AMPP	Amyloid precursor protein	An integral membrane protein expressed in many tissues and concentrated in the synapses of neurons.	http://en.wikipedia.org/wiki/Amyloid_precursor_protein
AMYS	Amylose	Amylose is an unbranched glucan in starch.	http://www.ncbi.nlm.nih.gov

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Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
AION	Anions	Negatively charged atoms or radicals.	www.biology-online.org/dictionary/Anions
AA1A	Annexin A1a	A protein involved in calcium-dependent phospholipid binding, calcium ion binding and phospholipase inhibitor activity.	http://refgene.com/gene/334724
AA13	Annexin A13	A member of the annexin family of calcium-dependent phospholipid-binding proteins. Annexins have unique N-terminal domains and homologous C-terminal domains which contain the calcium-dependent phospholipid-binding sites. Alternate names: Annexin XIII, Annexin-13, Intestine-specific annexin, ANXA13.	http://www.omim.org/entry/602573 and http://www.uniprot.org/uniprot/P27216
AHDA	Anteisoheptadecanoic acid	14-methylhexadecanoic acid, or anteisoheptadecanoic acid (C17:0 ai), is a saturated fatty acid.	ECOTOX
APDA	Anteisopentadecanoic acid	12-methyltetradecanoic acid, anteisopentadecanoic acid (C15:0 ai) is a saturated fatty acid. Also: sarcinic acid	http://en.wikipedia.org/wiki/ and http://pubchem.ncbi.nlm.nih.gov
ANXH	Antheraxanthin	A neutral yellow plant pigment unique to the Euglenophyta.	http://encyclopedia2.thefreedictionary.com/antheraxanthin
ANTC	Anthocyanin	Any of various soluble glycoside pigments producing blue to red coloring in flowers and plants	www.merriam-webster.com/dictionary/anthocyanin
ANTH	Anthocyanins	Any of a class of water-soluble glycosidic pigments, esp those responsible for the red and blue colours in flowers. They are closely related to vitamins E and P.	http://dictionary.reference.com/browse/anthocyanin
SBCO	Antimony concentration	The concentration of Antimony found in a sample.	ECOTOX
ANTO	Antioxidant activity	Antioxidants are man-made or natural substances that may prevent or delay some types of cell damage. Antioxidants are found in many foods, including fruits and vegetables.	http://www.nlm.nih.gov/medlineplus/antioxidants.html
ANPY	Antipyrine	An artificial alkaloid, believed to be efficient in abating fever.	www.biology-online.org/dictionary/Antipyrine

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APAI	Apolipoprotein A-I	The most abundant protein component of High Density Lipoproteins or HDL. This protein serves as an acceptor for Cholesterol released from Cells thus promoting efflux of Cholesterol to HDL then to the LIVER for excretion from the body (reverse Cholesterol transport). It also acts as a cofactor for Lecithin Cholesterol Acyltransferase that Forms Cholesterol Esters on the HDL particles.	http://www.online-medical-dictionary.org/definitions-a/apolipoprotein-a-i.html
ALPB	Apolipoprotein B100	Apolipoprotein B100 (apoB100) is a protein that plays a role in moving cholesterol around your body. It is a form of low density lipoprotein (LDL).	https://www.nlm.nih.gov/medlineplus/ency/article/003502.htm
AQPO	Aquaporin	Any of several proteins that are found in cell membranes and selectively permit water to pass into and out of the cell.	http://www.merriam-webster.com/dictionary/aquaporin
AQP1	Aquaporin-1	A protein that forms a water-specific channel that provides the plasma membranes of red cells and kidney proximal tubules with high permeability to water, thereby permitting water to move in the direction of an osmotic gradient. Also: Aquaporin 1.	http://www.uniprot.org/uniprot/P29972
ARCA	Arachidic acid	Arachidic acid, or Eicosanoic acid (C20:0), is a saturated fatty acid.	ECOTOX
ARCH	Arachidonate	A polyunsaturated 20-carbon essential fatty acid occurring in animal fats and formed by biosynthesis from linoleic acid; it is a precursor to leukotrienes, prostaglandins, and thromboxane. Also Arachidonic acid, C20:4n-6	http://medical-dictionary.thefreedictionary.com/Arachidonate+acid
2ACG	2-Arachidonoylglycerol	An endocannabinoid, an endogenous agonist of the CB1 receptor. It is an ester formed from the omega-6 fatty acid arachidonic acid and glycerol. It is present at relatively high levels in the central nervous system, with cannabinoid neuromodulatory effects.	http://en.wikipedia.org/wiki/2-Arachidonoylglycerol
ARGI	Arginine	A nonessential amino acid occurring in proteins and involved in the urea cycle, which converts ammonia to urea, and in the synthesis of creatine. Preparations of the base or the glutamate or hydrochloride salt are used in the treatment of hyperammonemia and as a diagnostic aid in the assessment of pituitary function.	Dorland's Medical Dictionary for Health Consumers. 2007
ASCO	Arsenic content	The concentration of arsenic found in a sample.	ECOTOX
ASCN	Arsenic to creatinine ratio	The ratio of arsenic to creatinine.	ECOTOX
ASBT	Ascorbate	A salt or ester of ascorbic acid.	www.biology-online.org/dictionary/Ascorbate

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Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
AOAR	Ascorbate to oxidized Ascorbate ratio	Ratio of Ascorbate to oxidized Ascorbate in sample.	ECOTOX
ASCA	Ascorbic Acid	A water-soluble, white crystalline vitamin present in citrus fruits, tomatoes, berries, potatoes, and fresh green and leafy vegetables. It is essential for the formation of collagen and fibrous tissue for normal intercellular matrices in teeth, bone, cartilage, connective tissue, and skin, and for the structural integrity of capillary walls. It also aids in fighting bacterial infections and interacts with other nutrients. Vitamin C.	http://medical-dictionary.thefreedictionary.com/ascorbic+acid
AADA	Ascorbic acid to Dehydroascorbate ratio	The ratio of Ascorbic acid to Dehydroascorbate found in a sample.	ECOTOX
ASHC	Ash Content	When either organic compounds are decomposed or released at high temperature (500C -600C), the remaining residue is the ash. This residue consists of oxides and salts containing anions such as phosphates, chlorides, sulfates, and other halides and cations such as sodium, potassium, calcium, magnesium, iron, and manganese.	www.foodscience-avenue.com/2008/05/what-is-ash-content.html
ASPR	Asparagine	A nonessential amino acid that is the beta-amide if aspartic acid. It is found in most plants, and has diuretic properties. It is used as a culture medium for certain bacteria.	Dorlands Medical Dictionary
ASPA	Aspartate	A nonessential amino acid that has a central role in transferring amino groups by aspartate aminotransferase in the liver; in proteins, aspartate takes the form of its amide, asparagine.	McGraw-Hill Concise Dictionary of Modern Medicine, 2002
ASPC	Aspartic Acid	One of the non-essential amino acids commonly occurring in the L-form. It is found in animals and plants.	http://www.ncbi.nlm.nih.gov
ASTA	Astaxanthin	A reddish pigment that belongs to a group of chemicals called carotenoids. It occurs naturally in certain algae and causes the pink or red color in salmon, trout, lobster, shrimp, and other seafood.	http://www.webmd.com/vitamins-supplements/ingredientmono-1063-astaxanthin.aspx?activeingredientid=1063&activeingredientname=astaxanthin
ASRA	AST(reduced):total AST including oxidized glutathione	the ratio of reduced acid-soluble thiols to total acid soluble thiols including oxidized glutathione	ECOTOX

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
ATHE	ATP to hemoglobin ratio	The ratio of adenosine triphosphate to hemoglobin in a sample.	ECOTOX
AVER	Averufin	An anthraquinone that is involved with aflatoxin biosynthesis	ECOTOX 75785
AVDN	Avidin	Avidin is a tetrameric protein produced in the oviducts of birds, reptiles and amphibians deposited in the whites of their eggs. Advodom interacts with biotin to render it unavailable to mammals, thereby producing biotin deficiency.	http://www.ncbi.nlm.nih.gov/mesh and http://en.wikipedia.org/wiki
BACA	Barium Calcium ratio	The ratio of barium to calcium in a sample.	ECOTOX
BACO	Barium content	The concentration of barium found in a sample.	ECOTOX
BHNC	Behenic Acid	CH3(CH2)20COOH; a constituent of most fats and fish oils; large amounts are found in jamba, mustard seed, rapeseed oils, and cerebrosides.	Farlex Partner Medical Dictionary, 2012
BAPY	Benzo(a)pyrene content	The concentration of benzo(a)pyrene found in a sample.	ECOTOX
BECO	Beryllium concentration	The concentration of Beryllium found in a sample.	ECOTOX
BGPR	beta- and gamma-Protein	Protein: Any of numerous naturally occurring extremely complex substances (as an enzyme or antibody) that consist of amino acid residues joined by peptide bonds, contain the elements carbon, hydrogen, nitrogen, oxygen, usually sulfur, and occasionally other elements (as phosphorus or iron), that are essential constituents of all living cells	www.merriam-webster.com/medical/protein
BATP	beta-ATP (beta-Adenosine triphosphate)	Beta-ATP (beta-Adenosine triphosphate) consists of adenosine, composed of an adenine ring and a ribose sugar, and three phosphate groups (triphosphate). The phosphoryl group is in the beta position relative to the ribose group.	http://en.wikipedia.org/wiki and ECOTOX
BGBN	beta globin	The polypeptide moiety of haemoglobin that is designated beta and that when deficient or defective causes various anemias (as beta-thalassemia or sickle-cell anemia).	http://cancerweb.ncl.ac.uk/omd/ and medical.merriam-webster.com
B2MG	beta2-Microglobulin	A polypeptide found free in serum and which also combines with the α (heavy) chain to form class I major histocompatibility heterodimer.	Saunders Comprehensive Veterinary Dictionary, 3 ed, 2007

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Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
BCAR	beta-Carotene	A phytonutrient that is an isomer of carotene found in dark green and yellow fruits and vegetables and that is converted to vitamin A, primarily in the liver.	http://medical-dictionary.thefreedictionary.com/beta+carotene
CBCH	beta-Carotene to Chlorophyll A Ratio	Ratio of beta-Carotene to Chlorophyll A	
BCXN	beta-Cryptoxanthin	Beta-cryptoxanthin is a common carotenoid that is found in fruit, and in human blood and tissues. Beta-cryptoxanthin has several functions that are important for human health, including roles in antioxidant defense and cell-to-cell communication. Most importantly, beta-cryptoxanthin is a precursor of vitamin A, which is an essential nutrient needed for eyesight, growth, development and immune response.	http://www.ncbi.nlm.nih.gov/pubmed/25270992
BGLB	beta-Globulins	Any of a group of globular proteins that are generally insoluble in water and present in blood, eggs, milk, and as a reserve protein in seeds. Blood serum globulins comprise four types: α1-, α2-, and β-globulins, which serve as carrier proteins; and γ-globulins (gamma globulins), which include the immunoglobulins responsible for immune responses.	"globulin." A Dictionary of Biology. 2004. Encyclopedia.com. 7 Jul. 2014 <http://www.encyclopedia.com>.
BTBL	beta-Tubulin	Tubulin is microtubule subunit protein found in large quantities in mammalian brain. It has also been isolated from sperm flagellum; cilia; and other sources. One of the most common members of the tubulin family is beta-tubulin.	http://en.wikipedia.org/wiki and http://www.ncbi.nlm.nih.gov
HCO3	Bicarbonate (HCO3-) concentration	A carbonate in which but half the hydrogen of the acid is replaced by a positive element or radical, thus making the proportion of the acid to the positive or basic portion twice what it is in the normal carbonates; an acid carbonate; sometimes called supercarbonate. They are an important factor in determining the pH of the blood and the concentration of bicarbonate ions is regulated by the kidney. Levels in the blood are an index of the alkali reserve or buffering capacity.	www.biology-online.org/dictionary/Bicarbonate
BIDP	Bid protein	Bid, a pro-apoptotic member of the Bcl-2 family, was initially discovered through binding to both pro-apoptotic Bax and anti-apoptotic Bcl-2. During apoptosis, Bid can be cleaved not only by caspase-8 during death receptor apoptotic signaling, but also by other caspases, granzyme B, calpains and cathepsins.	http://www.ncbi.nlm.nih.gov/pubmed/19641510

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Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
BILE	Bile	An alkaline fluid secreted by the liver and delivered to the duodenum to aid in the emulsification, digestion, and absorption of fats. Also known as gall.	http://www.accesscience.com/overflow.aspx?searchStr=Fluids&stype=4&term=Fluids&rootID=792937&p=10
BLAC	Bile Acids	Steroid acids found in bile; e.g., taurocholic and glycocholic acid's, used when biliary secretion is inadequate and for biliary colic. Their physiological roles include fat emulsification. Their synthesis is reduced in disorders of the peroxisomes.	http://medical-dictionary.thefreedictionary.com/Bile+(biology)
BLLB	Bilirubin	A reddish yellow pigment C33H36N4O6 that occurs especially in bile and blood and causes jaundice if accumulated in excess.	http://www.m-w.com/
TLBL	Bilirubin, Total	Bilirubin: a bile pigment produced by breakdown of heme and reduction of biliverdin; it normally circulates in plasma and is taken up by liver cells and conjugated to form bilirubin diglucuronide, the water-soluble pigment excreted in bile.	http://medical-dictionary.thefreedictionary.com/bilirubin
GBCM	Biochemical, General	The study of the chemical substances and vital processes occurring in living organisms; biological chemistry; physiological chemistry.	www.thefreedictionary.com/biochemical
BPTN	Biopterin	A natural product that has been considered as a growth factor for some insects.	http://www.online-medical-dictionary.org/definitions-b/biopterin.html
BIOT	Biotin Content	A colorless, crystalline, water-soluble B complex vitamin that acts as a coenzyme in fatty acid production and in the oxidation of fatty acids and carbohydrates. It also aids in the use of protein, folic acid, pantothenic acid, and vitamin B12. Rich sources are egg yolk, beef liver, kidney, unpolished rice, brewer's yeast, peanuts, cauliflower, and mushrooms. Formerly called vitamin H.	Mosby's Medical Dictionary, 8th edition, 2009
BICO	Bismuth concentration	The concentration of Bismuth found in a sample.	ECOTOX
BAGA	Bisphenol A glucuronic acid	A major degradation product of bisphenol A subjected to renal excretion.	ECOREF 60614
<BUNT>	Blood Urea Nitrogen	Nitrogen in the form of urea in the blood or serum, used as a indicator of kidney function.	http://medical-dictionary.thefreedictionary.com/blood+urea+nitrogen
BCON	Boron Content	The concentration of boron found in a sample.	ECOTOX

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
BPHY	b-Phycoerythrin	A phycobilin pigment present in cyanobacteria which can be coupled to antibodies for detecting proteins and antigens due to the extremely bright (red) signal immunofluorescence assays.	Segen's Medical Dictionary, 2012
BRKN	Bradykinin	Vasoactive nonapeptide (RPPGFSPFR) formed by action of proteases on kininogens. Bradykinin is a very potent vasodilator and increases permeability of post capillary venules, it acts on endothelial cells to activate phospholipase A2. It is also spasmogenic for some smooth muscle and will cause pain.	www.biology-online.org/dictionary/Bradykinin
BRCO	Bromine Concentration	The level of bromine in a sample	ECOTOX
BFCO	Bromoform concentration	Bromoform: A colorless heavy liquid compound $CHBr_3$ that is similar to chloroform in properties and methods of preparation and is used chiefly in separating minerals (as in assaying) and in organic synthesis.	www.merriam-webster.com/dictionary/bromoform
CFLP	c-FLIP protein	Cellular FLICE (FADD-like IL-1β-converting enzyme)-inhibitory protein (c-FLIP) is a master anti-apoptotic regulator and resistance factor that suppresses tumor necrosis factor-α (TNF-α), Fas-L, and TNF-related apoptosis-inducing ligand (TRAIL)-induced apoptosis, as well as apoptosis triggered by chemotherapy agents in malignant cells.	http://www.ncbi.nlm.nih.gov/pubmed/23070002
CX10	C-X-C motif chemokine 10	A chemokine secreted from cells stimulated with type I and II IFNs and LPS, is a chemoattractant for activated T cells. Also: IFN-gamma-inducible protein 10 (IP-10), and CXCL10.	http://www.ncbi.nlm.nih.gov/pubmed/11907072
C4CD	C4 acids	Initial product of photosynthesis.	ECOTOX
CADV	Cadaverine	A syrupy colorless poisonous ptomaine C5H14N2 formed by decarboxylation of lysine especially in putrefaction of flesh.	http://www.merriam-webster.com/dictionary/cadaverine
CDAI	Cadmium Accumulation index	The ratio of a chemical in the organism to the ratio of the chemical in the soil.	ECOTOX
CDBP	Cadmium binding proteins	Cadmium binding proteins, metallothionein and non-metallothionein proteins.	ECOTOX
CDCO	Cadmium Content	The concentration of cadmium found in a sample.	ECOTOX
CDSE	Cadmium Selenium Ratio	The ratio of cadmium to selenium in a sample.	ECOTOX
CDPR	Cadmium to Phosphorus ratio	The ratio of cadmium to phosphorus.	ECOTOX

BCM	**Biochemical Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
CDZN	Cadmium to Zinc Ratio	The ratio of cadmium to zinc.	ECOTOX
CFCA	Caffeic Acids	Caffeic Acidsaare a class of phenolic acids related to chlorogenic acid, p-coumaric acid, vanillic acid, etc., which are found in plant tissues. It is involved in plant growth regulation.	http://www.ncbi.nlm.nih.gov
CABN	Calbindin	A protein that plays a fundamental role in the Vitamin D mediated transport of calcium in reptiles, amphibians, birds and mammals. It is found in the intestine, kidneys, egg shell gland, brain, and possibly other organs. Its molecular weight is species dependent. Also known as Cholecalcin, Vitamin D-Dependent Calcium-Binding Protein, Intestinal Membrane Calcium-Binding Protein	http://www.ncbi.nlm.nih.gov
CLCN	Calcein	Calcein is a fluorescent compound created by non-specific intracellular esterases. The acetomethoxy derivative can be transported into live cells and the reagent is useful as a viability test and for short term marking of cells. A calcium chelating agent that fluoresces brightly in the presence of bound calcium.	http://cancerweb.ncl.ac.uk and http://www.ncbi.nlm.nih.gov
CGRP	Calcitonin Gene-Related Peptide	Calcitonin gene-related peptide. A 37-amino acid peptide derived from the calcitonin gene. It occurs as a result of alternative processing of mRNA from the calcitonin gene. The neuropeptide is widely distributed in neural tissue of the brain, gut, perivascular nerves, and other tissue. The peptide produces multiple biological effects and has both circulatory and neurotransmitter modes of action. In particular, it is a potent endogenous vasodilator.	http://www.ncbi.nlm.nih.gov
CACO	Calcium Content	The concentration of calcium found in a sample.	ECOTOX
CAAL	Calcium to aluminum Ratio	The ratio of the amount of calcium to aluminum in an organism or organism's parts.	ECOTOX
CABC	Calcium Boron ratio	The ratio fo calcium to boron found in a sample.	ECOTOX
CANR	Calcium Nitrogen ratio	The ratio of calcium to nitrogen in a sample.	ECOTOX
CANA	Calcium to sodium ratio	Ratio of calcium to sodium in an organism or organism's tissues.	ECOTOX
CAZN	Calcium to Zinc Ratio	Ratio of calcium to zinc in an organism or organism's tissues.	ECOTOX
CAPH	Calcium/Phosphorus Ratio	Calcium and phosphorus form Calcium phosphate, the dense hard material found in teeth and bones	ECOTOX

BCM	**Biochemical Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
CPHR	Calcium Phosphorus to Hydroxyproline ratio	The ratio of Calcium and Phosphorus to Hydroxyproline in a sample.	ECOTOX
CLMD	Calmodulin	A calcium-binding protein found in all nucleated cells that affects the activity of many calcium-sensitive enzymes, including those involved in muscular contraction.	The American Heritage® Dictionary of the English Language, Fourth Edition copyright ©2000
CLRT	Calreticulin	Calcium-binding chaperone that promotes folding, oligomeric assembly and quality control in the endoplasmic reticulum (ER) via the calreticulin/calnexin cycle. This lectin interacts transiently with almost all of the monoglucosylated glycoproteins that are synthesized in the ER. Interacts with the DNA-binding domain of NR3C1 and mediates its nuclear export. Involved in maternal gene expression regulation. May participate in oocyte maturation via the regulation of calcium homeostasis. Also: CRP55, Calregulin, Endoplasmic reticulum resident protein 60.	http://www.uniprot.org/uniprot/P14211
CMPH	Camphor Concentration	The concentration of camphor found in a sample.	ECOTOX
CPTC	Camptothecin	An alkaloid isolated from the stem wood of the Chinese tree, Camptotheca acuminata. This compound selectively inhibits the nuclear enzyme DNA Topoisomerases, Type I. Several semisynthetic analogs of camptothecin have demonstrated antitumor activity. Also: (S)-(+)-Camptothecin, (+)-Camptothecin, (+)-Camptothecine, d-Camptothecin, 20(S)-Camptothecine, (S)-Camptothecin.	http://www.ncbi.nlm.nih.gov/mesh/68002166 and http://pubchem.ncbi.nlm.nih.gov/summary/summary.cgi?cid=24360
CAPA	Capric acid	Capric acid, decanoic acid, is a C10:0 fatty acid found in animal oils and fats; has an unpleasant smell resembling goats.	http://wordnetweb.princeton.edu/ and http://en.wikipedia.org/wiki/
CPRA	Caproic Acid	A liquid fatty acid C6H12O2 that is found as a glycerol ester in fats and oils or made synthetically and used in pharmaceuticals and flavors. Also called hexanoic acid.	http://www.merriam-webster.com/medical/caproic%20acid

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
CARB	Carbohydrate	Any of a class of organic compounds that are polyhydroxy aldehydes or polyhydroxy ketones, or change to such substances on simple chemical transformations, as hydrolysis, oxidation, or reduction, and that form the supporting tissues of plants and are important food for animals and people.	http://dictionary.reference.com/browse/carbohydrate
CCON	Carbon Content	The concentration of carbon found in a sample.	ECOTOX
CO2C	CO2 conentration (Carbon Dioxide Content)	The concentration of carbon dioxide found in a sample.	ECOTOX
CNRA	Carbon to Nitrogen Ratio	The ratio of carbon to phosphorus in a sample.	ECOTOX
CPRT	Carbon phosphorus ratio	The ratio of carbon to phosphorus in a sample.	ECOTOX
CHMG	Carboxyhemoglobin	Hemoglobin that has carbon monoxide instead of the normal oxygen bound to it.	http://www.medterms.com/script/main/art.asp?articlekey=39016
CARO	Carotene	Any of several red, crystalline carotenoid hydrocarbon pigments occurring widely in nature, convertible in the animal body to Vitamin A.	www.merriam-webster.com/medical/carotene
CACH	Carotene to Chlorophyll A Ratio	Ratio of Carotene to Chlorophyll A	ECOTOX
CARC	Carotenoid Content	Any of a class of yellow to red pigments found especially in plants, algae, and photosynthetic bacteria. Carotenoids generally consist of conjoined units of the hydrocarbon isoprene, with alternating single and double bonds. The carotenoids absorb light energy of certain frequencies and transfer it to chlorophyll for use in photosynthesis. They also act as antioxidants for chlorophyll, protecting it from damage by oxidation in the presence of sunlight. Carotenoids are nutritionally important for many animals, giving flamingoes their color, for example, and also have antioxidant properties	The American Heritage® Science Dictionary, 2005
CRCA	Carotenoids Chlorophyll A ratio	The ratio of carotenoids to chlorophyll a	ECOTOX
CTCR	Carotenoid to total chlorophyll	The ratio of carotenoid to total chlorophyll in a sample.	ECOTOX
CARR	Carrageenan	Sulphated cell wall polysaccharide found in certain red algae. Contains repeating sulphated disaccharides of galactose and (sometimes) anhydrogalactose.	www.biology-online.org/dictionary/Carrageenan

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
CRVN	Carvone	An oily liquid terpenoid ketone C10H14O having a characteristic odor of caraway, found in many essential oils (as caraway, dill, or spearmint), and used as a flavoring agent and perfume.	http://www.merriam-webster.com/dictionary/carvone
CSEN	Casein	Group of proteins isolated from milk; amphipathic polypeptides of around 200 amino acids with substantial hydrophobic c terminal domains that associate to give micellar polymers in divalent cation rich medium, casein is a glycoprotein.	www.biology-online.org/dictionary/Casein
CT4P	Caudal type homeobox transcription factor 4 protein	Caudal type homeobox transcription factor 4 protein (cdx4) is a member of the caudal-type homeobox genes which are candidates for directing tissue and organ development and differentiation.	http://www.allelebiotech.com/content/pdf/AB/ABP-PAB-10470.pdf
CRMD	Ceramide	Any of a group of amido sphingolipids formed by linking a fatty acid to sphingosine and found widely in small amounts in plant and animal tissue	www.merriam-webster.com/medical/ceramide
CRBR	Cerebroside	Glycolipid found in brain (11% of dry matter). Sphingosine core with fatty amide or hydroxy fatty amide and a single monosaccharide on the alcohol group (either glucose or galactose).	www.biology-online.org/dictionary/Cerebroside
CRLF	Ceroid and Lipofuscin	Ceroid and Lipofuscin are naturally occurring lipid pigments.	http://www.ncbi.nlm.nih.gov
CA26	Cerotic acid	Cerotic acid is a 26-carbon saturated (26:0) fatty acid. Elevated plasma levels of saturated very-long-chain fatty acids and in particular hexacosanoic acid, are found in peroxisomal disorders including adrenoleukodystrophy. Also hexacosanoic acid, ceric acid, ceratinic acid, cerinic acid, cerotate.	https://www.caymanchem.com/app/template/Product.vm/catalog/13354
CCL2	Chemokine (C-C motif) ligand 2	One of the key chemokines that regulate migration and infiltration of monocytes/macrophages. Also: Monocyte chemoattractant protein-1 (MCP-1), and CCL2.	http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2755091/
CHTN	Chitin	Chitin is a linear polysaccharide of beta-1->4 linked units of acetylglucosamine. It is the second most abundant biopolymer on earth, found especially in insects and fungi.	http://www.ncbi.nlm.nih.gov
CHLR	Chloride	A binary compound of chlorine.	The American Heritage® Dictionary of the English Language, Fourth Edition copyright ©2000
CLCO	Chlorine concentration	The concentration of chlorine found in a sample.	ECOTOX

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
CLGA	Chlorogenic acid	A naturally occuring phenolic acid which is a carcinogenic inhibitor. It has also been shown to prevent paraquat-induced oxidative stress in rats. Chemical name: Cyclohexanecarboxylic acid	www.biology-online.org/dictionary/Chlorogenic_acid
CHLA	Chlorophyll A Concentration	The major pigment found in all oxygen-evolving photosynthetic organisms (higher plants, and red and green algae).	Farlex Partner Medical Dictionary, 2012
CHLB	Chlorophyll B Concentration	Chlorophyll B: A yellow-green chlorophyll pigment which occurs only in plants and green algae. It functions as a light harvesting pigment that pass on the light excitation to chlorophyll a. It absorbs well at wavelength of 450-500 nm and 600-650 nm of the electromagnetic spectrum. Its molecular formula is C55H70O6N4Mg.	www.biology-online.org/dictionary/Chlorophyll_b
CHAB	Chlorophyll A:Chlorophyll B	The ratio of Chlorophyll A and Chlorophyll B found in a sample.	ECOTOX
CACC	Chlorophyll A to Chlorophyll C ratio	The ratio of Chlorophyll A and Chlorophyll C found in a sample.	ECOTOX
CHAP	Chlorophyll A to Phaeophytin A ratio	Ratio of Chlorophyll A to Phaeophytin A in a sample.	ECOTOX
CHCR	Chlorophyll Carbon ratio	The ratio of chlorophyll to carbon found in a sample.	ECOTOX
CHLC	Chlorophyll C concentration	Chlorophyll C: A form of chlorophyll that occurs only in algae, specifically the diatoms, dinoflagellates and brown algae. Its role is to pass on the light excitation to chlorophyll a. Its molecular formula is C35H28O5N4Mg.	www.biology-online.org/dictionary/Chlorophyll_c
CHLO	Chlorophyll Concentration	Any of a group of related green pigments found in photosynthetic cells that converts light energy into ATP and other forms of energy needed for biochemical processes; it is found in green plants, brown and red algae, and certain aerobic and anaerobic bacteria.	The American Heritage® Medical Dictionary Copyright, 2007, 2004
CHCT	Chlorophyll:Carotenoids	The ratio of chlorophyll to carotenoids in a sample	ECOTOX
COAN	Chlorpyrifos-o-analog	A metabolite of the chemical Chlorpyrifos.	ECOTOX

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
CHOL	Cholesterol	A pearly, fatlike steroid alcohol, C27H45OH, crystallizing in the form of leaflets or plates from dilute alcohol and found in animal fats and oils, in bile, blood, brain tissue, milk, yolk of egg, myelin sheaths of nerve fibres, the liver, kidneys and adrenal glands. It is a precursor of bile acids and is important in the synthesis of steroid hormones.	www.biology-online.org/dictionary/Cholesterol
CLET	Cholesterol ethers	Ether compound of cholesterol.	ECOTOX
CHES	Cholesteryl ester	Esterified cholesterol.	ECOREF 67751
CHLN	Choline	A quaternary amine, often classified as a member of the B vitamin complex; it occurs in phosphatidylcholine and acetylcholine, is an important methyl donor in intermediary metabolism, and prevents the deposition of fat in the liver.	Dorland's Medical Dictionary for Health Consumers, 2007
CHDS	Chondroitin Sulfate	Chondroitin Sulfate is a derivative of chondroitin which has a sulfate moiety esterified to the galactosamine moiety of chondroitin, found in various tissues (as cartilage, adult bone, and tendons).	http://www.ncbi.nlm.nih.gov and http://www.merriam-webster.com
CHOR	Choriogenin	An estrogen-mediated protein.	ECOREF #167808
CRCO	Chromium content	The concentration of chromium found in a sample.	ECOTOX
CRPR	Chromium to Phosphorus Ratio	The ratio of chromium to phosphorus in a sample.	ECOTOX
CMYS	Chymotrypsin	(Protein) serine proteases from pancreas. Preferentially hydrolyse phe, Tyr or trp peptide and ester bonds.	www.biology-online.org/dictionary/Chymotrypsin
CHYM	Chymotrypsinogen	An inactive proenzyme secreted by the pancreas and cleaved by trypsin in the small intestine to yield chymotrypsin.	Dorland's Medical Dictionary for Health Consumers, 2007
C12O	cis-12-octadecenoic acid	cis-12-octadecenoic acid (C18:1 cis12) is a mono unsaturated fatty acid.	ECOTOX
C13O	cis-13-octadecenoic acid	cis-13-octadecenoic acid (C18:1 cis13) is a mono unsaturated fatty acid.	ECOTOX
C7HD	cis-7-hexadecenoic acid	cis-7-hexadecenoic acid (C16:1 cis7) is a mono unsaturated fatty acid.	ECOTOX
C9HD	cis-9-heptadecenoic acid	cis-9-heptadecenoic acid (C17:1 cis9) is a mono unsaturated fatty acid.	ECOTOX

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
CANT	cis-Aconitic acid	An intermediate in the isomerization of citrate to isocitrate in the citric acid cycle . Also: Cis-aconitate, Citridinic acid, Pyrocitric acid, Achilleic acid, Equisetic acid.	http://www.ebi.ac.uk/chebi/searchId.do?chebiId=CHEBI:16383 and https://en.wikipedia.org/wiki/Aconitic_acid
C11O	cis-vaccenic acid	cis-11-Octadecenoic acid (C18:1 cis11), or cis-vaccenic acid, is a mono unsaturated fatty acid.	ECOTOX
CITT	Citrate	Citrate can refer either to the conjugate base of citric acid, (C3H5O(COO)3), or to the esters of citric acid.	http://en.wikipedia.org/wiki
CITA	Citric acid	An important intermediate in the citric acid cycle which breaks down glucose into water and carbon dioxide when oxygen is present.	www.biology-online.org/dictionary/Citric_acid
CITR	Citrulline	The organic compound citrulline is an a-amino acid. It is a key intermediate in the urea cycle, the pathway by which mammals excrete ammonia.	http://en.wikipedia.org/wiki
FCIX	Coagulation Factor IX	Storage-stable blood coagulation factor acting in the intrinsic pathway. Its activated form, IXa, forms a complex with factor VIII and calcium on platelet factor 3 to activate factor X to Xa. Deficiency of factor IX results in Hemophilia B (Christmas Disease).	http://www.ncbi.nlm.nih.gov/mesh/68005164
FVII	Coagulation Factor VII	Heat- and storage-stable plasma protein that is activated by tissue thromboplastin to form factor VIIa in the extrinsic pathway of blood coagulation. The activated form then catalyzes the activation of factor X to factor Xa. Also known as: Blood Coagulation Factor VII ,Stable Factor, Proconvertin.	http://www.ncbi.nlm.nih.gov/mesh/68005167
CFCX	Coagulation Factor X	Storage-stable glycoprotein blood coagulation factor that can be activated to factor Xa by both the intrinsic and extrinsic pathways. A deficiency of factor X, sometimes called Stuart-Prower factor deficiency, may lead to a systemic coagulation disorder. Also known as: Autoprothrombin III , Stuart Factor.	http://www.ncbi.nlm.nih.gov/mesh/68005170
COCO	Cobalt Content	The concentration of cobalt found in a sample.	ECOTOX
CLLG	Collagen	The protein substance of the white fibers (collagenous fibers) of skin, tendon, bone, cartilage and all other connective tissue, composed of molecules of tropocollagen, it is converted into gelatin by boiling. Collagenous pertaining to collagen, forming or producing collagen.	www.biology-online.org/dictionary/Collagen

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
CLHP	Collagen to hydroxyproline ratio	Ratio of collagen to hydroxyproline	ECOTOX
CSF2	Colony-Stimulating Factor, Granulocyte-Macrophage (CSF2)	Granulocyte-Macrophage Colony-Stimulating Factor is an acidic glycoprotein of MW 23 kDa with internal disulfide bonds. The protein is produced in response to a number of inflammatory mediators by mesenchymal cells present in the hemopoietic environment and at peripheral sites of inflammation. GM-CSF is able to stimulate the production of neutrophilic granulocytes, macrophages, and mixed granulocyte-macrophage colonies from bone marrow cells and can stimulate the formation of eosinophil colonies from fetal liver progenitor cells. GM-CSF can also stimulate some functional activities in mature granulocytes and macrophages. Also: CSF-2	http://www.ncbi.nlm.nih.gov
CCC3	Complement component C3-1	A protein of the immune system. It plays a central role in the complement system and contributes to innate immunity.	http://en.wikipedia.org/wiki/Complement_component_3
CCC9	Complement component C9	Constituent of the membrane attack complex (MAC) that plays a key role in the innate and adaptive immune response by forming pores in the plasma membrane of target cells. C9 is the pore-forming subunit of the MAC.	http://www.uniprot.org/uniprot/P02748#section_comments
CNDN	Conjugated Dienes	Dienes are hydrocarbons which contain two double bonds. Dienes are intermediate between alkenes and polyenes.Conjugated dienes have conjugated double bonds separated by one single bond. They are also the most stable.	http://en.wikipedia.org
CJLA	Conjugated Linoleic Acids	Conjugated Linoleic Acids represent a group of around nine geometric and positional isomers of Linoleic Acid in which the trans/cis double bonds are conjugated, where double bonds alternate with single bonds.	http://www.ncbi.nlm.nih.gov
CUAI	Copper Accumulation index	The ratio of a chemical in the organism to the ratio of the chemical in the soil.	ECOTOX
CUCO	Copper Content	The concentration of copper found in a sample.	ECOTOX
CUCD	Copper to Cadmium ratio	The ratio of copper to cadmium.	ECOTOX
CUCR	Copper to Carbon ratio	The ratio of copper to carbon in a sample.	ECOTOX
CUMN	Copper to Manganese Ratio	Ratio of copper to manganese in an organism or organism's tissues.	ECOTOX
CUMO	Copper to molybdenum ratio	Ratio of copper to molybdenum in an organism or organism's tissues.	ECOTOX

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
CUZN	Copper to Zinc Ratio	Ratio of copper to molybdenum in an organism or organism's tissues.	ECOTOX
CTR1	Copper Transporter 1	Copper Transporter 1 is a high-affinity copper transporter protein of the plasma membrane.	http://www.ncbi.nlm.nih.gov
CPRP	Coproporphyrin	A porphyrin occurring as several isomers; the III isomer, an intermediate in heme biosynthesis, is excreted in the feces and urine in hereditary coproporphyria and variegate porphyria; the I isomer, a side product, is excreted in the feces and urine in congenital erythropoietic porphyria.	Dorland's Medical Dictionary for Health Consumers, 2007
CCTR	Coproprophyrin creatine ratio	The ratio of Coproprophyrin to creatine in a sample.	ECOTOX
CIII	Coproporphyrinogen III	An intermediate in the heme biosynthesis from uroporphyrinogen-III pathway.	http://www.ymdb.ca/compounds/YMDB00084
CMCA	Coumaric acids	Hydroxycinnamic acid and its derivatives. Act as activators of the indoleacetic acid oxidizing system, thereby producing a decrease in the endogenous level of bound indoleacetic acid in plants.	http://www.ncbi.nlm.nih.gov
CRPT	C-reactive protein	C-reactive protein (CRP) is produced by the liver. The level of CRP rises when there is inflammation throughout the body.	http://www.nlm.nih.gov/medlineplus/ency/article/003356.htm
CRTN	Creatine	A compound which is made by the body and is used to store energy in the form of phosphate molecules.	www.biology-online.org/dictionary/Creatine
CREC	Creatine compounds	The total amount of creatine compounds found in a sample	ECOTOX
CREA	Creatinine	A nitrogenous compound formed as the end product of CREATINE metabolism. It is formed in the muscle in relatively small amounts, passes into the blood and is excreted in the urine. A laboratory test for the creatinine level in the blood may be used as a measurement of kidney function.	Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, Seventh Edition, 2003
CC23	Crustacean calcium-binding protein 23	Also called CCBP-23 protein. Possibly acts as a regulatory protein and not as a calcium buffer or transport protein.	expasy.org/uniprot/CCB23_ORCLI
C1AB	Cry1Ab protein	Cry1Ab protein is an insecticidal crystal protein encoded by strains of B. thuringiensis, or crops genetically engineered to express the protein.	http://www.ncbi.nlm.nih.gov and ECOTOX

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
CGMP	Cyclic guanylic acid, cGMP	Cyclic guanosine monophosphate (cGMP) is a cyclic nucleotide derived from guanosine triphosphate (GTP). cGMP acts as a second messenger much like cyclic AMP. Its most likely mechanism of action is activation of intracellular protein kinases in response to the binding of membrane-impermeable peptide hormones to the external cell surface. Also called: guanosine monophosphate - a nucleotide consisting of guanine, ribose or deoxyribose, and a phosphate group. It is a constituent of DNA or RNA.	Francis SH, Corbin JD (August 1999). "Cyclic nucleotide-dependent protein kinases: intracellular receptors for cAMP and cGMP action". Crit Rev Clin Lab Sci 36 (4): 275–328 and http://dictionary.reference.com/browse/guanylic+acid
CYTN	Cysteine	An amino acid found in many proteins in the body, including keratin. It is a metabolic precursor of cystine and an important source of sulfur for various body functions.	Mosby's Medical Dictionary, 8th edition, 2009,
CPNI	Cysteine proteinase inhibitors	Exogenous and endogenous compounds which inhibit cysteine proteinases.	www.biology-online.org/dictionary/Cysteine_proteinase_inhibitors
CYSI	Cystine	A naturally occurring amino acid, the chief sulfur-containing component of the protein molecule. It is sometimes found in the urine and in the kidneys in the form of minute hexagonal crystals, frequently forming cystine calculus in the bladder	Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, Seventh Edition, 2003
CYSN	Cytidine	A nucleoside containing cytosine.	http://www.merriam-webster.com/medical/cytidine
CYCB	Cytochalasin B	An alkaloid that inhibits a wide variety of cellular movements, interacts with actomyosin, the contractile protein complex of striated muscle.	Proc. Nat. Acad. Sci. USA Vol. 69, No. 2, pp. 442-446, February 1972
CYTC	Cytochrome c	Cytochromes of the c type that are found in eukaryotic mitochondria. They serve as redox intermediates that accept electrons from mitochondrial electron transport complex III and transfer them to mitochondrial electron transport complex IV.	http://www.ncbi.nlm.nih.gov

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
CP2K	Cytochrome P2K (CYP 2K)	Electron transfer hemeprotein having a mode of action in which the transfer of a single electron is effected by the reversible valence change of the central iron atom of the heme prosthetic group; P2K = pigment 2K	ECOTOX
CP3K	Cytochrome P3K (CYP 3K)	Electron transfer hemeprotein having a mode of action in which the transfer of a single electron is effected by the reversible valence change of the central iron atom of the heme prosthetic group; P3K = pigment 3K.	ECOTOX
DDEC	DDE concentration	The concentration of DDE in tissue	ECOTOX
DB19	DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 19 (DBP5 homolog, yeast)	A protein involved in ATP catabolic process.	http://zfin.org/cgi-bin/webdriver?MIval=aa-markergoview.apg&OID=ZDB-GENE-020419-30
DABT	Dehydroascorbate	Any salt or ester of dehydroascorbic acid.	www.lexic.us/definition-of/dehydroascorbate
DASC	Dehydroascorbic acid	C6H6O6 A relatively inactive acid resulting from elimination of two hydrogen atoms from ascorbic acid when the latter is oxidized by air or other agents; has potential ascorbic acid activity.	McGraw-Hill Dictionary of Scientific & Technical Terms, 2003
DAAA	Dehydroascorbic acid to Ascorbic Acid ratio	The ratio of Dehydroascorbic acid to Ascorbic Acid in a sample	ECOTOX
DAAS	Dehydroascorbic acid and Ascorbic Acid	The amount of Dehydroascorbic acid and Ascorbic Acid in a sample	ECOTOX
DHRT	Dehydroretinol (Vitamin A2)	Vitamin A2, the form, C20H28O, of vitamin A found in the retina and liver of freshwater fishes and certain invertebrates and amphibians; it differs from retinol (vitamin A1) in having one more conjugated double bond and has approximately one-third the biological activity of retinol. Called also retinol2.	Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, Seventh Edition, 2003
ACTR	delta Aminolevulinic acid creatine ratio	The ratio of delta Aminolevulinic acid to creatine in a sample	ECOTOX
DALA	delta-Aminolevulinic acid	The delta-aminolevulinic acid (pronounce) synthase (ALA synthase) reaction occurs in the mitochondria. The product of the reaction, ALA, diffuses into the cytoplasm, where the next several steps of heme synthesis occur.	http://medlib.med.utah.edu/NetBiochem/hi31.htm

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
DHMG	Deoxyhemoglobin	Hemoglobin not combined with oxygen, formed when oxyhemoglobin releases its oxygen to the tissues.	Dorland's Medical Dictionary for Health Consumers. 2007
DOVL	Deoxynivalenol	Deoxynivalenol, also known as Vomitoxin, is a type B trichothecene, an epoxy-sesquiterpeneoid. This micotoxin may contaminate food or feed grains, induce emesis and inhibit protein synthesis.	http://en.wikipedia.org/wiki and http://www.ncbi.nlm.nih.gov
DSMN	Desmosine	Special amino acid, derived from four lysine residues, and found only in elastin. Allows elastin to stretch reversibly in all directions.	Saunders Comprehensive Veterinary Dictionary, 3 ed, 2007
DDXN	Diadinoxanthin	Diadinoxanthin, 5,6-Epoxy-7',8'-didehydro-5,6-dihydro-carotene-3,3-diol, is a Xanthophyll.	http://www.ncbi.nlm.nih.gov and http://en.wikipedia.org/wiki
DAPP	Diaminopropane	Diaminopropane may refer to either of two isomeric chemical compounds: 1,2-diaminopropane or 1,3-diaminopropane.	http://en.wikipedia.org/wiki
DTXN	Diatoxanthin	Diatoxanthin is a Xanthophyll.	http://www.ncbi.nlm.nih.gov and http://en.wikipedia.org/wiki
DDRP	Didehydroretinyl palmitate	A vitamin.	ECOTOX
DISC	Diethylsuccinate Hydrolysis	No definition available.	
DGDG	Digalactosyl Diglyceride (Glycolipid)	A plant lipid.	http://generon.co.uk/index.php?route=product/product&product_id=355
DGCR	Diglyceride	A glyceride containing two fatty acid molecules in ester linkage.	Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, Seventh Edition, 2003
DHLA	Dihomo-gamma-Linolenic Acid	Dihomo-gamma-Linolenic Acid (C20:3n-6), also all cis-8,11,14-eicosatetraenoic acid, is a poly unsaturated fatty acid.	ECOTOX and http://www.ncbi.nlm.nih.gov

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
DRP3	Dihydropyrimidinase-related protein 3	Necessary for signaling by class 3 semaphorins and subsequent remodeling of the cytoskeleton. Plays a role in axon guidance, neuronal growth cone collapse and cell migration. Alternate name: Unc-33-like phosphoprotein 1, Dpysl3	http://www.uniprot.org/uniprot/Q62188
DPR5	Dihydropyrimidinase-related protein 5	A protein that may have a function in neuronal differentiation and/or axon growth. Also: Collapsin response mediator protein 5.	http://www.uniprot.org/uniprot/Q9EQF6
DHAP	Dihydroxyacetone-P	The accumulation of dihydroxyacetone-P leads to an increased ether-linked glycerolipid synthesis. The release of fatty acids and the accumulation of ether-linked lipids may protect tumor cells from immune attack.	www.metabolic-database.com/html/lipogenesis_fatty_acid_accumul.html
DHPG	Dihydroxyphenylethylene glycol	A noradrenaline metabolite. Also known as: DHPG, DOPEG, 3,4-dihydroxyphenylglycol, (S)-isomer dihydroxyphenylethylene glycol, (+-)-isomer dihydroxyphenylethylene glycol, 3,4-dihydroxyphenylethylene glycol.	http://www.ncbi.nlm.nih.gov/mesh?term=dihydroxyphenylethylene%20glycol
DMSP	Dimethylsulfoniopropionate	An organosulfur compound with the formula (CH3)2S+CH2CH2COO−. This zwitterionic metabolite can be found in marine phytoplankton, seaweeds, and some species of terrestrial and aquatic vascular plants. It functions as an osmolyte as well as several other physiological and environmental roles have also been identified. Also: DMSP.	http://en.wikipedia.org/wiki/Dimethylsulfoniopropionate
PGF2	Dinoprost	Dinoprost is a naturally occurring prostaglandin that has oxytocic, luteolytic, and abortifacient activities. Due to its vasocontractile properties, the compound has a variety of other biological actions. Also: PGF2, Prostaglandin F2alpha, Prostaglandin F2, 9alpha,11beta-PGF2, Estrofan, Enzaprost F	http://www.ncbi.nlm.nih.gov
DPHG	Diphosphatidylglycerol	Diphosphatidylglycerol, also called cardiolipin, is an acidic phospholipids composed of two molecules of phosphatidic acid covalently linked to a molecule of glycerol. They occur primarily in mitochondrial inner membranes and in bacterial plasma membranes. Chemical name: 1,3-bis(sn-3'-phosphatidyl)-sn-glycerol	http://www.ncbi.nlm.nih.gov and http://www.lipidlibrary.co.uk
DTBL	Direct Bilirubin (Conjugated)	After the liver adds a glucuronide to the unconjugated bilirubin, it is called conjugated bilirubin, also called direct bilirubin. Conjugated bilirubin is excreted into the hepatic ducts, the common bile duct and then the bowel.	www.websters-online-dictionary.org/definitions/Bilirubin
DCHA	Docosahexaenoic acid	Docosahexaenoic acid (22:6 n-3), also DHA or C22:6, (all cis-4,7,10,13,16,19) omega-3 fatty acid, is a poly unsaturated fatty acid.	ECOTOX

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
DCPA	Docosapentaenoic acid	Docosapentaenoic acid (22:5 n-3), also DPA; Clupanodonic acid; or C22:5(all cis-7,10,13,16,19) acid, is a poly unsaturated fatty acid.	ECOTOX and http://en.wikipedia.org/wiki
D6FA	Docosatrienoic acid (C22:3n-6)	Docosatrienoic acid (C22:3n-6) is a poly unsaturated fatty acid.	ECOTOX
D11A	Docosenoic acid (C22:1n-11)	Docosenoic acid (C22:1n-11) is a poly unsaturated fatty acid.	ECOTOX
DMCA	Domoic Acid	Causes amnesic shellfish poisoning (ASP), is an amino acid phycotoxin (algal toxin) found associated with certain algal blooms	http://en.wikipedia.org/wiki/Domoic_acid
DOP1	Dopa	A phenolic amino acid $C_9H_{11}NO_4$ occurring naturally (as in broad beans) or prepared synthetically (as from tyrosine); is used in the treatment of Parkinson's disease—called also dihydroxyphenylalanine.	www.merriam-webster.com/dictionary/dopa
DATP	Dopamine Transporter Protein	The dopamine transporter (also dopamine active transporter, DAT, Dopamine Carriers, Dopamine Plasma Membrane Transporter Proteins, SLC6A3) is a membrane spanning protein that binds the neurotransmitter dopamine and performs reuptake of it from the synapse into a neuron.	http://en.wikipedia.org/wiki and http://www.nlm.nih.gov/mesh
DRYM	Dry matter	All soluble and insoluble organic substances and inorganic substances present in a sample except for water.	www.florafood.com/common/documents/alidefpar.pdf
DYEN	Dynein	A protein from the microtubules of cilia and flagella, which functions as an ATP-splitting enzyme and is essential to the motility of cilia and flagella.	http://medical-dictionary.thefreedictionary.com/dynein
ECCR	Echinochrome	Any of several red to brown respiratory pigments found in certain sea urchins.	www.merriam-webster.com/dictionary/echinochrome
ECDA	Eicosadienoic acid	Eicosadienoic acid (C20:2 n-6), also C20:2 (cis, cis-11, 14) acid, is a poly unsaturated fatty acid.	ECOTOX and http://en.wikipedia.org/wiki
ECSP	Eicosapentaenoate	A fatty acid.	
EIPA	Eicosapentaenoic acid	Eicosapentaenoic acid (EPA or also icosapentaenoic acid) is an omega-3 fatty acid. In physiological literature, it is given the name 20:5(n-3). It also has the trivial name timnodonic acid. It is a polyunsaturated fatty acid (PUFA) that acts as a precursor for prostaglandin-3 (which inhibits platelet aggregation), thromboxane-3, and leukotriene-5 groups (all eicosanoids).	http://en.wikipedia.org/wiki/Eicosapentaenoic_acid

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
EIDO	Eicosapentaenoic acid and Docosahexaenoic acid	The amount of Eicosapentaenoic acid and Docosahexaenoic acid found in a sample.	ECOTOX
ECSA	Eicosatrienoic acid	8-cis,11-cis,14-cis-Eicosatrienoic acid (dihomo-gamma-linolenic acid or 20:3(n-6)) is the immediate precursor of arachidonic acid, and of a family of eicosanoids (PG1 prostaglandins).	http://lipidlibrary.aocs.org/lipids/fa_poly/index.htm
ECOA	Eicosenoic acid(C20:1 cis11)	Eicosenoic acid (C20:1 cis11), or Gondoic acid, is a mono unsaturated fatty acid.	ECOTOX
E11A	Eicosenoic acid (C20:1n-11)	Eicosenoic acid (C20:1n-11) is a poly unsaturated fatty acid.	ECOTOX
ELDA	Elaidic acid	Elaidic acid (C18:1 trans9) is a mono unsaturated fatty acid.	ECOTOX
ELST	Elastin	Glycoprotein (70 kD) randomly coiled and cross linked to form elastic fibers that are found in connective tissue. Like collagen, the amino acid composition is unusual with 30% of residues being glycine and with a high proline content. Cross linking depends upon formation of desmosine from four lysine side groups. The mechanical properties of elastin are poorer in old animals.	www.biology-online.org/dictionary/Elastin
ELYT	Electrolytes	Substances in solution in the ionized state, carrying an electrical charge (anions negative, cations positive). Applies to those in the body fluids, where dissociated sodium chloride is the major electrolyte in extracellular fluids (Na+and Cl-), and potassium (K+), with organic anions, in intracellular fluids. Other physiologically important cations are calcium and magnesium, and the anions bicarbonate and phosphate. Normal electrolyte concentrations are essential for normal cellular function. Movements of ions are crucial in the maintenance of potential differences across cell membranes and, for example, in the generation and transmission of nervous impulses, neuromuscular and synaptic transmission, and all secretory function.	Dictionary of Sport and Exercise Science and Medicine by Churchill Livingstone, 2008
ETFA	Electron transfer flavoprotein subunit alpha	The electron transfer flavoprotein serves as a specific electron acceptor for several dehydrogenases, including five acyl-CoA dehydrogenases, glutaryl-CoA and sarcosine dehydrogenase. It transfers the electrons to the main mitochondrial respiratory chain via ETF-ubiquinone oxidoreductase (ETF dehydrogenase). Also: Electron-transfer-flavoprotein, alpha polypeptide, Electron transfer flavoprotein subunit alpha, mitochondrial.	http://www.uniprot.org/uniprot/P13804

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EF1A	Elongation factor-1 alpha	Peptide elongation factor 1 is a multisubunit protein that is responsible for the GTP-dependent binding of aminoacyl-tRNAs to eukaryotic ribosomes. The alpha subunit (EF-1alpha) binds aminoacyl-tRNA and transfers it to the ribosome in a process linked to GTP hydrolysis.	http://www.online-medical-dictionary.org/omd.asp?q=Elongation+Factor+1alpha
EDPS	Endoplasmin	Molecular chaperone that functions in the processing and transport of secreted proteins. When associated with CNPY3, required for proper folding of Toll-like receptors. Functions in endoplasmic reticulum associated degradation (ERAD). Also: Glucose-regulated protein 94, 94 kDa glucose-regulated protein, GRP-94, Grp94, Heat shock protein 90 kDa beta member 1, HSP90B1.	http://www.uniprot.org/uniprot/P41148
ENDP	Endorphin	One of the three major groups of endogenous opioid peptides.	http://www.ncbi.nlm.nih.gov
ETXN	Endotoxin	Toxins closely associated with the living cytoplasm or cell wall of certain microorganisms, which do not readily diffuse into the culture medium, but are released upon lysis of the cells.	http://www.ncbi.nlm.nih.gov
NRGC	Energy Compound	No definition available**.**	
NKPH	Enkephalin	Either of two peptides with opiate and analgesic activity that occur naturally in the brain and have a marked affinity for opiate receptors.	http://www.m-w.com/
ENKP	Enkephalins	Natural opiate pentapeptides isolated originally from pig brain. Leu enkephalin (YGGFL) and Met enkephalin (YGGFM) bind particularly strongly to _ type opiate receptors.	www.biology-online.org/dictionary/Enkephalins
EZIN	Enzyme inhibitors	Compounds or agents that combine with an enzyme in such a manner as to prevent the normal substrate-enzyme combination and the catalytic reaction.	www.biology-online.org/dictionary/Enzyme_inhibitors
EPDM	Ependymin	A protein that might have a function during axon regeneration. It is also thought to play a role in neural plasticity.	http://www.uniprot.org/uniprot/P17561
ETCO	epsillon-Tocopherol concentration	One of ten forms of vitamin E.	Traber, MG. "Chapter 15: vitamin E". In Bowman BA and Russell RM. Current Knowledge in Nutrition I (9 ed.). Washington DC, USA: ILSI. ISBN 978-1-57881-199-1.

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
ERGL	Ergosterol	Ergosterol is a steroid of interest both because its biosynthesis in fungi is a target of antifungal agents, notably azoles, and because when it is present in skin of animals, ultraviolet rays break a bond to result in ergocalciferol.	http://www.ncbi.nlm.nih.gov
ERUC	Erucic Acid	A 22-carbon unsaturated fatty acid present in the seeds of nasturtium (Indian cress) and of several Cruciferae species (rape, mustard, and wallflower); thought to be toxic to cardiac muscle. Also: 22:1(n-9)	Farlex Partner Medical Dictionary, 2012 and https://en.wikipedia.org/wiki/Polyunsaturated_fatty_acid
ETSR	Erythrocyte sedimentation rate	A test that measures the rate at which red blood cells settle through a column of liquid. A non-specific index of inflammation.	www.biology-online.org/dictionary/Esr
ECFC	Esterified cholesterol free cholesterol ratio	The ratio of esterified chlolesterol to free cholesterol found in an organism or tissue sample	ECOTOX
ETST	Esters of Sterins	A fractional component of blood lipids	ECOREF#72824
ESRP	Estrogen receptor protein	An estrogen receptor is a protein molecule found inside those cells that are targets for estrogen action. Estrogen receptors contain a specific site to which only estrogens (or closely related molecules) can bind. Also known as: ER-alpha, Estradiol receptor, Nuclear receptor subfamily 3 group A member 1.	http://www.uniprot.org/uniprot/P03372 and http://www.cancer.gov/cancertopics/understandingcancer/estrogenreceptors/page3
ETHM	Ethanolamine	A viscous, hygroscopic amino alcohol with an ammoniacal odor. It is widely distributed in biological tissue and is a component of lecithin. It is used as a surfactant, fluorimetric reagent, and to remove CO2 and H2S from natural gas and other gases.	http://www.ncbi.nlm.nih.gov/mesh/68019856
EICN	Ethyl isocyanide	Bound ethyl isocyanide serves as a structural model for the transition state of the NO-induced oxidation reaction.	phillips-lab.biochem.wisc.edu
ETHL	Ethylene	A colorless flammable gas, CH2dbondCH2, with a slightly sweet odor and taste; formerly used as an inhalation anesthetic.	Dorland's Medical Dictionary for Health Consumers, 2007

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
EUCA	Eucalyptol	A liquid C10H18O with an odor of camphor that occurs in many essential oils (as of eucalyptus). Also: 1,8-cineol, 1,8-cineole, cajeputol, 1,8-epoxy-p-menthane, 1,8-oxido-p-menthane, eucalyptole, 1,3,3-trimethyl-2-oxabicyclo[2,2,2]octane, cineol, cineole.	http://www.merriam-webster.com/dictionary/eucalyptol and http://pubchem.ncbi.nlm.nih.gov/summary/summary.cgi?cid=2758
FASL	Fas Ligand	A transmembrane protein belonging to the tumor necrosis factor superfamily that was originally discovered on cells of the lymphoid-myeloid lineage, including activated T-Lymphocytes and natural killer cells. It plays an important role in immune homeostasis and cell-mediated toxicity by binding to the Fas receptor and triggering apoptosis.	http://www.reference.md/files/D053/mD053222.html
F2IP	F2-Isoprostanes	F2-Isoprostanes are a class of Isoprostanes derived from the free radical oxidation of arachidonic acid through non-enzymatic oxidation of cell membrane lipids.	http://www.ncbi.nlm.nih.gov
FAME	Fatty Acid Methyl Ester	A type of fatty acid ester that can be produced by an alkali-catalyzed reaction between fats or fatty acids and methanol. It can be used as a tool for microbial source tracking (MST). The molecules in biodiesel are primarily FAMEs.	http://en.wikipedia.org/wiki/Fatty_acid_methyl_ester
FATS	Fatty acids	Fatty acids can saturated, monounsaturated and polyunsaturated.	ECOTOX
FATL	Fatty acid, total	Any of the group of a long chain of hydrocarbon derived from the breakdown of fats (through a process called hydrolysis). It has a single carboxylic group and aliphatic tail.	www.biology-online.org/dictionary/Fatty_acid
FFTA	Fatty Acids, Free or Nonesterified	A nonesterified fatty acid, released by the hydrolysis of triglycerides within adipose tissue. Free fatty acids can be used as an immediate source of energy by many organs and can be converted by the liver into ketone bodies.	Mosby's Medical Dictionary, 8th edition, 2009
FBXP	F-box only protein 50	A protein that promotes cell proliferation. Also: Nonspecific cytotoxic cell receptor protein 1, NCC receptor protein 1 homolog, NCCRP1, FBXO50.	http://www.uniprot.org/uniprot/Q6ZVX7
FSPP	Female specific proteins	Proteins that only appear in female hemolymph or tissues during oocyte maturation.	http://biotech.korea.ac.kr/member/kimhr/17.pdf

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Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
FENR	Fenretinide (4-Hydroxy-retinoic acid)	An orally-active synthetic phenylretinamide analogue of retinol (vitamin A) with potential antineoplastic and chemopreventive activities. Fenretinide binds to and activates retinoic acid receptors (RARs), thereby inducing cell differentiation and apoptosis in some tumor cell types. This agent also inhibits tumor growth by modulating angiogenesis-associated growth factors and their receptors and exhibits retinoid receptor-independent apoptotic properties.	http://www.cancer.gov/drugdictionary?cdrid=39582
FRTN	Ferritin	Ferritins are Iron-containing proteins that are widely distributed in animals, plants, and microorganisms. Their major function is to store iron in a nontoxic bioavailable form. Each ferritin molecule consists of ferric iron in a hollow protein shell (apoferritins) made of 24 subunits of various sequences depending on the species and tissue types.	http://www.ncbi.nlm.nih.gov
FRLA	Ferulic acid	Ferulic acid is an organic compound that is an abundant phenolic phytochemical found in plant cell walls. It is a derivative of trans-cinnamic acid. As a component of lignin, ferulic acid is a precursor in the manufacture of other aromatic compounds.	http://en.wikipedia.org
FIBR	Fiber	Coarse, indigestible plant matter, consisting primarily of polysaccharides such as cellulose, that when eaten stimulates intestinal peristalsis.	The American Heritage® Medical Dictionary Copyright, 2007, 2004
FBRG	Fibrinogen	Soluble plasma protein (340 kD, 46 nm long), composed of 6 peptide chains.	www.biology-online.org/dictionary/Fibrinogen
FBNT	Fibronectin	An adhesive glycoprotein: one form circulates in plasma and acts as an opsonin; another is a cell-surface protein that mediates cellular adhesive interactions.	Dorland's Medical Dictionary for Health Consumers, 2007
FLVN	Flavin	Any of a group of water-soluble yellow pigments widely distributed in animals and plants, including riboflavin and yellow enzymes.	Dorland's Medical Dictionary for Health Consumers, 2007

BCM	**Biochemical Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
FLAV	Flavonoid	Any of a group of aromatic compounds that have two substituted benzene rings connected by a chain of three carbon atoms and an oxygen bridge and that include many common pigments.	http://www.merriam-webster.com/medlineplus/Flavonoid
FLRS	Fluorescence	Property of emitting light while exposed to light, the emitted light having a wavelength only slightly longer than that of the light absorbed	Used for algae or other organisms that naturally fluoresce, may be used to measure chlorophyll or population growth rate. For example, if it is specifically stated that fluorescence is used to measure chlorophyll A, code the measurement as CHLA.
FLCO	Fluoride concentration	The concentration of fluoride found in sample.	ECOTOX
FLCA	Folic acid	A member of the vitamin B family that stimulates the hematopoietic system. It is present in the liver and kidney and is found in mushrooms, spinach, yeast, green leaves, and grasses. Also: Vitamin M, Pteroylglutamic Acid, Folate, Folvite, Folacin	http://www.ncbi.nlm.nih.gov/
FADH	Formaldehyde	Formaldehyde is the chemical compound with the formula H2CO. It is the simplest aldehyde-- an organic compound containing a terminal carbonyl group: it consists of exactly one carbonyl. Small amounts of formaldehyde are produced as a metabolic byproduct in most organisms.	http://en.wikipedia.org/wiki
FAAN	Free amino acid Nitrogen ratio	The ratio of Free Amino acid to nitrogen in a sample.	ECOTOX
FACR	Free amino acid to soluble carbohydrate ratio	The ratio of Free amino acid to soluble carbohydrate found in a sample.	ECOTOX

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
FTIX	Free thyroxine index	The amount of unbound, physiologically active thyroxine (T4) in serum. This amount is determined by direct assay or, more frequently, calculated on the basis of an in vitro uptake test. In this test the uptake (by resin or charcoal) of labeled triiodothyronine (T3) is measured; because T3 is less strongly bound by serum, it is used instead of T4. The free T4 index is then obtained by multiplying the T3 uptake by the total concentration of T4 in serum.	Mosby's Medical Dictionary, 8th edition, 2009
FRCT	Fructose	A 6 carbon sugar (hexose) abundant in plants. Fructose has its reducing group (carbonyl) at C2 and thus is a ketose, in contrast to glucose that has its carbonyl at C1 and thus an aldose. Sucrose, common table sugar, is the non-reducing disaccharide formed by an alpha linkage from C1 of glucose to C2 of fructose (latter in furanose form). Fructose is a component of polysaccharides such as insulin, levan.	www.biology-online.org/dictionary/Fructose
FXTN	Fucoxanthin	Fucoxanthin is a Xanthophyll.	http://www.ncbi.nlm.nih.gov
FUB1	Fumonisin B1	Fumonisine B1 is an inhibitor of ceramide synthase. Fumonisin B1 is the most prevalent member of a family of toxins produced by several species of Fusarium moulds which occur mainly in maize.	http://en.wikipedia.org/wiki/Fumonisin_B1
FUB2	Fumonisin B2	Fumonisin B2 is a mycotoxin produced by the fungus Fusarium moniliforme. It is a structural analog of Fumonisin B1. Fumonisin B2 is more cytotoxic than Fumonisin B1. Fumonisin B2 inhibits sphingosine acyl-transterase.	http://en.wikipedia.org/wiki/Fumonisin_B2
FUMO	Fumonisins	a family of toxins produced by several species of Fusarium moulds which occur mainly in maize	http://en.wikipedia.org/wiki/Fumonisin_B1
FRCM	Furanocoumarin	Furanocoumarins, or furocoumarins, are a class of organic chemical compounds produced by a variety of plants. They are biosynthesized partly through the phenylpropanoid pathway and the mevalonate pathway, which is biosynthesized by a coupling of dimethylallyl pyrophosphate (DMAPP) and 7-hydroxycoumarin (umbelliferone).	http://en.wikipedia.org/wiki/Furanocoumarin
GDAD	Gadoleic acid	Gadoleic acid is an unsaturated fatty acid. It is a prominent component of some fish oils including cod liver oil. Also: 20:1(n-9).	https://en.wikipedia.org/wiki/Gadoleic_acid
GLTL	Galactolipid	A glycolipid that yields galactose on hydrolysis.	http://www.fasthealth.com/dictionary/g/galactolipid.php

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GLCA	Gallic acid	A colorless or slightly yellow crystalline compound obtained from nutgalls. It is used in photography, pharmaceuticals, and as an analytical reagent. Also known as 3,4,5-Trihydroxybenzoic Acid.	http://www.ncbi.nlm.nih.gov
G1GL	Gamma-1 globulin	A class of globulins identified by its position after serum protein electrophoresis.	https://en.wikipedia.org/wiki/Gamma_globulin
G2GL	Gamma-2 globulin	A class of globulins identified by its position after serum protein electrophoresis.	https://en.wikipedia.org/wiki/Gamma_globulin
GAMB	gamma-Aminobutyrate	A gamma-amino acid anion resulting from the deprotonation of the carboxy group of gamma-aminobutyric acid. Also: 4-Aminobutyrate, 4-Aminobutylate, γ-aminobutanoate.	http://www.ebi.ac.uk/chebi/searchId.do?chebiId=CHEBI:30566
GABA	gamma-Aminobutyric acid	An amino acid C4H9NO2 that is a neurotransmitter that induces inhibition of postsynaptic neurons—abbreviation GABA	www.merriam-webster.com/medical/gamma-aminobutyric%20acid
GGLB	gamma-Globulins	Any of a group of globular proteins that are generally insoluble in water and present in blood, eggs, milk, and as a reserve protein in seeds. Blood serum globulins comprise four types: α1-, α2-, and β-globulins, which serve as carrier proteins; and γ-globulins (gamma globulins), which include the immunoglobulins responsible for immune responses.	"globulin." A Dictionary of Biology. 2004. Encyclopedia.com. 7 Jul. 2014 <http://www.encyclopedia.com>.
GBTR	gamma-Globulin to Transferrin ratio	The ratio of gamma-Globulin to Transferrin in a sample.	ECOTOX
GGLU	gamma-Glutamylcysteine	gamma-Glutamylcysteine is a precursor of glutathione. It is formed by gamma-glutamylcysteine synthetase and used by glutathione synthetase to form glutathione.	http://www.uscnk.com/directory/Gamma-Glutamylcysteine(gGLU)-3756.htm
GLAF	gamma-Linolenic acid	gamma-Linolenic acid (C18:3n-6), also C18:3 (all cis-6,9,12) acid or gamoleic acid, is a poly unsaturated fatty acid.	ECOTOX
GSYC	gamma-Synuclein	A protein that plays a role in neurofilament network integrity. May be involved in modulating axonal architecture during development and in the adult. May also function in modulating the keratin network in skin. Also: Synuclein gamma b, Persyn, Sensory neuron synuclein.	http://www.uniprot.org/uniprot/Q63544

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GTCO	gamma-Tocopherol concentration	A natural tocopherol with less antioxidant activity than alpha-tocopherol. It exhibits antioxidant activity by virtue of the phenolic hydrogen on the 2H-1-benzopyran-6-ol nucleus. As in beta-tocopherol, it also has three methyl groups on the 6-chromanol nucleus but at different sites.	http://de.dict.md/definition/Tocopherol
GNGL	Ganglioside	Any of a group of glycolipids that are found especially in the plasma membrane of cells of the gray matter and have sialic acid, hexoses, and hexosamines in the carbohydrate part and ceramide as the lipid.	www.merriam-webster.com/medical/ganglioside
GD1A	Ganglioside GD1a	Ganglioside antibodies are associated with diverse peripheral neuropathies. GD1a antibodies are associated with different variants of Guillain-Barre syndrome (GBS) particularly acute motor axonal neuropathy.	http://www.aruplab.com/guides/ug/tests/0051033.jsp
GD1B	Ganglioside GD1b	Ganglioside antibodies are associated with diverse peripheral neuropathies. GD1b antibodies are predominantly found in sensory ataxic neuropathy syndrome. Anti-GQ1b antibodies are seen in more than 80% of patients with Miller-Fisher syndrome and may be elevated in GBS patients with ophthalmoplegia	www.aruplab.com/guides/ug/tests/0051033.jsp
GGM1	Ganglioside GM1	Ganglioside antibodies are associated with diverse peripheral neuropathies. Elevated antibody levels to ganglioside-monosialic acid (GM1) and the neutral glycolipid, asialo-GM1 are associated with motor or sensorimotor neuropathies, particularly multifocal motor neuropathy. Anti-GM1 may occur as IgM (polyclonal or monoclonal) or IgG antibodies. These antibodies may also be found in patients with diverse connective tissue diseases as well as normal individuals.	www.aruplab.com/guides/ug/tests/0051033.jsp
GGT1	Ganglioside GT1	Gangliosid is a glycosphingolipid found in the brain and other nervous system tissues. Gangliosides are members of a group of galactose-containing cerebrosides with a basic composition of ceramide-glucose-galactose-*N*-acetyl neuraminic acid. Accumulation of gangliosides caused by an inborn error of metabolism results in gangliosidosis or Tay-Sachs disease.	Mosby's Medical Dictionary, 8th edition, 2009

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
GCBN	Gap charge balance	A measurement used for determining blood gases. Because of electrochemical balance the concentrations of serum cations and anions are the same. However, in the routine measurement of electrolytes, more anions are unmeasured than are cations; this leads to an expected "anion gap." As typically calculated, the anion gap is based on only three electrolytes: sodium, chloride and bicarbonate (or serum CO2).	http://www.mtsinai.org/pulmonary/noninvasive/gaps.htm
GTPC	Gentiopicrin	A bitter crystalline glucoside C16H20O9 obtained from gentians and especially from gentian root. Also: Gentiopicroside.	http://www.merriam-webster.com/medical/gentiopicrin and http://www.chemindustry.com/chemicals/01156881.html
GESM	Geosmin	An organic compound with a distinct earthy flavor and aroma, and is responsible for the earthy taste of beets and a contributor to the strong scent (petrichor) that occurs in the air when rain falls after a dry spell of weather or when soil is disturbed. It is produced by a variety of microorganisms. Chemically, it is a bicyclic alcohol with formula C12H22O, a derivative of decalin	http://encyclopedia.thefreedictionary.com/Geosmin
GERN	Geraniol	An olefinic terpene alcohol that is the principal constituent of oil of rose and oil of palmarosa; also found in many other volatile oils (for example, citronella and lemon grass). An isomer of linalool; an oily liquid with sweet rose odor used in perfumery that is also used as an insect attractant.	Farlex Partner Medical Dictionary, 2012
GERA	Geranyl Acetate	Geranyl acetate contains not less than 90 percent of total esters, calculated as C12H20O2. Geranyl acetate is found in the oils of Daucus carota L., Eucalyptus macarthurii Deane, and other oils. It is obtained from geraniol by ecetylation. It is a colourless liquid, having a pleasant flowery odour. Chemical name:3,7-Dimethyl-2 trans,6-octadienyl acetate	www.inchem.org/documents/jecfa/jecmono/v44aje19.htm
GG1P	GG12661 protein	Protein involved in actin filament bundle assembly, acting crosslink formation, and calcium ion binding.	ECOTOX
GINS	Ginsenosides	Ginsenosides or panaxosides are a class of steroid glycosides, and triterpene saponins, found exclusively in the plant genus Panax (ginseng).	http://en.wikipedia.org/wiki/Ginsenoside

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Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
GPRO	Glial fibrillary acidic protein	(GFAP) This protein is a member of the intermediate filament family of proteins. Intermediate filaments form networks that provide support and strength to cells. Several molecules of glial fibrillary acidic protein bind together to form the type of intermediate filament found in astroglial cells. Astroglial cells support and nourish cells in the brain and spinal cord. If brain or spinal cord cells are injured through trauma or disease, astroglial cells react by rapidly producing more glial fibrillary acidic protein.	http://ghr.nlm.nih.gov/gene/GFAP
GLOB	Globulin	A simple globular protein which cannot be dissolved in pure water but which can be dissolved if a salt is added to the water.	www.biology-online.org/dictionary/Globulin
GLPS	Glucagon-Like Peptides	Peptides derived from proglucagon which is also the precursor of pancreatic glucagon. Despite expression of proglucagon in multiple tissues, the major production site of glucagon-like peptides (glps) is the intestinal l cells. Glps include glucagon-like peptide 1, glucagon-like peptide 2, and the various truncated forms. Synonym: Enteroglucagon.	http://www.ncbi.nlm.nih.gov
GLUC	Glucose	A simple monosaccharide sugar that serves as the main source of energy and as an important metabolic substrate for most living things. Its chemical formula is: C6H12O6. One of the products of photosynthesis in plants and other photosynthetic organisms. In plants, glucose molecules are stored as repeating units of sugar (e.g. starch). Serves as an important metabolic intermediate of cellular respiration. In animals, an excess of glucose is stored as glycogen.	www.biology-online.org/dictionary/Glucose
GTP1	Glucose Transporter Type 1	Glucose Transporter Type 1 is a ubiquitously expressed glucose transporter protein that is important for constitutive, basal glucose transport. It is predominately expressed in endothelial cells and erythrocytes at the blood-brain barrier and is responsible for glucose entry into the brain. Also: Solute Carrier Family 2, Facilitated Glucose Transporter, Member 1 Protein, GLUT1 Protein, SLC2A1 Protein, Erythrocyte Glucose Transporter	http://www.ncbi.nlm.nih.gov

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GCAC	Glucuronic Acid	A sugar acid formed by the oxidation of the C-6 carbon of GLUCOSE. In addition to being a key intermediate metabolite of the uronic acid pathway, glucuronic acid also plays a role in the detoxification of certain drugs and toxins by conjugating with them to form Glucuronides. Also: D-GLCA,D-Glucuronic acid, Glycuronic acid ,Glucosiduronic Acid, (2S,3S,4S,5R,6S)-3,4,5,6-tetrahydroxyoxane-2-carboxylic acid D-Glucuronic acid, D-gluco-Hexulonic acid, D-glucuronate.	http://www.chemicalbook.com/CASEN_6556-12-3.htm and http://www.ncbi.nlm.nih.gov/mesh/68020723
GLTT	Glutamate	A salt of glutamic acid. In addition to being one of the 20 major amino acids incorporated into the peptide chains of proteins, it is a major excitatory amino acid of the central nervous system.	Mosby's Medical Dictionary, 8th edition, 2009
GTMA	Glutamic acid	A crystalline amino acid C5H9NO4 that is widely distributed in plant and animal proteins and that acts throughout the central nervous system especially in the form of a salt or ester as a neurotransmitter which excites postsynaptic neurons—abbreviation Glu.	www.merriam-webster.com/medical/glutamic%20acid
GMIN	Glutamine	A nonessential amino acid found in the juices of many plants and in many proteins in the body. It functions as an amino donor for many reactions. It is also a nontoxic transport for ammonia because it is readily hydrolyzed to glutamic acid and free ammonia, the latter excreted in the urine.	Mosby's Medical Dictionary, 8th edition, 2009
GTAS	Glutamine and asparagine	Glutamine: An amino acid. Monoamide of flutamic acid, important carrier of urinary ammonia and is broken down in the kidney by the enzyme glutaminase. Asparagine: A white crystalline amino acid found in many plant seeds.	McGraw-Hill Scientific Dictionary
GLGL	Glutamine to glutamate ratio	The ratio of Glutamine to glutamate in a sample.	ECOTOX
GLTH	Glutathione (reduced glutathione)	The tripeptide _ glutamylcysteinylglycine. It contains an unusual peptide Linkage between the carboxyl group of the glutamate side chain and the amine group of cysteine. The concentration of glutathione in animal cells is 5mM and its sulphydryl group is kept largely in the reduced state. This allows it to act as a sulphydryl buffer, reducing any disulphide bonds formed within cytoplasmic proteins to cysteines. Also known as Reduced glutathione	www.biology-online.org/dictionary/Glutathione
GSSG	Glutathione disulfide (oxidized glutathione)	Glutathione (GSSG) is a disulfide derived from two glutathione molecules. In living cells, glutathione disulfide is reduced into two molecules of glutathione with reducing equivalents from the coenzyme NADPH. This reaction is catalyzed by the enzyme glutathione reductase.	http://en.wikipedia.org/wiki/Glutathione_disulfide

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Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
GGGH	Glutathione disulfide to glutathione ratio (oxidized to reduced)	The ratio of glutathione disulfide to glutathione. Also known as Oxidized glutathione to reduced glutathione ratio	ECOTOX
GTTO	Glutathione, total	The measure of total glutathione levels (reduced glutathione and glutathione disulfide) in a sample.	ECOTOX
GLTE	Gluten	The mixture of proteins, including gliadins and glutelins, found in wheat grains, which are not soluble in water. Any of the prolamins found in cereal grains, especially the prolamins in wheat, rye, barley, and possibly oats.	The American Heritage Dictionary of the English Language, Fourth Edition, 2000
GCLL	Glyceollin	Glyceollins are a family of prenylated pterocarpan found in ineffective types of nodule in soybean in response to symbiotic infection. They are phytoalexins with an antiestrogenic activity.	http://en.wikipedia.org/wiki/Glyceollin
GYCL	Glycerol content	a trihydroxy sugar alcohol that is the backbone of many lipids and an important intermediate in carbohydrate and lipid metabolism. Pharmaceutical preparations are called glycerin.	Dorland's Medical Dictionary for Health Consumers, 2007
GCPP	Glycerophosphocholine	An important nutrient present in all body cells; but primarily in liver, brain and nerve tissue. It is a metabolic precursor of phospholipids.	http://www.lipoid.com/en/node/38
GLCN	Glycine	The simplest amino acid. It is a common residue in proteins, especially collagen and elastin and is not optically active. It is also a major inhibitory neurotransmitter in spinal cord and brainstem of vertebrate central nervous system.	www.biology-online.org/dictionary/Glycine
GBTN	Glycine betaine	Glycine betaine, or N,N,N-trimethylglycine, was named after its discovery in sugar beets (Beta vulgaris) in the 19th century. It is a small N-trimethylated amino acid, existing in zwitterionic form at neutral pH.	http://en.wikipedia.org/wiki
GLYA	Glycoalkaloid	Glycoalkaloids are a family of poisons commonly found in the plant species Solanum dulcamara (nightshade). There are several glycoalkaloids (alkaloids + sugars) that are potentially toxic.	http://en.wikipedia.org/wiki
GLYC	Glycogen	A branched polymer of glucose that is mainly produced in liver and muscle cells, and functions as secondary long-term energy storage in animal cells. It is an analogue of starch in plants, only it is less branched. Under the microscope, glycogen has a characteristic asterisk or star appearance.	www.biology-online.org/dictionary/Glycogen

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GLYP	Glycoprotein Composition	Proteins with covalently attached sugar units, either bonded via the OH group of serine or threonine O glycosylated) or through the amide NH2 of asparagine (N glycosylated). Includes most secreted proteins and proteins exposed at the outer surface of the plasma membrane	www.biology-online.org/dictionary/Glycoprotein
GRHP	Gonadotropin releasing hormone to protein content ratio	Ratio of Gonadotropin releasing hormone to protein content	ECOTOX
GAX4	Gonyautoxin 4	Gonyautoxin 4 is a compound produced by Gonyaulax dinoflagellates and may then be consumed by mollusks, fishes, etc. This substance is a member of the saxitoxin group of neurotoxins that cause respiratory paralysis and other effects in mammals, known as paralytic shellfish poisoning.	http://en.wikipedia.org/wiki and http://www.ncbi.nlm.nih.gov
GSPL	Gossypol	Gossypol is a dimeric sesquiterpene found in cottonseed. Gossypol is a polyphenolic aldehyde that permeates cells and acts as an inhibitor for several dehydrogenase enzymes.	http://en.wikipedia.org/wiki and http://www.ncbi.nlm.nih.gov
GRMN	Gramine	Gramine (also called donaxine) is a naturally occurring indole alkaloid present in several plant species. Gramine may play a defensive role in these plants, since it is toxic to many organisms.	http://en.wikipedia.org/wiki
GCLN	Grancalcin	Calcium-binding protein that may play a role in the adhesion of neutrophils to fibronectin. May play a role in the formation of focal adhesions. Also: Grancalcin, EF-hand calcium binding protein.	http://www.uniprot.org/uniprot/P28676
CSF3	Granulocyte Colony-Stimulating Factor (CSF3)	Granulocyte Colony-Stimulating Factor is a glycoprotein of MW 25 kDa containing internal disulfide bonds. It induces the survival, proliferation, and differentiation of neutrophilic granulocyte precursor cells and functionally activates mature blood neutrophils. Among the family of colony-stimulating factors, G-CSF is the most potent inducer of terminal differentiation to granulocytes and macrophages of leukemic myeloid cell lines. Also: CSF3, Colony Stimulating Factor 3	http://www.ncbi.nlm.nih.gov
GTHE	GTP to hemoglobin ratio	The ratio of Guanosine-5'-triphosphate to hemoglobin in a sample.	ECOTOX
GNSN	Guanosine	A nucleoside C10H13N5O5 composed of guanine and ribose.	http://www.merriam-webster.com/dictionary/guanosine

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G5DP	Guanosine 5'-diphosphate	A nucleotide derivative of guanine. It is involved in numerous intracellular cell signalling and energy transfer processes. Acronym: GDP	http://www.sigmaaldrich.com/content/dam/sigma-aldrich/docs/Sigma/Product_Information_Sheet/2/g7127pis.pdf
G5TP	Guanosine 5'-triphosphate	GTP functions as a carrier of phosphates and pyrophosphates involved in channeling chemical energy into specific biosynthetic pathways. GTP activates the signal transducing G proteins which are involved in various cellular processes including proliferation, differentiation, and activation of several intracellular kinase cascades. Proliferation and apoptosis are regulated in part by the hydrolysis of GTP by small GTPases Ras and Rho. Another type of small GTPase, Rab, plays a role in the docking and fusion of vesicles and may also be involved in vesicle formation. In addition to its role in signal transduction, GTP also serves as an energy-rich precursor of mononucleotide units in the enzymatic biosynthesis of DNA and RNA.	http://www.sigmaaldrich.com/catalog/product/sigma/g8877?lang=en&region=US
HS71	Heat shock cognate protein 71	A 646 amino acid heat shock cognate protein functioning as a molecular chaperone, facilitating the folding of other cellular proteins. It plays an important role in cells by transiently associating with nascent polypeptides to facilitate correct folding. IT is a ubiquitously expressed protein and rapidly translocates from the cytoplasm to the nucleus in response to heat shock. Also: HSPA8, HSC71, HSPA10, and LPS-associated protein 1, LAP1.	https://www.rndsystems.com/products/human-mouse-rat-hspa8-hsc71-antibody_af4148
HP60	Heat Shock Protein 60	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein

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Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
HP70	Heat Shock Protein 70	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HSPS	Heat Shock Protein	Families of proteins conserved through prokaryotic and eukaryotic cells and bacteria in response to hyperthermia and other environmental stresses, although some are constitutively expressed. They increase thermal tolerance and perform functions essential to cell survival under these conditions. Acronym: HSP	www.biology-online.org/dictionary/Heat-shock_protein
HSP4	Heat Shock Protein 4	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HSP6	Heat Shock Protein 6	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
H108	Heat shock protein 108	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein

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HP16	Heat shock protein 16	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HS16	Heat Shock Protein 16.2	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HP20	Heat shock protein 20	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HP26	Heat Shock Protein 26	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HP30	Heat shock protein 30	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein

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Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
HP32	Heat shock protein 32	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HP40	Heat shock protein 40	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HP42	Heat shock protein 42	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HP52	Heat shock protein 52	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HP69	Heat Shock protein 69	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein

BCM	**Biochemical Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
HP71	Heat shock protein 71	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HP72	Heat shock protein 72	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
H727	Heat shock proteins 72 and 77	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HP73	Heat shock protein 73	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HP75	Heat shock protein 75	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein

BCM	**Biochemical Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
HS78	Heat shock protein 78	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HS09	Heat shock protein 9	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HP90	Heat shock protein 90	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HC37	Heat shock protein 90 co-chaperone Cdc37	Co-chaperone that binds to numerous kinases and promotes their interaction with the Hsp90 complex, resulting in stabilization and promotion of their activity. Also: Cell division cycle 37 homolog, Hsp90 co-chaperone Cdc37, Hsp90 chaperone protein kinase-targeting subunit, CDC37.	http://www.uniprot.org/uniprot/Q8X1E6
HP96	Heat shock protein 96	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
HPSS	Heat Shock Proteins, small	Member of a ubiquitous protein group found in all life forms, which arise after various stressors (for example, heat, cold, deprivation of an essential chemical). Its function is to help lessen the harmful effects of such stressors.	Farlex Partner Medical Dictionary, 2012
HPCI	Heat Shock protein cognate isoforms 72 - 77	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HMGT	Hemagglutinin	A substance that causes hemagglutination (i.e. the agglutination of red blood cells). Hemagglutinins may be in the form of antibodies, viral capsid proteins, or certain plant lectins (e.g. PHA).	www.biology-online.org/dictionary/Hemagglutinin
HMCT	Hematocrit (Anemia)	The volume percentage of erythrocytes in whole blood; also, the apparatus or procedure used in its determination.	Dorland's Medical Dictionary for Health Consumers, 2007
<HEMT>	Hematological Parameters	No definition available.	
HEME	Heme Content	Heme - the pigmented iron-containing nonprotein part of the hemoglobin molecule. There are four heme groups in a hemoglobin molecule, each consisting of a cyclic structure of four pyrrole residues, called protoporphyrin, and an atom of iron in the center. Heme binds and carries oxygen in the red blood cells, releasing it to tissues that give off excess amounts of CO2.	Mosby's Medical Dictionary, 8th edition, 2009
HMCY	Hemocyanin	Blue, oxygen transporting, copper containing protein found in the blood of molluscs and crustacea.	www.biology-online.org/dictionary/Hemocyanin
HMGL	Hemoglobin	Four subunit globular oxygen carrying protein of the erythrocytes of vertebrates and some invertebrates. Hemoglobin (Hgb) molecules are found in all red blood cells. They bind oxygen in the lungs, carry the oxygen throughout the body, and release it to the body's cells and tissues.	www.biology-online.org/dictionary/Hemoglobin
HMPR	Hemoglobin to protein ratio	Hemoglobin to protein ratio in a sample	ECOTOX

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
HMLS	Hemolysin	An agent or a substance, such as an antibody or a bacterial toxin that causes the destruction of red blood cells, thereby liberating hemoglobin. Also called erythrocytolysin, erythrolysin.	The American Heritage Stedman's Medical Dictionary
HPXN	Hemopexin	A glycoprotein that binds heme preventing its excretion in urine and that is part of the beta-globulin fraction of human serum.	www.merriam-webster.com/medical/hemopexin
HMSN	Hemosiderin	Hemosiderin or haemosiderin is an iron-storage complex. It is always found within cells (as opposed to circulating in blood) and appears to be a complex of ferritin, denatured ferritin and other material. The iron within deposits of hemosiderin is very poorly available to supply iron when needed.	http://en.wikipedia.org/wiki
HXDC	Hexadecenoate	Palmitate, also called n-hexadecanoate, is the dissociated and observed form of Palmitic Acid at physiological pH	http://en.wikipedia.org/wiki
HXBT	Hexobarbital	A barbiturate C12H16N2O3 used as a sedative and hypnotic and in the form of its soluble sodium salt C12H15N2NaO3 as an intravenous anesthetic of short duration.	www.merriam-webster.com/medical/hexobarbital
HEXS	Hexose	Suger, a monosaccharide with six carbon atoms. Hexoses include Fructose, Fucose, Galactose, Glucose, Mannose, Rhamnose, and Sorbose	www.wikipedia.org/wiki and http://www.ncbi.nlm.nih.gov
HDLC	High density lipoprotein cholesterol	The serum cholesterol carried on high-density lipoproteins, approximately 20 to 30 per cent of the total.	Dorland's Medical Dictionary for Health Consumers, 2007
HDCH	High density lipoprotein cholesterol:Total cholesterol	The ratio between high density lipoprotein cholesterol and total cholesterol concentrations in a sample.	ECOTOX
HSTM	Histamine	An amine, C5H9N3, produced by decarboxylation of histidine, found in all body tissues. It induces capillary dilatation, which increases capillary permeability and lowers blood pressure; contraction of most smooth muscle tissue; increased gastric acid secretion; and acceleration of the heart rate. It is also a mediator of immediate hypersensitivity.	Dorland's Medical Dictionary for Health Consumers, 2007

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
HIST	Histidine	An amino acid with an imidazole side chain with a pKa of 6-7. Acts as a proton donor or acceptor and has high potential reactivity and diversity of chemical function. Forms part of the catalytic site of many enzymes. An essential amino acid found in proteins that is important for the growth and repair of tissue	www.biology-online.org/dictionary/Histidine
HITY	Histidine to tyrosine ratio	Ratio of histidine to tyrosine in an organism or organism's tissues.	
HCTN	Homocysteine	Homocysteine is a thiol-containing amino acid formed by a demethylation of methionine.	http://www.ncbi.nlm.nih.gov
HVLA	Homovanillic acid	An acid that is produced by normal metabolism of dopamine and may be elevated in the urine in association with tumors of the adrenal gland.	Mosby's Medical Dictionary, 8th edition, 2009
HMDP	Homovanillic acid to Dopamine Ratio	The ratio of Homovanillic acid to Dopamine found in a sample	ECOTOX
HYLA	Hyaluronic Acid	A natural high-viscosity mucopolysaccharide with alternating beta (1-3) glucuronide and beta (1-4) glucosaminidic bonds. It is found in the umbilical cord, in vitreous body and in synovial fluid. A high urinary level is found in progeria	http://www.ncbi.nlm.nih.gov
HDCB	Hydrocarbons	Organic compounds composed exclusively of carbon and hydrogen where no carbon atoms join to form a ring structure.	www.biology-online.org/dictionary/Hydrocarbons
HCNC	Hydrogen cyanide	The concentration of Hydrogen cyanide found in sample. Hydrogen cyanide is a poisonous usually gaseous compound HCN that has the odor of bitter almonds.	ECOTOX and http://www.merriam-webster.com/medical/hydrogen%20cyanide
H2O2	Hydrogen Peroxide	A colorless, heavy, strongly oxidizing liquid, H2O2, capable of reacting explosively with combustibles and used principally in aqueous solution as a mild antiseptic, a bleaching agent, an oxidizing agent, and a laboratory reagent.	The American Heritage® Dictionary of the English Language, Fourth Edition copyright ©2000
HYDC	Hydroxide content	Any chemical compound containing one or more groups, each comprising one atom each of oxygen and hydrogen bonded together and functioning as the negatively charged ion OH-. The positively charged portion of the compound usually is the ion of a metal (e.g., sodium, magnesium, or aluminum), although it may be an organic group (e.g., guanidinium or tetramethylammonium). Also: Hydroxyl content.	http://www.britannica.com/science/hydroxide

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HBZA	Hydroxybenzoic acids	$C_7H_6O_3$, Any one of three crystalline derivatives of benzoic acid: ortho, meta, and para forms; the ester of the para compound is used as a bacteriostatic agent.	McGraw-Hill Dictionary of Scientific & Technical Terms, 2003
HPLN	Hydroxyproline	Specific proline residues on the amino side of a glycine residue in collagen become hydroxylated at C4, before the polypeptides become helical, by the activity of prolyl hydroxylase. This enzyme has a ferrous ion at the active site and a reducing agent such as ascorbate is necessary to maintain the iron in the ferrous state. The presence of hydroxyproline is essential to produce stable triple helical tropocollagen, hence the problems caused by ascorbate deficiency in scurvy. This unusual amino acid is also present in considerable amounts in the major glycoprotein of primary plant cell walls.	Dictionary of Cell and Molecular Biology
HYOX	Hymenoxon	A toxic lactone isolated from Bitterweed (Hymenoxys odorata).	ECOTOX 25099
HPCN	Hypericin	Hypericin is a naphtodianthrone, a red-colored anthraquinone-derivative, which, together with hyperforin, is one of the principal active constituents of Hypericum (Saint John's wort).	http://en.wikipedia.org/wiki/
HGRP	Hyperosmotic glycine rich protein	Plasma membrane protein of unknown function, predicted to be palmitoylated; has similarity to hydrophilins, which are hydrophilic, glycine-rich proteins involved in the adaptive response to hyperosmotic conditions.	http://www.yeastrc.org/pdr/viewProtein.do?id=528616
HIFT	Hypoxia inducible factor-1 alpha-Tubulin ratio	Ratio of Hypoxia inducible factor (HIF-1-alpha) to alpha-Tubulin in sample.	ECOTOX
IDZL	Imidazole	An antimetabolite related to histidine. Also: 1H-Imidazole, Glyoxaline, Glyoxalin.	http://www.merriam-webster.com/dictionary/imidazole and https://pubchem.ncbi.nlm.nih.gov/compound/imidazole#section=Top

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IBIL	Indirect Bilirubin (Free)	Indirect bilirubin - the lipid-soluble form of bilirubin that circulates in loose association with the plasma proteins or the fraction of bilirubin that does not conjugate with glucuronic acid in hepatic cells. Also called unconjugated bilirubin.	Dorland's Medical Dictionary for Health Consumers, 2007 and Medical Dictionary for the Health Professions and Nursing, 2012
IDAA	Indole Acetic Acid	Indole-3-acetic acid, also known as IAA and Indoleacetic Acid, is a member of the group of phytohormones called auxins. IAA is generally considered to be the most important native auxin.	http://en.wikipedia.org/wiki
3IMG	3-Indolymethyl glucosinolate	Also known as glucobrassicin, a type of glucosinolate that can be found in almost all cruciferous plants, such as cabbages (e.g.broccoli), mustards, cress, and woad.	http://en.wikipedia.org/wiki/Glucobrassicin
IKBA	Inhibitory kappa B alpha	A regulatory protein that inhibits NF-kappa-B by complexing with and trapping it in the cytoplasm. May be involved in regulation of transcriptional responses to NF-kappa-B, including cell adhesion, immune and proinflammatory responses, apoptosis, differentiation and growth. Also: IkB-alpha.	http://www.phosphosite.org/proteinAction.action?id=990
INSN	Inosine	A purine nucleoside that has hypoxanthine linked by the N9 nitrogen to the C1 carbon of ribose. It is an intermediate in the degradation of purines and purine nucleosides to uric acid and in pathways of purine salvage. It also occurs in the anticodon of certain transfer RNA molecules. Also: 9-beta-D-Ribofuranosylhypoxanthine, beta-Inosine, Hypoxanthine D-riboside, Hypoxanthine nucleoside, Hypoxanthine ribonucleoside, Hypoxanthine riboside, Hypoxanthosine, Inosinum.	Dorland, 28th ed, 1994 and http://chem.sis.nlm.nih.gov/chemidplus/unii/5A614L51CT
IN1P	Inositol 1-phosphate	Inositol phosphates are a group of mono- to polyphosphorylated inositols. They have important messaging functions in the cells. The measurement of Inositol 1-phosphate concentration in a sample.	http://en.wikipedia.org/wiki/Inositol_phosphate
ITFG	Interferon-gamma	Interferon-gamma,or type II interferon, is a cytokine that is the major interferon produced by mitogenically or antigenically stimulated lymphocytes. It is structurally different from type I interferon and its major activity is immunoregulation. It has been implicated in the	http://www.ncbi.nlm.nih.gov

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		expression of class II histocompatibility antigens in cells that do not normally produce them, leading to autoimmune diseases.	
IL1A	Interleukin-1alpha	A soluble factor produced by monocytes; macrophages, and other cells which activates T-lymphocytes and potentiates their response to mitogens or antigens. Interleukin-1 alpha is an interleukin-1 subtype that occurs as a membrane-bound pro-protein form that is cleaved by proteases to form a secreted mature form. Unlike Interleukin-1beta both membrane-bound and secreted forms of interleukin-1alpha are biologically active. Also: IL-1 alpha	http://www.ncbi.nlm.nih.gov
IL1B	Interleukin-1 beta	A soluble protein (17 kD: 152 amino acids) secreted by monocytes, macrophages or accessory cells involved in the activation of both T-lymphocytes and B lymphocytes and potentiates their response to antigens or mitogens. Its biological effects include the ability to replace macrophage requirements for T-cell activation, as well as affecting a wide range of other cell types. at least two IL-1 genes are active and alpha and beta forms of IL-1 are recognized. It is released early in an immune system response by monocytes and macrophages. It stimulates T-cell proliferation and protein synthesis. Another effect of IL-1 is that it causes fever.	www.biology-online.org/dictionary/Interleukin-1
ITL2	Interleukin-2	A hormone-like substance released by stimulated t lymphocytes, causes activation and differentiation of other t lymphocytes independently of antigen; a type of interleukin, a chemical messenger, a substance that can improve the body's response to disease. It stimulates the growth of certain disease-fighting blood cells in the immune system. It is secreted by Thl cd4 cells to stimulate CD8 cytotoxic t-1yrnphocytes. Interleukin 2 also increases the proliferation and maturation of the cd4 cells themselves. During hiv infection, interleukin-2 production gradually declines. use of interleukin 2 therapy is under study as a way to raise cd4 cell counts and restore immune function. Acronym: il-2	www.biology-online.org/dictionary/Interleukin-2
IL2B	Interleukin-2 receptor beta	Receptor for interleukin-2. This beta subunit is involved in receptor mediated endocytosis and transduces the mitogenic signals of IL2.	http://www.uniprot.org/uniprot/P14784
ILK3	Interleukin-3	Interleukin-3 is a multilineage cell growth factor secreted by lymphocytes; epithelial cells; and astrocytes which stimulates clonal proliferation and differentiation of various types of blood and	http://www.ncbi.nlm.nih.gov

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		tissue cells. Also: IL3	
ILK4	Interleukin-4	Interleukin-4 is a soluble factor produced by activated T-lymphocytes that induces the expression of MHC class II genes and FC receptors on B-lymphocytes and causes their proliferation and differentiation. It also acts on T-lymphocytes, mast cells, and several other hematopoietic lineage cells.	http://www.ncbi.nlm.nih.gov
ILK6	Interleukin-6	An interleukin that acts as both a pro-inflammatory and anti-inflammatory cytokine. In humans, it is encoded by the IL6 gene. IL-6 is secreted by T cells and macrophages to stimulate immune response, e.g. during infection and after trauma, especially burns or other tissue damage leading to inflammation. IL-6 also plays a role in fighting infection.	http://en.wikipedia.org/wiki/Interleukin_6
IL8B	Interleukin-8 receptor beta	Receptor for interleukin-8 which is a powerful neutrophil chemotactic factor. Binding of IL-8 to the receptor causes activation of neutrophils. This response is mediated via a G-protein that activates a phosphatidylinositol-calcium second messenger system. Binds to IL-8 with high affinity. Also binds with high affinity to CXCL3, GRO/MGSA and NAP-2.	http://www.uniprot.org/uniprot/P25025
IL10	Interleukin-10	Interleukin-10 is a cytokine produced by a variety of cell types, including T-lymphocytes; monocytes; dendritic cells; and epithelial cells that exerts a variety of effects on immunoregulation and inflammation. Interleukin-10 combines with itself to form a homodimeric molecule that is the biologically active form of the protein. Also: IL-10, Cytokine Synthesis Inhibitory Factor, CSIF	http://www.ncbi.nlm.nih.gov
IL12	Interleukin-12	Interleukin-12 is a heterodimeric cytokine that plays a role in innate and adaptive immune responses. Interleukin-12 is a 70 kDa protein that is composed of covalently linked 40 kDa and 35 kDa subunits. It is produced by dendritic cells; macrophages and a variety of other immune cells and plays a role in the stimulation of interferon-gamma production by T-lymphocytes and natural killer cells. Also: IL-12 p70	http://www.ncbi.nlm.nih.gov
IP40	Interleukin-12 subunit p40	Interleukin-12 subunit p40 is a cytokine subunit that is a component of both interleukin-12 and interleukin-23. It binds to the interleukin-12 subunit p35 via a disulfide bond to form interleukin-12 and to interleukin-23 subunit p19 to form interleukin-23. Also: Interleukin-12b, IL-12(p40)	http://www.ncbi.nlm.nih.gov
IL17	Interleukin 17	Interleukin-17 (IL-17, or IL-17A) is the founding member of a group of cytokines called the IL-17	http://www.ncbi.nlm.nih.gov and

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		family. IL-17A is a proinflammatory cytokine produced primarily by T-lymphocytes or their precursors. Several subtypes of interleukin-17 have been identified, each of which is a product of a unique gene. Also: IL17A, CTLA8	www.wikipedia.org/wiki
ICON	Iodine concentration	The concentration of Iodine found in a sample.	ECOTOX
FEAI	Iron Accumulation index	The ratio of a chemical in the organism to the ratio of the chemical in the soil.	ECOTOX
FECO	Iron Content	The concentration of Iodine found in a sample.	ECOTOX
FNNN	Iron-nitrosyl plus N-nitroso compounds	The amount of Iron-nitrosyl compounds plus N-nitroso compounds found in a sample.	ECOTOX
FEMN	Iron to Manganese Ratio	The ratio of iron to manganese in a sample.	ECOTOX
FEZN	Iron to zinc ratio	The ratio of iron to zinc in a sample.	ECOTOX
ISDM	Isodesmosine	2-(4-amino-4-carboxybutyl)-1-(5-amino-5-carboxypentyl)-3,5-bis(3-amino-3-carboxypropyl)pyridinium. A rare amino acid found in elastin, formed by condensation of four molecules of lysine into a pyridinium ring.	www.encyclo.co.uk/define/isodesmosine
IDMN	Isodesmosine + Desmonine	Isodesmosine: 2-(4-amino-4-carboxybutyl)-1-(5-amino-5-carboxypentyl)-3,5-bis(3-amino-3-carboxypropyl)pyridinium. A rare amino acid found in elastin, formed by condensation of four molecules of lysine into a pyridinium ring. ... Chemical name: Pyridinium A desmosine cross-link is formed from three allysyl side chains plus one unaltered lysyl side chain from the same or neighbouring polypeptides. It is found in elastin. Desmosine causes a yellow color. This desmosine is responsible for the rubber properties of elastin.	www.encyclo.co.uk/define/isodesmosine and http://en.wikipedia.org/wiki/Desmosine
IHDA	Isoheptadecanoic acid	15-methylhexadecanoic acid, or isoheptadecanoic acid (C17:0 iso), is a saturated fatty acid.	ECOTOX
ILEU	Isoleucine	An amino acid that occurs in most dietary proteins and is essential for proper growth in infants and for nitrogen balance in adults. Also spelled isoleuceine.	http://medical-dictionary.thefreedictionary.com/isoleucine
IMNT	Iso-menthone	Exists as two stereoisomerisms, menthone and ISO Menthone in many essential oils in particular in oils from Mentha spices. The isolation is carried out by fractional, distillation.	http://hindustanmint.tradeindia.com/iso-menthone-fraction-of-de-mentholised-oil--387628.html

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IODA	Iso-octadecanoic acid	Iso-octadecanoic acid (C18:0 iso) is a saturated fatty acid.	ECOTOX
IPLM	Isopalmitic acid	14-Methylpentadecanoic acid, isopalmitic acid (C16:0 iso) is a saturated fatty acid.	http://en.wikipedia.org/wiki/ and http://pubchem.ncbi.nlm.nih.gov
IPDA	Isopentadecanoic acid	13-methyltetradecanoic acid, isopentadecanoic acid (C15:0 iso) is a saturated fatty acid.	http://en.wikipedia.org/wiki/ and http://pubchem.ncbi.nlm.nih.gov
ISPT	Isoprostane	A series of prostaglandin-like compounds that are produced by the attack of free-radical species on unsaturated fatty acids, especially arachidonic acid, of cellular membranes. Once cleaved from the lipid membrane by the action of phospholipases they can circulate into various bodily fluids and eventually be excreted. Although these compounds resemble enzymatically synthesized prostaglandins their stereoisometric arrangement is usually different than the "naturally occurring" compounds.	http://www.ncbi.nlm.nih.gov
JSMA	Jasmonic acid	The major function of JA and its various metabolites is regulating plant responses to abiotic and biotic stresses as well as plant growth and development. Regulated plant growth and development processes include growth inhibition, senescence, tendril coiling, flower development and leaf abscission. JA is also responsible for tuber formation in potatoes, yams, and onions. It has an important role in response to wounding of plants and systemic acquired resistance. When plants are attacked by insects, they respond by releasing JA, which activates the expression of protease inhibitors, among many other anti-herbivore defense compounds. Also: 7-epi-jasmonic acid, jasmonate.	http://en.wikipedia.org/wiki/Jasmonic_acid and http://www.reference.md/files/C011/mC011006.html
KTNE	Ketone	A byproduct of fat metabolism. An overabundance of ketones in the bloodstream is seen in a severe metabolic derangement known as diabetic ketoacidosis.	www.biology-online.org/dictionary/Ketone
LAAC	Lac	Resin-like substance secreted by certain lac insects; used in, for example, varnishes and sealing wax.	http://www.memidex.com/lac+animal-product
LACT	Lactate	A salt or ester of lactic acid. Lactate is a product of fermentation and is produced during cellular respiration as glucose is broken down.	The American Heritage Science Dictionary, 2005
LCPY	Lactate Pyruvate Ratio	The ratio of lactate to pyruvate found in a sample	ECOTOX

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LCTA	Lactic Acid	A colorless or yellowish, syrupy, water-soluble liquid, which is a byproduct of anaerobic glucose metabolism. An intermediate product of carbohydrate metabolism (anaerobic metabolism), derived chiefly from muscle cells and red blood cells.	www.biology-online.org/dictionary/Lactic_acid
LCTS	Lactose	The major sugar in human and bovine milk.	www.biology-online.org/dictionary/Lactose
ASPO	L-alpha-Aspartyl-L-proline	A dipeptide composed of aspartate and proline. It is an incomplete breakdown product of protein digestion or protein catabolism. Also: Aspartyl-L-proline, Aspartylproline, Aspartyl-proline, 1-L-alpha-aspartyl-L-Proline, L-a-Aspartyl-L-proline.	http://www.hmdb.ca/metabolites/HMDB28761#biological-properties,http://pubchem.ncbi.nlm.nih.gov/summary/summary.cgi?cid=170612 and http://www.chemspider.com/Chemical-Structure.149163.html
LANO	Lanosterol	A triterpene that derives from the chair-boat-chair-boat folding of 2,3-oxidosqualene. It is metabolized to Cholesterol and Cucurbitacins.	http://www.ncbi.nlm.nih.gov/mesh/68007810
LAUA	Lauric acid	Lauric acid, dodecanoic acid (C12:0), a crystalline fatty acid occurring as glycerides in natural fats and oils, especially coconut oil and palm-kernel oil.	http://wordnetweb.princeton.edu/ and http://en.wikipedia.org/wiki/
LASC	L-ascorbic acid	Synonym-ascorbic acid (ASCA). Vitamin C. A water-soluble vitamin found in many fruits and vegetables.	Dorlands Dictionary
LA2S	L-Ascorbyl-2-sulfate	Ascorbic acid 2-sulfate: A six carbon compound related to glucose. It is found naturally in citrus fruits and many vegetables. Ascorbic acid is an essential nutrient in human diets, and necessary to maintain connective tissue and bone. Its biologically active form, vitamin C, functions as a reducing agent and coenzyme in several metabolic pathways. Vitamin C is considered an antioxidant. Other names Vitamin C; L Ascorbic Acid; Ascorbate, Sodium; Ascorbate, Ferrous; Acid, L-Ascorbic; Acid, Ascorbic; Sodium Ascorbate; Magnorbin; Magnesium Ascorbicum; L-Ascorbic Acid; Hybrin; Ferrous Ascorbate; Ascorbic Acid, Monosodium Salt.	www.reference.md/files/C001/mC001956.html

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LASS	L-ascorbyl-2-sulfate	A stable derivative of ascorbic acid used as a source of vitamin C.	http://www.asasea.com/technical/AQ48-okeefe.pdf
PBIC	Lead Iodine content	The content of Lead Iodine found in an organism or tissue, including radiolabeled ions.	ECOTOX
PBAI	Lead Accumulation index	The ratio of a chemical in the organism to the ratio of the chemical in the soil.	ECOTOX
PBCO	Lead Content	The content of Lead found in an organism or tissue.	ECOTOX
PBPR	Lead Phosphorus ratio	The ratio of lead to phosphorus in an organism or tissue.	ECOTOX
LGHE	Leghemoglobin	A red iron-containing protein, similar in a number of properties to the hemoglobin of blood, that forms in the root nodules of actively nitrogen-fixing leguminous plants of the genus Leguminosae. Leghemoglobin is a product of the symbiosis of two organisms: it consists of a heme synthesized by nodule bacteria and a globin formed by the cells of a higher plant. Leghemoglobin is destroyed when the nodules lose their capacity for symbiotic nitrogen fixation. Like other hemoproteins, leghemoglobin regulates the oxygen regime in the nodule.	http://encyclopedia2.thefreedictionary.com/Leghemoglobin
LEUC	Leucine	The most abundant amino acid found in proteins. Confers hydrophobicity and has a structural rather than a chemical role. A white crystalline amino acid occurring in proteins that is essential for nutrition; obtained by the hydrolysis of most dietary proteins.	www.biology-online.org/dictionary/Leucine
LCCT	Leucocrit	The leucocrit value expresses the leucocyte volume in relation to the total volume of blood. The leucocrit value is determined in heparinized microcapillaries simultaneously with the determination of the haematocrit value.	www.fao.org/docrep/field/003/AC160E/AC160E09.htm
LTB4	Leukotriene B4	Leukotriene B4, or LTB4, is the major metabolite in neutrophil polymorphonuclear leukocytes. It stimulates polymorphonuclear cell function (degranulation, formation of oxygen-centered free radicals, arachidonic acid release, and metabolism).	http://www.ncbi.nlm.nih.gov
LIGN	Lignin	Organic substance which act as a binder for the cellulose fibres in wood and certain plants and adds strength and stiffness to the cell walls.	www.biology-online.org/dictionary/Lignin

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LIAC	Lignoceric acid	A crystalline fatty acid C24H48O2 that is found especially in wood tar (as from beechwood) and in the form of esters in many fats, fatty oils, and waxes and is derived from kerasin. (24:0). Also C24:0.	http://www.merriam-webster.com/medical/lignoceric%20acid
LIMO	Limonene	A hydrocarbon; liquid terpene with a lemon odor; found in lemons and oranges and other essential oils; a chiral molecule. Contains d-limonene used in food manufacturing and some medicines.	www.websters-online-dictionary.org/definitions/limonene
LINA	Linalool	A colorless, fragrant liquid, $C_{10}H_{18}O$, distilled from the oils of rosewood, bergamot, and other plants and trees and used in perfume manufacture.	www.thefreedictionary.com/linalool
LELA	Linoelaidic acid	Linoelaidic acid (C18:2 trans9,trans12) is a poly unsaturated fatty acid.	ECOTOX
LNLT	Linoleate	A salt (soap), ester, or anionic form of linoleic acid	http://medical-dictionary.thefreedictionary.com/linoleate
LINO	Linoleic Acid	A principal fatty acid in plants and considered essential in animal nutrition; used in medicine, feeds, paints, and margarine. Also: C18:2omega6, 18:2(n-6).	McGraw-Hill Dictionary of Scientific & Technical Terms, 6E, (2003)
LNLN	Linolenic acid	A liquid unsaturated fatty acid C18H30O2 found especially in drying oils (as linseed oil) and essential for the nutrition of some animals.	www.merriam-webster.com/dictionary/linolenic%20acid
LNLA	Linolenic acid, all cis	Linolenic acid (C18:3n-3), also C18:3 (all cis-9,12,15) acid or alpha-Linolenic acid, is a poly unsaturated fatty acid.	ECOTOX
LNEI	Linolenic and Eicosenoic Acid	Linolenic acid - One of the principle unsaturated fatty acids in plants and essential fatty acids in plants and an essential fatty acid in animal nutrition. Eicosenoic acid - a saturated fatty acid; a constituent of butter.	
LIPD	Lipid	Any of a group of organic compounds, including the fats, oils, waxes, sterols, and triglycerides, that are insoluble in water but soluble in common organic solvents, are oily to the touch, and together with carbohydrates and proteins constitute the principal structural material of living cells.	http://dictionary.reference.com/browse/lipid
LCAR	Lipid:Chlorophyll A ratio	Ratio of Lipid to Chlorophyll A in a sample.	ECOTOX

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<LIPT> goes to LIPD	Lipid Content, Total	No definition available.	
LDPO	Lipid Peroxides	Peroxides produced in the presence of a free radical by the oxidation of unsaturated fatty acids in the cell in the presence of molecular oxygen. The formation of lipid peroxides results in the destruction of the original lipid leading to the loss of integrity of the membranes. They therefore cause a variety of toxic effects in vivo and their formation is considered a pathological process in biological systems. Their formation can be inhibited by antioxidants, such as vitamin e, structural separation or low oxygen tension.	www.biology-online.org/dictionary/Lipid_peroxides
LPSA	Lipid Soluble Antioxidants	Lipid-soluble antioxidants protect cell membranes from lipid peroxidation. These compounds may be synthesized in the body or obtained from the diet.	http://en.wikipedia.org/wiki/Antioxidant
LDNT	Lipids, Neutral	Neutral lipids (e.g., cholesteryl esters, triglycerides, and fatty acids) Neutral lipids can be surrounded by a hydrophilic shell composed of phospholipidsor serum lipoproteins, they can be encompassed by detergents and phospholipids (intestinal micelles), or they can be bound to amphipathic proteins (transfer proteins).	www.pnas.org/content/85/20/7438.full.pdf
LDPL	Lipids, Polar	In an aqueous system, the polar heads of lipids align towards the polar, aqueous environment, while the hydrophobic tails minimize their contact with water and tend to cluster together, forming a vesicle; depending on the concentration of the lipid, this biophysical interaction may result in the formation of micelles, liposomes, or lipid bilayers. Micelles and bilayers form in the polar medium by a process known as the hydrophobic effect.	http://en.wikipedia.org/wiki/Lipid
LPDS	Lipocalin-type prostaglandin D synthase-like protein	A protein involved in lipid metabolism. Also: prostaglandin D2 synthase b.	http://www.uniprot.org/uniprot/Q8QGV4 and http://zfin.org/action/marker/view/ZDB-GENE-030131-8436
LPFS	Lipofuscin	Any of the minute, yellow-brown, lipogenic pigment granules that accumulate in the cytoplasm of senile animal and human cells. Lipofuscins are lipogenic pigments found chiefly in the smooth muscle cells, heart muscle cells, macrophages, parenchyma cells, interstitial cells, nerve cells, and ganglion cells. Their presence is associated with lysosomal degradation of the cell membrane.	www.biology-online.org/dictionary/Lipofuscin

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LIPA	Lipoic Acid	An octanoic acid bridged with two sulfurs so that it is sometimes also called a pentanoic acid in some naming schemes. It is biosynthesized by cleavage of Linoleic acid and is a coenzyme of oxoglutarate dehydrogenase.Also: lipoate, Heparlipon, R-(+)-alpha-Lipoic acid, (+)-alpha-Lipoic acid, and (R)-(+)-1,2-Dithiolane-3-pentanoic acid.	http://pubchem.ncbi.nlm.nih.gov/compound/thioctic_acid
LPPX	Lipoperoxide	Pathophysiology A peroxide–an O-O containing free radicals–which has peroxidized the carbon atoms close to the double bonds in an unsaturated fatty acid.	McGraw-Hill Concise Dictionary of Modern Medicine, 2002
LPPT	Lipoproteins	A complex of lipids and apolipoproteins, the form in which lipids are transported in the blood.	Dorland's Medical Dictionary for Health Consumers, 2007
LICO	Lithium content	The concentration of lithium found in a sample.	
LDLP	Low density lipoprotein	Lipoprotein substances (combination of a fat and a protein) which acts as a carrier for cholesterol and fats in the bloodstream. High levels of low density lipoprotein are considered a positive risk factor for the development of coronary artery disease. Less than 130 mg/dl is desirable, 130 to 159 mg/dl is borderline high, over 160 is considered high. Acronym: LDL	www.biology-online.org/dictionary/Low_density_lipoprotein
LUTE	Lutein	A lipochrome from the corpus luteum, fat cells, and egg yolk.	Dorland's Medical Dictionary for Health Consumers, 2007
LUZE	Lutein and Zeaxanthin content	The content of both lutein, a lipochrome, and zeaxanthin, a common carotenoid alcohol, measured in a sample.	ECOTOX
LUZC	Lutein and Zeaxanthin to Chlorophyll A ratio	The ratio of Lutein and Zeaxanthin to Chlorophyll A.	ECOTOX
LYCP	Lycopene	A red crystalline substance, C40H56, that is the main pigment of certain fruits, as the tomato and paprika, and is a precursor to carotene in plant biosynthesis.	http://www.dictionary.com/browse/lycopene

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
LYSI	Lysine	Scientific name: 2,6-diaminohexanoic acid. An essential amino acid found in dairy and meat products, wheat germ, and brewer's yeast.	Jonas: Mosby's Dictionary of Complementary and Alternative Medicine. (c) 2005,
LPPC	Lysophosphatidylcholine	Lysophosphatidylcholines, also called lysolecithins, are a class of chemical compounds which are derived from phosphatidylcholines. They result from partial hydrolysis of phosphatidylcholines which removes one of the fatty acid groups.	http://en.wikipedia.org/wiki
LPPE	Lysophosphatidylethanolamine	Lysophosphatidylethanolamine is a specific inhibitor of phospholipase D, a key enzyme in the degradation of membrane phospholipids during the early stages of plant senescence. By this action, it retards the senescence of leaves, flowers, and post-harvest fruits.	http://lipidlibrary.aocs.org/Lipids/pe/index.htm#lpe
LPPG	Lysophosphatidylglycerol	Lysophosphatidylglycerol, with a fatty acid in position sn-1 only, has been reported to have some biological properties in animal tissues in vitro, but it is not known whether these are relevant in vivo.	http://lipidlibrary.aocs.org/Lipids/pg/index.htm
MGCO	Magnesium content	A chemical element, its salts are essential in nutrition, being required for the activity of many enzymes, especially those concerned with oxidative phosphorylation.	Dorland's Medical Dictionary for Health Consumers, 2007
MPIX	Magnesium-protoporphyrin IX	A chlorophyll biosynthesis intermediate.	ECOREF#157877
MGAL	Magnesium to aluminum ratio	The ratio of the amount of magnesium to aluminum in an organism or organism's parts.	ECOTOX
MGNR	Magnesium to Nitrogen ratio	Magnesium to nitrogen ratio in a sample.	ECOTOX
MLAT	Malate	A salt or ester of malic acid	www.merriam-webster.com/dictionary/malate
MLDH	Malondialdehyde	An organic compound with the formula CH2(CHO)2. This reactive species occurs naturally and is a marker for oxidative stress; is generated from reactive oxygen species (ROS), and as such is assayed in vivo as a bio-marker of oxidative stress. Malondialdehyde is reactive and potentially mutagenic has shown to be found in heated edible oils such as sunflower and palm oils.	http://en.wikipedia.org/wiki/Malondialdehyde

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
MNAI	Manganese Accumulation index	The ratio of a chemical in the organism to the ratio of the chemical in the soil.	
MNCO	Manganese Content	A chemical element, its salts occur in the body tissue in very small amounts and activate liver arginase and other enzymes.	Dorland's Medical Dictionary for Health Consumers, 2007
MNFE	Manganese to iron ratio	Ratio of manganese to iron in an organism or organism's tissues.	ECOTOX
MNNR	Manganese Nitrogen ratio	The ratio of manganese to nitrogen in a sample.	ECOTOX
MANT	Mannitol	A white, crystalline, water-soluble, slightly sweet alcohol that is used as a dietary supplement and dietetic sweetener and in medical tests of kidney function. Mannitol occurs naturally as an important food storage and transportation molecule in brown algae like kelp.	The American Heritage Science Dictionary, 2005
MRNN	Marennine	Among microalgae, the marine diatom Haslea ostrearia has the distinctive feature of synthesizing and releasing, into the surrounding environment, a blue-green polyphenolic pigment called marennine. The oyster-breeding industry commonly makes use of this natural phenomenon for the greening of oysters. Marennine exists in two different forms, the intracellular and extracellular forms. Both forms of marennine inhibit the development of marine bacteria	www.biomedsearch.com/searchlist.html?query_txt=Marennine&s.x=14&s.y=12
MARG	Margaric acid	Margaric acid (C17:0), or heptadecanoic acid, is a saturated fatty acid.	ECOTOX
MEAD	Mead Acid	Mead Acid (C20:3n-9), also all cis-5,8,11-eicosatrienoic acid, is a poly unsaturated fatty acid.	ECOTOX
MCHG	Mean Corpuscular Hemoglobin	(MCH) the average hemoglobin content of an erythrocyte.	Dorland's Medical Dictionary for Health Consumers, 2007
MCHC	Mean Corpuscular Hemoglobin Concentration	An estimation of the concentration of hemoglobin in grams per 100 mL of packed red blood cells, derived from the ratio of the hemoglobin to the hematocrit.	Mosby's Medical Dictionary, 8th edition, 2009

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
MCPV	Mean Corpuscular Volume	The average volume of red blood cells in erythrocyte indices, calculated from the hematocrit and the red blood cell count.	The American Heritage® Medical Dictionary Copyright, 2007, 2004
MPVL	Mean platelet volume	Mean platelet volume measures the average amount (volume) of platelets. It is used along with platelet count to diagnose some diseases. If the platelet count is normal, the mean platelet volume can still be too high or too low.	http://www.webmd.com/a-to-z-guides/complete-blood-count-cbc
MLNN	Melanin	Melanin is a class of compounds found in plants, animals, and protists, where it serves predominantly as a pigment. The class of pigments are derivatives of the amino acid tyrosine.	http://en.wikipedia.org/wiki
MPRB	Membrane progesterone receptor beta	Membrane progestin receptor beta (MPRb) is a steroid membrane receptor and binds progesterone. MPRb may be involved in oocyte maturation. MPRb is an integral membrane protein and is expressed in brain and testis. It belongs to the ADIPOR family.	http://www.abcam.com/progestin-receptor-beta-antibody-ab46534.html
MTHL	Menthol	An alcohol from various mint oils or produced synthetically;	Dorland's Medical Dictionary for Health Consumers, 2007
MNTH	Menthone	A liquid ketone C10H18O that occurs in a levorotatory form esp. in peppermint oil and pennyroyal oil and that can be made synthetically by oxidation of menthol.	www.merriam-webster.com/dictionary/menthone
MNAC	Menthyl Acetate	A natural monoterpene which contributes to the smell and flavor of peppermint. It is the acetate ester of menthol. Menthyl acetate constitutes 3-5% of the volatile oil of mentha piperita.	http://en.wikipedia.org/wiki/Menthyl_acetate
HGCO	Mercury concentration	The concentration of mercury found in a sample.	ECOTOX
MTLT	Metal Content, Total	Total metal content in a sample.	ECOTOX
MTLN	Metallothionein	A family of low-molecular-weight, cysteine-rich proteins present in various tissues, which bind functional (e.g., copper, selenium, zinc) and toxic (e.g., arsenic, cadmium, mercury, silver) metal ions. Metallotheonein production is stimulated by heavy metals (e.g., cadmium and mercury) and is involved in transport, storage, and regulation of “natural” metal ions.	Segen's Medical Dictionary, 2012

BCM	**Biochemical Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
MTCD	Metallothionein to Cadmium ratio	The ratio of Metallothionein to Cadmium meaured in a sample	ECOTOX
MCUR	Metallothionein to Copper ratio	The ratio of Metallothionein to Copper measured in a sample	ECOTOX
MJNA	Methyl jasmonate	Methyl jasmonate (MJ, MeJA), a methyl ester of jasmonic acid (JA) is a plant growth regulator. It is a fragrant volatile compound isolated from the flowers of Jasminum grandiflorum. It has been reported to play an important role in the plant's response to pathogens and wound. Also: methyl jasmonic acid, 3-Oxo-2-(2-pentenyl)cyclopentaneacetic acid, methyl ester, and Methyl 3-oxo-2-(2-pentenyl)cyclopentaneacetate.	http://www.sigmaaldrich.com/catalog/product/aldrich/392707?lang=en&region=US
MLLA	Methyl linolenate	Methyl linolenate, a polyunsaturated fattly acid (PUFA), is used in studies on the mechanisms and prevention of oxidation/peroxidation of unsaturated fatty acids. Methyl linolenate is being studied as a possible skin whitening agent with anti-melanogenesis activity. Also: Linolenic acid methyl ester, Methyl cis,cis,cis-9,12,15-octadecatrienoate.	http://www.sigmaaldrich.com/catalog/product/sigma/l2626?lang=en&region=US
MSLC	Methylselenocysteine content	The concentration of Methylselenocystein, also known as Selenium-methyl-selenocysteine (Se-methyl-selenocysteine), found in a sample.	ECOTOX
MGLB	Methemoglobin	Hemoglobin in the oxidized state. Also ferrihemoglobin.	http://www.ncbi.nlm.nih.gov
METH	Methionine	A naturally occurring, essential amino acid that furnishes both methyl groups and sulfur necessary for normal metabolism. Labeled with carbon 11, it is used in positron emission tomography for detection of neoplasms.	Dorland's Medical Dictionary for Health Consumers, 2007
MDCH	Methyl-4,7,10,13,16,19-Docosahexanate	No definition available.	
MGPN	Mg-2,4-divinyl pheophophyrin a5 monomethyl ester	Mg-2,4-divinyl pheophophyrin a5 monomethyl ester is a protochlorophyllide pigment.	http://www.ncbi.nlm.nih.gov and http://en.wikipedia.org/wiki

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MCYS	Microcystin	Microcystins are cyclic nonribosomal peptides produced by cyanobacteria. They are cyanotoxins and can be very toxic for plants and animals including humans. Microcystins consist of several uncommon non-proteinogenic amino acids. Microcystin-containing (algae) 'blooms' are a problem worldwide. Once ingested, microcystin travels to the liver, though some remains in the blood stream and may contaminate tissue.	http://en.wikipedia.org/wiki/Microcystin
MCPR	Microsomal Proteins	Proteins found in microsomes.	ECOTOX
MP3B	Microtubule-associated protein 1 light chain 3 beta	Ubiquitin-like modifier involved in formation of autophagosomal vacuoles (autophagosomes). Plays a role in mitophagy which contributes to regulate mitochondrial quantity and quality by eliminating the mitochondria to a basal level to fulfill cellular energy requirements and preventing excess ROS production.	http://www.uniprot.org/uniprot/Q9GZQ8
MCON	Mineral content	Mineral content.	ECOTOX
MRXC	Mirex concentration	The amount of the chemical Mirex found in an organism, tissue or response site	ECOTOX
MOCO	Molybdenum Content	An essential trace element required for the function of certain enzymes (e.g., xanthine oxidase); it is present in legumes, whole grains, cereals, dark green vegetables, legumes, liver and meats.	Segen's Medical Dictionary, 2012
MGDG	Monogalactosyl Diglyceride (Glycolipid) Content	A group of glycolipids in which the sugar group is galactose. They are distinguished from glycosphingolipids in lacking nitrogen. They constitute the majority of membrane lipids in plants	www.reference.md/files/C426/mC426675.html
MGCR	Monoglyceride	More correctly known as a monoacylglycerol, is a glyceride consisting of one fatty acid chain covalently bonded to a glycerol molecule through an ester linkage; can be formed by both industrial chemical and biological processes; commonly added to commercial food products in small quantities.	http://en.wikipedia.org/wiki/Monoglyceride
MFPF	Monosaturated fatty acid to Polysaturated fatty acid ratio	The ratio of Monosaturated fatty acid to Polysaturated fatty acid found in a sample.	ECOTOX
MOTP	Monoterpenes	Any of a class of terpenes C10H16 containing two isoprene units per molecule.	http://www.merriam-webster.com/dictionary/monoterpene
MUFA	Monounsaturated Fatty Acids	Monounsaturated Fatty Acids are fatty acids in which the carbon chain contains one double or triple carbon-carbon bonds.	http://www.ncbi.nlm.nih.gov

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MYLN	Myelin	A lipoproteinaceous substance constituting the sheaths of various nerve fibers throughout the body and enveloping the axis of myelinated nerves. It is largely composed of phospholipids and protein, which gives the fibers a white, creamy color	Mosby's Medical Dictionary, 8th edition, 2009
MYRA	Myristic acid	One of the less common fatty acyl residues of phospholipids in biological membranes but is found as an N terminal modification of a large number of membrane associated proteins and some cytoplasmic proteins; a saturated fatty acid occurring naturally in animal and vegetable fats; also called tetradecanoic acid, C14:0	www.encyclo.co.uk/define/Myristic%20acid
MYSL	Myristoleic acid	Myristoleic acid (C14:1 cis9) is a mono unsaturated fatty acid.	ECOTOX
MINO	myo-Inositol	myo-Inositol plays an important role as the structural basis for a number of secondary messengers in eukaryotic cells. An inositol having myo- configuration.	http://www.ebi.ac.uk/chebi/searchId.do?chebiId=CHEBI:17268 and https://en.wikipedia.org/wiki/Inositol
HNMS	N[3H-methyl] scopolamine	Scopolamine: a poisonous alkaloid C17H21NO4 similar to atropine that is found in various solanaceous plants and is used for its anticholinergic effects (as preventing nausea in motion sickness and inducing mydriasis) —called also hyoscine	www.merriam-webster.com/dictionary/scopolamine
CNAC	N-Acetyl-(S-3-chloroprop-2-enyl)cysteine (3CNAC)	N-acetyl-(S-3-chloroprop-2-enyl)cysteine (3CNAC) is a metabolite of 1,3-Dichloropropene, a conjugate of acetylcysteine with 1,3-dichloropropene.	http://www.ncbi.nlm.nih.gov and http://www.epa.gov/iris/subst/0224.htm
NBUA	N-Butyric acid	One of two isomeric fatty acids C4H8O2; the straight-chain acid of unpleasant odor normally found in perspiration and rancid butter. Also Butanoic acid, or normal butyric acid	http://www.wikipedia.org/wiki
RNDP	NADPH to NADP Ratio	Ratio of NADPH to NADP. NADPH is the reduced form of NADP+, and NADP+ is the oxidized form of NADPH (Nicotinamide adenine dinucleotide phosphate).	http://en.wikipedia.org/wiki and ECOTOX
NPTN	Neopterin	A pteridine derivative present in body fluids; elevated levels result from immune system activation, malignant disease, allograft rejection, and viral Infections. (From Stedman, 26th ed) Neopterin also serves as a precursor in the biosynthesis of Biopterin.	http://www.online-medical-dictionary.org/definitions-n/neopterin.html

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NXNT	Neoxanthin	Carotenoid pigments involved in photosynthesis. Neoxanthin is one of the main carotenoids in chloroplasts of higher plants and algae. Alternate spelling: neoxanthine	http://www.ncbi.nlm.nih.gov and ECOTOX
NRMA	Neuraminic acid	Sometimes known as sialic acid, but strictly one of a family of sialic acids (which includes also N glycolyl neuraminic acid and O substituted derivatives). It is a 9 carbon sugar formed by adding to mannose three carbons from pyruvate. Occurs in the subset of glycolipids known as gangliosides and in glycoproteins. The presence of its carboxyl group on glycolipids and glycoproteins is responsible for much of the negative charge on animal cell surfaces.	www.biology-online.org/dictionary/Sialic_acid
NICO	Nickel Content	The concentration of nickel found in a sample.	ECOTOX
NIFE	Nickel to nitrogen ratio	Ratio of nickel to nitrogen in an organism or organism's tissues.	
<NADP>	Nicotinamide-adenine Dinucleotide Phosphate, Reduced	(nicotinamide) NADP - a coenzyme compound of robosylnicotinamide 5'-phosphate, serves as an electron carrier in a number of reactions.	
NICT	Nicotine	A plant alkaloid from tobacco, blocks transmission at nicotinic synapses. An alkaloid poison that occurs in tobacco; used in medicine and as an insecticide.An alkaloid substance found in tobacco.	www.biology-online.org/dictionary/Nicotine
NPSS	Ninhydrin-positive Substances	No definition available**.**	
NO2C	Nitrite concentration (NO2-)	The concentration of Nitrite (NO2-) in a sample.	ECOTOX
NO3C	Nitrate concentration (NO3-)	The concentration of Nitrate (NO3-) in a sample.	ECOTOX
NOCO	Nitric Oxide concentration	This compound is produced from L arginine by the enzyme nitric oxide synthase. Acts as a potent vasorelaxant via elevation of intracellular cGMP in vascular smooth muscle. Synthesis of nitric oxide is not confined to endothelium, isoforms of nitric oxide synthase are also found in brain, neutrophils and platelets. Synonym: endothelium derived relaxation factor.	www.biology-online.org/dictionary/Nitric_oxide
NCON	Nitrogen content	The concentration of nitrogen found in a sample.	ECOTOX
NCAR	Nitrogen Calcium ratio	The ratio of nitrogen to calcium in a sample.	ECOTOX
NMGR	Nitrogen Magnesium ratio	The ratio of nitrogen to magnesium in a sample.	ECOTOX

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Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
NPRT	Nitrogen Phosphorus Ratio	The ratio of nitrogen to phosphorus in a sample.	ECOTOX
NKRT	Nitrogen Potassium ratio	The ratio of nitrogen to potassium in a sample.	ECOTOX
NSRA	Nitrogen to sulfur ratio	The ratio of nitrogen to sulfur in a sample.	ECOTOX
NOHB	Nitrosyl hemoglobin	A protein in which the NO group replaces CO in hemoglobin A.	http://www.ncbi.nlm.nih.gov/mesh/67008657
NODA	Nonadecanoic acid	Nonadecanoic acid (C19:0) is a saturated fatty acid.	ECOTOX
NMIF	Non-methylene-interrupted fatty acids	Polyunsaturated fatty acids without methylene interrupted double bonds.	ECOTOX and http://lipidlibrary.aocs.org/Lipids/fa_poly/file.pdf
NPSH	Nonprotein Sulfhydryl	Sulfhydryl: the univalent radical group, SH, present in many biologically active molecules such as coenzymes and certain proteins.	http://dictionary.reference.com/browse/sulfhydryl
QPHP	Non-photochemical quenching pigments to light harvesting pigments ratio	The ratio of Non-photochemical quenching pigments to light harvesting pigments.	ECOTOX
NSUG	Non-reducing sugars	A sugar that cannot donate electrons to other molecules and therefore cannot act as a reducing agent. Sucrose is the most common nonreducing sugar. The linkage between the glucose and fructose units in sucrose, which involves aldehyde and ketone groups, is responsible for the inability of sucrose to act as a reducing sugar.	www.encyclopedia.com/doc/1O6-nonreducingsugar.html
NC47	NSFL1 cofactor p47	A protein that reduces the ATPase activity of VCP. Necessary for the fragmentation of Golgi stacks during mitosis and for VCP-mediated reassembly of Golgi stacks after mitosis. May play a role in VCP-mediated formation of transitional endoplasmic reticulum (tER)Also: NSFL1 (p97) cofactor (p47), p97 cofactor p47.	http://www.uniprot.org/uniprot/Q9CZ44
NCB2	N-terminal EF-hand calcium-binding protein 2	A calcium binding protein. Also: Novel protein similar to vertebrate EF hand calcium binding protein 2, Neuronal calcium-binding protein 2, Synaptotagmin-interacting protein 2.	http://www.uniprot.org/uniprot/Q7Z6G3
NFKB	Nuclear factor-kappa B	Protein complex that controls transcription of DNA, cytokine production and cell survival. NF-κB is found in almost all animal cell types and is involved in cellular responses to stimuli such as stress. Also: nuclear factor kappa-light-chain-enhancer of activated B cells.	https://en.wikipedia.org/wiki/NF-%CE%BAB

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NRF2	Nuclear Factor E2 Related Factor 2	A basic-Leucine Zipper Transcription Factor that was originally described as a transcriptional regulator controlling expression of the beta-Globin Gene. It may regulate the expression of a wide variety of Genes that play a Role in protecting Cells from oxidative damage. Also:Nrf2.	http://www.online-medical-dictionary.org/definitions-n/nuclear-factor-e2-related-factor-2.html
NUAC	Nucleic Acids	Any of the group of complex compounds consisting of linear chains of monomeric nucleotides whereby each monomeric unit is composed of phosphoric acid, sugar and nitrogenous base, and involved in the preservation, replication, and expression of hereditary information in every living cell. The chains of nucleotides in a nucleic acid are linked by 3', 5' phosphodiester linkages. Nucleic acids may be in the form of DNA or RNA molecules containing the genetic information important for all cellular functions and heredity.	www.biology-online.org/dictionary/Nucleic_acid
NUTP	Nucleoside Triphosphate	(NTP) is a molecule containing a nucleoside bound to three phosphates. Nucleotide derivatives are necessary for life, as they are building blocks of nucleic acids and have thousands of other roles in cell metabolism and regulation. NTPs generally provide energy and phosphate group for phosphorylations.	http://en.wikipedia.org/wiki/Nucleoside_triphosphate
NTPH	Nucleotide triphophate (Total) to hemoglobin ratio	Ratio of total nucleotide triphosphate to hemoglobin in a sample.	ECOTOX
NUTR	Nutrient Status Change	No definition available**.**	
OHGL	O2 Specific Bond to Hemoglobin	No definition available**.**	
ODCN	Octadecanoate	A free fatty acid	ECOREF #77855
OCTA	Octadecenoic acid (C18:1n-7)	Octadecenoic acid, both cis and trans isomers, (C18:1n-7) is a mono unsaturated fatty acid.	ECOTOX
OCTS	Octadecenoic acids	Octadecenoic acids, various isomers of the mono unsaturated fatty acid.	ECOTOX
OSDB	Oestradiol (Estradiol) breakdown products	Amount of polar metabolites formed in nmoles/g microsomal fraction from the breakdown of estradiol.	ECOTOX
EPNP	O-Ethyl-O-p-nitrophenylbenzenethionophosphate	The amount of O-Ethyl-O-p-nitrophenylbenzenethionophosphate contained within a response site.	ECOTOX
OLCO	Oil Content	The amount of oil contained within a response site	ECOTOX

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
OLYD	Oil Yield	Oil Yield refers to the amount of oil that can be derived from an oilseed or from algae. It is usually represented as a percent.	www.oilgae.com/ref/glos/oil_yield.html
OLEC	Oleic Acid	Yellowish, unsaturated fatty acid with lard-like aroma; the main component of olive and cooking oils; used in soaps, ointments, cosmetics, and ore beneficiation. Also: 18:1(n-9), 18:1 cis-9, C18:1omega9.	McGraw-Hill Dictionary of Scientific & Technical Terms, 6E, (2003)
O1LA	(omega -1)-Hydroxy lauric acid	Hydroxylation product of the metabolism of lauric acid.	ECOREF 67744
O2LA	(omega-2)-Hydroxy lauric acid	Hydroxylation product of the metabolism of lauric acid.	ECOREF 67744
O3LA	(omega-3)-Hydroxy lauric acid	Hydroxylation product of the metabolism of lauric acid.	ECOREF 67744
O6LA	(omega-6)-Hydroxy lauric acid	Hydroxylation product of the metabolism of lauric acid.	ECOREF 67744
O3FA	Omega 3 Fatty Acid	Omega 3 Fatty Acids are unsaturated fatty acids which have the first unsaturated bond in the third position from the omega carbon.	http://www.ncbi.nlm.nih.gov
O3O6	Omega 3 Fatty Acids to Omega 6 Fatty Acids ratio	Ratio of Omega 3 Fatty Acids to Omega 6 Fatty Acids in a sample.	ECOTOX
O6FA	Omega 6 Fatty Acids	Omega 6 Fatty Acids are unsaturated fatty acids which have the first unsaturated bond in the sixth position from the omega carbon.	http://www.ncbi.nlm.nih.gov
O6O3	Omega 6 Fatty Acids to Omega 3 Fatty Acids ratio	Ratio of Omega 6 Fatty Acids to Omega 3 Fatty Acids in a sample.	ECOTOX
OACD	Organic acids	Organic acid: an organic compound with acidic properties. The most common organic acids are the carboxylic acids, whose acidity is associated with their carboxyl group –COOH. In biological systems, organic compounds containing these groups are generally referred to as organic acids.	http://en.wikipedia.org/wiki/Organic_acid
ORNI	Ornithine	An amino acid obtained from arginine by splitting of urea; it is an intermediate in urea biosynthesis.	Dorland's Medical Dictionary for Health Consumers, 2007

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OSCN	Osteocalcin	Osteocalcin is a Vitamin K-dependent calcium-binding protein synthesized by osteoblasts and found primarily in bones. Serum osteocalcin measurements provide a noninvasive specific marker of bone metabolism. The protein contains three residues of the amino acid gamma-carboxyglutamic acid (Gla), which, in the presence of calcium, promotes binding to hydroxyapatite and subsequent accumulation in bone matrix.	http://www.ncbi.nlm.nih.gov
OXAC	Oxalic acid	A colourless, crystalline, toxic organic compound belonging to the family of carboxylic acids, commonly found in plants, also called Ethanedioic Acid.	http://www.britannica.com/EBchecked/topic/436389/oxalic-acid
OXAE	Oxaloacetate	A four-carbon molecule found in the mitochondrion that condenses with acetyl CoA to form citrate in the first reaction of the Krebs cycle. Also: alpha-ketoacid oxalacetate.	http://resonancerresearch.org/oxaloacetate.htm
OCON	Oxygen Content	The concentration of oxygen found in a sample.	ECOTOX
ONRA	Oxygen to nitrogen ratio	The ratio of oxygen to nitrogen in a sample.	ECOTOX
OXHC	Oxyhemocyanin	A blue pigment formed by the combination of hemocyanin with oxygen in the ratio of one molecule of oxygen to two atoms of copper in the hemocyanin.	www.merriam-webster.com/dictionary/oxyhemocyanin
OHCP	Oxyhemocyanin to protein ratio	Ratio of oxyhemocyanin to protein in a sample.	ECOTOX
PCLV	Packed Cell Volume	The percentage of the volume of whole, unclotted blood occupied by the erythrocytes. Abbreviated PCV.	Saunders Comprehensive Veterinary Dictionary, 3 ed, 2007
PALM	Palmitic Acid	A fatty acid derived from spermaceti; used to make metal palmitates and in soaps, water-proofing, and lubricating oils. Also: Hexadecanoic Acid, cetylic acid, C16:0	http://pubchem.ncbi.nlm.nih.gov
PALL	Palmitoleic Acid	A crystalline unsaturated fatty acid C16H30O2 occurring in the form of glycerides especially in marine animal oils (as of cod, seals, and whales) and yielding palmitic acid on hydrogenation. Also: 16:1(n-7), C16:1 trans-9, C16:1n7, palmitelaidic acid, palmitoleate.	www.merriam-webster.com/medical/palmitoleic%20acid and http://pubchem.ncbi.nlm.nih.gov/compound/palmitoleic_acid#section=EC-Number

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Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
PABA	p-Aminobenzoic acid	A part of the folic acid molecule. Also known as: 4-Amino-benzoic Acid, 4-Amino-Benzoesaeure, p-Amino-benzoesaeure, PABA, vitamin BX, Anticanitic vitamin, p-Carboxyaniline, p-Carboxyphenylamine, 1-Amino-4-carboxybenzene, Kyselina p-Aminobenzoova, Aniline-4-carboxylic acid.	http://chemicalland21.com/specialtychem/finechem/p-AMINOBENZOIC%20ACID.htm
AMNH	P-amino Hippurate	A salt, conjugate base, or ester of aminohippuric acid; the sodium salt is used to measure effective renal plasma flow and to determine the functional capacity of the tubular excretory mechanism.	Dorland's Medical Dictionary for Health Consumers, 2007
PTNA	Pantothenic acid	Pantothenic acid is a butyryl-beta-alanine that can also be viewed as pantoic acid complexed with beta alanine. It is incorporated into coenzyme a and protects cells against peroxidative damage by increasing the level of glutathione.Also: Vitamin B5	http://www.ncbi.nlm.nih.gov
PARN	Parinaric acid	A crystalline highly unsaturated fatty acid CH3CH2(CH=CH)4(CH2)7COOH obtained esp. from seed fats of trees of the genus Parinarium. 18:4 undifferentiated fatty acid.	http://www.nal.usda.gov/fnic/foodcomp/Data/SR17/sr17_doc.pdf and http://www.merriam-webster.com/dictionary/parinaric%20acid
PRXT	Paroxetine	A selective serotonin uptake inhibitor used as the hydrochloride salt to treat depression and obsessive-compulsive, panic, and social anxiety disorders.	Dorland's Medical Dictionary for Health Consumers, 2007
PTLN	Patulin	Patulin, or 4-Hydroxy-4H-furo(3,2-c)pyran-2(6H)-one, is a mycotoxin produced by several species of Aspergillus and Penicillium. It is found in unfermented apple and grape juice and field crops. It has antibiotic properties and has been shown to be carcinogenic and mutagenic and causes chromosome damage in biological systems.	http://www.ncbi.nlm.nih.gov
PCBC	PCB concentration	The amount of the chemical(s) Polychlorinated biphenol(s) found in an organism, tissue or response site.	ECOTOX

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
PCMA	p-Coumaric acid	A phenolic acid.Also: 4-Hydroxycinnamic acid, p-Hydroxycinnamic acid, 4-Coumaric acid, trans-p-Coumaric acid, Para-Coumaric acid, p-Cumaric acid.	http://pubchem.ncbi.nlm.nih.gov/compound/p-coumaric_acid
PETN	Pectin	Any of various water-soluble substances that bind adjacent cell walls in plant tissues.	http://www.merriam-webster.com/dictionary/pectin
PDCN	Pentadecanoate	A free fatty acid	ECOREF #77855
PDCA	Pentadecanoic acid	Pentadecanoic acid, pentadecylic acid (C15:0) is a saturated fatty acid.	http://en.wikipedia.org/wiki/
PFOS	Perfluorooctane sulfonate	The concentration of Perfluorooctane sulfonate found in a sample. Perfluorooctane sulfonate (PFOS) is a perfluoralkyl sulfonate that is commonly used as a simple salt (such as potassium, sodium or ammonium) or is incorporated into larger polymers.	www.epa.gov/optintr/existingchemicals/pubs/pfcs_action_plan1230_09.pdf
PFOA	Perfluorooctanoic acid	The concentration of Perfluorooctanoic acid found in a sample. Perfluorooctanoic acid (PFOA) is a perfluoralkyl carboxylate that is produced synthetically as a salt. Ammonium salt is the most widely produced form.	www.epa.gov/optintr/existingchemicals/pubs/pfcs_action_plan1230_09.pdf
POLD	Peroxidizable lipids	Lipids that are able to be peroxidized.	ECOTOX
PHPH	pH	Hydrogen ion concentration	www.biology-online.org/dictionary/Ph
PPYT	Phaeophytin	A breakdown product of chlorophyll	www.dep.state.fl.us/labs/biology/microbio.htm
PNLA	Phenolic acids	Acids containing or derived from phenol.	The American Heritage Medical Dictionary, 2007, 2004 by Houghton Mifflin Company. http://medical-dictionary.thefreedictionary.com/phenolic
PNYL	Phenols concentration	The concentration of Phenols found in a sample. Phenols, sometimes called phenolics, are a class of chemical compounds consisting of a hydroxyl group (-O H) attached to an aromatic hydrocarbon group. The simplest of the class is phenol (C6H5OH).	http://en.wikipedia.org/wiki/Phenols and ECOTOX

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
PHEN	Phenylalanine	One of the amino acids which the body cannot manufacture itself, but must acquire from food. It is abundant in meats and cheese. Phenylalanine is a precursor of tyrosine and together they lead to the formation of thyroxine or thyroid hormone and of adrenaline and noradrenaline which is converted into a neurotransmitter, a brain chemical which transmits nerve impulses.	www.biology-online.org/dictionary/Phenylalanine
PTNN	Phlorotannin	Phlorotannins are a class of polyphenolic compounds (tannins) derived from pholorglucinol (1,3,5-trihydroxybenzene) . Phlorotannins can be found in brown seaweeds.	http://www.ncbi.nlm.nih.gov and ECOTOX
PSPH	Phosphagen	Any of several organic phosphate compounds (as phosphocreatine or phosphoarginine) occurring especially in muscle and releasing energy on hydrolysis of the phosphate	www.merriam-webster.com/medical/phosphagen
PPHT	Phosphate	A salt of phosphoric acid. As a biological molecule, it is composed of phosphorus and oxygen and plays a major role in biological processes of many organisms, e.g. as chemical component of nucleic acids (DNA and RNA), nucleotides (ATP), plasma membrane (phospholipids), etc.	www.biology-online.org/dictionary/Phosphate
PHSP	Phosphatide Phosphorus	Phospholipid with phosphorus.	ECOTOX
PHPA	Phosphatidic acid	Phosphatidic acid is a major constituent of cell membranes and acts as a biosynthetic precursor for the formation of all acylglycerol lipids in the cell.	http://en.wikipedia.org/wiki
PHSC	Phosphatidyl Choline (Phospholipid) Content	A phospholipid comprising choline linked to phosphatidic acid; it is a major component of cell membranes and is localized preferentially in the outer surface of the plasma membrane.	Dorland's Medical Dictionary for Health Consumers, 2007
PHSE	Phosphatidyl Ethanolamine (Phospholipid) Content	A phospholipid containing ethanolamine that is a major constituent of cell membranes and is localized preferentially in the inner surface of the plasma membrane. Abbreviated PE.	Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, Seventh Edition, 2003
PHSG	Phosphatidyl Glycerol (Phospholipid) Content	A phospholipid that can be seen in amniotic fluid, pulmonary effluent and semen.	http://connection.ebscohost.com/c/reference-entries/62156446/phosphatidyl-glycerol

BCM	**Biochemical Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
PHSI	Phosphatidyl Inositol (Phospholipid)	A phosphatidic acid combined with inositol found in biomembranes and a precursor to certain cellular signals. Sometimes referred to as inositide. Synonym(s): phosphoinositide, Phosphatidylinositol.	Farlex Partner Medical Dictionary, 2012
PPDS	Phosphatidylserine	A phospholipid containing serine that is an important constituent of cell membranes and is localized preferentially in the inner surface of the plasma membrane.	Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, Seventh Edition. 2003
PARG	Phosphoarginine	A compound (in particular, a phosphagen) of l-arginine with phosphoric acid containing the phosphoamide bond; a source of energy in the contraction of muscle in invertebrates, corresponding to phosphocreatine in the muscles of vertebrates. Synonym(s): arginine phosphate	Farlex Partner Medical Dictionary, 2012
PSPC	Phosphocholine	The biological role played by a material entity when bound by a receptor of the adaptive immune system. An intermediate in the synthesis of phosphatidylcholine in tissues. Also: Choline phosphate, N-Trimethyl-2-aminoethylphosphonate, O-Phosphocholine, Phosphocholine, Phosphorylcholine.	http://www.ebi.ac.uk/chebi/searchId.do?chebiId=CHEBI:18132 and https://en.wikipedia.org/wiki/Phosphocholine
PHCR	Phosphocreatine	A compound of creatine and phosphoric acid occurring in muscle, being the most important storage form of high-energy phosphate, the energy source in muscle contraction. Also: Creatine phosphate.	Saunders Comprehensive Veterinary Dictionary, 3 ed, 2007 and https://en.wikipedia.org/wiki/Phosphocreatine
PCRA	Phosphocreatine to creatine	The ratio of Phosphocreatine to creatine	ECOTOX
PCRE	Phosphocreatinine	A high energy reservoir for ATP formation.	http://web.stcloudstate.edu/lsreerama/Assets/Biochem480/MetabGen.pdf
PDST	Phosphodiester	An oligonucleotide with an oxygen atom linking consecutive nucleotides.	www.merriam-webster.com/medical/phosphodiester

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
PSPY	Phosphoenol pyruvate	A high energy derivative of pyruvate occurring as an intermediate in the Embden-Meyerhof pathway of glucose metabolism, in gluconeogenesis, and in the biosynthesis of some amino acids.	Dorland's Medical Dictionary for Health Consumers, 2007
PPEA	Phosphoethanolamine	A key intermediate in the formation of cephalins; formed in liver and brain by phosphorylation of ethanolamine.	Farlex Partner Medical Dictionary, 2012
PLTR	Phospholipid to Triglyceride ratio	The ratio of phospholipid to triglyceride in a sample.	ECOTOX
PMST	Phosphomonoester	Phosphomonoesters (or phosphoric esters) are chemical compounds containing one ester bond and a phosphate group. In biology, phosphomonesters are needed as the building blocks for the synthesis of Phospholipid cellular membranes, especially those found on neurons. [1] Enzymes which cleave these bonds are known as phosphomonoesterases, or phosphatases.	http://encyclopedia.thefreedictionary.com/Phosphomonoesters
PPPN	Phosphoprotein	Any of various proteins (as casein) that contain combined phosphoric acid.	http://www.merriam-webster.com/medlineplus/phosphoprotein
PCON	Phosphorus Content	The concentration of phosphorus found in a sample.	ECOTOX
PFER	Phosphorus to Iron Ratio	The ratio of phosphorus to iron in a sample.	ECOTOX
PORT	Phosphorus oxygen ratio	The ratio of phosphorus to oxygen in a sample.	ECOTOX
PNRT	Phosphorus Nitrogen ratio	The ratio of phosphorus to nitrogen in a sample.	ECOTOX
PZNR	Phosphorus to Zinc ratio	Ratio of phosphorus to zinc in an organism or organism's tissues.	ECOTOX

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Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
PPPT	Phosphorylation of proteins	The addition of a phosphate group to an organic molecule. Phosphorylation is important for many processes in living cells. ATP is formed during cell respiration from ADP by phosphorylation, as in the mitochondria of eukaryotic cells (oxidative phosphorylation) and the chloroplasts of plant cells (photosynthetic phosphorylation). Phosphorylation also regulates the activity of proteins, such as enzymes, which are often activated by the addition of a phosphate group and deactivated by its removal (called dephosphorylation).	www.thefreedictionary.com/phosphorylation
PSPI	Phosphotidylserine and phosphotidylinosital	Derivatives of phosphatidic acids that are parts of biomembranes.	ECOTOX
PHSS	Phosphtidylserine	Derivatives of phosphatidic acids in which the phosphoric acid is bound in ester linkage to a serine moiety. Also Serine Phosphoglyceride	http://www.ncbi.nlm.nih.gov
PHCB	Phycobiliproteins	Phycobiliproteins are light harvesting protein complexes found in phycobilisomes.	http://www.ncbi.nlm.nih.gov
PHYC	Phycocyanin	Blue pigment in algae.A blue photosynthetic pigment found in some bacteria and algae which absorbs light in the 618nm range.	www.biology-online.org/dictionary/Phycocyanin
PCCR	Phycocyanin to chlorophyll a ratio	The ratio of phycocyanin to chlorophyll a in a sample.	ECOTOX
PCCB	Phycocyanobilin	A blue phycobilin, i.e., a tetrapyrrole chromophore found in cyanobacteria and in the chloroplasts of red algae, glaucophytes, and some cryptomonads.	http://en.wikipedia.org/wiki/Phycocyanobilin
PHCO	Phycoerythrin	Phycoerythrin is the metal-free red phycobilin pigment in a conjugated chromoprotein of red algae. It functions as a light-absorbing substance together with chlorophylls.	http://www.ncbi.nlm.nih.gov
PECA	Phycoerythrin to chlorophyll a ratio	The ratio of phycoerythrin to chlorophyll a in a sample.	ECOTOX
PHXA	p-Hydroxybenzaldehyde	A phenolic acid derivative. Also: 4-Hydroxybenzaldehyde, 4-Formylphenol, p-Formylphenol, p-Oxybenzaldehyde.	http://pubchem.ncbi.nlm.nih.gov/compound/4-hydroxybenzaldehyde
PHBA	p-Hydroxybenzoic acid	A phenolic acid. Also 4-Hydroxybenzoic acid, 4-Carboxyphenol, p-Salicylic acid.	http://pubchem.ncbi.nlm.nih.gov/compound/4-hydroxybenzoic_acid

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PYAX	Phytoalexin	A chemical produced by a host plant that inhibits the growth of a pathogenic fungus.	http://botanydictionary.org/phytoalexin.html
PHTC	Phytochelatin	Oligomers of glutathione, produced by the enzyme phytochelatin synthase. They are found in plants, fungi, nematodes and all groups of algae including cyanobacteria. Phytochelatins act as chelators, and are important for heavy metal detoxification.	http://en.wikipedia.org/wiki/Phytochelatin
PHTN	Phytoene	Phytoene is a precursor to carotenoids. Two molecules of the twenty carbon geranylgeranyl pyrophosphate are condensed in a tail-to-tail configuration to give the forty carbon phytoene, the first committed step in carotenoid biosynthesis.	http://en.wikipedia.org/wiki
PHBC	Phytoene to beta-carotene ratio	The ratio of phytoene to beta-carotene found in a sample.	ECOTOX
PIAC	Pinolenic acid	Pinolenic acid (often misspelled as Pinoleic acid) is a fatty acid contained in the Korean Pine nut and the seeds of other conifers (Taxaceae). (18:3n-6)	http://en.wikipedia.org/wiki/Pinolenic_acid
PSCY	Plastocyanin	A copper-containing plant protein that is a fundamental link in the electron transport chain of green plants during the photosynthetic conversion of light energy by photophosphorylation into the potential energy of chemical bonds.	www.reference.md/files/D010/mD010970.html
PLAT	Platelets	The smallest cells in the blood. They are formed in the red bone marrow, and some are stored in the spleen. Platelets are disk-shaped, contain no hemoglobin, and are essential for the coagulation of blood and in maintenance of hemostasis. Normally between 200,000 and 300,000 platelets are found in 1 mL3 of blood. Also called thrombocyte.	Mosby's Medical Dictionary, 8th edition, 2009
PNAS	p-Nitroanisol	The amount of p-Nitroanisol contained within a response site.	ECOTOX
PLAM	Polyamine	An organic compound having two or more primary amino groups (-NH2). This class of compounds includes many substances that play important roles in both eukaryotic and prokaryotic cells, such as putrescine, cadaverine, spermidine, and spermine.	http://en.wikipedia.org/wiki/Polyamine
PBHB	Poly-beta-hydroxybutyrate	Poly β-hydroxybutyrate (PHB) is an energy and carbon storage material accumulated in response to the limitation of an essential nutrient.	www.springerlink.com/content/j2n601h23v74t5k6/
PEGE	Polyethylene Glycol (Peg) Efflux	No definition available.	

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PLSC	Polysaccharide	A carbohydrate polymer that is formed from three or more molecules of simple carbohydrates. Examples of polysaccharides are dextrin, starch, glycogen, cellulose, gums, and inulin.	Mosby's Medical Dictionary, 8th edition, 2009
PUFA	Polyunsaturated Fatty Acids	Polyunsaturated Fatty Acids are fatty acids in which the carbon chain contains two or more double or triple carbon-carbon bonds.	http://www.ncbi.nlm.nih.gov
PUSF	Polyunsaturated fatty acid to Saturated fatty acid ratio	The ratio of Polyunsaturated fatty acid to Saturated fatty acid.	ECOTOX
PORP	Porphyrin	Any of various heterocyclic compounds, derived from pyrrole, that occur universally in protoplasm, contain a central metal atom, and provide the foundation structure for hemoglobin, chlorophyll, and certain enzymes.	The American Heritage® Medical Dictionary Copyright, 2007, 2004
KCDR	Potassium Cadmium Ratio	The ratio of potassium to cadmium in a sample.	ECOTOX
KCON	Potassium Content	The concentration of potassium found in a sample.	ECOTOX
KCUR	Potassium Copper Ratio	The ratio of potassium to copper in a sample.	ECOTOX
KNO3	Potassium nitrate	Potassium nitrate content in a sample.	ECOTOX
KNRT	Potassium Nitrogen ratio	The ratio of potassium to nitrogen in a sample.	ECOTOX
KNAR	Potassium Sodium Ratio	The ratio of potassium to sodium in a sample.	ECOTOX
PRAS	Prasinoxanthin	An algal pigment. (Note: If the measurement is on a single organism it is coded under BCM. If the measurement is on a group of organisms it is coded under POP.)	ECOTOX
PALB	Prealbumin	A protein component of plasma having a molecular weight of about 55,000 and containing 1.3% carbohydrate; estimated plasma concentration is 0.3 g per 100 mL. Also: transthyretin.	http://medical-dictionary.thefreedictionary.com/prealbumin
PCPA	Procarboxypeptidase A	Physiologically inactive substances that can be converted to active enzymes, specific precursor form is referred to as a procarboxypeptidase A. In the case of pancreatic carboxypeptidase A, the inactive zymogen form, pro-carboxypeptidase A, is converted to its active form - carboxypeptidase A - by the enzyme enteropeptidase. This mechanism ensures that the cells wherein pro-carboxypeptidase A is produced are not themselves digested.	http://www.ncbi.nlm.nih.gov and http://en.wikipedia.org/wiki

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PCPB	Procarboxypeptidase B	Physiologically inactive substances that can be converted to active enzymes, specific precursor form is referred to as a procarboxypeptidase B. In the case of pancreatic carboxypeptidase B, the inactive zymogen form, pro-carboxypeptidase B, is converted to its active form - carboxypeptidase A - by the enzyme enteropeptidase. This mechanism ensures that the cells wherein pro-carboxypeptidase A is produced are not themselves digested.	http://www.ncbi.nlm.nih.gov and http://en.wikipedia.org/wiki
PCD6	Programmed cell death 6-interacting protein	A protein that may play a role in the regulation of both apoptosis and cell proliferation. It is involved in concentration and sorting of cargo proteins of the multivesicular body (MVB) for incorporation into intralumenal vesicles (ILVs) that are generated by invagination and scission from the limiting membrane of the endosome. Also: ALG-2-interacting protein 1.	http://www.uniprot.org/uniprot/Q9QZA2
PRLN	Proline	A cyclic, nonessential amino acid occurring in proteins; it is a major constituent of collagen.	Dorland's Medical Dictionary for Health Consumers, 2007
PAAR	Proline to total amino acid ratio	The ratio of proline to total amino acid in a sample.	ECOTOX
PMP2	proMMP2	The inactive zymogen, or proenzyme, of MMP2 (matrix metalloproteinase 2)	ECOTOX
PM29	Pro-matrix metaloproteinase 2 and Pro-matrix metaloproteinase 9	Pro-matrix metaloproteinase 2 and Pro-matrix metaloproteinase 9 are the inactive zymogen, or proenzymes, of MMP2 and MMP9.	ECOTOX
PMP9	proMMP9	The inactive zymogen, or proenzyme, of MMP9 (matrix metalloproteinase 9)	ECOTOX
PADH	Propionaldehyde	Propionaldehyde is the organic compound with the formula CH3CH2CHO. It is the only 3-carbon aldehyde and is a structural isomer of acetone. It is a colourless liquid with a slightly irritating, fruity odour. It is present as a lipid metabolite in tissues.	http://en.wikipedia.org/wiki and ECOREF#73878

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PGE2	Prostaglandin E2	One of a group of naturally occurring, chemically related fatty acids that stimulate contractility of the uterine and other smooth muscle and have the ability to lower blood pressure, regulate acid secretion of the stomach, regulate body temperature and platelet aggregation, and control inflammation and vascular permeability; they also affect the action of certain hormones. Nine primary types are labeled A through I, the degree of saturation of the side chain of each being designated by subscripts 1, 2, and 3. The types of prostaglandins are abbreviated PGE2, PGF2α, and so on.	Dorland's Medical Dictionary for Health Consumers, 2007
PTSM	Proteasome	Proteolytic complexes that degrade cytosolic and nuclear proteins. Implicated in aTP dependent ubiquitin protein complex degradation and in antigen processing in antigen presenting cells.	www.biology-online.org/dictionary/Proteasome
PROB	Protein binding	The process in which substances, either endogenous or exogenous, bind to proteins, peptides, enzymes, protein precursors, or allied compounds. Specific protein-binding measures are often used as assays in diagnostic assessments.	www.biology-online.org/dictionary/Protein_binding
PRSH	Protein bound sulfhydryl	Sulfhydryl: The radical -sH; contained in glutathione, cysteine, coenzyme A, lipoamide (all in the reduced state), and in mercaptans (R-SH). Synonym: thiol.	www.biology-online.org/dictionary/Sulfhydryl
CNP1	Protein Canopy-1	Involved in the maintenance of the midbrain-hindbrain boundary (MHB) organizer. Contributes to a positive-feedback loop of FGF signaling in the MHB, enabling the MHB to exert its role as an organizer for the tectal and cerebellar development. Also: Protein D121, cnpy1, d121.	http://www.uniprot.org/uniprot/Q2L6L1
PCAR	Protein carbonyls	Markers of oxidative stress measured as 2,4-dinitrophenylhydrazine incorporated into protein	ECOREF #81028
PRCO	Protein Content	Protein: any of a group of complex organic compounds containing carbon, hydrogen, oxygen, nitrogen, and sulfur. Proteins, the principal constituents of the protoplasm of all cells, are of high molecular weight and consist of α-amino acids joined by peptide linkages. Twenty different amino acids are commonly found in proteins, each protein having a unique, genetically defined amino acid sequence that determines its specific shape and function. Their roles include enzymatic catalysis, transport and storage, coordinated motion, nerve impulse generation and transmission, control of growth and differentiation, immunity, and mechanical suppport.	Dorland's Medical Dictionary for Health Consumers, 2007

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PDJ1	Protein DJ-1	A protein that protects cells against oxidative stress and cell death. Also: Parkinson disease protein 7 homolog.	http://www.uniprot.org/uniprot/Q99LX0
PRPO	Protein to Polysaccharide ratio	The ratio of protein to polysaccharide found in a sample.	ECOTOX
PRUP	Protein to urea ratio	Ratio of protein to urine.	
PROI	Protein, insoluble	Any of a group of complex organic compounds which contain carbon, hydrogen, oxygen, nitrogen and usually sulphur, the characteristic element being nitrogen and which are widely distributed in plants and animals. In this case: Insoluble proteins	http://cancerweb.ncl.ac.uk/omd/
PRTL	Protein, Total	Total amount of protein in a sample	ECOTOX
PRTM	Prothrombin	A plasma protein that is the inactive precursor of thrombin. It is converted to thrombin by a prothrombin activator complex consisting of factor Xa, factor V, phospholipid, and calcium ions. Deficiency of prothrombin leads to hypoprothrombinemia. Also known as: Factor II, Blood Coagulation Factor II, Differentiation Reversal Factor, Factor Differentiation Reversal.	http://www.ncbi.nlm.nih.gov/mesh/68011516
PCCA	Protocatechuic acid	A crystalline acid C7H6O4 produced from various resins and found in combination in many plant products	www.merriam-webster.com/medical/protocatechuic%20acid
PCAH	Protocatechuic aldehyde	A phenolic acid derivative. Also: Protocatechualdehyde, Rancinamycin IV, 3,4-Dihydroxybenzaldehyde, 3,4-dihydroxy-benzaldehyde.	http://pubchem.ncbi.nlm.nih.gov/compound/3_4-Dihydroxybenzaldehyde
PTCP	Protochlorophyllide	An immediate precursor of chlorophyll a, which lacks the phytol side-chain of chlorophyll.	http://en.wikipedia.org/wiki/Protochlorophyllide
PRTO	Protoporphyrin	A kind of porphyrin that combines with iron and protein to form various important organic molecules, including catalase, hemoglobin, and myoglobin.	Mosby's Medical Dictionary, 8th edition, 2009
PPIX	Protoporphyrin IX	An important precursor to biologically essential prosthetic groups such as heme, cytochrome c, and chlorophylls.	http://en.wikipedia.org/wiki/Protoporphyrin_IX
PHCN	Pseudohypericin	Pseudohypericin is an analogue of hypericin and is also a principal constituent of Hypericum (Saint John's wort).	ECOTOX and http://en.wikipedia.org/wiki/
PLAC	Pulp:Acid	Pulp to acid ratio.	ECOTOX

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PUTR	Putrescine	An amine associated with putrifying tissue. Associates strongly with dNA. Has been suggested as a growth factor for mammalian cells in culture.	www.biology-online.org/dictionary/Putrescine
PYRT	Pyrethrin	Either of two oily liquid esters: C21H28O3 and C22H28O5 having insecticidal properties and occurring especially in the flowers of pyrethrum.	www.merriam-webster.com/dictionary/pyrethrin
PYRV	Pyruvate	A salt, ester, or anion of pyruvic acid. Pyruvate is the end product of glycolysis and may be metabolized to lactate or to acetyl CoA.	Dorland's Medical Dictionary for Health Consumers, 2007
QUIN	Quinone	Any of various usually yellow, orange, or red quinonoid compounds including several that are biologically important as coenzymes, hydrogen acceptors, or vitamins	http://www.merriam-webster.com/medlineplus/Quinone
LALN	Ratio of linoleic to linolenic fatty acids	Ratio of linoleic to linolenic fatty acids	ECOTOX
SUFA	Ratio of saturated to unsaturated fatty acids	Ratio of saturated to unsaturated fatty acids	ECOTOX
ROXS	Reactive oxygen species	A type of unstable molecule that contains oxygen and that easily reacts with other molecules in a cell. A build up of reactive oxygen species in cells may cause damage to DNA, RNA, and proteins, and may cause cell death. Reactive oxygen species are free radicals. Also called oxygen radical.	www.cancer.gov/dictionary?cdrid=687227
RDWD	Red cell distribution width	Red cell distribution width (RDW) is a measurement of the variability of red blood cell size. Higher numbers indicate greater variation in size. Part of a Complete Blood Count.	http://www.medterms.com/script/main/art.asp?articlekey=9996
GSGS	Reduced Glutathione to Glutathione disulfide	The ratio of reduced Glutathione to Glutathione disulfide	ECOTOX
RLPA	Reduced Lipoic Acid	A thio-fatty acid that is reduced form of lipoic acid. A potent antioxidant shown to directly destroy superoxide, hydroperoxy and hydroxyl radicals; also has neuroprotective and anti-tumour effects. Also: Dihydrolipoic acid.	http://www.ebi.ac.uk/chebi/searchId.do?chebiId=CHEBI:18047

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RSUG	Reducing sugars	A sugar that serves as a reducing agent due to its free aldehyde or ketone functional groups in its molecular structure. Examples are glucose, fructose, glyceraldehydes, lactose, arabinose and maltose, except for sucrose. Benedict's reaction is used to determine the presence of a reducing sugar, i.e. when a mixture contains sugar it will turn green/orange/red after this test – an indication that the reducing sugar is present in the mixture.	www.biology-online.org/dictionary/Reducing_sugar
RIDX	Refractive Index	The ratio of the velocity of light in a vacuum to the velocity in some medium. Refractive index generally increases with the atomic number of the constituent atoms.	www.biology-online.org/dictionary/Refractive_index
RBVL	Relative Blood Volume (Volume/100g Body Weight)	Sum of red cell volume and plasma volume in relation to body weight.	ECOTOX
RTNL	Retinal	The aldehyde of retinol, derived from absorbed dietary carotenoids or esters of retinol and having vitamin A activity. In the retina, retinal combines with opsins to form visual pigments. The two isomers 11-cis retinal and all-trans retinal are interconverted in the visual cycle. Also: Retinaldehyde, Vitamin A aldehyde.	Dorland's Medical Dictionary for Health Consumers. 2007
RTAC	Retinoic acid	An oxidized derivative of retinol, believed to be the form of vitamin A that plays a role in the development and growth of bone and in the maintenance of normal epithelial structures.	Dorland's Medical Dictionary for Health Consumers. 2007
RTND	Retinoids	Pertaining to any of a group of compounds whose molecules contain 20 carbon atoms structurally related to retinal, retinol, and other substances, some of which exhibit vitamin A activity. Retinoid analogs have been used in the prevention and treatment of various skin cancers and treatment of the digestive and respiratory tracts.	Mosby's Medical Dictionary, 8th edition, 2009
RTAT	Retinol (all trans)	The all trans form of retinol where all of the double bonds are in the trans configuration. Also known as Tretinoin and is used as chemotherapy for acute promyelocytic leukemia, a subtype of acute myelogenous leukemia.	http://www.chemistryexplained.com/Pr-Ro/Retinol.html and https://en.wikipedia.org/wiki/Retinol

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
VITA	Retinol (Vitamin A)	Retinol or any of several fat-soluble compounds with similar biological activity; the vitamin acts in numerous capacities, particularly in the functioning of the retina, the growth and differentiation of epithelial tissue, the growth of bone, reproduction, and the immune response. Deficiency causes skin disorders, increased susceptibility to infection, nyctalopia, xerophthalmia and other eye disorders, anorexia, and sterility. As vitamin A it is mostly found in liver, egg yolks, and the fat component of dairy products; its other major dietary source is the provitamin A carotenoids of plants. It is toxic when taken in excess	Dorland's Medical Dictionary for Health Consumers ,2007
RTRP	Retinol/Retinyl palmitate ratio	The ratio of Retinol to Retinyl palmitate in a sample.	ECOTOX
RBGD	Retinoyl beta-glucuronide	An unstable metabolite of the vitamin A metabolite retinoic acid.	http://www.pharmacy.ohio-state.edu/homepage/program/medchem/medc_curley.html
RTES	Retinyl esters	Sum of retinyl palmitate, retinyl stearate, and retinyl oleate.	ECOTOX 80509
VIDD	Retinyl palmitate:Dehydroretinyl palmitate	Ratio of Retinyl palmitate to Dehydroretinyl palmitate found in a sample.	ECOTOX
RTST	Retinyl stearate	A derivative of Vitamin A.	http://www.umm.edu/altmed/ConsSupplements/VitaminARetinolcs.html)
RHDP	Rhodopsin	Light sensitive pigment formed from retinal linked through a Schiff's base to opsin: rhodopsin is an integral membrane protein found in the discs of retinal rods and cones, comprising some 40% of the membrane. Vertebrate opsins are proteins of 38 kD	www.biology-online.org/dictionary/Rhodopsin
RIBO	Riboflavin Content	Riboflavin: a B vitamin that prevents skin lesions and weight loss.Otherwise known as vitamin B2, this vitamin is essential for the metabolic processes of all animals.	www.biology-online.org/dictionary/Riboflavin
RBSD	Riboside	A glycoside that yields ribose on hydrolysis	www.merriam-webster.com/medical/riboside

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
R23A	Ribosomal protein L23a	Ribosomal Protein L23a, also known as RPL23A or MDA20, is a 156 amino acid protein that exists as part of the 60S ribosomal subunit and is expressed at high levels in heart, pancreas and skeletal muscle. Localized to the cytoplasm, Ribosomal Protein L23a is thought to be involved in the mediation of growth inhibition, possibly functioning as a target molecule for interferons (IFNs).	http://www.scbt.com/datasheet-130252-ribosomal-protein-l23a-i-20-antibody.html
RBCO	Rubidium Concentration	The level of Rubidium in a sample	ECOTOX
SAHC	S-adenosyl-l-homocysteine	The compound formed by the demethylation of s-adenosyl-l-methionine.	www.biology-online.org/dictionary/S-adenosyl-l-homocysteine
SAME	S-adenosyl-l-methionine	Condensation product of adenosine and l-methionine involving replacement of the -OPO3H2 of adenylic acid by -S_(CH3)CH2CH2CH(NH3_)CO 2 of methionine; a sulfonium compound bearing a methyl group that is transferred in transmethylation reactions	www.biology-online.org/dictionary/S-adenosyl-l-methionine
AMAH	S-adenosylmethionine to S-adenosylhomocysteine ratio	Ratio of S-adenosylmethionine to S-adenosylhomocysteine in a sample.	ECOTOX
SLCA	Salicylic acid	A phenolic acid that has bacteriostatic, fungicidal, and keratolytic actions. Also: 2-Hydroxybenzoic acid, o-hydroxybenzoic acid, o-Carboxyphenol, 2-Carboxyphenol, Salonil, and Rutranex.	http://pubchem.ncbi.nlm.nih.gov/compound/salicylic_acid
ACSO	S-alk(en)yl-L-cysteine sulphoxide	S-alk(en)yl-L-cysteine sulphoxides (ACSOs) (flavour precursors), give rise to the characteristic aroma and flavour of garlic. Also Allium.	http://www.garlicworld.co.uk/flavour/page3.html and ECOTOX
SATF	Saturated Fatty Acids	Saturated Fatty Acids are fatty acids that have no double bonds between the carbon atoms of the fatty acid chain and are thus fully saturated with hydrogen atoms.	http://en.wikipedia.org/wiki
STLD	Saturated lipid or fat	A fatty acid with all potential hydrogen binding sites filled (totally hydrogenated fat). These hold the highest risk for the development of atherosclerosis.	www.biology-online.org/dictionary/Saturated_fat
SCPN	Scopoletin	A crystalline lactone C10H8O that is found in various solanaceous plants (as members of the genus Scopolia or belladonna).	www.merriam-webster.com/medical/scopoletin
<SMET>	Secondary Metabolism	No definition available.	

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
SLNT	Selenite content	The concentration of Selenite found in a sample.	ECOTOX
SECO	Selenium content	The concentration of selenium found in a sample.	ECOTOX
SEHG	Selenium mercury ratio	The ratio of selenium to mercury in a sample.	ECOTOX
SESR	Selenium to sulfur ratio	The ratio of selenium to sulfur palmitate in a sample.	ECOTOX
SLCY	Selenocysteine content	The concentration of Selenocysteine found in a sample.	ECOTOX
SCSM	Selenocysteine to Selenomethionine ratio	The ratio of Selenocysteine to Selenomethionine to in a sample.	ECOTOX
SLMT	Selenomethionine content	The concentration of Selenomethionine found in a sample.	ECOTOX
SERI	Serine	A nonessential amino acid found in many proteins in the body (e.g., casein, vitellin). It is synthesized from glycine or threonin and a precursor of the amino acids purine, cysteine, and others. It can be found in urine.	Mosby's Medical Dictionary, 8th edition, 2009
SRTR	Serotonin to Trytophan ratio	The ratio of Serotonin to Trytophan in a sample.	ECOTOX
SERT	Serotonin transporter	Serotonin transporter whose primary function in the central nervous system involves the regulation of serotonergic signaling via transport of serotonin molecules from the synaptic cleft back into the pre-synaptic terminal for re-utilization. Plays a key role in mediating regulation of the availability of serotonin to other receptors of serotonergic systems. Terminates the action of serotonin and recycles it in a sodium-dependent manner. Also: Sodium-dependent serotonin transporter, 5HT transporter, 5-HTT, Solute carrier family 6 member 4, SERT, 5HT Transporter protein.	http://www.uniprot.org/uniprot/Q60857 and http://en.wikipedia.org/wiki/Serotonin_transporter
SERP	Serpin	Any of a group of structurally related proteins that typically are serine protease inhibitors (as antithrombin and antitrypsin) whose inhibiting activity is conferred by an active site in a highly variable and mobile peptide loop and that include some (as ovalbumin and angiotensinogen) which have apparently lost the inhibitory action due to mutation in the course of evolutionary change.	www.merriam-webster.com/medical/serpin
TRC3	Short transient receptor potential channel 3 protein	A protein involved in catalysis of the calcium concentration-regulatable energy-independent passage of cations across a lipid bilayer down a concentration gradient. Also: Receptor-activated cation channel TRP3, Transient receptor protein 3, Trp-related protein 3.	http://www.uniprot.org/uniprot/Q9QZC1 and http://www.informatics.jax.org/marker/MGI:109526

BCM	**Biochemical Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
SIAL	Sialic acid	Any of a group of acetylated derivatives of neuraminic acid; they occur in many polysaccharides, glycoproteins, and glycolipids in animals and bacteria.	Dorland's Medical Dictionary for Health Consumers, 2007
SLAC	Silicic acid	Hydrated silicon dioxide that occurs in nature. It is insoluble in water or acids except hydrofluoric acid.	www.biology-online.org/dictionary/Silicic_acid
SICO	Silicon content	The concentration of silicon found in a sample.	ECOTOX
AGCO	Silver concentration	The concentration of silver found in a sample.	ECOTOX
SPXN	Siphonaxanthin	Siphonaxanthinis a Xanthophyll.	http://www.ncbi.nlm.nih.gov and http://en.wikipedia.org/wiki
SRGA	Siringic acid	Siringic acid is a phenolic acid	ECOREF#71186
SNSC	S-Nitroso compounds	The amount of S-Nitroso compounds found in a sample.	ECOTOX
NACO	Sodium Content	The concentration of sodium found in a sample.	ECOTOX
NAZN	Sodium Zinc Ratio	The ratio of sodium to zinc in a sample.	ECOTOX
NAKR	Sodium Potassium Ratio	The ratio of sodium to potassium in a sample.	ECOTOX
PRSL	Soluble Protein	An older laboratory measurement that represents the portion of crude protein that goes into solution when mixed in a buffered solution. If 30% of the protein goes into solution, by definition, 30% of the crude protein is soluble.	http://www.omafra.gov.on.ca/english/livestock/dairy/facts/08-039.htm
SOSO	Soluble solids	The soluble solids content is the total of all the solids dissolved in the water, including sugar, salts, protein, acids, etc., and the measurement reading is the sum total of these.	http://www.articlesbase.com/science-articles/brix-refractometers-1554453.html

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
SSUG	Soluble Sugars	Soluble sugars, especially sucrose, glucose, and fructose, play an obviously central role in plant structure and metabolism at the cellular and whole-organism levels. They are involved in the responses to a number of stresses, and they act as nutrient and metabolite signalling molecules that activate specific or hormone-crosstalk transduction pathways, thus resulting in important modifications of gene expression and proteomic patterns. Various metabolic reactions and regulations directly link soluble sugars with the production rates of reactive oxygen species, such as mitochondrial respiration or photosynthesis regulation, and, conversely, with anti-oxidative processes, such as the oxidative pentose-phosphate pathway and carotenoid biosynthesis.	http://jxb.oxfordjournals.org/content/57/3/449.full
SGRV	Specific gravity	A dimensionless unit defined as the ratio of the density of a substance to the density of water at a specified temperature. It is common to use the density of water at 4 C (39 F) as a reference since water at this point has its highest density.	http://www.engineeringtoolbox.com/density-specific-weight-gravity-d_290.html
SPMD	Spermidine	A polyamine compound, C7H19N3, found in ribosomes and living tissues and having various metabolic functions. It was originally isolated from semen.	The American Heritage7 Dictionary of the English Language: Fourth Edition. 2000.
SPER	Spermine	A deliquescent crystalline aliphatic tetramine C10H26N4 found in semen in combination with phosphoric acid, in blood serum and body tissues, and in yeast.	www.merriam-webster.com/medical/spermine
SPHG	Sphingomyelin	Any of a group of crystalline phosphatides that are obtained especially from nerve tissue and that on hydrolysis yield a fatty acid (as lignoceric acid), sphingosine, choline, and phosphoric acid.	www.merriam-webster.com/medical/sphingomyelin www.merriam-webster.com/medical/sphingomyelin
SPIG	Spiggin	A glue protein produced by the kidney of a male stickleback that is used as a cementing substance for the building of a nest.	ECOREF 62582

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
STRH	Starch Content	A polysaccharide carbohydrate (C6H10O5)n consisting of a large number of glucose monosaccharide units joined together by glycosidic bonds found especially in seeds, bulbs, and tubers. Plants use starch as a way to store excess glucose, and thus also use starch as food during mitochondrial oxidative phosphorylation.	www.biology-online.org/dictionary/Starch
STDN	Stearidonic acid	Stearidonic acid is and omega-3 faty acid sometimes called moroctic acid. It is biosynthesized from alpha-linolenic acid by the enzyme delta-6-desaturase. Also: 18:4(n-3).	https://en.wikipedia.org/wiki/Stearidonic_acid
STER	Stearic Acid	A saturated 18-carbon fatty acid occurring in most fats and oils, particularly of tropical plants and land animals; used pharmaceutically as a tablet and capsule lubricant and as an emulsifying and solubilizing agent. Also C18:0	land's Medical Dictionary for Health Consumers, 2007
STES	Sterol esters	Sterol esters are present in plant tissues, but as relatively minor components other than in waxes. Usually the sterol components of sterol esters are similar to the free sterols, although there may be relatively less of stigmasterol.	http://www.lipid.co.uk/infores/Lipids/sterols/
STOL	Sterols	Any steroid-based alcohol having a hydrocarbon (aliphatic) side-chain of 8-10 carbons at the 17-beta position and a hydroxyl group at the 3-beta position (therefore an alcohol).	www.biology-online.org/dictionary/Sterols
STPP	Sterol to phospholipid ratio	The ratio of sterol to phospholipid ratio in a sample.	ECOTOX
SEWE	Steryl esters and wax esters	A component of the lipid content of organisms.	ECOTOX
SVOL	Steviol	The amount of Steviol measured in a sample.	ECOTOX
SRCA	Strontium Calcium ratio	The ratio of strontium to calcium in a sample.	ECOTOX
SRCO	Strontium Content	The concentration of strontium found in a sample.	ECOTOX
PRST	Structure proteins	Proteins with a role in structure and support in tissue and within the cell; the collagens.	www.medilexicon.com/medicaldictionary.php?t=73045
SCCN	Succinate	A salt or ester of succinic acid	Dorland's Medical Dictionary for Health Consumers, 2007

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Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
SUCR	Sucrose	A disaccharide of glucose and fructose from sugar cane, sugar beet, or other sources; used as a food and sweetening agent and pharmaceutical aid.	Dorland's Medical Dictionary for Health Consumers ,2007
SUGA	Sugar Content	Any of a class of sweet water-soluble carbohydrates, the monosaccharides and smaller oligosaccharides; often specifically sucrose.	Dorland's Medical Dictionary for Health Consumers, 2007
SGMP	Sugar monophosphates	Initial product of photosynthesis.	ECOTOX
SPHS	Sugar phosphates	Sugar phosphates (sugars that have added or substituted phosphate groups) are often used in biological systems to store or transfer energy. They also form the backbone for DNA and RNA (DNA having two sugar molecules, and RNA having just one).	http://encyclopedia.thefreedictionary.com/Sugar+phosphates
SLFT	Sulfate concentration	The concentration of sulfate measured in a sample.	ECOTOX
SFTD	Sulfatides	Cerebroside sulfuric esters containing one or more sulfate groups in the sugar portion of the molecule.	Farlex Partner Medical Dictionary, 2012
SHMG	Sulfhemoglobin	A green pigment formed by the reaction of hemoglobin with a sulfide in the presence of oxygen or hydrogen peroxide.	http://www.merriam-webster.com/medical/sulfhemoglobin
SLFH	Sulfhydryl	The radical -sH; contained in glutathione, cysteine, coenzyme A, lipoamide (all in the reduced state), and in mercaptans (R-SH). Synonym: thiol.	www.biology-online.org/dictionary/Sulfhydryl
SQVD	Sulfoquinovosyl diglyceride	Any compound containing one or more monosaccharide residues bound by a glycosidic linkage to a hydrophobic moiety such as an acylglycerol, a sphingoid, a ceramide (N-acylsphingoid) or a prenyl phosphate.	www.reference.md/files/C013/mC013694.html
SCON	Sulfur Content	The concentration of sulfur found in a sample.	ECOTOX
SSTS	Sulfane Sulfur	A chemical compound containing a sulfur to sulfur double bond. Also, Thiosulfoxide.	http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4170951/ and https://en.wikipedia.org/wiki/Thiosulfoxide

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Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
SSER	Sulfur to Selenium Ratio	The ratio of sulfur to selenium ratio in a sample.	ECOTOX
SPOX	Superoxide	Any compound containing the highly reactive and extremely toxic oxygen radical O2−, a common intermediate in numerous biological oxidations.	Dorland's Medical Dictionary for Health Consumers, 2007
SPTP	Synaptophysin	Synaptophysin is a 38-kd calcium-binding glycoprotein that is present in the presynaptic vesicles of neurons and in the neurosecretory granules of neuroendocrine cells.	http://www.biocare.net/AntibodyView.asp?ID=421
S25A	Synaptosomal-associated protein 25-A	A protein that may play an important role in the synaptic function of specific neuronal systems. Associates with proteins involved in vesicle docking and membrane fusion. Also: Synaptosome-associated protein 25.1.	http://www.uniprot.org/uniprot/Q5TZ66
SYRA	Syringic acid	A phenolic acid. Also: 4-Hydroxy-3,5-dimethoxybenzoic acid, 3,5-Dimethoxy-4-hydroxybenzoic acid, Cedar acid, Gallic acid 3,5-dimethyl ether.	http://pubchem.ncbi.nlm.nih.gov/compound/syringic_acid
TANN	Tannins	Any of various soluble astringent complex phenolic substances of plant origin used especially in tanning leather and dyeing fabric, manufacturing ink, clarifying wine and beer, and in medicine.	http://www.merriam-webster.com/dictionary/tannins?show=0&t=1306339968
TART	Tartaric acid	Any of several isomers of the dicarboxylic acid HOOC(CHOH)2COOH, occurring especially in grapes. Also called 2,3-Dihydroxybutanedioic acid.	Dorland's Medical Dictionary for Health Consumers, 2007
TAUR	Taurine	An oxidized sulfur-containing amine occurring conjugated in the bile, usually as cholyltaurine or chenodeoxycholyltaurine; it may also be a central nervous system neurotransmitter or neuromodulator.	Dorland's Medical Dictionary for Health Consumers, 2007
TGRT	Taurine to Glycine ratio	The ratio of Taurine to Glycine in a sample.	ECOTOX
TCON	Tungsten content	The concentration of tungsten found in a sample.	ECOTOX
TNZA	Tenuazonic acid	Tenuazonic acid is a metabolite found in a strain of the fungus Alternaria tenuis Auct. which functions as an antibiotic with antiviral and antineoplastic properties, and may also act as a mycotoxin.	http://www.ncbi.nlm.nih.gov

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Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
TDCN	Tetradecanoate	A free fatty acid	ECOREF #77855
TEAM	Tetraethyl Ammonium	The quaternary ammonium ion (C2H5)4N+ containing four ethyl groups; also : a salt of this ion (as the deliquescent crystalline chloride used as a ganglionic blocking agent)—abbreviation TEA	www.merriam-webster.com/medical/tetraethylammonium
TLCO	Thallium content	The concentration of thallium found in a sample.	ECOTOX
LCPR	The ratio of lipid to chlorophyll to protein	The ratio of the amount of lipid to chlorophyll to protein in an organism or organism's parts.	ECOTOX
LPRR	The ratio of lipid to protein	The ratio of the amount of lipid to protein in an organism or organism's parts.	ECOTOX
THIA	Thiamin	A water-soluble B vitamin that is a necessary cofactor in alpha-keto decarboxylation, links glycolysis with the Krebs cycle (tricarboxylic acid cycle, the main source of energy in mammals), and is critical in the production of cyclic guanosine monophosphate.	Segen's Medical Dictionary, 2012
TPPH	Thiamin pyrophosphate	The diphosphoric ester of thiamin, a coenzyme of several (de)carboxylases, transketolases, and α-oxoacid dehydrogenases. Synonym(s): aneurine pyrophosphate, cocarboxylase, diphosphothiamin	Farlex Partner Medical Dictionary, 2012
THBA	Thiobarbituric Acid	A barbituric acid derivative C6H4N2O2S that is used to form a series of thio analogs of the barbiturates.	www.merriam-webster.com/medical/thiobarbituric%20acid
TBAR	Thiobarbituric Acid Reactive Substances	TBARS - are formed as a byproduct of lipid peroxidation (i.e. as degradation products of fats) which can be detected by the TBARS assay using thiobarbituric acid as a reagent. Because reactive oxygen species (ROS) have extremely short half-lives, they are difficult to measure directly. Instead, what can be measured are several products of the damage produced by oxidative stress, such as TBARS.	http://en.wikipedia.org/wiki/TBARS
TCNT	Thiocyanate	Thiocyanate (also known as rhodanide) is the anion [SCN]-. It is both a breakdown product of cyanide and is known to be important in the biosynthesis of hypothiocyanite by a lactoperoxidase.	www.wikipedia.org/wiki
THSF	Thioether	A thioether is a functional group in organic chemistry that has the structure R1-S-R2. Like many other sulfur-containing compounds, volatile thioethers characteristically have foul odors. Also: Sulfides, Sulfur Ethers.	http://www.ncbi.nlm.nih.gov and http://en.wikipedia.org/wiki

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Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
TRXN	Thioredoxin	Hydrogen-donating proteins that participate in a variety of biochemical reactions including ribonucleotide reduction and reduction of peroxiredoxins. Thioredoxin is oxidized from a dithiol to a disulfide when acting as a reducing cofactor. The disulfide form is then reduced by NADPH in a reaction catalyzed by thioredoxin reductase.	http://www.online-medical-dictionary.org/definitions-t/thioredoxin.html
THCO	Thorium concentration	The concentration of Thorium found in a sample.	ECOTOX
TRGB	Thyroglobulin	An iodine-containing glycoprotein of high molecular weight, occurring in the colloid of the follicles of the thyroid gland; the iodinated tyrosine moieties of thyroglobulin form the active hormones thyroxine and triiodothyronine.	Dorland's Medical Dictionary for Health Consumers, 2007
TLR2	Toll-like receptor 2 protein	Cooperates with LY96 to mediate the innate immune response to bacterial lipoproteins and other microbial cell wall components. Cooperates with TLR1 or TLR6 to mediate the innate immune response to bacterial lipoproteins or lipopeptides. Also: Toll/interleukin-1 receptor-like protein 4.	http://www.uniprot.org/uniprot/O60603
TLR4	Toll-like receptor 4 protein	Cooperates with LY96 and CD14 to mediate the innate immune response to bacterial lipopolysaccharide (LPS). Acts via MYD88, TIRAP and TRAF6, leading to NF-kappa-B activation, cytokine secretion and the inflammatory response. Also: hToll.	http://www.uniprot.org/uniprot/O00206
THLS	Trehalose	A crystalline disaccharide C12H22O11 that is found in various organisms (as fungi and insects), is about half as sweet as sucrose, and is sometimes used as a sweetener in commercially prepared foods.	www.merriam-webster.com/dictionary/trehalose
THRE	Threonine	The hydroxylated polar amino acid. A colorless crystalline amino acid found in protein; occurs in the hydrolysates of certain proteins; an essential component of human nutrition.One of 20 amino acids that are commonly found in proteins, this particular amino acid is soluble in water.	www.biology-online.org/dictionary/Threonine
TXB2	Thromboxane B2	Thromboxane B2 is a stable, physiologically active compound formed in vivo from the prostaglandin endoperoxides. It is important in the platelet-release reaction.	http://www.nlm.nih.gov

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Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
TYMD	Thymidine	A pyrimidine nucleoside that has thymine bound to a deoxyribose sugar. Thymidine is in fact a deoxyribonucleoside. The prefix deoxy- is often left out since there are no precursors of thymine nucleotides involved in RNA synthesis, only DNA synthesis. Hence, it is sometimes simply called thymidine.	www.biology-online.org/dictionary/Thymidine
TTTV	Thymol turbidity test	Precipitation of abnormal proportions of albumin and globulin from the serum of patients with liver disease by addition of thymol. Although popular in the past it has been superseded by quantitative determination of specific proteins and direct measurement of liver enzymes. Synonyms: Maclagan test, Maclagan thymol turbidity test	www.medilexicon.com/medicaldictionary.php?t=90866
SNCO	Tin concentration	The concentration of Tin found in a sample.	ECOTOX
TICO	Titanium content	The concentration of titanium found in a sample.	ECOTOX
<D44T>	Total 4,4 Dimethylsterols	The 4,4-dimethyl- and 4α-methylsterols are part of the biosynthetic pathway, but are only minor if ubiquitous sterol components of plants	http://lipidlibrary.aocs.org/lipids/plant_st/index.htm
<DI4T>	Total 4-dimethysterols	No definition available.	
C9BT	Total 9b,19-cyclopropylsterols	A sterol is any steroid-based alcohol having a hydrocarbon (aliphatic) side-chain of 8-10 carbons at the 17-beta position and a hydroxyl group at the 3-beta position (therefore an alcohol).	www.biology-online.org/dictionary/Sterol
TAOC	Total antioxidant capacity	The measure of antioxidant capacity of all antioxidants in a biological sample.	http://jcmb.halic.edu.tr/pdf/7-1/BOLUM_1.pdf
TGOG	Total glutathione oxidized glutathione ratio	The ratio of total glutathione (GSH+GSSG) to oxidized glutathione (GSSG) in a sample.	ECOTOX
GLYT	Total Glycolipid Content	A lipid containing carbohydrate groups, usually galactose but also glucose, inositol, or others; the glycolipids include the cerebrosides.	Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, Seventh Edition, 2003
LAMT	Total lauric acid metabolites	A total of all metabolism products of lauric acid.	ECOREF#67744
TNSC	Total Non-structural Carbohydrate	Non-structural carbohydrate (NSC) - simple carbohydrates, such as starches and sugars, stored inside the cell that serve as a cellular energy source. Non-structural carbohydrates are rapidly and easily digested by the animal.	www.omafra.gov.on.ca/english/livestock/dairy/facts/08-039.htm

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TOCA	Total oxidative capacity	The quantitative determination of peroxides in a biological sample. Also: Total oxidant capacity, TOC.	http://www.biotrend-usa.com/spec/BTDM-P-4200.pdf
PHST	Total Phospholipid Content	Phospholipids consist of a glycerol bound to two fatty acids and a phosphate group. They serve as a major structural component of most biological membranes. They form the lipid bilayer in cell membranes of organisms.	www.biology-online.org/dictionary/Phospholipid
TTSL	Total Solids (in milk)	Total solids are determined by weighing milk, drying milk, and weighing dried milk residue. Total solids content of milk is the weight of dried milk residue expressed as percentage of original milk weight.	http://www.fmmaseattle.com/lab/solids.htm
T9HC	trans-9 Hexadecanoate	A free fatty acid	ECOREF #77855
T10O	trans-10-octadecenoic acid	trans-10-octadecenoic acid (C18:1 trans10) is a mono unsaturated fatty acid.	ECOTOX
T12O	trans-12-octadecenoic acid	trans-12-octadecenoic acid (C18:1 trans12) is a mono unsaturated fatty acid.	ECOTOX
TSFN	Transferrin	A protein that carries iron in the bloodstream (80 kD) found in mammalian serum, a beta globulin; binds ferric iron with a Kass of around 21 at pH 7.4, 18.1 at pH 6.6. An important constituent of growth media. Transferrin receptors on the cell surface bind transferrin as part of the transport route of iron into cells.	www.biology-online.org/dictionary/Transferrin
TGB1	Transforming growth factor beta 1	Transforming growth factor beta 1 or TGF-beta1 is a polypeptide member of the transforming growth factor beta superfamily of cytokines. It is a secreted protein that performs many cellular functions, including the control of cell growth, cell proliferation, cell differentiation and apoptosis.	http://en.wikipedia.org
TCTP	translationally controlled tumor protein	TCTP is highly conserved and abundant. It is involved in many key biological pathways, such as the TOR pathway, apoptosis, nuclear reprogramming, and cell cycle. It is highly regulated on a transcriptional, translational and protein level. As TCTP is involved in a wide array of biological functions, it is not surprising that any changes to TCTP might result in an array of abnormal phenotypes. Furthermore, abnormal cell proliferation, growth, and survival are probably the most important characteristics of cancer, all of which are regulated by TCTP.	www.hindawi.com/journals/bcri/2012/105203/

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TTRN	Transthyretin	An a-globulin secreted by the liver; it forms a complex with retinol binding protein and binds retinol, transporting it to the peripheral tissues. It may also bind triiodothyronine or thyroxine although these are usually transported by thyroxine-binding globulins.	Dorland's Medical Dictionary
TRIB	Tributyrin	A synthetic substrate for lipase assays. Synonym(s): glyceryl tributyrate, tributyrylglycerol	Farlex Partner Medical Dictionary, 2012
TRIG	Triglycerides (Triacylglycerols)	An energy-rich compound made up of a single molecule of glycerol and three molecules of fatty acid, and serves as a major component of animal and plant oils and fats. Triglycerides are present in both plants and animals. Triglycerides in plants are typically found in plant cell membrane where the fatty acids are mostly unsaturated. In animals, the fatty acid component is largely saturated.	www.biology-online.org/dictionary/Triglyceride
TMAO	Trimethylamine oxide	Trimethylamine oxide (TMAO) is a common and compatible osmolyte in tissue that is often credited with counteracting protein-destabilizing forces.	www.cephbase.dal.ca/refdb/pdf/6856.pdf
TRLX	Trolox	A water soluble vitamin E derivative. It is an antioxidant like vitamin E and it is used in biological or biochemical applications to reduce oxidative stress or damage.	http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3932407/ and https://en.wikipedia.org/wiki/Trolox
TPNN	Troponin	A complex of three proteins, troponin-C (TnC), troponin-I (TnI), troponin-T (TnT), and present in striated muscle. Together, these proteins function as regulators of muscle contraction.	Medical Dictionary for the Health Professions and Nursing, 2012
TRYS	Trypsinogen	The inactive precursor form of trypsin. Trypsinogen is secreted in pancreatic juice and converted to active trypsin through the action of enterokinase in the intestine. Also called protrypsin	Mosby's Medical Dictionary, 8th edition, 2009
TRYA	Tryptamine	A crystalline substance, C10H12N2, which is formed in plant and animal tissues from tryptophan and is an intermediate in various metabolic processes.	The American Heritage Dictionary of the English Language, Fourth Edition (2000)

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
TRYP	Tryptophan	A naturally occurring amino acid, existing in proteins and essential for human metabolism. It is a precursor of serotonin. Adequate levels may mitigate pellagra by compensating for deficiencies of niacin.	Dorland's Medical Dictionary for Health Consumers, 2007
TRTY	Trytophan to tyrosine ratio	The ratio of trytophan to tyrosine in an organism or organism's tissues.	ECOTOX
TERP	T-terpinene	No definition available.	
TA1C	Tubulin alpha-1C chain	Tubulin alpha-1C chain belongs to the tubulin family. Tubulin is the major constituent of microtubules. It binds two moles of GTP, one at an exchangeable site on the beta chain and one at a non-exchangeable site on the alpha-chain. Alternate names: Alpha-tubulin 6, Tubulin alpha-6 chain.	http://www.uniprot.org/uniprot/Q9BQE3
TP53	Tumor protein D53	A protein involved in G2/M transition of mitotic cell cycle, apoptotic DNA fragmentation, positive regulation of JNK cascade and positive regulation of MAP kinase activity. Also: Tumor protein D52-like 1, TPD52L1.	http://www.uniprot.org/uniprot/O54818 and http://useast.ensembl.org/
TMFA	Tumor necrosis factor-alpha	A gene on chromosome 6p21.3 that encodes a cytokine, primarily secreted by macrophages, which binds to TNFRSF1A/TNFR1 and TNFRSF1B/TNFBR. TNF can induce cell death of certain tumour cell lines, and it is a potent pyrogen causing fever either directly or by stimulating interleukin-1 secretion. It is implicated in the tumour-related cachexia. It may stimulate cell proliferation and induce cell differentiation.	Segen's Medical Dictionary, 2012
TYRO	Tyrosine	A naturally occurring, nonessential amino acid present in most proteins; it is a product of phenylalanine metabolism and a precursor of thyroid hormones, catecholamines, and melanin.	Dorland's Medical Dictionary for Health Consumers, 2007
UFAS	Unsaturated fatty acids	Unsaturated Fatty Acids are fatty acids in which the carbon chain contains one (monounsaturated), two or more (polyunsaturated) double or triple carbon-carbon bonds.	http://www.ncbi.nlm.nih.gov
USAR	Unsaturated fatty acid to saturated fatty acids ratio	Ratio of unsaturated fatty acids to saturated fatty acids.	ECOTOX
URAC	Uracil	A pyrimidine base (C4H4N2O2) that is one of the four bases coding genetic information in the polynucleotide chain of RNA.	http://www.merriam-webster.com/

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
UCON	Uranium concentration	The concentration of Uranium found in a sample.	ECOTOX
UREA	Urea	The chief nitrogenous endproduct of protein metabolism, formed in the liver from amino acids and from ammonia compounds; found in urine, blood, and lymph.	Dorland's Medical Dictionary for Health Consumers, 2007
UTMR	Urea to Trimethylamine oxide ratio	Ratio of Urea to Trimethylamine oxide	ECOTOX
UREN	Urea nitrogen	The nitrogen associated with the urea in the body.	ECOTOX
UNCR	Urea nitrogen to Creatinine ratio	The ratio of Urea nitrogen to Creatinine in a sample.	ECOTOX
URIC	Uric Acid	The water-insoluble end product of primate purine metabolism.	Dorland's Medical Dictionary for Health Consumers, 2007
UDPA	Uridine Diphosphate (UDP) Acetylglucosamine	Uridine Diphosphate N-Acetylglucosamine serves as the biological precursor of insect chitin, of muramic acid in bacterial cell walls, and of sialic acids in mammalian glycoproteins.	http://de.dict.md/definition/UDP
UPRP	Uroporphyrin	Any of several porphyrins produced by oxidation of uroporphyrinogen; one or more are excreted in excess in the urine in several of the porphyrias	Dorland's Medical Dictionary for Health Consumers, 2007
UCTR	Uroprophrin creatine ratio	The ratio of Uroprophrin to creatine in a sample.	ECOTOX
UIII	Uroporphyrinogen III	The precursor for synthesis of vitamin B12, chlorophyll, and heme, in organisms that produce these compounds.	http://www.rpi.edu/dept/bcbp/molbiochem/MBWeb/mb2/part1/heme.htm
USNA	Usnic acid	A yellow crystalline substance C18H16O7 that is obtained from various lichens.	http://www.merriam-webster.com/medical/usnic%20acid
VACC	Vaccenic acid	n-Trans-11-octadecenoic acid;an unsaturated fatty acid of which both cis and trans isomers are found in butter and other animal fats.	www.biology-online.org/dictionary/Vaccenic_acid

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
VALI	Valine	An essential amino acid that is a constituent of proteins, especially fibrous proteins.	The American Heritage® Medical Dictionary Copyright, 2007, 2004
VCON	Vanadium content	The concentration of vanadium found in a sample.	ECOTOX
VNLA	Vanillic acid	An odorless crystalline phenolic acid C8H8O4 found in some varieties of vanilla, formed by oxidation of vanillin, and used chiefly in the form of esters as food preservatives.	www.merriam-webster.com/medical/vanillic%20acid
VNLL	Vanillin	A phenolic acid derivative; also known as: 4-Hydroxy-3-methoxybenzaldehyde, Vanillaldehyde, Vanillic aldehyde, 4-Hydroxy-3-methoxy-benzaldehyde, and Vanilline.	http://pubchem.ncbi.nlm.nih.gov/compound/vanillin#section=Odor
VMAC	Vanillylmandelic acid	A urinary metabolite of epinephrine and norepinephrine. It may be measured in the urine to determine the levels of these catecholamines.	Mosby's Medical Dictionary, 8th edition, 2009
VCXN	Vaucheriaxanthin	Vaucheriaxanthin is a Xanthophyll.	http://www.ncbi.nlm.nih.gov and http://en.wikipedia.org/wiki
VERA	Versicolorin A	A mycotoxin	ECOTOX
VHAC	Versiconal Hemiacetal Acetate	An anthraquinone that is an intermediate in aflatoxin biosynthesis	ECOTOX 75785
VLDL	Very low density lipoprotein	Composed mostly of cholesterol, with little protein and used to transport cholesterol, triglycerides and other lipids to various tissues. Often called "bad cholesterol" because it deposits cholesterol on the walls of arteries.	NIH-Medline
VPRO	Vimentin	Intermediate filament protein found in mesodermally derived cells including muscle.	www.biology-online.org/dictionary/Vimentin
VXCA	Violaxanthin to Chlorophyll A ratio	Ratio of Violaxanthin to Chlorophyll A	ECOTOX
VLXN	Violaxanthin	An orange to red crystalline carotenoid pigment C40H56O4 obtained from yellow pansies and many other plants: zeaxanthin di-epoxide.	www.merriam-webster.com/dictionary/violaxanthin
VTAE	Vitamin A ester (Retinyl ester)	A compound that has a fatty acid bound to the alcohol group of retinol.	http://www.canr.uconn.edu/nusci/hpg/fatsolublenotes.pdf

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
VB12	Vitamin B12	Vitamin B12 is a cobalt-containing coordination compound produced by intestinal micro-organisms and found also in soil and water. Higher plants do not concentrate vitamin B 12 from the soil and so are a poor source of the substance as compared with animal tissues. It is important for the normal functioning of the brain and nervous system, and for the formation of blood. Cyanocobalamin is an especially common vitamer of the B-12 vitamin family, animals and humans can convert it to active (cofactor) forms of the vitamin, such as methylcobalamin	http://www.ncbi.nlm.nih.gov and http://en.wikipedia.org/wiki
VTMD	Vitamin D	Vitamin D is a fat-soluble vitamin that includes both cholecalciferols and ergocalciferols.	http://www.ncbi.nlm.nih.gov
VTD3	Vitamin D3	A hormone synthesized in the skin on irradiation of 7-dehydrocholesterol or obtained from the diet; it is activated when metabolized to 1,25-dihydroxycholecalciferol. Also called cholecalciferol.	Dorland's Medical Dictionary for Health Consumers, 2007
VTME	Vitamin E	Any of a group of at least eight related fat-soluble compounds with similar biological antioxidant activity, particularly α-tocopherol but also including other isomers of tocopherol and the related compound tocotrienol. It is found in wheat germ oil, cereal germs, liver, egg yolk, green plants, milk fat, and vegetable oils and is also prepared synthetically. In various species it is important for normal reproduction, muscle development, and resistance of erythrocytes to hemolysis.	Dorland's Medical Dictionary for Health Consumers, 2007
VITN	Vitellin	Major egg yolk proteins from egg-laying animals such as non-mammalian vertebrates; arthropods; and others. Vitellins are high-density lipoglycoproteins derived from circulating precursors, vitellogenins. Vitellins serve as nutrients for the growing non-mammalian embryos.	http://www.ncbi.nlm.nih.gov
VITE	Vitellogenin	A precursor protein of egg yolk normally in the blood or hemolymph only of females that is used as a biomarker in vertebrates of exposure to environmental estrogens which stimulate elevated levels in males as well as females	www.merriam-webster.com/dictionary/vitellogenin

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VSFD	Vitellogenin fused with superoxide dismutase	Functions during superoxide metabolic processes, metal ion binding, oxidations-reduction processes, lipid transport activity, and lipid transport.	https://www.researchgate.net/publication/259990314_Proteomic_evaluation_of_citrate-coated_silver_nanoparticles_toxicity_in_Daphnia_magna
VTLP	Vitellogenin-like protein	A precursor protein of egg yolk normally in the blood or hemolymph only of females that is used as a biomarker in vertebrates of exposure to environmental estrogens which stimulate elevated levels in males as well as females.	www.merriam-webster.com/dictionary/vitellogenin
VEPO	Vitellogenin:protein ratio	The ratio of the amount of vitellogenin to the amount of protein in an organism.	
VIVT	Vitellogenin:Vitellin ratio	The amount of Vitellogenin to the amount of Vitellin in a sample.	
WTCO	Water Content	The amount of water found in a sample.	ECOTOX
WAXX	Wax	Waxes are natural secretions of plants or animals. Chemically, a wax is a type of lipid that may contain a wide variety of long-chain alkanes, esters, polyesters and hydroxy esters of long-chain primary alcohols and fatty acids. These substances are malleable at normal ambient temperatures, a melting point above approximately 45 C, relatively low viscosity when melted, insoluble in water, and hydrophobic.	ECOTOX and http://en.wikipedia.org/wiki
WAXE	Wax esters	A wax ester is an ester of a fatty acid and a fatty alcohol.	Ullmann's Encyclopedia of Industrial Chemistry
XNSN	Xanthosine	A crystalline nucleoside C10H12N4O6 that yields xanthine and ribose on hydrolysis.	http://www.merriam-webster.com/medical/xanthosine
XTRA	Xanthurenic acid	a bicyclic aromatic compound formed as a minor catabolite of tryptophan and present in increased amounts in urine in vitamin B6 deficiency and some disorders of tryptophan catabolism.	Dorland's Medical Dictionary for Health Consumers, 2007
ZEAR	Zearalenone	Also known as RAL and F-2 mycotoxin, is a potent estrogenic metabolite produced by some Fusarium and Gibberella species.	http://en.wikipedia.org/wiki/Zearalenone

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Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
ZXTN	Zeaxanthin	A common carotenoid alcohol which is synthesised in plants (e.g., peppers, corn, spinach, broccoli, kiwifruit, garden peas and other vegetables), giving many their characteristic colour. Synonym: zeaxanthol.	Segen's Medical Dictionary, 2012
ZXCH	Zeaxanthin to Chlorophyll A ratio	Ratio of Zeaxanthin to Chlorophyll A	ECOTOX
ZXVX	Zeaxanthin to Violaxanthin ratio	Ration of Zeaxanthin to Violaxanthin	ECOTOX
ZNAI	Zinc Accumulation index	The ratio of a chemical in the organism to the ratio of the chemical in the soil.	ECOTOX
ZNCO	Zinc Content	The concentration of zinc found in a sample.	ECOTOX
ZNPP	Zinc protoporphyrin	A tightly bound, specific non-polypeptide unit required for the biological function of some proteins. A prosthetic group consisting of a protoporphyrin ring and a central zinc (Zn) atom. High levels of zinc protoporphyrin (ZPP) in blood indicate lead exposure.	http://www.clunet.edu/BioDev/omm/catalase/frames/hemetx.htm
ZNCD	Zinc to cadmium ratio	Ratio of zinc to cadmium in an organism or organism's tissues.	ECOTOX
ZNCU	Zinc to Copper ratio	Ratio of zinc to copper in an organism or organism's tissues.	ECOTOX
ZNFE	Zinc to iron ratio	Ratio of zinc to iron in an organism or organism's tissues.	ECOTOX
ZNNA	Zinc to sodium ratio	Ratio of zinc to sodium in an organism or organism's tissues.	ECOTOX
ZPGP	Zona pellucida glycoprotein	Zona pellucida glycoproteins are responsible for species-restricted binding of sperm to unfertilized eggs, inducing sperm to undergo acrosomal exocytosis, and preventing sperm from binding to fertilized eggs.	http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2528931/
ZPP2	Zona pellucide protein 2	A glycoprotein that helps form a non-cellular membrane around a developing egg.	ECOREF 67746
ZPRO	Zona Radiata Protein	A radiately striated membrane situated next the yolk of an ovum, or separated from it by a very delicate membrane only or Eggshell Zona radiata proteins (Zrp). Zrps are comprised of three-to-four protein monomers in the 50–60 kDa MW range and show structural similarity to proteins of the Zona pellucida; an extracellular envelope that lies immediately outside the plasma membrane in the eggs of placental mammals	www.webster-dictionary.org/definition/Zona%20radiata and www.sciencedirect.com/science/article/pii/S014111360000177X

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
BGAL	(Beta)-galactosidase	An enzyme that hydrolyzes the β-galactoside linkage in lactose-producing glucose and galactose; also hydrolyzes the chromogenic substrate IPTG (isopropylthiogalactoside) and thus is used as an indicator of fused genes and gene expression. Also: Lactase, b-lactase, maxilact, hydrolact, b-d-Lactosidase, EC 3.2.1.23.	Farlex Partner Medical Dictionary, 2012 and http://www.chem.qmul.ac.uk/iubmb/enzyme/EC3/2/1/23.html
ALAD	(Delta)-Aminolevulinic Acid Dehydratase	An enzyme of which the concentration in erythrocytes is a widely used indicator of the level of lead poisoning in animals.	http://medical-dictionary.thefreedictionary.com/delta-aminolevulinic+acid+dehydratase
ALAS	(Gamma)-ala Synthetase	rate limiting step of heme synthesis, affected in sideroblastic anemia (X-linked) or makes gamma-ALA from glycine and succinyl-CoA using B6 as a cofactor	http://quizlet.com/12202513/heme-synthesis-and-its-problems-flash-cards/
GGTR	(Gamma)-glutamyl Transferase	Gamma glutamyl transferase (GGT) found in the cell membrane in most tissues, but particularly high levels are present in liver (bile duct cells, hepatocytes) and kidney (renal convoluted tubular cells). Increased serum levels occur primarily with cholestasis. (**GGT is also used for gamma glutamyl transpeptadase, a liver enzyme; prior to using the GGTR code verify that indeed GGT is used as the transferase in the current publication. The gamma glutamyl transpeptadase code is GGTP.)	Saunders Comprehensive Veterinary Dictionary, 3 ed, 2007
ACCS	1-Aminocyclopropane-1-carboxylate synthase	A Class I aminotransferase, is the key regulatory enzyme in the biosynthetic pathway of the plant hormone ethylene. It catalyses the formation of 1-aminocyclopropane-1-carboxylate, a direct precursor of ethylene in higher plants. The enzyme functions as a homodimer and requires pyridoxal-5'-phosphate as a cofactor. (EC:4.4.1.14) Other names:1-aminocyclopropanecarboxylate synthase; 1-aminocyclopropane-1-carboxylic acid synthase; 1-aminocyclopropane-1-carboxylate synthetase; aminocyclopropanecarboxylic acid synthase; aminocyclopropanecarboxylate synthase; ACC synthase; S-adenosyl-L-methionine methylthioadenosine-lyase.	http://www.chem.qmul.ac.uk/iubmb/enzyme/EC4/4/1/14.html and Rottmann,W.H. etal.(1991)J. Mol. Biol. 222 937-61 1991 http://dx.doi.org/10.1016/0022-2836(91)90587-V
15B7	15 beta/7alpha-hydroxylases	15 beta/7alpha-hydroxylases are an isoform of the unspecific monooxygenase EC 1.14.14.1 that oxidizes a variety of structurally unrelated compounds.	ECOTOX and http://www.ncbi.nlm.nih.gov
17BH	17beta-hydroxysteroid dehydrogenase	Converts androstenedione to testosterone in the fetal testes. Also: 17-beta-HSD, EC 1.1.1.62.	http://www.omim.org/entry/605573

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Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
2OHB	2-OH Biphenyl hydroxylase	An enzyme	
HSHG	3-beta Hydroxysteroid dehydrogenase	Hydroxysteroid dehydrogenase is a type of alcohol oxidoreductases which acts as a dehydrogenase upon a hydroxysteroid. Accepted name: 3(or 17)beta-hydroxysteroid dehydrogenase, Other name(s): beta-hydroxy steroid dehydrogenase; 17-ketoreductase; 17beta-hydroxy steroid dehydrogenase; 3beta-hydroxysteroid dehydrogenase; 17beta-hydroxy steroid dehydrogenase; 3beta-hydroxy steroid dehydrogenase.	www.wikipedia.org/wiki and www.chem.qmul.ac.uk
CECD	3-Cyano-7-ethoxycoumarin O-deethylase	An enzyme.	
3HCD	3-Hydroxyacyl-CoA dehydrogenase	Normally, through a process called fatty acid oxidation, several enzymes work in a step-wise fashion to break down (metabolize) fats and convert them to energy. The 3-hydroxyacyl-CoA dehydrogenase enzyme is required for a step that metabolizes groups of fats called medium-chain fatty acids and short-chain fatty acids. Also: EC 1.1.1.35, Beta-hydroxyacyl dehydrogenase and Beta-keto-reductase	http://ghr.nlm.nih.gov/condition/3-hydroxyacyl-coa-dehydrogenase-deficiency and http://enzyme.expasy.org/EC/1.1.1.35
HCAD	3-Hydroxyacyl-CoA dehydrogenase	Beta-Hydroxyacyl dehydrogenase;enzyme catalyzing the oxidation of an l-3-hydroxyacyl-CoA to a 3-ketoacyl-CoA with reduction of NAD+; one of the enzymes of the b oxidation of fatty acids.	http://cancerweb.ncl.ac.uk/omd/
3HAO	3-Hydroxyanthranilate oxygenase	An enzyme.	
3HBD	3-Hydroxybutyrate dehydrogenase	3-hydroxybutyrate dehydrogenase is an enzyme, Other name(s): NAD-beta-hydroxybutyrate dehydrogenase; hydroxybutyrate oxidoreductase; beta-hydroxybutyrate dehydrogenase; D-beta-hydroxybutyrate dehydrogenase; D-3-hydroxybutyrate dehydrogenase; D-(-)-3-hydroxybutyrate dehydrogenase; beta-hydroxybutyric acid dehydrogenase; 3-D-hydroxybutyrate dehydrogenase; beta-hydroxybutyric dehydrogenase, (R)-3-hydroxybutanoate:NAD+ oxidoreductase	http://www.chem.qmul.ac.uk
3MST	3-Mercaptopyruvate sulfurtransferase	An enzyme that is a part of the cysteine catabolic pathway; it catalyzes the conversion of 3-mercaptopyruvate to pyruvate and H2S; a deficiency of this enzyme will result in elevated urine concentrations of 3-mercaptopyruvate as well as of 3-mercaptolactate, both in the form of disulfides with cysteine.	http://medical-dictionary.thefreedictionary.com/3-Mercaptopyruvate+sulfurtransferase

ENZ	**Enzyme Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
4ABT	4-Aminobutyrate transaminase	An enzyme that catalyzes the chemical reaction 4-aminobutanoate and 2-oxoglutarate into succinate semialdehyde and L-glutamate. EC 2.6.1.19. Other name(s): 4-aminobutyrate aminotransferase, Beta-alanine--oxoglutarate aminotransferase, GABA transaminase, Gamma-amino-N-butyrate transaminase.	http://enzyme.expasy.org/EC/2.6.1.19
4CBH	4-Chlorobiphenyl hydroxylase	An enzyme.	ECOTOX
PNPP	4-Nitrophenylphosphatase	4-nitrophenylphosphatase is an enzyme that catalyzes the hydrolysis of nitrophenyl phosphates to nitrophenols. Other name(s): nitrophenyl phosphatase; p-nitrophenylphosphatase; para-nitrophenyl phosphatase; K-pNPPase; NPPase; PNPPase; Ecto-p-nitrophenyl phosphatase; p-nitrophenylphosphate phosphohydrolase, K-Dependent p-Nitrophenylphosphatase, 4-nitrophenylphosphate phosphohydrolase	http://www.chem.qmul.ac.uk and http://www.ncbi.nlm.nih.gov
4OHB	4-OH Biphenyl Hydroxylase	No definition available.	
5ARD	5alpha-Reductase	Accepted name: 3-oxo-5alpha-steroid 4-dehydrogenase Other name(s): steroid 5alpha-reductase; 3-oxosteroid delta4-dehydrogenase; 3-oxo-5alpha-steroid delta4-dehydrogenase; steroid delta4-5alpha-reductase; delta4-3-keto steroid 5alpha-reductase; delta4-3-oxo steroid reductase; delta4-3-ketosteroid5alpha-oxidoreductase; delta4-3-oxosteroid-5alpha-reductase; 3-keto-delta4-steroid-5alpha-reductase; testosterone 5alpha-reductase; 4-ene-3-ketosteroid-5alpha-oxidoreductase; delta4-5alpha-dehydrogenase; 3-oxo-5alpha-steroid:(acceptor) delta4-oxidoreductase Systematic name: 3-oxo-5alpha-steroid:acceptor delta4-oxidoreductase	http://www.chem.qmul.ac.uk

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
5AVS	5-Aminolevulinate synthase	5-aminolevulinate synthase is an enzyme of the transferase class that catalyzes condensation of the succinyl group from succinyl coenzyme A with glycine to form delta-aminolevulinate. It is a pyridoxyal phosphate protein and the reaction occurs in mitochondria as the first step of the heme biosynthetic pathway. The enzyme is a key regulatory enzyme in heme biosynthesis. Other name(s): ALAS; ALA synthase; alpha-aminolevulinic acid synthase; delta-aminolevulinate synthase; delta-aminolevulinate synthetase; delta-aminolevulinic acid synthase; delta-aminolevulinic acid synthetase; delta-aminolevulinic synthetase; 5-aminolevulinate synthetase; 5-aminolevulinic acid synthetase; ALA synthetase; aminolevulinate synthase; aminolevulinate synthetase; aminolevulinic acid synthase; aminolevulinic acid synthetase; aminolevulinic synthetase	http://www.chem.qmul.ac.uk and http://www.ncbi.nlm.nih.gov
5NLT	5'-Nucleotidase activity	A nonlipid enzyme, elevated in some liver disorders and cancer of the pancreas. It is infrequently measured in the blood to diagnose certain liver and bone diseases. This enzyme is widely distributed throughout the body but is found in high concentrations in the liver and pancreas. The normal accumulation in serum is 0.1 to 6 units. Also: 5'-NT and EC 3.1.3.5	Mosby's Medical Dictionary, 8th edition, 2009 and http://www.uniprot.org/uniprot/P21589
RNPH	5'-Ribonucleotide phosphohydrolase	A glycoprotein enzyme present in various organs and in many cells. The enzyme catalyzes the hydrolysis of a 5'-ribonucleotide to a ribonucleoside and orthophosphate in the presence of water. It is cation-dependent and exists in a membrane-bound and soluble form.	http://de.dict.md/uebersetzung/5'+ribonucleotide+phosphohydrolase
6PGD	6-Phosphogluconate dehydrogenase	6-phosphogluconate dehydrogenase is an enzyme of the oxidoreductase class that catalyzes the reaction 6-phospho-D-gluconate and NADP+ to yield D-ribulose 5-phosphate, carbon dioxide, and NADPH. Also: phosphogluconate 2-dehydrogenase, 6-phosphogluconic dehydrogenase; phosphogluconate dehydrogenase; gluconate 6-phosphate dehydrogenase; 6-phosphogluconate dehydrogenase (NAD); 2-keto-6-phosphogluconate reductase	http://www.chem.qmul.ac.uk and http://www.ncbi.nlm.nih.gov
BFCD	7-Benzyloxy-4-trifluoromethylcoumarin O-debenzylase	Mediated by CYP3A; an enzyme. Also benzyloxy-4-[trifluoromethyl]-coumarin-O-debenzyloxylase , benzyloxy-4-trifluoromethyl-coumarin O-debenzyloxylase, BFCOD.	ECOTOX and ECOREF#116891
EROD	7-Ethoxyresorufin O-deethylase	An enzyme	

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
A712	7,12-dimethylbenz(a)anthracene hydroxylase	7,12-dimethylbenz(a)anthracene hydroxylase is part of a large group of cytochrome P-450 (heme-thiolate) monooxygenases that complex with NAD(P)H-Flavin Oxioreductase in numerous mixed-function oxidations of aromatic compounds.	http://www.ncbi.nlm.nih.gov
26SP	26S protease regulatory subunit 6A	The 26S protease is involved in the ATP-dependent degradation of ubiquitinated proteins. Alternate names: 26S proteasome AAA-ATPase subunit RPT5, Proteasome 26S subunit ATPase 3, Proteasome subunit P50, Tat-binding protein 1.	http://www.ncbi.nlm.nih.gov/protein/50344782 and http://www.uniprot.org/uniprot/P17980
ACOH	Acetanilide-4-hydroxylase	A marker for CYP1A2.	ECOREF#75745
AASY	Acetolactate synthase	A flavoprotein enzyme that catalyzes the formation of acetolactate from 2 moles of Pyruvate in the biosynthesis of Valine and the formation of acetohydroxybutyrate from pyruvate and alpha-ketobutyrate in the biosynthesis of Isoleucine. Other name(s): a-acetohydroxy acid synthetase; a-acetohydroxyacid synthase; a-acetolactate synthase; a-acetolactate synthetase; acetohydroxy acid synthetase; acetohydroxyacid synthase; acetolactate pyruvate-lyase (carboxylating); acetolactic synthetase.	http://www.chem.qmul.ac.uk and http://www.ncbi.nlm.nih.gov
ACHE	Acetylcholinesterase	An enzyme present in the central nervous system, particularly in nervous tissue, muscle, and red cells, that catalyzes the hydrolysis of acetylcholine to choline and acetic acid. Also: AChE, EC:3.1.1.7	Dorland's Medical Dictionary for Health Consumers, 2007
ACAC	Acetyl-CoA carboxylase	Carries out three functions: biotin carboxyl carrier protein, biotin carboxylase and carboxyltransferase. Involved in the synthesis of very-long-chain fatty acid synthesis which is required to maintain a functional nuclear envelope. Required for acylation and vacuolar membrane association of VAC8 which is necessary to maintain a normal morphology of the vacuole. Also: ACC, EC:6.4.1.2	http://www.uniprot.org/uniprot/Q00955
ACPH	Acid Phosphatase	A hydrolase found in mammalian liver, spleen, bone marrow, plasma and formed blood elements, and prostate gland, catalyzing the cleavage of orthophosphate from orthophosphoric monoesters under acid conditions; determination of its activity in serum is an important diagnostic test. Also: EC:3.1.3.2,, APase6, pH 6-optimum acid phosphatase	Dorland's Medical Dictionary for Health Consumers, 2007 and http://www.uniprot.org/uniprot/?query=3-hydroxyacyl-CoA+dehydrogenase&sort=score

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
APRT	Acid Protease	Any of a number of protein-hydrolysing agents—e.g., endopeptidases or exopeptidases—including those produced by fungi—e.g., Aspergillus oryzae—which are used in manufacturing flour and soy products. Also: 3.4.23.-	soy products. Segen's Medical Dictionary, 2012 Farlex, and http://www.uniprot.org/uniprot/P22929
APYR	Acid pyrophosphatase	A group of enzymes within the class EC 3.6.1.- that catalyze the hydrolysis of diphosphate bonds, chiefly in nucleoside di- and triphosphates. They may liberate either a mono- or diphosphate.	
ACCO	Acyl-CoA oxidase	Acyl-CoA oxidase, enzyme that catalyzes the first and rate-determining steps of peroxisomal beta-oxidation of fatty acids. It acts on enzyme A derivatives of fatty acids with chain lengths from 8 to 18 . Also, fatty acyl-CoA oxidase; acyl coenzyme A oxidase; fatty acyl-coenzyme A oxidase, acyl-CoA:oxygen 2-oxidoreductase	http://www.chem.qmul.ac.uk and http://www.ncbi.nlm.nih.gov
AATA	Acyl coenzyme A:testosterone acyltransferase	An enzyme responsible for testosterone esterification	Gooding etal,Environ Health Perspect. (2003) 111(4): 426-430
AGLP	Acylglycerol lipase	Hydrolyses glycerol monoesters of long-chain fatty acids. Also: monoacylglycerol lipase, monoacylglycerolipase, monoglyceride lipase, monoglyceride hydrolase, fatty acyl monoester lipase, monoacylglycerol hydrolase, monoglyceridyllipase, monoglyceridase, glycerol-ester acylhydrolase, EC 3.1.1.23.	http://www.enzyme-database.org/query.php?ec=3.1.1.23
A17E	ADAM 17 endopeptidase	A 70-kDa enzyme that belongs to the ADAM protein family of disintegrins and metalloproteases. Also known as ADAM 17, ADAM metallopeptidase domain 17, TACE , tumor necrosis factor alpha converting enzyme, CD156B, Snake venom-like protease, TNF-alpha convertase, cSVP, ADAM18, MGC71942, ADAM metallopeptidase domain 18, disintegrin and metalloproteinase domain-containing protein 17, TNF-alpha converting enzyme, CD156b antigen, EC 3.4.24.86.	http://en.wikipedia.org/wiki/ADAM17, http://www.genecards.org/cgi-bin/carddisp.pl?id_type=entrezgene&id=6868 and http://www.chem.qmul.ac.uk/iubmb/enzyme/EC3/4/24/86.html
ADDM	Adenosine deaminase	An enzyme which catalyzes the conversion of adenosine to inosine and whose deficiency causes a form of severe combined immunodeficiency disease as a result of the accumulation of toxic metabolites which inhibit DNA synthesis—abbreviation. Also: Adenosine aminohydrolase, EC:3.5.4.4, ADA.	www.merriam-webster.com/medical/adenosine%20deaminaseand http://www.uniprot.org/uniprot/P56658

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
AMDC	Adenosylmethionine decarboxylase	An enzyme that catalyzes the removal of the carboxylate group of S-adenosylmethionine to form S-adenosyl-5'-3-methylpropylamine which then acts as the n-propylamine group donor in the synthesis of the polyamines spermidine and spermine from putrescine. Other names: S-adenosylmethionine decarboxylase; S-adenosyl-L-methionine decarboxylase; S-adenosyl-L-methionine carboxy-lyase, EC 4.1.1.50.	http://www.chem.qmul.ac.uk/iubmb/enzyme/EC4/1/1/50.html and http://www.ebi.ac.uk/interpro/IEntry?ac=IPR001985
ATPA	Adenosine Triphosphatase	An enzyme in skeletal muscle and other tissues that catalyzes the hydrolysis of adenosine triphosphate to adenosine diphosphate and inorganic phosphate. Among various enzymes in this group, mitochondrial ATPase is involved in obtaining energy for cellular metabolism, and myosin ATPase is involved in muscle contraction.	Mosby's Medical Dictionary, 8th edition, 2009
ADNY	Adenylate	An enzyme that catalyzes the formation of cyclic AMP from ATP.	http://www.m-w.com/
ADCY	Adenylate cyclase	Adenylate cyclase is an enzyme. Other name(s): adenylylcyclase; adenyl cyclase; 3',5'-cyclic AMP synthetase; ATP diphosphate-lyase (cyclizing).	http://www.chem.qmul.ac.uk/iubmb
ADPS	ADPase	A calcium-activated enzyme that catalyzes the hydrolysis of ATP to yield AMP and orthophosphate. It can also act on ADP and other nucleoside triphosphates and diphosphates.Accepted name: nucleoside diphosphate phosphatase. Also: apyrase, ATP-diphosphatase; adenosine diphosphatase, thiaminpyrophosphatase, UDPase, inosine diphosphatase, IDPase, adenosinepyrophosphatase, guanosine diphosphatase, guanosine 5'-diphosphatase, inosine 5'-diphosphatase, uridine diphosphatase, uridine 5'-diphosphatase, type B nucleoside diphosphatase, GDPase, CDPase, nucleoside 5'-diphosphatase, type L nucleoside diphosphatase, NDPase, nucleoside diphosphate phosphohydrolase, nucleoside-diphosphatase, EC 3.6.1.6.	http://www.chem.qmul.ac.uk and http://www.ncbi.nlm.nih.gov
AGPP	ADP glucose pyrophosphorylase	ADP glucose pyrophosphorylase is an enzyme. Other name(s): glucose-1-phosphate adenylyltransferase, adenosine diphosphate glucose pyrophosphorylase; adenosine diphosphoglucose pyrophosphorylase; ADP-glucose pyrophosphorylase; ADP-glucose synthase; ADP-glucose synthetase; ADPG pyrophosphorylase; ADP:alpha-D-glucose-1-phosphate adenylyltransferase	http://www.chem.qmul.ac.uk

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
AAPT	Alanine aminopeptidase	Catalysis of the release of an N-terminal amino acid, preferentially alanine, from an oligopeptide or polypeptide.	http://www.informatics.jax.org/searches/GO.cgi?id=GO:0016284
AATT	Alanine transaminase (ALT)	Alanine transaminase is an enzyme that catalyses the conversion of l-alanine and 2-oxoglutarate to pyruvate and l-glutamate. Other name(s): glutamic-pyruvic transaminase; glutamic-alanine transaminase; GPT; β-alanine aminotransferase; alanine aminotransferase; alanine-α-ketoglutarate aminotransferase; alanine-pyruvate aminotransferase; ALT; glutamic acid-pyruvic acid transaminase; glutamic-pyruvic aminotransferase; L-alanine aminotransferase; L-alanine transaminase; L-alanine-α-ketoglutarate aminotransferase; pyruvate transaminase; pyruvate-alanine aminotransferase; pyruvate-glutamate transaminase	http://www.chem.qmul.ac.uk and http://www.ncbi.nlm.nih.gov
ATAS	Alanine aminotransferase Aspartate aminotransferase ratio	The ratio of alanine aminotransferase (ALT) to aspartate aminotransferase (AST) found in a sample	ECOTOX
AGTF	Alanine gamma-glutamyltransferase	An enzyme.	
ATRP	Alanine Transpeptidase	An enzyme.	
ADHE	Alcohol dehydrogenase	Alcohol dehydrogenase is responsible for catalyzing oxidation of primary and secondary alcohols to aldehydes and ketones. Other name(s): aldehyde reductase; ADH; alcohol dehydrogenase (NAD); aliphatic alcohol dehydrogenase; ethanol dehydrogenase; NAD-dependent alcohol dehydrogenase; NAD-specific aromatic alcohol dehydrogenase; NADH-alcohol dehydrogenase; NADH-aldehyde dehydrogenase; primary alcohol dehydrogenase; yeast alcohol dehydrogenase.	http://www.chem.qmul.ac.uk and http://en.wikipedia.org/wiki
AD2B	Aldehyde dehydrogenase 2b	An enzyme involved in involved in the metabolic process and the oxidation-reduction process.	http://www.ebi.ac.uk/interpro/protein/Q6TH48
ALDH	Aldehyde dehydrogenase (ALDH)	Aldehyde dehydrogenase is a polymorphic enzyme responsible for the oxidation of aldehydes to carboxylic acids, which leave the liver and are metabolized by the body's muscle and heart. ALDH1 and ALDH2 are the most important enzymes for aldehyde oxidation. These enzymes are found in many tissues of the body but are at the highest concentration in the liver.	http://en.wikipedia.org/wiki/Aldehyde_dehydrogenase

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
ADND	Aldehyde dehydrogenase (NAD)	This enzyme belongs to the family of oxidoreductases, specifically those acting on the aldehyde or oxo group of donor with NAD+ as acceptor. Other name(s): CoA-independent aldehyde dehydrogenase; m-methylbenzaldehyde dehydrogenase; NAD-aldehyde dehydrogenase; NAD-dependent 4-hydroxynonenal dehydrogenase; NAD-dependent aldehyde dehydrogenase; NAD-linked aldehyde dehydrogenase; propionaldehyde dehydrogenase; aldehyde dehydrogenase (NAD), NAD+ Aldehyde dehydrogenase, EC1.2.1.3.	http://www.chem.qmul.ac.uk/iubmb/enzyme/EC1/2/1/3.html and http://en.wikipedia.org/wiki/Aldehyde_dehydrogenase_(NAD%2B)
ADNP	Aldehyde dehydrogenase (NADP)	This enzyme belongs to the family of oxidoreductases, specifically those acting on the aldehyde or oxo group of donor with NADP+ as acceptor. Other name(s): NADP-acetaldehyde dehydrogenase; NADP-dependent aldehyde dehydrogenase; aldehyde dehydrogenase (NADP), NADP+Aldehyde dehydrogenase, EC1.2.1.4.	http://www.chem.qmul.ac.uk/iubmb/enzyme/EC1/2/1/4.html and http://en.wikipedia.org/wiki/Aldehyde_dehydrogenase_(NADP%2B)
ALDO	Aldolase	A crystalline enzyme that occurs widely in living systems and catalyzes reversibly the cleavage of a phosphorylated fructose into triose sugars.	www.merriam-webster.com/dictionary/aldolase
AEPX	Aldrin Epoxidase	An enzyme.	
ALIE	Ali esterase	Ali esterase catalyzes a carboxylic ester to yield an alcohol and carboxylic acid anion; has wide specificity; also hydrolyzes vitamin a esters; can be used to separate stereoisomers; consider also esterase b which is a serine protease. Also known as carboxylesterase, B-esterase; monobutyrase; cocaine esterase; procaine esterase; methylbutyrase; vitamin A esterase; butyryl esterase; carboxyesterase; carboxylate esterase; carboxylic esterase; methylbutyrate esterase; triacetin esterase; carboxyl ester hydrolase; butyrate esterase; methylbutyrase; a-carboxylesterase; propionyl esterase; nonspecific carboxylesterase; esterase D; esterase B; esterase A; serine esterase; carboxylic acid esterase; cocaine esterase, carboxylic-ester hydrolase	http://www.chem.qmul.ac.uk/
ALPH	Alkaline Phosphatase	An enzyme that catalyzes the cleavage of orthophosphate from orthophosphoric monoesters under alkaline conditions. Differing forms of the enzyme occur in normal and malignant tissues. Also: APase, EC:3.1.3.1.	Dorland's Medical Dictionary for Health Consumers, 2007 and http://www.uniprot.org/uniprot/P00634

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
AKPT	Alkaline protease	A protease works optimally at a pH of 8 to 11. Alkaline proteases are used in washing powders and hair removal from cattle hide, and are produced by bacteria, silkworms and other organisms. Also: EC=3.4.21.-.	Segen's Medical Dictionary, 2012 Farlex and http://www.uniprot.org/uniprot/P27693
AKPY	Alkaline pyrophoshatase	A group of enzymes within the class EC 3.6.1.- that catalyze the hydrolysis of diphosphate bonds, chiefly in nucleoside di- and triphosphates. They may liberate either a mono- or diphosphate.	
ALLN	Allantoinase Activity	An enzyme (an amidohydrolase) that catalyses the hydrolysis of allantoin to allantoic acid. Also: Allantoin-utilizing enzyme, EC:3.5.2.5.	Farlex Partner Medical Dictionary, 2012 and http://www.uniprot.org/uniprot/P77671
AMYL	Alpha-amylase	A starch-splitting enzyme used in the treatment of inflammatory conditions and edema of soft tissues associated with traumatic injury. Also: 1,4-alpha-D-glucan glucanohydrolase, BLA, EC:3.2.1.1,	Mosby's Dental Dictionary, 2nd edition, 2008 and http://www.uniprot.org/uniprot/P06278
AFCD	alpha-Fucosidase	An enzyme that catalyzes the hydrolysis of an alpha-l-fucoside, producing an alcohol and l-fucose; a deficiency of the lysosomal enzyme will result in fucosidosis.	Farlex Partner Medical Dictionary, 2012 and
AGCT	alpha-Galactosidase	An enzyme that catalyzes the conversion of alpha-d-galactoside to d-galactose. Also: Alpha-D-galactoside galactohydrolase, Melibiase, EC:3.2.1.22.	Mosby's Medical Dictionary, 8th edition, 2009 and http://www.uniprot.org/uniprot/Q9FXT4
AGPD	alpha-glycerol phosphate dehydrogenase	NAD-dependent glycerol-3-phosphate dehydrogenase (1.1.1.8) (GPD) catalyzes the reversible reduction of dihydroxyacetone phosphate to glycerol-3-phosphate. It is a cytoplasmic protein, active as a homodimer, each monomer containing an N-terminal NAD binding site. In insects, it acts in conjunction with a mitochondrial alpha-glycerophosphate oxidase in the alpha-glycerophosphate cycle, which is essential for the production of energy used in insect flight.	http:www.ebi.ac.uk
HBDS	alpha-Hydroxybutyrate dehydrogenase	An enzyme.	

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
AMNS	alpha-Mannosidase	An enzyme that catalyzes the hydrolysis of terminal, non-reducing alpha-D-mannose residues in alpha-D-mannosides. The enzyme plays a role in the processing of newly formed N-glycans and in degradation of mature glycoproteins. There are multiple isoforms of alpha-mannosidase, each having its own specific cellular location and pH optimum. Defects in the lysosomal form of the enzyme results in a buildup of mannoside intermediate metabolites and the disease alpha-mannosidosis. Also: Alpha-D-mannoside mannohydrolase, EC:3.2.1.24.	http://www.labome.org/topics/chemicals/enzymes/enzymes/hydrolases/glycoside/mannosidases/alpha-mannosidase-12554.html and http://www.uniprot.org/uniprot/P22855
AMPD	Aminopeptidase	Any member of a sub-subclass of enzymes of the hydrolase class that catalyze the hydrolytic cleavage of the N-terminal amino acid or dipeptide from a peptide chain; they are exopeptidases and occur in plasma and many tissues.	www.mercksource.com/pp/us/cn
APND	Aminopyrine N-demethylase	An enzyme.	
AMDM	AMP deaminase (adenosine monophosphate deaminase)	An enzyme that hydrolyzes adenylic acid to inosinic acid and NH3. A muscular deficiency of AMP deaminase in muscles can lead to excess fatigue following exercise. Synonym(s): adenylic acid deaminase Also: Myoadenylate deaminase, EC:3.5.4.6.	Farlex Partner Medical Dictionary, 2012 and http://www.uniprot.org/uniprot/P50998
AMLS	Amylase	An enzyme that catalyzes the hydrolysis of starch into simpler compounds. The α-amylases occur in animals and include pancreatic and salivary amylase; the β-amylases occur in higher plants.	Dorland's Medical Dictionary for Health Consumers, 2007
ALAT	Amylolytic activity	Characterized by or capable of the enzymatic splitting of starch into soluble products.	http://www.merriam-webster.com/medical/amylolytic
AAPA	Amylolytic activity to Proteolytic activity	The ratio of amylolytic to proteolytic activity. Also called A/P Coefficient.	ECOTOX and ECOREF#157763
ANAE	A-naphthyl Acetate Esterase	An enzyme.	
AGCE	Angiotensin converting enzyme	A glycoprotein (dipeptidyl carboxypeptidase) that catalyzes the conversion of angiotensin I to angiotensin II by splitting two terminal amino acids. ACE-inhibiting agents are used for controlling hypertension and for protecting the kidneys in diabetes mellitus. Also: ACE, EC:3.4.15.1, Dipeptidyl carboxypeptidase I, Kininase II, CD_antigen=CD143	Mosby's Medical Dictionary, 8th edition, 2009 and http://www.uniprot.org/uniprot/P12822
ANHG	Aniline hydrogenase	Aniline hydrogenase is an enzyme	ECOTOX
AHDX	Aniline Hydroxylase	An enzyme.	

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Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
AREG	Arachidonate epoxygenase	Requires cytochrome p-450; uses NADPH and oxygen; forms 5,6-,8,9-11,12- and 14,15-cis-epoxyeicosatrienoic acids; p4502caa is the form isolated from rabbit renal cortex Registry number: EC 1.14.13.- Synonym: NADPH-dependent arachidonic acid epoxygenase, cytochrome p-450 epoxygenase, cytochrome p-450 arachidonate oxygenase, cyp2j2, cyp2caa, cytochrome p-450 2caa (26 Jun 1999)	www.lexic.us/definition-of/arachidonate_epoxygenase
ARGN	Arginase	A crystalline enzyme that converts naturally occurring arginine into ornithine and urea. Also: EC:3.5.3.1	www.merriam-webster.com/medical/arginase and http://www.uniprot.org/uniprot/P00812
AGKN	Arginine kinase	An enzyme that catalyzes the phosphorylation of the guanidine nitrogen of arginine in the presence of ATP and a divalent cation with formation of phosphorylarginine and ADP. Also: EC:2.7.3.3	www.reference.md/files/D001/mD001122.html and http://www.uniprot.org/uniprot/O15992
ARSN	Argininosuccinate synthetase	Argininosuccinate synthase or synthetase (ASS) (EC 6.3.4.5) is an enzyme that catalyzes the synthesis of argininosuccinate from citrulline and aspartate. ASS is responsible for the third step of the urea cycle and one of the reactions of the citrulline-NO cycle.	http://encyclopedia.thefreedictionary.com/Argininosuccinate+synthetase
ARMT	Aromatase	An enzyme which converts androgens to estrogens. This enzyme complex is located in the endoplasmic reticulum of estrogen-producing cells including ovaries, placenta, testicular sertoli and leydig cells, adipose, and brain tissue. Also known as Estrogen synthetase, P450Arom, CYP 19, CYP19, CYP19 Protein, Cytochrome P-450(AROM), Cytochrome P450 19, Estrogen Synthase, Androstenedione Aromatase, Cytochrome P-450 CYP19, Cytochrome P 450 CYP19, EC 1.14.14.1	http://www.ncbi.nlm.nih.gov/mesh?term=cyp19
ARHY	Aromatic hydroxylase	Enzyme is concentrated in the hepatic endoplasmic reticulum.	Free Online Medical Dictionary
AMTR	Arsenite methyltransferase	A subclass of enzymes of the transferase class that catalyze the transfer of a methyl group from one compound to another. Arsenite methyltransferase [liver arsenite methyltransferase] converts arsenite to monomethylarsonic Also: Arsenite methyl transferase, Methylarsonite methyltransferase, S-adenosyl-L-methionine: arsenic(III) methyltransferase, EC=2.1.1.137.	www.reference.md/files/C116/mC116338.html and http://www.uniprot.org/uniprot/Q9HBK9

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
AHHD	Aryl hydrocarbon hydrolase (AHH)	A group of cytochrome p-450 (haem-thiolate) proteins which utilise reduced flavin or flavoprotein as one donor and incorporate one atom of oxygen. They act on many aromatic compounds. They are a component part of the mixed-function oxidase system and are important for the oxidation of many drugs and toxins such as phenobarbital, carcinogens, and insecticide. These enzymes are considered to be an aspect of EC 1.14.14.1. Also: Aryl Hydrocarbon hydrolase (AHH).	http://www.kmle.com/search.php?Search=aryl- Link: cancerweb.ncl.ac.uk/omd/ and http://enzyme.expasy.org/EC/1.14.14.1
ARES	Aryldialkylphosphatase (Arylesterase)	Aryldialkylphosphatase acts on organophosphorus compounds (such as paraoxon) including esters of phosphonic and phosphinic acids. Inhibited by chelating agents; requires divalent cations for activity. Also: organophosphate hydrolase; paraoxonase; A-esterase; aryltriphosphatase; organophosphate esterase; esterase B1; esterase E4; paraoxon esterase; pirimiphos-methyloxon esterase; OPA anhydrase; organophosphorus hydrolase; phosphotriesterase; paraoxon hydrolase; OPH; organophosphorus acid anhydrase.	http://www.chem.qmul.ac.uk
ASPT	Arylsulfatase	A group of enzymes active in the hydrolysis of sulfates and the metabolism of mucopolysaccharides; found in liver, pancreas, kidneys and immature monocytes. Several species of molluscs and *Aerobacter* spp. serve as commercial sources of the enzyme which is used in analytic endocrinology. Also: Cys-type sulfatase, Arylsulphatase, EC:3.1.6.1	Saunders Comprehensive Veterinary Dictionary, 3 ed, 2007 and http://www.uniprot.org/uniprot/Q0TUK6
ASCP	Ascorbate peroxidase	An enzyme.	
ASOA	Ascorbic acid oxidase activity	A copper containing enzyme found in higher plants where it catalyzes the reversible oxidation of ascorbate to 2-dehydro-ascorbate acid with the concomitant reduction of molecular oxygen to water.	http://www.cordis.lu/tmr/src/grants/fair/975021.htm

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
ASAT	Aspartate aminotransferase	Accepted name: aspartate transaminase. Usually abbreviated as AST. Other name(s): glutamic-oxaloacetic transaminase; glutamic-aspartic transaminase; transaminase A; AAT; AspT; 2-oxoglutarate-glutamate aminotransferase; aspartate a-ketoglutarate transaminase; aspartate aminotransferase; aspartate-2-oxoglutarate transaminase; aspartic acid aminotransferase; aspartic aminotransferase; aspartyl aminotransferase; AST; glutamate-oxalacetate aminotransferase; glutamate-oxalate transaminase; glutamic-aspartic aminotransferase; glutamic-oxalacetic transaminase; glutamic oxalic transaminase; GOT (enzyme); L-aspartate transaminase; L-aspartate-a-ketoglutarate transaminase; L-aspartate-2-ketoglutarate aminotransferase; L-aspartate-2-oxoglutarate aminotransferase; L-aspartate-2-oxoglutarate-transaminase; L-aspartic aminotransferase; oxaloacetate-aspartate aminotransferase; oxaloacetate transferase; aspartate:2-oxoglutarate aminotransferase; glutamate oxaloacetate transaminase; EC 2.6.1.1 Systematic name: L-aspartate:2-oxoglutarate aminotransferase	http://www.chem.qmul.ac.uk and http://enzyme.expasy.org/EC/2.6.1.1
AAGP	Aspartate aminotransferase to glutamate pyruvate transaminase ratio	Ratio of aspartate aminotransferase to glutamate pyruvate transaminase AST/GPT	ECOTOX
BATS	ATP synthase beta chain	This enzyme consists of two major segments: Fo portion, the transmembrane proton channel and F1 portion, the catalytic component. The proton channel component allows the diffusion of protons (hydrogen ions) from an area where there are more hydrogen ions to an area where there are less hydrogen ions due to a proton gradient. As the proton (H+ ion) moves down the concentration gradient this moves the enzyme in a spinning motion, which brings ADP and inorganic phosphate together to form a bond, thus creating ATP molecule. The resulting ATP molecule is released so that a new ADP molecule can enter for another phosphorylation. This enzyme can also work in reverse using the energy release from ATP hydrolysis to pump protons against their thermodynamic gradient. Since it can also use ATP as a source of energy it is also aptly called ATP synthetase. Also: ATP synthase, Chloroplast ATPase, F(0)F(1)-ATPase, F(1)-ATPase, F(o)F(1)-ATPase, H(+)-transporting ATP synthase, H(+)-transporting ATPase, Mitochondrial ATPase, EC 3.6.3.14	www.biology-online.org/dictionary/ATP_synthase, http://enzyme.expasy.org/EC/3.6.3.14 and http://www.uniprot.org/uniprot/W1EDX5

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Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
AAMD	ATP synthase subunit alpha, mitochondrial	Mitochondrial membrane ATP synthase (F1F0 ATP synthase or Complex V) produces ATP from ADP in the presence of a proton gradient across the membrane which is generated by electron transport complexes of the respiratory chain.	http://proteopedia.org/wiki/index.php/1efr
AZOR	Azo-reductase	Azo-reductase is an enzyme. Other name(s): new coccine (NC)-reductase; NC-reductase; azo-dye reductase; orange II azoreductase; NAD(P)H:1-(4'-sulfophenylazo)-2-naphthol oxidoreductase; orange I azoreductase; azo reductase; azoreductase; nicotinamide adenine dinucleotide (phosphate) azoreductase; NADPH2-dependent azoreductase; dimethylaminobenzene reductase; p-dimethylaminoazobenzene azoreductase; dibromopropylaminophenylazobenzoic azoreductase; N,N-dimethyl-4-phenylazoaniline azoreductase; p-aminoazobenzene reductase; methyl red azoreductase; NADPH2:4-(dimethylamino)azobenzene oxidoreductase, azobenzene reductase.	http://www.chem.qmul.ac.uk
B5P4	b5/P-450	An enzyme.	
BADH	Benzaldehyde dehydrogenase	This enzyme belongs to the family of oxidoreductases, specifically those acting on the aldehyde or oxo group of donor with NAD+ or NADP+ as acceptor.	http://www.uniprot.org/uniprot/Q9A5Q0
BAPH	Benzo(a)pyrene Hydroxylase	An enzyme.	
BAPM	Benzo(a)pyrene monooxygenase	An enzyme that catalyses the incorporation of one oxygen atom of molecular oxygen into benzo(a)pyrene.	
BPND	Benzphetamine-n-demethylase	An enzyme.	
<BHXA>	Benzpyrene hydroxylase	An enzyme.	
BROD	Benzylresorufin O-deethylase	An enzyme.	
BAMY	Beta-amylase	A glucanohydrolase yielding β-maltose units from the nonreducing ends of 1,4-α-glucans. An exoamylase. Also: glycogenase, saccharogen amylase, 1,4-alpha-D-glucan maltohydrolase, EC:3.2.1.2.	Farlex Partner Medical Dictionary, 2012 and http://www.uniprot.org/uniprot/P10538
BGMD	beta-Glucosaminidase	Cleaves all non-reducing terminal beta-linked N-acetylglucosamine.	http://www.prozyme.com/glycopro/index.html#GE30

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Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
BGSE	beta-Glucosidase	A glucosidase enzyme that acts upon β1->4 bonds linking two glucose or glucose-substituted molecules (i.e., the disaccharide cellobiose). It is an exocellulase with specificity for a variety of beta-D-glycoside substrates. It catalyzes the hydrolysis of terminal non-reducing residues in beta-D-glucosides with release of glucose. Also: gentiobiase, cellobiase, emulsin, elaterase, aryl-beta-glucosidase, beta-D-glucosidase, beta-glucoside glucohydrolase, arbutinase, amygdalinase, p-nitrophenyl beta-glucosidase, primeverosidase, amygdalase, linamarase, salicilinase, beta-1,6-glucosidase, EC:3.2.1.21.	http://www.uniprot.org/uniprot/Q03506 and Lehninger Principles of Biochemistry (2000).
BGCR	beta-Glucuronidase	beta-Glucuronidase hydrolyzes conjugated glucuronides. It is ubiquitous in animal lysozymes. The enzyme has found wide application in determining urinary steroids.	http://www.worthington-biochem.com/manual/G/GL.html
HCAR	beta-Hydroxy-beta-methylglutaryl-CoA reductase	The rate-limiting enzyme for cholesterol synthesis and is regulated via a negative feedback mechanism mediated by sterols and non-sterol metabolites derived from mevalonate, the product of the reaction catalyzed by reductase. Normally in mammalian cells this enzyme is suppressed by cholesterol derived from the internalization and degradation of low density lipoprotein (LDL) via the LDL receptor. Also: 3-hydroxy-3-methylglutaryl-CoA reductase.	www.ncbi.nlm.nih.gov/gene/3156
BHST	Betaine homocysteine S-methyltransferase	A zinc metallo-enzyme that catalyzes the transfer of a methyl group from betaine to homocysteine to produce dimethylglycine and methionine respectively. This enzyme belongs to the family of transferases, specifically those transferring one-carbon group methyltransferases and participates in the metabolism of glycine, serine, threonine and also methionine. EC 2.1.1.5. Also: betaine-homocysteine methyltransferase; betaine-homocysteine transmethylase, Betaine homocysteine methyltransferase.	http://www.chem.qmul.ac.uk/iubmb/enzyme/EC2/1/1/5.html and http://en.wikipedia.org/wiki/Betaine%E2%80%94homocysteine_S-methyltransferase

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
BN4H	Bunitrolol 4-hydroxylase	A superfamily of hundreds of closely related hemeproteins found throughout the phylogenetic spectrum, from animals, plants, fungi, to bacteria. They include numerous complex monooxygenases. In animals, these P-450 enzymes serve two major functions: (1) biosynthesis of steroids, fatty acids, and bile acids; (2) metabolism of endogenous and a wide variety of exogenous substrates, such as toxins and drugs. They are classified, according to their sequence similarities rather than functions, into CYP gene families (>40% homology) and subfamilies (>59% homology). For example, enzymes from the CYP1, CYP2, and CYP3 gene families are responsible for most drug metabolism.	www.reference.md/files/C071/mC071864.html
BCHE	Butyrylcholinesterase	An enzyme that acts on a variety of choline esters and a few other compounds. Other name(s): pseudocholinesterase; butyrylcholine esterase; non-specific cholinesterase; choline esterase II (unspecific); benzoylcholinesterase; choline esterase; propionylcholinesterase; anticholineesterase; BtChoEase, acylcholine acylhydrolase, EC 3.1.1.8.	http://www.chem.qmul.ac.uk/iubmb/enzyme/EC3/1/1/8.html and http://www.enzyme-database.org/query.php?ec=3.1.1.8
BCOD	Butoxycoumurin O-dealkylase	An enzyme.	
CACP	Ca2+/calmodulin-dependent protein kinase	Ca2+/calmodulin-dependent protein kinase is an enzyme. Other names: ATP:caldesmon O-phosphotransferase; caldesmon kinase; caldesmon kinase (phosphorylating); Ca2+/calmodulin-dependent microtubule-associated protein 2 kinase; Ca2+/calmodulin-dependent protein kinase 1; Ca2+/calmodulin-dependent protein kinase II; Ca2+/calmodulin-dependent protein kinase IV; Ca2+/calmodulin-dependent protein kinase kinase; Ca2+/calmodulin-dependent protein kinase kinase beta; calmodulin-dependent kinase II; CaM kinase; CaM kinase II; CAM PKII; CaM-regulated serine/threonine kinase; CaMKI; CaMKII; CaMKIV; CaMKKalpha; CaMKKbeta; microtubule-associated protein 2 kinase; STK20	http://www.chem.qmul.ac.uk
CATP	Calcium adenosine triphosphatase	Calcium ATPase is a form of P-ATPase that transfers calcium after a muscle has contracted. The calcium ATPase are: Plasma membrane Ca2+ ATPase (PMCA) and Sarcoplasmic reticulum Ca2+ ATPase (SERCA).	http://en.wikipedia.org/wiki/Calcium_ATPase

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
CCAT	Calcium Carbonate adenosine triphosphatase	An enzyme.	
CMAT	Calcium Magnesium adenosine triphosphatase	An enzyme that catalyzes the hydrolysis of ATP and is activated by millimolar concentrations of either Ca(2+) or Mg(2+). Also: Ca/Mg ATPase, Calcium Magnesium ATPase, Ca-Mg ATPase, Ca2+-Mg2+ ATPase.	http://www.reference.md/files/D017/mD017301.html
CAAH	Carbonic anhydrase	A zinc-containing enzyme that occurs in living tissues (as red blood cells) and aids carbon-dioxide transport from the tissues and its release from the blood in the lungs by catalyzing the reversible hydration of carbon dioxide to carbonic acid. EC 4.2.1.1 Accepted name: Carbonate dehydratase	http://www.merriam-webster.com/medlineplus/Carbonic%20Anhydrase and http://www.chem.qmul.ac.uk/iubmb/enzyme/EC4/2/1/1.html
CBEE	Carboxylesterase	Carboxylesterase is a Serine-dependent esterase with wide Substrate Specificity. The enzyme is involved in the detoxification of Xenobiotics and the activation of ester and of amide Prodrugs.	http://www.online-medical-dictionary.org/definitions-c/carboxylesterase.html
CPTO	Carnitine O-palmitoyltransferase	An enzyme that catalyzes reversibly the conversion of palmitoyl-CoA to palmitoylcarnitine in the inner mitochondrial membrane. Also known as: CPT, CPTo, outer malonyl-CoA inhibitable carnitine palmitoyltransferase, CPTi, CPT I (outer membrane carnitine palmitoyl transferase), carnitine palmitoyltransferase I, carnitine palmitoyltransferase II, CPT-A, CPT-B, acylcarnitine transferase, carnitine palmitoyltransferase, carnitine palmitoyltransferase-A, L-carnitine palmitoyltransferase, palmitoylcarnitine transferase, palmitoyl-CoA:L-carnitine O-palmitoyltransferase, EC 2.3.1.21.	http://www.ncbi.nlm.nih.gov/mesh/68002334 and http://www.chem.qmul.ac.uk/iubmb/enzyme/EC2/3/1/21.html
CSP3	Caspase 3	A short pro-domain caspase that plays an effector role in apoptosis. Other name(s): CPP32; apopain; yama protein.	http://www.ncbi.nlm.nih.gov and www.chem.qmul.ac.uk
C3C7	Caspase3 Caspase7 ratio	The ratio of Caspase3 to Caspase7 found in a sample.	ECOTOX

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
CSP8	Caspase 8	Caspase-8 is a member of the cysteine proteases, which are implicated in apoptosis and cytokine processing. Like all caspases, caspase-8 is synthesized as an inactive single polypeptide chain zymogen procaspase and is activated by proteolytic cleavage, through either autoactivation after recruitment into a multimeric complex or trans-cleavage by other caspases.	http://www.ncbi.nlm.nih.gov/pubmed/11185963
CTLS	Catalase	A red crystalline enzyme that consists of a protein complex with hematin groups and catalyzes the decomposition of hydrogen peroxide into water and oxygen. Also: EC:1.11.1.6	www.merriam-webster.com/dictionary/catalase
CTMT	Catechol o-methyltransferase	A transferase that catalyzes the methylation of the hydroxyl group at the 3 position of the aromatic ring of catechols, including the catecholamines norepinephrine and epinephrine (thus, converting to normetanephrine and metanephrine, respectively), the methyl group coming from S-adenosyl-l-methionine. An important step in the catabolism of the catecholamines. Also: EC:2.1.1.6.	Farlex Partner Medical Dictionary, 2012 and http://www.uniprot.org/uniprot/P22734
CTHP	Cathepsin	One of a number of enzymes each of which catalyzes the hydrolytic cleavage of specific peptide bonds.	Dorland's Medical Dictionary for Health Consumers, 2007
CTHB	Cathepsin b	A lysosomal cysteine proteinase which hydrolyzes proteins, with a specificity resembling that of papain. The enzyme is present in a variety of tissues and is important in many physiological and pathological processes. In pathology, cathepsin b has been found to be involved in demyelination, emphysema, rheumatoid arthritis, and neoplastic infiltration. Also: APP secretase, Cathepsin B1, EC=3.4.22.1	www.biology-online.org/dictionary/Cathepsin_b and http://www.uniprot.org/uniprot/P07858
CTHD	Cathepsin d	An acid hydrolase isolated from cartilage which plays a part in the endogenous degradation of proteoglycans in degenerative diseases of joints.	Saunders Comprehensive Veterinary Dictionary, 3 ed, 2007 and http://www.uniprot.org/uniprot/P07339

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
CLLS	Cellulase	Any of several enzymes, produced primarily by fungi and bacteria that catalyze the hydrolysis of cellulose.Also: EC:3.2.1.4	Based on the Random House Dictionary, Random House, Inc. 2014. and http://www.brenda-enzymes.info/php/result_flat.php4?ecno=3.2.1.4&organism=
CRLP	Ceruloplasmin	A dehydrogenase produced in the liver involved in copper detoxification and possibly in mopping up excess oxygen radicals or superoxide anions ↑ in Neoplasms, inflammation, liver disease, rheumatoid arthritis, SLE, pregnancy, OCs, estrogen therapy in Wilson's disease, Menkes' kinky hair syndrome, hepatitis, cirrhosis, nephrotic syndrome, sprue, scleroderma of small intestine. A blue, copper-containing globulin that may play a part in erythropoiesis and oxygen reduction.	McGraw-Hill Concise Dictionary of Modern Medicine, 2002
CTNS	Chitinase	An enzyme that cleaves the glycosidic bonds in chitin, thereby breaking down the polysaccharide structural component of the hard outer covering of many animals and of the cell wall of fungi.	www.biology-online.org/dictionary/Chitinase
CATE	Chloramphenicol O-acetyltransferase	Chloramphenicol O-acetyltransferase is an enzyme. Other name(s): chloramphenicol acetyltransferase; chloramphenicol acetylase; chloramphenicol transacetylase; CAT I; CAT II; CAT III; acetyl-CoA:chloramphenicol 3-O-acetyltransferase.	http://www.chem.qmul.ac.uk
CYOX	Chlorpyrifos-oxonase	An enzyme which has activity similar to aryldialkylphosphatase (EC 3.1.8.1); emzyme from rat plasma and liver hydrolyzes chlorpyrifos oxon ... Registry number: EC 3.1.8.- ... Synonym: cpfoase	www.encyclo.co.uk/define/chlorpyrifos%20oxonase
C7A1	Cholesterol 7-alpha-Hydroxylase	A membrane-bound cytochrome p450 enzyme that catalyzes the 7-alpha-hydroxylation of cholesterol in the presence of molecular oxygen and nadph-ferrihemoprotein reductase. This enzyme, encoded by cyp7, converts cholesterol to 7-alpha-hydroxycholesterol which is the first and rate-limiting step in the synthesis of bile acids. Also: cholesterol 7alpha-monooxygenase, CYP7A1	http://www.ncbi.nlm.nih.gov and http://www.chem.qmul.ac.uk
CLES	Cholesterol esterase	An enzyme that catalyzes the hydrolytic cleavage of cholesterol and other sterol esters and triglycerides. Deficiency of the lysosomal enzyme causes the allelic disorders Wolman's disease and cholesteryl ester storage disease.	Dorland's Medical Dictionary for Health Consumers, 2007

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
CACA	Choline acetyltransferase	An enzyme catalyzing the synthesis of acetylcholine; it is a marker for cholinergic neurons. Also: EC 2.3.1.6, Accepted Name: Choline O-acetyltransferase.	Dorland's Medical Dictionary for Health Consumers, 2007 and http://www.uniprot.org/uniprot/Q6LEN5
CAPK	Choline phosphokinase	An enzyme that catalyzes the formation of O-phosphocholine and ADP from choline and ATP Also known as choline kinase, choline phosphotransferase, and EC 2.7.1.32	Farlex Partner Medical Dictionary, 2012 and http://www.brenda-enzymes.org/enzyme.php?ecno=2.7.1.32
CPCY	Choline-phosphate cytidylyltransferase	An enzyme that controls phosphatidylcholine synthesis. Also: Choline-phosphate cytidylyltransferase A, EC:2.7.7.15, CCT-alpha, CTP:phosphocholine cytidylyltransferase A, CCT A, CT A, Phosphorylcholine transferase A	http://www.uniprot.org/uniprot/P19836
CPPT	Cholinephosphotransferase	An enzyme catalyzing the reaction between CDP-choline and 1,2-diacylglycerol to form a phosphatidylcholine and CMP. The last step in lecithin biosynthesis.	www.drugs.com/dict/cholinephosphotransferase.html
CEST	Cholinesterase	An enzyme found in blood and in various other tissues that catalyzes hydrolysis of choline esters, including acetylcholine.	McGraw-Hill Dictionary of Scientific & Technical Terms, 6E (2003)
CSYN	Citrate synthase	An enzyme that catalyzes condensation of acetyl coenzyme A with oxaloacetate to form citric acid in the Krebs cycle—called also citrogenase, EC:2.3.3.16	www.merriam-webster.com/medical/citrate%20synthase and http://www.uniprot.org/uniprot/P0ABH7
CGNS	Collagenase	Collagenases are endopeptidases that digest native collagen in the triple helix region. Collagens are the major fibrous component of animal extracellular connective tissue.	http://www.worthington-biochem.com/cls/default.html
CZSD	Copper zinc superoxide dismutase	CuZn superoxide dismutase (CuZnSOD) catalyses the dismutation reaction of the total superoxide radical to molecular oxygen and hydrogen peroxide. This type of SOD is distinguished by its metal prosthetic group, Cu/Zn.	From Molecular Biophysics Group

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
CPPO	Coproporphyrinogen oxidase	The CPOX gene provides instructions for making an enzyme known as coproporphyrinogen oxidase. This enzyme is involved in the production of a molecule called heme. Heme is vital for all of the body's organs, although it is most abundant in the blood, bone marrow, and liver. Heme is an essential component of iron-containing proteins called hemoproteins, including hemoglobin (the protein that carries oxygen in the blood). The production of heme is a multi-step process that requires eight different enzymes. Coproporphyrinogen oxidase is responsible for the sixth step in this process, the removal of carbon and oxygen atoms from coproporphyrinogen III (the product of the fifth step) to form protoporphyrinogen IX. Symbol: CPOX	http://ghr.nlm.nih.gov/gene/CPOX
CRKI	Creatine kinase	Any of three isoenzymes found especially in vertebrate skeletal and myocardial muscle and the brain that catalyze the transfer of a high-energy phosphate group from phosphocreatine to ADP with the formation of ATP and creatine and typically occur in elevated levels in the blood following injury to brain or muscle tissue. Also: creatine phosphokinase, creatine phosphotransferase, phosphocreatine kinase, adenosine triphosphate-creatine transphosphorylase, Lohmann's enzyme, EC 2.7.3.2.	www.merriam-webster.com/medical/creatine%20kinase and http://www.chem.qmul.ac.uk/iubmb/enzyme/EC2/7/3/2.html
CUAT	Cu2+-exporting ATPase	A P-type ATPase that undergoes covalent phosphorylation during the transport cycle. Also: Copper adenosine triphosphatase, Cu-ATPase, Cu2+-ATPase, CopB, ATP phosphohydrolase (Cu2+-exporting), EC 3.6.3.4.	http://www.chem.qmul.ac.uk/iubmb/enzyme/EC3/6/3/4.html
GMPP	Cyclic guanylic acid phosphodiesterase, cGMP PDE	An enzyme involved with the process of sight.	

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
CYST	Cysteine dioxygenase	An enzyme that catalyzes the oxidation of cysteine to cysteine sulfinic acid, which is the first major step in cysteine catabolism in mammalian tissues. Also: EC:1.13.11.20, Cysteine oxidase, L-cysteine:oxygen oxidoreductase	http://pubs.rsc.org/en/content/articlelanding/cc/2007/b702158e#!divAbstract , http://www.brenda-enzymes.org/enzyme.php?ecno=1.13.11.20 and http://www.ebi.ac.uk/intenz/query?cmd=SearchEC&ec=1.13.11.20
CYAM	Cystine aminopeptidase	A zinc-containing sialoglycoprotein that is used to study aminopeptidase activity in the pathogenesis of hypertension. EC 3.4.11.3. Other names Oxytocinase; Cystyl Aminopeptidase; Cystine Arylamidase; Vasopressinase; Cystine Aminopeptidase; Cystinaminopeptidase; Cystidyl Aminopeptidase	www.reference.md/files/D010/mD010122.html
CYTB	Cytochrome b	A cytochrome of the respiratory chain. A deficiency of this cytochrome leads to chronic granulomatous disease. Also: Complex III subunit 3, Complex III subunit CYTB, Complex III subunit III, Cytochrome b-c1 complex subunit 3, Cytochrome b-c1 complex subunit CYTB, Ubiquinol-cytochrome-c reductase complex cytochrome b subunit	Farlex Partner Medical Dictionary, 2012 and http://www.uniprot.org/uniprot/?query=Cytochrome+b&sort=score
CYB5	Cytochrome B-5	A cytochrome in the endoplasmic reticulum that acts with a number of oxygenases; a deficiency of this cytochrome results in a form of hereditary methemoglobinemia. Also: microsomal cytochrome b5 type A, Cytochrome B5, MCB5	Farlex Partner Medical Dictionary, 2012 and http://www.uniprot.org/uniprot/P00167
CYCC	Cytochrome c + c1	No Definition	
CCOX	Cytochrome C-oxidase	An enzyme complex of the inner mitochondrial membrane that catalyses the reaction between ferrocytochrome c and oxygen to yield ferricytochrome c and water. Other name(s): cytochrome oxidase; cytochrome a3; cytochrome aa3; Warburg's respiratory enzyme; indophenol oxidase; indophenolase; complex IV (mitochondrial electron transport); ferrocytochrome c oxidase; NADH cytochrome c oxidase, EC 1.9.3.1.	http://www.lexic.us/definition-of/cytochrome_aa3 and http://www.chem.qmul.ac.uk
CCCS	Cytochrome c oxidase citrate synthase ratio	Ratio of cytochrome c oxidase to citrate synthase found in a sample.	ECOTOX

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
CCOV	Cytochrome c oxidase subunit IV	Cytochrome c oxidase or complex IV, catalyzes the final step in mitochondrial electron transfer chain, and is regarded as one of the major regulation sites for oxidative phosphorylation.	http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1885940/
CP1A	Cytochrome P1A (CYP1A)	No Definition	
CYP2	Cytochrome P2	No Definition	
CY2B	Cytochrome P2B (CYP2B)	One of the intracellular hemoprotein respiratory pigments that are enzymes functioning in electron transport as carriers of electrons	
CYP3	Cytochrome P450, Family 3, Subfamily A (CYP3A)	Monooxygenases which catalyze many reactions involved in drug metabolism and synthesis of cholesterol, steroids and other lipids. Also: Cytochrome P3A, CYP3, CYP3A, cytochrome P450, subfamily IIIA (niphedipine oxidase), CYP3A43.	http://www.genecards.org/cgi-bin/carddisp.pl?gene=CYP3A
P420	Cytochrome P-420	No Definition	
P450	Cytochrome P-450	A superfamily of hundreds of closely related hemeproteins found throughout the phylogenetic spectrum, from animals, plants, fungi, to bacteria. They include numerous complex monooxygenases (mixed function oxygenases). In animals, these P-450 enzymes serve two major functions: (1) biosynthesis of steroids, fatty acids, and bile acids; (2) metabolism of endogenous and a wide variety of exogenous substrates, such as toxins and drugs (biotransformation). They are classified, according to their sequence similarities rather than functions, into CYP gene families (>40% homology) and subfamilies (>59% homology). For example, enzymes from the CYP1, CYP2, and CYP3 gene families are responsible for most drug metabolism. Also, Cytochrome P450, EC:1.14.-.-	http://ghr.nlm.nih.gov/glossary=cytochromep450
P1A1	Cytochrome P-450 1A1	An isoenzyme translation product of the P450 subfamily 1A CYP1A gene.	ECOREF 61237
1A12	Cytochrome P450 1A1/2	A microsomal cytochrome p450 isoform protein. (CYP1A1/2)	ECOTOX

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
C1A2	Cytochrome P-450 1A2	A cytochrome P-450 monooxygenase that can be induced by polycyclic aromatic xenobiotics in the liver of human and several animal species. This enzyme is of significant clinical interest due to the large number of drug interactions associated with its induction and its metabolism of THEOPHYLLINE. Caffeine is considered to be a model substrate for this enzyme. CYP1A2 activity can also be increased by environmental factors such as cigarette smoking, charbroiled meat, cruciferous vegetables, and a number of drugs including phenytoin, phenobarbital, and omeprazole. Also, EC:1.14.14.1, CYPIA2, Cytochrome P-448, Cytochrome P-450d, Cytochrome P450-D	www.reference.md/files/D019/mD019388.html
C2A6	Cytochrome P450 2A6	Cytochrome P450 2A6 (abbreviated CYP2A6) is a member of the cytochrome P450 mixed-function oxidase system, which is involved in the metabolism of xenobiotics in the body. CYP2A6 is the primary enzyme responsible for the oxidation of nicotine and cotinine. It is also involved in the metabolism of several pharmaceuticals, carcinogens, and a number of coumarin-type alkaloids. CYP2A6 is the only enzyme in the human body that appreciably catalyzes the 7-hydroxylation of coumarin, such that the formation of the product of this reaction, 7-hydroxycoumarin, is used as a probe for CYP2A6 activity. Also: Cytochrome P450, family 2, subfamily A, polypeptide 6, EC=1.14.13.- 1,4-cineole 2-exo-monooxygenase, CYPIIA6, Coumarin 7-hydroxylase, Cytochrome P450 IIA3, Cytochrome P450(I).	http://en.wikipedia.org/wiki/CYP2A6 and http://www.uniprot.org/uniprot/P11509
C1B1	Cytochrome P450 1B1	Cytochromes P450 are a group of heme-thiolate monooxygenases. In liver microsomes, this enzyme is involved in an NADPH-dependent electron transport pathway. It oxidizes a variety of structurally unrelated compounds, including steroids, fatty acids, retinoid and xenobiotics. EC:1.14.14.1.	http://www.uniprot.org/uniprot/Q16678
P2B1	Cytochrome P450 2B1 (CYP2B1)	Cytochrome P450 2B1 (CYP2B1) is an isoform of the unspecific monooxygenase EC 1.14.14.1 that oxidizes a variety of structurally unrelated compounds.	ECOTOX and http://www.ncbi.nlm.nih.gov
2B12	Cytochrome P450 2B1/2	A microsomal cytochrome p450 isoform protein. (CYP2B1/2)	ECOTOX
2B10	Cytochrome P450 2B10 (CYP2B10)	Cytochrome P450 2B10 (CYP2B10) is an isoform of the unspecific monooxygenase EC 1.14.14.1 that oxidizes a variety of structurally unrelated compounds.	ECOTOX and http://www.ncbi.nlm.nih.gov

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
C2C6	Cytochrome P450 2C6	Cytochrome P450 2C6 (CYP2C6) is an isoform of the unspecific monooxygenase EC 1.14.14.1 that oxidizes a variety of structurally unrelated compounds. Also: CYPIIC6, Cytochrome P450 PB1, PTF2.	ECOTOX, http://www.uniprot.org/uniprot/P05178 and http://www.ncbi.nlm.nih.gov
2C11	Cytochrome P450 2C11 (CYP2C11)	Cytochrome P450 2C11 (CYP2C11) is an isoform of the unspecific monooxygenase EC 1.14.14.1 that oxidizes a variety of structurally unrelated compounds.	ECOTOX and http://www.ncbi.nlm.nih.gov
C116	Cytochrome P450 2C11/6	A microsomal cytochrome p450 isoform protein. (CYP2C11/6)	ECOTOX
C2E1	Cytochrome P450 2E1	A member of the cytochrome P450 mixed-function oxidase system, is involved in the metabolism of xenobiotics in the body. While it is involved only in the oxidative metabolism of a small range of substrates (mostly small polar molecules), there are many important drug interactions mediated by CYP2E1. Also: CYP2E1, N-Nitrosodimethylamine Demethylase	http://www.ncbi.nlm.nih.gov/ and http://en.wikipedia.org
C2K1	Cytochrome P450 2K1	A microsomal cytochrome p450 isoform protein. (CYP2K1)	
C2M1	Cytochrome P450 2M1	A microsomal cytochrome p450 isoform protein. (CYP2M1)	
C3A1	Cytochrome P450 3A1 (CYP3A1)	Cytochrome P450 3A1 (CYP3A1) is an isoform of the unspecific monooxygenase EC 1.14.14.1 that oxidizes a variety of structurally unrelated compounds.	ECOTOX and http://www.ncbi.nlm.nih.gov
3A21	Cytochrome P450 3A2/1	A microsomal cytochrome p450 isoform protein. (CYP3A2/1)	ECOTOX
CA27	Cytochrome P450 3A27	A microsomal cytochrome p450 isoform protein. (CYP3A27)	
CY2C	Cytochrome P-450 CYP2C	Electron transfer hemeprotein having a mode of action in which the transfer of a single electron is affected by the reversible valence change of the central iron atom of the heme prosthetic group; found in the endoplasmic reticulum that acts as an intermediary in MFO reactions.	

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
C2D6	Cytochrome p-450 cyp2d6	Cytochrome P450 2D6 (CYP2D6), a member of the cytochrome P450 mixed-function oxidase system, is one of the most important enzymes involved in the metabolism of xenobiotics in the body. Also, many substances are bioactivated by CYP2D6 to form their active compounds. CYP2D6 shows the largest phenotypical variability among the CYPs, largely due to genetic polymorphism. The genotype accounts for normal, reduced, and non-existent CYP2D6 function in subjects. The type of CYP2D6 function of an individual may influence the person's response to different doses of drugs that CYP2D6 metabolizes. Also EC:1.14.14.1, CYPIID6, Cytochrome P450-DB1, Debrisoquine 4-hydroxylase	http://en.wikipedia.org/wiki/CYP2D6
CPOD	Cytochrome P450 dependent O-demethylase	An enzyme	ECOTOX
CYTA	Cytochrome P450A	A cytochrome when the heme contains a formyl side chain and a cytochrome with a protoheme IX prosthetic group.	Dorland's Medical Dictionary
CPDE	Cytochrome P450-dependent O-deethylation activity	An enzyme	ECOTOX
DEAS	Dehydroascorbatase	Catalyses the hydrolysis of the gamma lactone, dehydroascorbate, to diketogulonate.	onlinelibrary.wiley.com/cochranelibrary/search/mesh?searchRow.searchOptions.conceptId=D003682&searchRow.searchCriteria.meshTerm=Dehydroascorbatase
DHAO	Dehydroascorbate reductase	dehydroascorbate reductase, Accepted name: glutathione dehydrogenase (ascorbate),Other name(s): dehydroascorbic reductase; dehydroascorbic acid reductase; glutathione dehydroascorbate reductase; DHA reductase ; GDOR; glutathione:dehydroascorbic acid oxidoreductase; Systematic name: glutathione:dehydroascorbate oxidoreductase	www.chem.qmul.ac.uk
DHYG	Dehydrogenase	Enzyme that oxidizes a substrate by transferring hydrogen to an acceptor that is either NAD/NADP or a flavin enzyme.	http://cancerweb.ncl.ac.uk/omd/
DBHD	delta-5-3-beta hydroxysteroid dehydrogenase	Converts dehydroepiandrosterone to delta-4-androstene-3,17-dione	

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
DCNS	(+)-delta-Cadinene synthase	A sesquiterpenoid. An intermediate in phytoalexin biosynthesis. Also: D-cadinene synthase, EC 4.2.3.13.	http://enzyme.expasy.org/EC/4.2.3.13
D6DS	Delta-6-desaturase	Linoleoyl-CoA Desaturase is an enzyme that catalyzes the syn-dehydrogenation of linoleol-CoA gamma-linolenoyl-CoA Also: linoleate desaturase, linoleic desaturase, Delta-6 Fatty Acid Desaturase , Delta-6-Desaturase, Delta-6-FADTase, Linoleic Acid Delta-6 Desaturase, Linoleoyl Coenzyme A Desaturase	http://www.ncbi.nlm.nih.gov and http://www.chem.qmul.ac.uk
DNSE	Deoxyribonuclease II	Deoxyribonuclease II is an enzyme. Other name(s): DNase II; pancreatic DNase II; deoxyribonucleate 3'-nucleotidohydrolase; DNase II; pancreatic DNase II; acid deoxyribonuclease; acid DNase	http://www.chem.qmul.ac.uk
DBFD	Dibenzylfluorescein dealkylase	A biotransformation enzyme.	ECOREF#118462
DSCA	Diethylsuccinase	No definition available.	
DMAG	Dimethylargininase	An enzyme that hydrolyzes N(G),N(G)-dimethyl-L-arginine (ADMA) and N(G)-monomethyl-L-arginine (MMA) which act as inhibitors of NOS. It has therefore a role in the regulation of nitric oxide generation. Also: N(G),N(G)-dimethylarginine dimethylaminohydrolase 1, Dimethylarginine dimethylaminohydrolase 1, Dimethylarginine dimethylaminohydrolase, DDAHI, Dimethylargininase-1, EC 3.5.3.18.	http://www.uniprot.org/uniprot/O08557 and http://enzyme.expasy.org/EC/3.5.3.18
DCM1	DNA (cytosine-5-)-methyltransferase 1	An enzyme that has a role in the establishment and regulation of tissue-specific patterns of methylated cytosine residues. Also: DNA methyltransferase 1.	http://www.ncbi.nlm.nih.gov/gene?Db=gene&Cmd=ShowDetailView&TermToSearch=1786
DBHX	Dopamine beta-hydroxylase	This enzyme converts dopamine into norepinephrine	www.behavenet.com/capsules/neurochem/dopaminebetahydroxylase.htm
DTDP	DT-diaphorase	Prevents the redox cycling of certain compounds.	
E20M	Ecdysone 20-monooxygenase	Ecdysone 20-monooxygenase is an enzyme from insect fat body or malpighian tubules involving a heme-thiolate protein (P-450). NADPH can act as ultimate hydrogen donor. Also: alpha-ecdysone C-20 hydroxylase; ecdysone 20-hydroxylase	http://www.chem.qmul.ac.uk
ESTS	Elastase	An enzyme that digests elastin. Also, EC:3.4.21.	Collins English Dictionary and http://www.uniprot.org/uniprot/P32197

ENZ	**Enzyme Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
ENCL	Endocellulase	An enzyme that is able to break beta 1-4 bonds randomly along a cellulose strand. Also, EC:3.2.1.4	http://www.uniprot.org/uniprot/U6NE74
ENDC	Endochitinase	Catalysis of the hydrolysis of nonterminal (1->4)-beta linkages of N-acetyl-D-glucosamine (GlcNAc) polymers of chitin and chitodextrins. Typically, endochitinases cleave randomly within the chitin chain.	http://www.ebi.ac.uk/QuickGO/GTerm?id=GO:0008843
ENGC	Endoglucanase	An enzyme isolated from fungi and bacteria. It catalyzes the endohydrolysis of 1,4-beta-glucosidic linkages in cellulose, lichenin, and cereal beta-glucans. EC 3.2.1.4.	http://www.online-medical-dictionary.org/omd.asp?q=endoglucanase
GENZ	Enzyme, General	Any of numerous complex proteins that are produced by living cells and catalyze specific biochemical reactions at body temperatures	http://www.merriam-webster.com/dictionary/enzyme
EPND	EPN (O-Ethyl-O-p-nitrophenyl phenylphosphonothionate) detoxification	No definition available.	
EPHY	Epoxide hydrase	No definition available.	
EMDL	Erythromycin N-demethylase	A Cytochrome P450-dependent monooxygenase activity	ECOTOX
ESTE	Esterase	Any of a group of enzymes that hydrolyse esters into alcohols and acids. Also, EC:3.1.1.	Collins English Dictionary and http://www.uniprot.org/uniprot/P18773
ESLI	Esterase lipase	No Definition	
ESST	Estradiol sulfotransferase	Estrogen sulfotransferase (EST) catalyzes the sulfation of estrogens such as estradiol and estrone, using the cofactor3'-phosphoandenosine-5'-phosphosulfate (PAPS).	http://www.epa.gov/endocrine/inventory/NIEH-091.html
ECOD	Ethoxycoumurin O-deethylase	No definition available.	
ENDM	Ethylmorphine-n-demethylase	No definition available.	
EXCL	Exocellulase	An enzyme that is able to cleave the glucose molecules from the ends of cellulose strands	

ENZ	**Enzyme Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
ERKM	Extracellular Signal-Regulated MAP Kinases	A mitogen-activated protein kinase subfamily that is widely expressed and plays a role in regulation of meiosis; mitosis; and post mitotic functions in differentiated cells. The extracellular signal regulated map kinases are regulated by a broad variety of cell surface receptors and can be activated by certain carcinogens. Also: ATP:protein phosphotransferase (MAPKK-activated), c-Jun N-terminal kinase; Dp38; ERK; ERK1; ERK2; extracellular signal-regulated kinase; JNK; JNK3a1; LeMPK3; MAP kinase; MAP-2 kinase; MAPK; MBP kinase I; MBP kinase II; microtubule-associated protein 2 kinase; microtubule-associated protein kinase; myelin basic protein kinase; p38d; p38-2; p42 mitogen-activated protein kinase; p42mapk; PMK-1; PMK-2; PMK-3; pp42; pp44mapk; p44mpk; SAPK; STK26; stress-activated protein kinase	http://www.ncbi.nlm.nih.gov and http://www.chem.qmul.ac.uk
FAAH	Fatty acid amide hydrolase	Integral membrane protein, the enzyme is responsible for the catabolism of neuromodulatory fatty acid amides, including anandamide and oleamide, occurs in mammalia. Also: FAAH; oleamide hydrolase; anandamide amidohydrolase EC 3.5.1.99.	http://www.chem.qmul.ac.uk/iubmb/enzyme/EC3/5/1/99.html
FASC	Fatty acid synthase complex	The multienzyme complex that catalyzes the formation of palmitate from acetyl-coenzyme A, malonyl-coenzyme A, and NADPH. Also: Fatty acid synthase.	Medical Dictionary Copyright, 2006
FADE	Fatty acyl desaturase	Fatty acyl desaturases are enzymes involved in fatty acid chain synthesis, elogation and desaturation	ECOTOX
FNIR	Ferredoxin-nitrite reductase	An enzyme involved with nitrogen assimilation. Also: Ferredoxin--nitrite reductase, Ferredoxin--nitrite reductase chloroplastic, EC 1.7.7.1.	http://enzyme.expasy.org/EC/1.7.7.1 and http://www.brenda-enzymes.info/enzyme.php?ecno=1.7.7.1

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
FMOO	Flavin-containing monooxygenase (FMO)	A microsomal enzyme responsible for metabolism of some drugs. Other name(s)**:** dimethylaniline oxidase; dimethylaniline *N*-oxidase; FAD-containing monooxygenase; *N,N*-dimethylaniline monooxygenase; DMA oxidase; flavin mixed function oxidase; Ziegler's enzyme; mixed-function amine oxidase; FMO; FMO-I; FMO-II; FMO1; FMO_2; FMO3; FMO4; FMO5; flavin monooxygenase; methylphenyltetrahydropyridine *N*-monooxygenase; 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine:oxygen *N*-oxidoreductase; dimethylaniline monooxygenase (*N*-oxide-forming); *N,N*-dimethylaniline,NADPH:oxygen oxidoreductase (*N*-oxide-forming)	http://www.fda.gov/cder/drug/drugReactions/default.htm and http://www.chem.qmul.ac.uk
F16D	Fructose 1,6-diphosphatase	A pacemaker or rate-limiting enzyme in the liver; participates in the control of the rate of hepatic metabolism. Also, EC 3.1.3.11, Fructose-bisphosphatase, Fructose 1,6-bisphosphatase, Hexose diphosphatase.	Saunders Comprehensive Veterinary Dictionary, 2007, http://www.brenda-enzymes.org/enzyme.php?ecno=3.1.3.11 and http://enzyme.expasy.org/EC/3.1.3.11
F6PD	Fructose-6-phosphate dehydrogenase	An enzyme	
FDPA	Fructose-diphosphate aldolase	Catalyzes the aldol condensation of dihydroxyacetone phosphate (DHAP or glycerone-phosphate) with glyceraldehyde 3-phosphate (G3P) to form fructose 1,6-bisphosphate (FBP) in gluconeogenesis and the reverse reaction in glycolysis. Also, Fructose-bisphosphate aldolase, EC:4.1.2.13	http://www.uniprot.org/uniprot/P14540
PGTP	G-protein GTPase, heterotrimeric	Heterotrimeric G-protein GTPase group comprises GTP-hydrolysing systems, where GTP and GDP alternate in binding. This group includes stimulatory and inhibitory G-proteins such as Gs, Gi, Go and Golf, targetting adenylate cyclase and/or K+ and Ca2+ channels; Gq stimulating phospholipase C; transducin activating cGMP phosphodiesterase; gustducin activating cAMP phosphodiesterase. Golf is instrumental in odour perception, transducin in vision and gustducin in taste recognition. At least 16 different alpha subunits (39-52 kDa), 5 beta subunits (36 kDa) and 12 gamma subunits (6-9 kDa) are known. Systematic name: GTP phosphohydrolase (signalling)	http://www.chem.qmul.ac.uk

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
GMCS	gamma-Cystathionase	A liver enzyme, requiring pyridoxal phosphate as coenzyme, which catalyzes the hydrolysis of l-cystathionine to l-cysteine and 2-ketobutyrate, releasing NH3; also catalyzes formation of 2-ketobutyrate from l-homoserine, of pyruvate (and NH3 and H2S) from l-cysteine, and of thiocysteine, pyruvate, and NH3 from cystine.	http://medical-dictionary.thefreedictionary.com/gamma-cystathionase
GGTP	gamma-Glutamyl transpeptidase	is an enzyme that transfers gamma-glutamyl functional groups. It is found in many tissues, the most notable one being the liver, and has significance in medicine as a diagnostic marker. Also, EC 2.3.2.2, γ-glutamyl transferase, GGT, GGTP, gamma-GT, Gamma-glutamyl transferase	http://en.wikipedia.org/wiki/Gamma-glutamyl_transpeptidase and http://www.brenda-enzymes.org/enzyme.php?ecno=2.3.2.2
GGCS	gamma-Glutamylcysteine synthetase	An enzyme that catalyses the ATP-dependent condensation of cysteine and glutamate to form the dipeptide gamma-glutamylcysteine. The peptide bond in this peptide product is between the carboxylate group of the glutamate and the amino group of the cysteine.	Njålsson R, Norgren S (2005). "Physiological and pathological aspects of GSH metabolism". Acta Paediatr 94 (2): 132–137. doi:10.1080/08035250410025285. PMID 15981742
GSCT	gamma-Secretase	A multi-subunit internal protease that cleaves within the transmembrane domain of its substrates. It is an integral membrane protein and minimally consists of four proteins; presenilin, nicastrin, APH-1 and PEN-2. Gamma-secretase is involved in the processing of Notch.	http://www.tocris.com/pharmacologicalBrowser.php?ItemId=218804
GLTN	Gelatinase	A proteolytic enzyme in organisms that confer the ability to hydrolyze gelatin into smaller peptides or chains of amino acids.	http://www.biology-online.org/dictionary/Gelatinase
GLKN	Glucokinase	Catalyzes the initial step in utilization of glucose by the beta-cell and liver at physiological glucose concentration. Glucokinase has a high Km for glucose, and so it is effective only when glucose is abundant. The role of GCK is to provide G6P for the synthesis of glycogen. Pancreatic glucokinase plays an important role in modulating insulin secretion. Hepatic glucokinase helps to facilitate the uptake and conversion of glucose by acting as an insulin-sensitive determinant of hepatic glucose usage. Also, EC:2.7.1.2, Hexokinase type IV, HK IV, Hexokinase-4, HK4, Hexokinase-D	http://www.uniprot.org/uniprot/P35557

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
GPIM	Glucose phosphate isomerase	An enzyme that catalyses the reversible interconversion of d-fructose 6-phosphate and d-glucose-6-phosphate; a part of glycolysis and gluconeogenesis; glucosephosphate isomerase deficiency is an inherited disorder resulting in liver glycogenesis and haemolytic anaemia. Synonym: hexosephosphate isomerase, phosphohexomutase, phosphohexose isomerase. Also, EC:5.3.1.9	www.lexic.us/definition-of/glucose-phosphate_isomerase and http://www.uniprot.org/uniprot/X2CSG4
G6PT	Glucose-6-phosphatase	Hydrolyzes glucose-6-phosphate to glucose in the endoplasmic reticulum. Forms with the glucose-6-phosphate transporter (SLC37A4/G6PT) the complex responsible for glucose production through glycogenolysis and gluconeogenesis. Hence, it is the key enzyme in homeostatic regulation of blood glucose levels. Also, EC:3.1.3.9, G6Pase, G-6-Pase	http://www.uniprot.org/uniprot/O19133
G6PD	Glucose-6-phosphate dehydrogenase	An enzyme found especially in red blood cells that dehydrogenates glucose-6-phosphate in a glucose degradation pathway alternative to the Krebs cycle.	www.merriam-webster.com/medical/glucose-6-phosphate%20dehydrogenase
GD6D	Glucose-6-phosphate dehydrogenase : 6-phosphogluconate dehydrogenase ratio	Ratio of Glucose-6-phosphate dehydrogenase to 6-phosphogluconate dehydrogenase	ECOTOX
GCTA	Glucosyltransferase	Any enzyme that transfers glucosyl groups from one compound to another; glucosyltransferases are in EC subclass 2.4 (glycosyltransferases). Also, Transglucosylase	Farlex Partner Medical Dictionary, 2012
GLTR	Glucuronyl transferase	Glucuronyl transferase is a liver enzyme. It changes bilirubin into a form that can be removed through the bile. It also changes some hormones, medicines, and toxins into non-harmful products. If the body does not produce enough glucuronyl transferase, jaundice can occur	www.nlm.nih.gov/medlineplus/ency/article/002370.htm
GLMC	Glutamate decarboxylase	Catalyzes the production of GABA. The calmodulin-binding is calcium-dependent and it is proposed that this may, directly or indirectly, form a calcium regulated control of GABA biosynthesis. Also, EC:4.1.1.15.	http://www.uniprot.org/uniprot/P54767

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
GLMD	Glutamate dehydrogenase	Glutamate dehydrogenase (GD), glutamic dehydrogenase An enzyme that catalyzes the reversible reaction of glutamic acid into 2-oxoglutaric acid and ammonia. High concentrations occur in the liver of sheep, cattle, horses and dogs. Serum levels are useful in detecting hepatocellular damage in ruminants. Also, EC:1.4.1.3	http://medical-dictionary.thefreedictionary.com/glutamate+dehydrogenase+(GD),+glutamic+dehydrogenase and http://www.uniprot.org/uniprot/P52596
GOPG	Glutamate oxaloacetate transaminase to glutamic pyruvic transaminase ratio	Ratio of Glutamate Oxaloacetate Transaminase to Glutamic Pyruvic Transaminase	ECOTOX
GMSN	Glutamate synthase (NADH)	An enzyme involved with nitrogen assimilation. Also: Glutamate (reduced nicotinamide adenine dinucleotide) synthase, NADH: GOGAT, L-glutamate synthase (NADH), L-glutamate synthetase (NADH), NADH-glutamate synthase, NADH-dependent glutamate synthase, NADH-GOGAT, EC 1.4.1.14.	http://www.genome.jp/dbget-bin/www_bget?ec:1.4.1.14 and http://www.brenda-enzymes.info/enzyme.php?ecno=1.4.1.14
GSNP	Glutamate synthase (NADPH)	A key enzyme in the early stages of ammonia assimilation in bacteria, algae and plants, catalyzing the reductive transamidation of the amido nitrogen from glutamine to 2-oxoglutarate to form two molecules of glutamate. Also: Glutamate (reduced nicotinamide adenine dinucleotide phosphate) synthase, Glutamate synthetase (NADP), Glutamine amide-2-oxoglutarate aminotransferase (oxidoreductase, NADP), Glutamine-ketoglutaric aminotransferase, GOGAT, L-glutamate synthase (NADPH), L-glutamate synthetase (NADPH), L-glutamine:2-oxoglutarate aminotransferase NADPH oxidizing, NADPH-dependent glutamate synthase, NADPH-glutamate synthase, EC 1.4.1.13.	http://www.brenda-enzymes.org/enzyme.php?ecno=1.4.1.13 and http://enzyme.expasy.org/EC/1.4.1.13
GLMT	Glutamate transferase	No definition available.	
GLAD	Glutamic acid dehydrogenase	Also, EC 1.4.1.2, Glutamate dehydrogenase, Glutamic dehydrogenase.	http://enzyme.expasy.org/EC/1.4.1.2 and http://www.brenda-enzymes.org/enzyme.php?ecno=1.4.1.2

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Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
GPTR	Glutamic pyruvic transaminase	An enzyme transferring amino groups from l-alanine to 2-ketoglutarate, or the reverse (from l-glutamate to pyruvate); one d-alanine transaminase effects the same reaction, but using d-alanine and d-glutamate. Serum concentration is increased in viral hepatitis and myocardial infarction. Also: Alanine transaminase, glutamic-pyruvic transaminase, serum glutamic:pyruvic transaminase, Glutamic--alanine transaminase, EC 2.6.1.2	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/2.6.1.2
GOTR	Glutamic-oxaloacetic transaminase	An enzyme that catalyzes the reversible transfer of an amino group from aspartate to α-ketoglutarate to form glutamate and oxaloacetate, requiring the coenzyme pyridoxal phosphate; it is normally present in serum and in various body tissues, especially in the heart and liver. It is released into the serum as the result of tissue injury, especially injury to the heart or liver, hence the concentration in the serum may be increased in myocardial infarction or acute damage to hepatic cells. Serum levels are also increased in some muscle diseases, such as progressive muscular dystrophy. Also, aspartate transaminase (AST) (ASAT), EC 2.6.1.1	Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, Seventh Edition, 2003 and http://enzyme.expasy.org/EC/2.6.1.1
GLUT	Glutaminase	An enzyme that catalyzes the deamination of glutamine to form glutamate and an ammonium ion; most of the latter are converted to urea via the urea cycle. Also, EC 3.5.1.2, L-glutamine amidohydrolase.	Dorland's Medical Dictionary for Health Consumers, 2007 and http://enzyme.expasy.org/EC/3.5.1.2
GLMS	Glutamine synthetase	An enzyme that catalyzes the reaction of l-glutamate, ammonia, and ATP to glutamine, ADP, and orthophosphate; one of the few known mammalian enzymes that uses ammonium ion as a substrate under physiologic conditions. Also, EC 6.3.1.2 and Glutamate--ammonia ligase	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/6.3.1.2
GTPD	Glutamyl transpeptadase	A membrane-bound glycoprotein necessary for the formation of mercapturic acids from glutathione conjugates, This enzyme has a number of acceptor amino acids and catalyzes three reactions.	Dictionary of Toxicology 3rd Edition

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
GLPX	Glutathione peroxidase	A selenium-containing enzyme whose blood level is a good indicator of the selenium status of the animal; occurs in a plasma form, an enzyme with specificity for phospholipids, and an intracellular form. Also, GPx, EC 1.11.1.9	Saunders Comprehensive Veterinary Dictionary, 3 ed, 2007 Elsevier and http://enzyme.expasy.org/EC/1.11.1.9
GLRE	Glutathione reductase	A flavin enzyme involved in the defense of the erythrocyte against hemolysis. A partial deficiency occurs relatively frequently but is due to a deficiency of riboflavin; called also GR. Also, Glutathione-disulfide reductase, Glutathione reductase (NADPH), Glutathione S-reductase, GSH reductase, GSSG reductase, NADPH-glutathione reductase, NADPH-GSSG reductase, NADPH:oxidized-glutathione oxidoreductase, EC 1.8.1.7	Saunders Comprehensive Veterinary Dictionary, 3 ed, 2007 Elsevier and http://enzyme.expasy.org/EC/1.8.1.7
GSTR	Glutathione S-transferase	A class of enzymes that catalyzes the reaction of glutathione with an acceptor molecule (for example, an arene oxide) to form an S-substituted glutathione; a key step in detoxification of many substances; start of the mercapturic acid pathway. Also, Ligandin, Glutathione S-alkyltransferase, Glutathione S-aralkyltransferase, Glutathione S-aryltransferase, S-(hydroxyalkyl)glutathione lyase, Glutathione transferase, EC 2.5.1.18. Formerly EC 1.8.6.1, EC 2.5.1.12, EC 2.5.1.13, EC 2.5.1.14 and EC 4.4.1.7.	Farlex Partner Medical Dictionary, 2012, http://www.uniprot.org/uniprot/Q8MU52 and http://enzyme.expasy.org/EC/2.5.1.18
GSO1	Glutathione S-transferase omega 1	An enzyme that is a member of a superfamily of proteins (specifically omega class) that is a glutathione S-transferase (GST) with glutathione-dependent thiol transferase and dehydroascorbate reductase activities. GSTs are involved in the metabolism of xenobiotics and carcinogens.	http://www.ncbi.nlm.nih.gov/gene?Db=gene&Cmd=ShowDetailView&TermToSearch=9446
GT1B	Glutathione S-transferase theta 1b	A member of a superfamily of proteins that catalyze the conjugation of reduced glutathione to a variety of electrophilic and hydrophobic compounds.	http://www.urogene.org/pgdb/gene/92.html
GTST	Glutathione synthetase	A ligase catalyzing the formation of glutathione; deficient activity causes decreased levels of glutathione and increased levels of 5-oxoproline and cysteine. If confined to erythrocytes, the deficiency results in well-compensated hemolytic anemia; if generalized, metabolic acidosis and neurologic dysfunction may also occur. Also, Glutathione synthase, GSH synthetase, EC 6.3.2.3	Dorland's Medical Dictionary for Health Consumers, 2007 and http://enzyme.expasy.org/EC/6.3.2.3

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
GAPD	Glyceraldehyde 3-phosphate dehydrogenase	Glyceraldehyde-3-phosphate dehydrogenase is a key enzyme in glycolysis that catalyzes the first step of the pathway by converting D-glyceraldehyde 3-phosphate (G3P) into 3-phospho-D-glyceroyl phosphate. Component of the GAIT (gamma interferon-activated inhibitor of translation) complex which mediates interferon-gamma-induced transcript-selective translation inhibition in inflammation processes. Upon interferon-gamma treatment assembles into the GAIT complex which binds to stem loop-containing GAIT elements in the 3'-UTR of diverse inflammatory mRNAs (such as ceruplasmin) and suppresses their translation. Also, Glyceraldehyde-3-phosphate dehydrogenase (phosphorylating), GAPDH, NAD-dependent glyceraldehyde-3-phosphate dehydrogenase, Triosephosphate dehydrogenase, EC 1.2.1.12	http://www.uniprot.org/uniprot/P04406 and http://enzyme.expasy.org/EC/1.2.1.12
GLYD	Glyceraldehyde dehydrogenase	No definition available.	
G31A	Glycerol-3-phosphate 1-O-acyltransferase	An enzyme. Acyl-[acyl-carrier protein] can also act as acyl donor. The enzyme acts only on derivatives of fatty acids of chain length above C10. Also: acyl-CoA:sn-glycerol-3-phosphate 1-O-acyltransferase, 3-glycerophosphate acyltransferase, alpha-glycerophosphate acyltransferase, sn-glycerol 3-phosphate acyltransferase, sn-glycerol-3-phosphate acyltransferase, ACP:sn-glycerol-3-phosphate acyltransferase, glycerol 3-phosphate acyltransferase, glycerol phosphate acyltransferase, glycerol phosphate transacylase, glycerophosphate acyltransferase, glycerophosphate transacylase, glycerol-3-phosphate O-acyltransferase, EC 2.3.1.15.	http://www.ebi.ac.uk/intenz/query?cmd=SearchEC&ec=2.3.1.15
GNMT	Glycine N-methyltransferase	An enzyme that catalyzes the methylation of glycine by using S-adenosylmethionine (AdoMet) to form N-methylglycine (sarcosine) with the concomitant production of S-adenosylhomocysteine (AdoHcy). Possible crucial role in the regulation of tissue concentration of AdoMet and of metabolism of methionine. Also: Folate-binding protein, Gnmt, EC 2.1.1.20.	http://www.uniprot.org/uniprot/P13255

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
GLPP	Glycogen phosphorylase	The major enzyme in glycogenolysis, leading to the release of glucose-1-phosphate from glycogen. This enzyme is activated by phosphorylation from ATP by glycogen phosphorylase kinase, activated by cAMP-dependent protein kinase or by Ca2+ via calmodulin, or inhibited by hydrolysis of the phosphate by glycogen phosphorylase phosphatase. Also, Amylophosphorylase, Muscle phosphorylase a and b, Polyphosphorylase, EC 2.4.1.1	Saunders Comprehensive Veterinary Dictionary, 2007 and http://enzyme.expasy.org/EC/2.4.1.1
GYSS	Glycogen(starch) synthase	An enzyme that catalyzes the key step of glycogen synthesis and plays an important role in glycogen metabolism in liver and muscle. Also: EC 2.4.1.11, UDP-glucose:glycogen 4-alpha-D-glucosyltransferase, glucosyltransferase uridine diphosphoglucose-glycogen, glycogen synthase, glycogen (starch) synthase, glycogen synthase 2, glycogen synthetase (starch), granule-bound starch synthase, UDP-glucose-glycogen glucosyltransferase, UDP-glycogen synthase, UDPG-glycogen synthetase, UDPG-glycogen transglucosylase, uridine diphosphoglucose-glycogen glucosyltransferase.	http://www.brenda-enzymes.org/enzyme.php?ecno=2.4.1.11
GCOX	Glycolate oxidase	Glycolate oxidase is an enzyme. Other name(s): (S)-2-hydroxy-acid oxidase; hydroxy-acid oxidase A; hydroxy-acid oxidase B; glycolate oxidase; oxidase, L-2-hydroxy acid; hydroxyacid oxidase A; L-alpha-hydroxy acid oxidase; L-2-hydroxy acid oxidase, EC 1.4.3.19.	www.chem.qmul.ac.uk and http://enzyme.expasy.org/EC/1.4.3.19
GUPX	Guaiacol Peroxidase	Plant peroxidase. Guaiacol peroxidases have also been found in sterile root exudates and shown to oxidize Mn2+ to form Mn3+ chelates that are capable of decolorizing aromatic dyes. Peroxidase is commonly assayed by noting the development of color (A470) during the oxidation of a simple phenolic compound, guaiacol (ortho-methoxyphenol). For every four molecules of H2O2 that are reduced, one molecule of tetraguaiacol is formed.	http://lbewww.epfl.ch/COST837/PhytoRemed2000_Files/Session2.pdf http://www-plb.ucdavis.edu/courses/s99/plb111l/Enzymes.html.
HATP	H+-transporting ATPase	Multisubunit enzymes that reversibly synthesize adenosine triphosphate. They are coupled to the transport of protons across a membrane. Other names: ATP synthase; F1-ATPase; FoF1-ATPase; ATP phosphohydrolase (H+-transporting), H+-transporting two-sector ATPase, mitochondrial ATPase; coupling factors (F0, F1 and CF1); chloroplast ATPase	http://www.ncbi.nlm.nih.gov and http://www.chem.qmul.ac.uk/

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
HOXY	Heme oxygenase (Haem oxygenase)	An enzyme that catalyzes the reaction of heme with dioxygen and three electron donors to produce biliverdin, carbon monoxide, Fe3+, and three water molecules; the only reaction in humans that produces carbon monoxide. Also, EC 1.14.99.3, Heme oxygenase (biliverdin-producing), Heme oxidase, Heme oxygenase (decyclizing).	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/1.14.99.3
FECH	Heme synthetase	Heme synthetase is an enzyme. Also: ferrochelatase, ferro-protoporphyrin chelatase; iron chelatase; heme synthetase; protoheme ferro-lyase	http://www.chem.qmul.ac.uk
HEPX	Heptachlor epoxidase	No definition available.	
HXBH	Hexobarbital hydroxylase	A drug metabolizing enzyme that metabolizes hexobarbital	ECOTOX
HXKN	Hexokinase	An enzyme that catalyzes the transfer of a high-energy phosphate group to a hexose, the initial step in the cellular utilization of free hexoses. The enzyme occurs in all tissues as various isozymes with varying specificities; the liver isozyme (type IV) is specific for glucose and is often called glucokinase. Also, EC 2.7.1.1, Hexokinase type I, Hexokinase type II, Hexokinase type III, Hexokinase type IV (glucokinase)	Dorland's Medical Dictionary for Health Consumers, 2007 and http://enzyme.expasy.org/EC/2.7.1.1
HSLP	Hormone-sensitive lipase	The enzyme activity is increased in response to hormones that elevate intracellular levels of cAMP. It hydrolyzes all acylglycerols (triacylglycerol, diacylglycerol and monoacylglycerol) as well as cholesteryl esters, steroid fatty acid esters, retinyl esters and p-nitrophenyl esters. Also: HSL, Diacylglycerol acylhydrolase , EC 3.1.1.79.	http://enzyme.expasy.org/EC/3.1.1.79
HPSE	Hydrogen peroxidase	No definition available.	
HAHY	Hydroxyacylglutathione hydrolase	An enzyme with catalytic activity similar to that of lactoylglutathione lyase, but more general; catalyzes the hydrolysis of an S-2-hydroxyacylglutathione, producing glutathione and a 2-hydroxy acid anion. Also: Glyoxalase II, EC 3.1.2.6. Formerly EC 3.1.2.8.	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/3.1.2.6
IDPT	Inorganic diphosphatase	A member of the sPPase family I. An enzyme that imports protons from the cytosol into the vacuolar lumen. Also: Pyrophosphatase (inorganic) 1, Diphosphate phosphohydrolase, Inorganic pyrophosphatase, Pyrophosphate phosphohydrolase, Pyrophosphate phospho-hydrolase, EC 3.6.1.1.	http://enzyme.expasy.org/EC/3.6.1.1 and http://www.brenda-enzymes.org/php/result_flat.php4?ecno=3.6.1.1

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
IPYR	Inorganic pyrophosphate	A chemical that can block bone mineral crystal formation.	http://www.homestead.com/hypophosphatasia/files/page8.html
IVAS	Invertase	An enzyme that catalyzes the hydrolysis of sucrose into glucose and fructose. Also called beta-fructofuranosidase, Saccharase, Beta-fructosidase, EC 3.2.1.26	The American Heritage® Medical Dictionary Copyright, 2007, 2004 and http://enzyme.expasy.org/EC/3.2.1.26
ITMD	Iodothyronine 5'-monodeiodinase	An integral membrane bound selenoenzyme. The enzyme activity has only been demonstrated in the direction of 5'-deiodination, which renders the thyroid hormone more active. The enzyme consists of type I and type II enzymes, both containing selenocysteine, but with different kinetics. Accepted name: thyroxine 5'-deiodinase Other names: diiodothyronine 5'-deiodinase [ambiguous]; iodothyronine 5'-deiodinase; iodothyronine outer ring monodeiodinase; type I iodothyronine deiodinase; type II iodothyronine deiodinase; thyroxine 5-deiodinase [misleading]; L-thyroxine iodohydrolase (reducing)	ECOREF 48163 and http://www.chem.qmul.ac.uk/iubmb/enzyme
FESD	Iron superoxide dimutase	Fe superoxide dimutase (FeSOD) caralyses the dimutation reaction of the toxic superoxide radical to molecular oxygen and hydrogen peroxide. This type of SOD is distinguished by its metal prosthetic group, Fe.	From University of Leeds PROMISE database
ICDH	Isocitrate dehydrogenase	Either of two enzymes that catalyze the oxidative decarboxylation of isocitrate during the Krebs cycle.	The American Heritage® Medical Dictionary Copyright, 2007, 2004

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
IDND	Isocitrate dehydrogenase (NAD+)	An enzyme of the oxidoreductase class that catalyzes the conversion of isocitrate and NAD+ to yield 2-ketoglutarate, carbon dioxide, and NADH. It occurs in cell mitochondria. The enzyme requires Mg2+, Mn2+; it is activated by ADP, citrate, and Ca2+, and inhibited by NADH, NADPH, and ATP. The reaction is the key rate-limiting step of the citric acid (tricarboxylic) cycle. (From Dorland, 27th ed) EC 1.1.1.41. Other name(s): isocitric dehydrogenase; ?-ketoglutaric-isocitric carboxylase; isocitric acid dehydrogenase; NAD dependent isocitrate dehydrogenase; NAD isocitrate dehydrogenase; NAD-linked isocitrate dehydrogenase; NAD-specific isocitrate dehydrogenase; NAD isocitric dehydrogenase; isocitrate dehydrogenase (NAD); IDH (ambiguous); nicotinamide adenine dinucleotide isocitrate dehydrogenase.	http://www.chem.qmul.ac.uk/iubmb/enzyme/EC1/1/1/41.html and http://www.ncbi.nlm.nih.gov/mesh?term=nad%2B-isocitrate%20dehydrogenase
IDNP	Isocitrate dehydrogenase (NADP+)	A non-allosteric, NADP+-linked enzyme that is found in both mitochondria and cytoplasm. Other name(s): oxalosuccinate decarboxylase; isocitrate dehydrogenase (NADP); oxalsuccinic decarboxylase; isocitrate (NADP) dehydrogenase; isocitrate (nicotinamide adenine dinucleotide phosphate) dehydrogenase; NADP-specific isocitrate dehydrogenase; NADP-linked isocitrate dehydrogenase; NADP-dependent isocitrate dehydrogenase; NADP isocitric dehydrogenase; isocitrate dehydrogenase (NADP-dependent); NADP-dependent isocitric dehydrogenase; triphosphopyridine nucleotide-linked isocitrate dehydrogenase-oxalosuccinate carboxylase; NADP+-linked isocitrate dehydrogenase; IDH (ambiguous); dual-cofactor-specific isocitrate dehydrogenase; NADP+-ICDH; NADP+-IDH; IDP; IDP1; IDP2; IDP3. EC 1.1.1.42	http://www.chem.qmul.ac.uk/iubmb/enzyme/EC1/1/1/42.html and http://www.brenda-enzymes.org/php/result_flat.php4?ecno=1.1.1.42
ICLY	Isocitric lyase	An enzyme unique to the glyoxylate cycle which enables plant tissues to utilize triglycerides as an energy source.	ECOREF#73229
JHES	Juvenile-hormone esterase	An enzyme that plays a crucial role in the decrease of JH activity in lepidopteran insects, by hydrolyzing the methyl ester of JH. It is also involved in the transport of JH. Demethylates the insect juvenile hormones, JH1 and JH3, but does not hydrolyse the analogous ethyl or isopropyl esters. Also: EC 3.1.1.59, JH-esterase, juvenile hormone analog esterase, juvenile hormone carboxyesterase.	http://www.enzyme-database.org/query.php?ec=3.1.1.59 and http://www.uniprot.org/uniprot/P12992

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Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
KYNU	Kynureninase	A liver enzyme catalyzing the hydrolysis of the l-kynurenine side chain, with the formation of anthranilic acid and l-alanine; a participant in l-tryptophan metabolism. Also, L-kynurenine hydrolase, EC 3.7.1.3	lex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/3.7.1.3
KATE	Kynurenine aminotransferase	Kynurenine aminotransferase (KAT) catalyzes the formation of kynurenic acid (KYNA), the natural antagonist of ionotropic glutamate receptors.	Han and Li, 2004, FEBS Letters, 577(3):381-385
LACC	Laccase	A group of multi-copper proteins of low specificity acting on both o- and p-quinols, and often acting also on aminophenols and phenylenediamine. The semiquinone may react further either enzymically or non-enzymically. Also: benzenediol:oxygen oxidoreductase, Laccase allele OR, Laccase allele TS, Ligninolytic phenoloxidase, p-diphenol oxidase, urishiol oxidase, urushiol oxidase, EC 1.10.3.2.	http://www.brenda-enzymes.org/enzyme.php?ecno=1.10.3.2
L3CS	L-3-cyanoalanine synthase	This enzyme belongs to the family of lyases, specifically the class of carbon-sulfur lyases and participates in cyanoamino acid metabolism. Other names: beta-cyanoalanine synthase, beta-cyanoalanine synthetase, beta-cyano-L-alanine synthase, L-cysteine hydrogen-sulfide-lyase (adding HCN), L-cysteine hydrogen-sulfide-lyase (adding hydrogen cyanide L-3-cyanoalanine-forming), L-3-cyanoalanine synthase, Beta-3-cyanoalanine synthase. (EC 4.4.1.9).	http://www.chem.qmul.ac.uk/iubmb/enzyme/EC4/4/1/9.html and http://en.wikipedia.org/wiki/L-3-cyanoalanine_synthase
GGSD	L-glutamate gamma-semialdehyde dehydrogenase	An enzyme that plays a key role in proline biosynthesis, leading to osmoregulation in plants. Also: Delta-1-pyrroline-5-carboxylate synthase, P5CS,1-pyrroline dehydrogenase, delta1-pyrroline-5-carboxylate dehydrogenase, L-pyrroline-5-carboxylate-NAD+ oxidoreductase, pyrroline-5-carboxylate dehydrogenase, pyrroline-5-carboxylic acid dehydrogenase, delta1--pyrroline-5-carboxylic acid dehydrogenase, 1-pyrroline-5-carboxylate:NAD+oxidoreductase, 1-pyrroline-5-carboxylate dehydrogenase, L-glutamate gamma-semialdehyde:NAD+oxidoreductase, Aldehyde dehydrogenase family 18 member A1, Aldh18a1, Pycs, old EC1.5.1.12, EC 1.2.1.88.	http://www.uniprot.org/uniprot/Q9Z110 and http://www.ebi.ac.uk/intenz/query?cmd=SearchEC&ec=1.2.1.88
LADH	Lactate dehydrogenase	An enzyme found in the cells of many body tissues, including the heart, liver, kidneys, skeletal muscle, brain, red blood cells, and lungs. It is responsible for converting muscle lactic acid into pyruvic acid, an essential step in producing cellular energy. Also: Lactic dehydrogenase, LDH.	Gale Encyclopedia of Medicine. 2008

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
LDMD	Lactate dehydrogenase/malic dehydrogenase ratio	No definition available.	
LGLY	Lactoylglutathione lyase	A lyase cleaving S-d-lactoylglutathione to glutathione and methylglyoxal. Synonym(s): Aldoketomutase, Glyoxalase I, Ketone-aldehyde mutase, Methylglyoxalase, (R)-S-lactoylglutathione methylglyoxal-lyase (isomerizing), EC 4.4.1.5	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/4.4.1.5
LAMO	Lauric acid monooxygenase	An enzyme that catalyzes the formation of hydroxylaurate from lauric acid.	http://onlinelibrary.wiley.com/doi/10.1111/j.1432-1033.1978.tb12586.x/pdf
LEAM	Leucine aminopeptidase	A digestive enzyme of small intestine enterocytes. Also, EC 3.4.11.1, Leucyl aminopeptidase, Cytosol aminopeptidase, Leucine aminopeptidase, Peptidase S.	Saunders Comprehensive Veterinary Dictionary, 3 ed, 2007 and http://enzyme.expasy.org/EC/3.4.11.1
LTRS	leucine tRNA ligase	An enzyme that activates leucine with its specific transfer RNA. Other name(s): leucyl-tRNA synthetase; leucyl-transfer ribonucleate synthetase; leucyl-transfer RNA synthetase; leucyl-transfer ribonucleic acid synthetase; leucine-tRNA synthetase; leucine translase.	http://www.chem.qmul.ac.uk and www.ncbi.nlm.nih.gov
LGDD	L-Gulonate dehydrogenase and decarboxylase	Enzymes involved in the metabolism of L-ascorbic acid.	ECOREF 58373
GULO	L-Gulonolactone oxidase	An enzyme which oxidizes l-gulonolactone to 2-keto-l-gulonolactone.	http://www.positivehealth.com/permit/Articles/Nutrition/vitc3.htm
LIPS	Lipase	Any enzyme that catalyzes the cleavage of a fatty acid anion from a triglyceride or phospholipid. Also, EC 3.1.1.3, Triacylglycerol lipase, Tributyrase, Triglyceride lipase	Dorland's Medical Dictionary for Health Consumers, 2007 and http://enzyme.expasy.org/EC/3.1.1.3

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
LPPR	Lipoperoxide	a product of the oxidation of unsaturated lipids	http://64.233.167.104/search?q=cache:1gRkyBs7mKEJ:www.apsnet.org/phyto/PDFS/1999/0819-03R.pdf+Lipoperoxide&hl=en&start=93
LPLP	Lipoprotein lipase	An enzyme that catalyzes the hydrolytic cleavage of fatty acids from triglycerides (or di- or monoglycerides) in chylomicrons, very-low-density lipoproteins, and low-density lipoproteins. Also, EC 3.1.1.34, Clearing factor lipase, Diacylglycerol lipase, Diglyceride lipase	Dorland's Medical Dictionary for Health Consumers, 2007 and http://enzyme.expasy.org/EC/3.1.1.34
LPXG	Lipoxygenase	An enzyme that catalyzes the oxidation of polyunsaturated fatty acids to form a peroxide of the acid.	Dorland's Medical Dictionary for Health Consumers, 2007
LNSE	l-Leucyl-beta-napthylamide splitting enzyme	Frequently used to test for leucine aminopeptidase (ec 3.4.11.1) activity; hydrolyzes naphthylamides of leucine.	http://cancerweb.ncl.ac.uk/omd/
T4GL	L-Thyroxine (T4) Glucuronidation	Glucuronidation represents a major means of metabolizing hormones so that they can then be excreted. In this case L-Thyroxine (T4).	http://www.anapsid.org/cnd/hormones/glucuronidation.html
LUCI	Luciferase	An enzyme present in certain luminous organisms that act to bring about the oxidation of luciferins; energy produced in the process is liberated as bioluminescence.	Mosby's Dental Dictionary, 2nd edition, 2008
LPDH	Lysopine dehydrogenase	Lysopine dehydrogenase is an enzyme. Other name(s): D-lysopine synthase; D-lysopine dehydrogenase; D(+)-lysopine dehydrogenase , N2-(D-1-carboxyethyl)-L-lysine:NADP+ oxidoreductase (L-lysine-forming)	http://www.chem.qmul.ac.uk
LYZM	Lysozyme activity	An enzyme present in saliva, tears, egg white, and many animal fluids, functioning as an antibacterial agent by catalyzing the hydrolysis of specific glycosidic linkages in peptidoglycans and chitin, breaking down some bacterial cell walls. Also, EC 3.2.1.17, Muramidase	Dorland's Medical Dictionary for Health Consumers, 2007 and http://enzyme.expasy.org/EC/3.2.1.17
LYSO	Lysyl oxidase	A copper-containing enzyme responsible for the maintenance of collagen and elastin in tissues; its absence leads to aneurysm formation in and rupture of large blood vessels.	Saunders Comprehensive Veterinary Dictionary, 3 ed, 2007

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
MGAT	Magnesium adenosine triphosphatase	No definition available.	
MCAT	Magnesium carbonate adenosine triphosphatase	No definition available.	
MLDA	Malate dehydrogenase	An enzyme that, using either NAD+ or NADP+, catalyzes the dehydrogenation of malate to oxaloacetate or its decarboxylation to pyruvate and CO2. At least six malate dehydrogenases are known, distinguished by their products, use of NAD+ or NADP+, and specificity of substrate (one acts on D-malate, the rest act on L-malate); one of these proteins is an enzyme in the tricarboxylic acid cycle. Also,Malic acid dehydrogenase, Malic dehydrogenase, Malic enzyme, pyruvic-malic carboxylase, EC 1.1.1.37	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/1.1.1.37
MLCB	Malathion Carboxylesterase	No definition available.	
MALE	Malic Enzyme	No definition available.	
MLTS	Maltase	Any enzyme with similar glycolytic activity, cleaving α-1,4 and sometimes α-1,6 linked glucose residues from nonreducing termini, in humans there are considered to be four such enzymes; two are the heat-stable enzymes, usually called maltases, constituting the glucoamylase complex; the other two are the heat-labile enzymes, usually called sucrase and isomaltase. Also, EC:3.2.1.20, Acid maltase, Glucoinvertase, Glucosidosucrase, Lysosomal alpha-glucosidase,Maltase-glucoamylase.	Dorland's Medical Dictionary for Health Consumers, 2007 and http://enzyme.expasy.org/EC/3.2.1.20
MM29	Matrix metalloproteinase 2 and Matrix metalloproteinase 9	Matrix metalloproteinase 2 and Matrix metalloproteinase 9 in a sample.	ECOTOX
MNSD	Manganese superoxide dismutase	Manganese superoxide dismutase (MnSOD) is located in mitochondria, is the key enzyme that protects the energy-generating mitochondria from oxidative damage.	http://www.hindawi.com/journals/er/2011/387176/

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
MSRA	Methionine sulfoxide reductase	The enzyme plays a role in preventing oxidative-stress damage caused by reactive oxygen species by reducing the oxidized form of methionine back to methionine and thereby reactivating peptides that had been damaged. This enzyme belongs to the family of oxidoreductases, specifically those acting on a sulfur group of donors with a disulfide as acceptor. Other names in common use include MsrB, methionine sulfoxide reductase (ambiguous), pMSR, methionine S-oxide reductase (ambiguous), selenoprotein R, methionine S-oxide reductase (R-form oxidizing), methionine sulfoxide reductase B, SelR, SelX, PilB, and pRMsr. Includes peptide-methionine (S)-S-oxide reductase, peptide-methionine (R)-S-oxide reductase, L-methionine (S)-S-oxide reductase, and L-methionine (R)-S-oxide reductase.	www.chem.qmul.ac.uk and www.wikipedia.org/wiki
MCOD	Methoxycoumarin O-dealkylase	No definition available.	
MROD	Methoxyresorufin-o-deethylase	No definition available.	
MAPK	Mitogen-activated protein kinases	Mitogen-activated protein (MAP) kinases (EC 2.7.11.24) are serine/threonine-specific protein kinases that respond to extracellular stimuli (mitogens) and regulate various cellular activities, such as gene expression, mitosis, differentiation, and cell survival/apoptosis	http://en.wikipedia.org/wiki/Mitogen-activated_protein_kinase
MFOS	Mixed function oxidases	An enzyme complex found in animals that oxidizes toxic compounds to render them more susceptible to metabolism and excretion. Such complexes are induced in a wide range of species following exposure to toxic organic substances, such as alkaloids, phenolics, terpenoids, and quinones. The enzymes are localized in the liver in vertebrates and in similar tissues, such as the hepatopancreas, in invertebrates. They catalyse the introduction to the toxic molecule of single oxygen atoms in the form of hydroxyl groups, which requires energy. High levels of these enzymes occur in plant-eating insects, in which they detoxify the natural toxins of the plants. Such enzymes may also render insects more resistant to insecticides.	A Dictionary of Biology. 2004.

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
MMP2	MMP2	Matrix metalloproteinase 2 is a secreted endopeptidase in the interstitial collagenase family. Also: gelatinase A; 72-kDa gelatinase; type IV collagenase; 3/4 collagenase (Obsolete); 72 kDa gelatinase type A; collagenase IV; collagenase type IV; MMP 2; type IV collagen metalloproteinase; type IV collagenase/gelatinase.	http://www.chem.qmul.ac.uk
MMP9	MMP9	Matrix metalloproteinase 9 is an enzyme in the interstitial collagenase family. Also: gelatinase B; 92-kDa gelatinase; type V collagenase; 92-kDa type IV collagenase; macrophage gelatinase; 95 kDa type IV collagenase/gelatinase; collagenase IV; collagenase type IV; gelatinase MMP 9; MMP 9; type IV collagen metalloproteinase.	http://www.chem.qmul.ac.uk
MAOA	Mono Amino Oxidase	An enzyme that catalyzes the oxidative deamination of naturally occurring monoamines. It is a flavin-containing enzyme that is localized in mitochondrial membranes, whether in nerve terminals, the liver, or other organs.Other name(s): amine oxidase (flavin-containing); monoamine oxidase, tyramine oxidase; tyraminase; amine oxidase; adrenalin oxidase; epinephrine oxidase; MAO; polyamine oxidase; serotonin deaminase; adrenaline oxidase; spermidine oxidase; spermine oxidase; monoamine:O2 oxidoreductase (deaminating)	http://www.chem.qmul.ac.uk and http://www.ncbi.nlm.nih.gov
MDHA	Monodehydroascorbate reductase	monodehydroascorbate reductase, Other name(s): NADH:semidehydroascorbic acid oxidoreductase; MDHA; semidehydroascorbate reductase; AFR; AFR-reductase; ascorbic free radical reductase; ascorbate free radical reductase; SOR; MDAsA reductase (NADPH) ; SDA reductase; NADH:ascorbate radical oxidoreductase; NADH-semidehydroascorbate oxidoreductase; ascorbate free-radical reductase ; NADH:AFR oxidoreductase; monodehydroascorbate reductase (NADH2), Systematic name: NADH:monodehydroascorbate oxidoreductase	www.chem.qmul.ac.uk
MUDH	Multiple dehydrogenases (measured total produced by soil microorganisms)	No definition available.	www.biology-online.org/dictionary/Dehydrogenase

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Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
NAGD	N-Acetyl-beta-d-glucosamimidase	N-Acetyl-/β-glucosaminidase (NAG) is a high molecular-weight (~140 kDa) hydrolytic lysosomal enzyme that is found in many tissues of the body. It breaks chemical bonds of glycosides and amino sugars that form structural components in many tissues. It is necessary for the degradation and disposal of various parts of the cell, including the cell membrane.	http://link.springer.com/referenceworkentry/10.1007%2F978-3-642-00418-6_305
NABH	beta-*N*-*A*cetylhexosaminidase	One of two chitinolytic enzymes involved in exoskeleton degradation and recycling in invertebrates. Enzyme reaction hydrolysis of terminal non-reducing *N*-acetyl-D-hexosamine residues in *N*-acetyl-beta-D-hexosaminides. Acts on *N*-acetylglucosides and *N*-acetylgalactosides. Also: Chitobiase, hexosaminidase; beta-acetylaminodeoxyhexosidase; *N*-acetyl-beta-D-hexosaminidase; *N*-acetyl-beta-hexosaminidase; beta-hexosaminidase; beta-acetylhexosaminidinase; beta-D-*N*-acetylhexosaminidase; beta-*N*-acetyl-D-hexosaminidase; beta-*N*-acetylglucosaminidase; hexosaminidase A; *N*-acetylhexosaminidase; beta-D-hexosaminidase; beta-*N*-acetyl-D-hexosaminide *N*-acetylhexosaminohydrolase, , EC:3.2.1.52, 3.2.1.29(deleted), 3.2.1.30(deleted).	http://www.genome.jp/dbget-bin/www_bget?ec:3.2.1.52, http://www.chem.qmul.ac.uk/iubmb/enzyme/EC3/2/1/52.html, http://www.brenda-enzymes.org/enzyme.php?ecno=3.2.1.29, http://www.chem.qmul.ac.uk/iubmb/enzyme/EC3/2/1/29.html, and http://www.uniprot.org/uniprot/Q54468
ATYL	n-Acetylglucosaminidase	Lysosomal enzymes are involved in cellular collagen metabolism.	http://www.resmedjournal.com/article/S0954-6111(02)91344-2/abstract
NATT	N-Acetyltransferase	An enzyme that catalyzes the transfer of acetyl groups from acetyl-CoA to arylamines. They have wide specificity for aromatic amines, particularly serotonin, and can also catalyze acetyl transfer between arylamines without CoA. EC 2.3.1.5.	www.online-medical-dictionary.org
PARP	NAD(+) ADP-ribosyltransferase	An enzyme that modifies various nuclear proteins by poly(ADP-ribosyl)ation. The modification is dependent on DNA and is involved in the regulation of various important cellular processes such as differentiation, proliferation, and tumor transformation and also in the regulation of the molecular events involved in the recovery of cell from DNA damage. Also: PARP, Poly [ADP-ribose] polymerase, Poly[ADP-ribose] synthase, ADP-ribosyltransferase (polymerizing), Poly(adenosine diphosphate ribose) polymerase, Poly(ADP-ribose) synthetase, Poly(ADP-ribose)polymerase, EC 2.4.2.30.	http://enzyme.expasy.org/EC/2.4.2.30 and http://www.uniprot.org/uniprot/P35875

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
NCB5	NADH cytochrome B5 reductase	Electron transport proteins found in animals, plants and yeasts.	
NDFR	NADH Ferrichrome Reductase	Nicotinamide adenine dinucleotide ferrichrome reductase.	
NDFC	NADH ferricyanide reductase	Nicotinamide adenine dinucleotide ferricyanide reductase.	
NACR	NADH-cytochrome C reductase	Nicotinamide adenine dinucleotide cytochrome C reductase.	
NDDP	NADH-DT-diaphorase	No definition available.	
NURH	NADH:ubiquinone reductase (H(+)-translocating)	A flavoprotein (FMN) containing iron-sulfur clusters. The complex is present in mitochondria and aerobic bacteria. Breakdown of the complex can release EC 1.6.99.3, NADH dehydrogenase. Also: Coenzyme Q reductase, Complex I (electron transport chain), Complex I (mitochondrial electron transport), Dihydronicotinamide adenine dinucleotide-coenzyme Q reductase, DPNH-coenzyme Q reductase, DPNH-ubiquinone reductase, Electron transfer complex I,Mitochondrial electron transport complex 1, Mitochondrial electron transport complex I, NADH coenzyme Q1 reductase, NADH dehydrogenase (ubiquinone), NADH-coenzyme Q reductase, NADH-CoQ oxidoreductase, NADH-CoQ reductase, NADH-ubiquinone oxidoreductase, NADH-ubiquinone reductase, Reduced nicotinamide adenine dinucleotide-coenzyme Q reductase, Ubiquinone reductase, EC 1.6.5.3.	http://enzyme.expasy.org/EC/1.6.5.3 and http://www.brenda-enzymes.org/php/result_flat.php4?ecno=1.6.5.3
NCCR	NADPH Cytochrome C Reductase	Nicotinamide adenine dinucleotide phosphate cytochrome C reductase.	
DHYD	NADPH Dehydrogenase	Catalyzes the reduction of the double bond of an array of alpha,beta-unsaturated aldehydes and ketones. It also reduces the nitro group of nitroester and nitroaromatic compounds. It could have a role in detoxification processes. Also, EC 1.6.99.1, NADPH diaphorase.	http://www.uniprot.org/uniprot/P54550 and http://enzyme.expasy.org/EC/1.6.99.1
450R	NADPH-cytochrome P-450 Reductase	No definition available.	
NDFH	NADPH-ferrihemoprotein reductase	An enzyme catalyzing the reduction of 2 ferricytochrome by NADPH to 2 ferrocytochrome; the physiologic acceptor is probably cytochrome P-450; thus, it has a role in steroid hydroxylations. Also, Cytochrome reductase	Farlex Partner Medical Dictionary, 2012
NNTR	NADPH-tetrazolium reductase	Enzyme that has the property of transferring electrons from NADPH to electron acceptors.	http://www.vef.unizg.hr/vetarhiv/papers/2004-74-5-2.pdf

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
NDMT	N-Demethylase	That transfers a methyl group from S adenosyl methionine to a substrate. most commonly encountered in bacterial chemotaxis where the methyl accepting chemotaxis proteins (MCPs) become methylated in the course of adaptation. Also known as methyltransferase.	
NEES	Neurotoxic esterase	Also known as neuropathy target esterase, It is a phospholipase that deacetylates intracellular phosphatidylcholine to produce glycerophosphocholine.	http://www.oecd.org/chemicalsafety/testing/45124281.pdf, and http://en.wikipedia.org/wiki/Neuropathy_target_esterase
NE24	Neutral endopeptidase 24.11	Neutral endopeptidase 24.11 cleaves a variety of active peptides, including enkephalins, at the amino side of hydrophobic amino acids. It is widely distributed in the body including specific structures in the central nervous system, lung, male genital tract, and intestine and in neutrophils, fibroblasts, and epithelial cells. Also, enkephalinase, NEP, and gi-321461668.	http://www.ncbi.nlm.nih.gov/pubmed/2521610
HAFS	N-Hydroxy-2-acetylaminofluorene sulfotransferase	A growth hormone dependant, liver enzyme involved in the microsomal metabolism of testosterone.	ECOREF 58214
NAOX	Nicotinamide adenine dinucleotide phosphate oxidase (NADPH) Oxidase	is a membrane-bound enzyme complex. It can be found in the plasma membrane as well as in the membranes of phagosomes used by neutrophil white blood cells to engulf microorganism. NADPH oxidase generates superoxide by transferring electrons from NADPH inside the cell across the membrane and coupling these to molecular oxygen to produce superoxide anion, a reactive free-radical. Superoxide can be produced in phagosomes, which contain ingested bacteria and fungi, or it can be produced outside of the cell. In a phagosome, superoxide can spontaneously form hydrogen peroxide that will undergo further reactions to generate reactive oxygen species (ROS).	http://en.wikipedia.org/wiki/NADPH_oxidase
NADN	Nicotinamide adenine dinucleotide (oxidized) (NAD)	(NAD) a coenzyme composed of nicotinamide mononucleotide in pyrophosphate linkage with adenosine monophosphate; it is involved in numerous enzymatic reactions, in which it serves as an electron carrier by being alternately oxidized (NAD+) and reduced (NADH).	Dorland's Medical Dictionary for Health Consumers, 2007

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
NADH	Nicotinamide adenine dinucleotide (reduced) (NADH)	The reduced form of nicotinamide-adenine dinucleotide. A coenzyme that incorporates niacin and involved in the Krebs cycle. Has been used to relieve jet lag and as a treatment for chronic fatigue syndrome. No known precautions when the daily dosage is kept at 5 mg or lower.	Saunders Comprehensive Veterinary Dictionary, 3 ed, 2007
NCTR	Nicotinamide transferase	An enzyme that catalyzes nicotinamide and other structurally related compounds	ECOTOX and http://www.ncbi.nlm.nih.gov/mesh/68050903
NRDT	Nitrate Reductase	Nitrate reductase is a key enzyme involved in the first step of nitrate assimilation in plants, fungi and bacteria. Also, EC 1.7.99.4	http://www.uniprot.org/uniprot/Q06457
NTRD	Nitrite reductase	An enzyme that catalyses the conversion of nitrite to ammonium hydroxide.	(http://medical-dictionary.thefreedictionary.com/Nitrite+reductase
NOSZ	Nitric oxide synthase	Nitric oxide synthase is a NADPH-dependent enzyme that catalyzes the conversion of l-arginine and oxygen to produce citrulline and nitric oxide. Also: nitric oxide synthetase; endothelium-derived relaxation factor-forming enzyme; endothelium-derived relaxing factor synthase; NO synthase; NADPH-diaphorase	http://www.ncbi.nlm.nih.gov and http://www.chem.qmul.ac.uk
NITG	Nitrogenase	A molybdenum-iron protein that reduces dinitrogen in three succesive two-electron reductions from nitrogen to diimine to hydrazine to two molecules of ammonia; the molybdenum may be replaced by vanadium or iron.	http://enzyme.expasy.org/EC/1.18.6.1
NRED	Nitroreductase	A family of evolutionarily related proteins involved in the reduction of nitrogen-containing compounds, including those containing the nitro functional group. Members of this family utilise FMN as a cofactor and are often found to be homodimers	http://en.wikipedia.org/wiki/Nitroreductase
NNDE	Nitrosamine-N-demethylase	A polymorphic enzyme that activates carcinogenic N-nitrosamines, benzene, urethane, and other low molecular weight compounds. It is inducible by ethanol and metabilizes alcohol. Experimentally, it is used to study the effects of ethanol usage and withdrawal via enzyme markers such as N-nitrosodimethylamine demethylase. Also, EC 1.5.99.-	Pharmacogenetics 1995;5 Spec No:S141-4
NSES	Non-specific esterases	Esterases are ubiquitous enzymes present in the cells of all living organisms. In this case it is the measurement of nonspecific.	ECOREF#97635

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
STPK	Non-specific serine/threonine protein kinase	This is a heterogeneous group of serine/threonine protein kinases that do not have an activating compound and are either non-specific or their specificity has not been analysed to date. Also:EC 2.7.11.1, Serine/threonine-protein kinase SIK2,Salt-inducible kinase 2, SIK-2,Serine/threonine-protein kinase SNF1-like kinase 2,Protein phosphokinase,Protein serine kinase,Protein serine-threonine kinase, Protein-serine kinase,Serine kinase,Serine protein kinase,Serine-specific protein kinase,Serine/threonine protein kinase,Threonine-specific protein kinase, A-kinase,AP50 kinase,ATP-protein transphosphorylase,calcium-dependent protein kinase C,calcium/phospholipid-dependent protein kinase,casein kinase,casein kinase (phosphorylating),casein kinase 2,casein kinase I,casein kinase II,cGMP-dependent protein kinase,CK-2,CKI,CKII,cyclic AMP-dependent protein kinase,cyclic AMP-dependent protein kinase A,cyclic monophosphate-dependent protein kinase,cyclic nucleotide-dependent protein kinase,cyclin-dependent kinase, cytidine 3',5'-cyclic monophosphate-responsive protein kinase,dsk1,glycogen synthase a kinase,glycogen synthase kinase,HIPK2,Hpr kinase,hydroxyalkyl-protein kinase,hydroxyalkyl-protein kinase,M phase-specific cdc2 kinase,mitogen-activated S6 kinase,p82 kinase,phosphorylase b kinase kinase,protein glutamyl kinase,protein kinase (phosphorylating),protein kinase CK2,protein kinase p58,protein-aspartyl kinase,protein-cysteine kinase,Prp4 protein kinase,Raf kinase,Raf-1,ribosomal protein S6 kinase II,ribosomal S6 protein kinase,STK32,T-antigen kinase,twitchin kinase,type-2 casein kinase,betaIIPKC,epsilon PKC,Wee 1-like kinase,Wee-kinase, WEE1Hu.	http://www.uniprot.org/uniprot/Q8CFH6, http://www.genome.jp/dbget-bin/www_bget?ec:2.7.11.1
NDPK	Nucleoside diphosphate kinase	Enzymes required for the synthesis of nucleoside triphosphates (NTP) other than ATP. They provide NTPs for nucleic acid synthesis, CTP for lipid synthesis, UTP for polysaccharide synthesis and GTP for protein elongation, signal transduction and microtubule polymerisation. EC 2.7.4.6.	http://www.ebi.ac.uk/interpro/entry/IPR001564

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
OAHL	O-acetylhomoserine (thiol)-lyase	An enzyme that catalyzes the reaction of N5-methyltetrahydrofolate with l-homocysteine to form tetrahydrofolate and l-methionine; a cobalamin-requiring enzyme; a deficiency of this enzyme results in an accumulation of l-homocysteine and neurological abnormalities. Also, EC 2.5.1.49, O-acetylhomoserine aminocarboxypropyltransferase, Methionine synthase, O-acetyl-L-homoserine acetate-lyase (adding methanethiol), O-acetyl-L-homoserine sulfhydrolase, O-acetylhomoserine sulfhydrolase, OAH sulfhydrylase. Formerly EC 4.2.99.10.	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/2.5.1.49
OLHD	omega laurate hydroxlase	Steroid metabolizing enzyme.	ECOREF 62306
O1LH	omega-1-laurate hydroxylase	Steroid metabolizing enzyme.	ECOREF 62306
O2LH	omega-2-laurate hydroxylase	Steroid metabolizing enzyme.	ECOREF 62306
ORCT	Ornithine Carbamoyl Transferase	An enzyme that catalyzes the carbamoylation of ornithine to form citrulline, a step in the urea cycle; deficiency of the enzyme is an X-linked aminoacidopathy causing hyperammonemia, neurologic abnormalities, and oroticaciduria and is usually fatal in the neonatal period in males. Also, EC 2.1.3.3, Ornithine carbamoyltransferase, Citrulline phosphorylase, Ornithine transcarbamylase, OTC, OTCase.	Dorland's Medical Dictionary for Health Consumers, 2007 and http://enzyme.expasy.org/EC/2.1.3.3
ORDC	Ornithine decarboxylase	An enzyme catalyzing the decarboxylation of l-ornithine to putrescine and CO2; first step in polyamine biosynthesis. Also, EC 4.1.1.17 , L-ornithine carboxy-lyase.	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/4.1.1.17
OOAT	Ornithine-Oxo-Acid Transaminase	A pyridoxal phosphate enzyme that catalyzes the formation of glutamate gamma-semialdehyde and an L-amino acid from L-ornithine and a 2-keto-acid. EC 2.6.1.13. Also known as ornithine aminotransferase, ornithine delta-transaminase, L-ornithine:alpha-ketoglutarate delta-aminotransferase, L-ornithine 5-aminotransferase, L-ornithine aminotransferase, ornithine 5-aminotransferase, ornithine transaminase, ornithine-alpha-ketoglutarate aminotransferase, ornithine-2-oxoacid aminotransferase, ornithine-keto acid aminotransferase, ornithine-keto acid transaminase, ornithine-ketoglutarate aminotransferase, ornithine-oxo acid aminotransferase, ornithine:alpha-oxoglutarate transaminase.	http://www.ncbi.nlm.nih.gov/mesh/68009953 and http://www.genome.jp/dbget-bin/www_bget?ec:2.6.1.13

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
PMAP	p38 Mitogen-activated protein kinase	A class of mitogen-activated protein kinases that are responsive to stress stimuli, such as cytokines, ultraviolet irradiation, heat shock, and osmotic shock, and are involved in cell differentiation, apoptosis and autophagy.	https://en.wikipedia.org/wiki/P38_mitogen-activated_protein_kinases
PACA	Palmitoyl-CoA	A fatty acid coenzyme derivative which plays a key role in fatty acid oxidation and biosynthesis.	http://pubchem.ncbi.nlm.nih.gov/compound/palmitoyl-CoA#section=Top
PAEA	Palmitoyl-CoA:estradiol acyltransferase	An enzyme responsible for estradiol esterification.	Janer, et al (2005) Aquat.Toxicol. 75(1):32-42
PAPN	Papain	Papain is an enzyme involved in the hydrolysis of proteins with broad specificity for peptide bonds, but preference for an amino acid bearing a large hydrophobic side chain at the P2 position. Other name(s): papayotin; summetrin; velardon; papaine; Papaya peptidase I	http://www.chem.qmul.ac.uk
PNOD	para-Nitrophenetole-o-deethylase	No definition available.	
PNAC	para-Nitrophenyl Acetate Carboxylasterase	No definition available.	
PCTN	Pectinase activity	Random hydrolysis of 1,4-alpha-D-galactosiduronic linkages in pectate and other galacturonans Also called Polygalacturonase or Pectin depolymerase.	http://www.expasy.ch/cgi-bin/nicezyme.pl?3.2.1.15
PCES	Pectinesterase	An ubiquitous cell-wall-associated enzyme that presents several isoforms that facilitate plant cell wall modification and subsequent breakdown. It is found in all higher plants as well as in some bacteria and fungi. Pectinesterase functions primarily by altering the localised pH of the cell wall resulting in alterations in cell wall integrity. Also: pectin demethoxylase, pectin methoxylase, pectin methylesterase, pectase, pectin methyl esterase, pectinoesterase, EC 3.1.1.11.	http://www.chem.qmul.ac.uk/iubmb/enzyme/EC3/1/1/11.html and http://en.wikipedia.org/wiki/Pectinesterase
PBHD	Pentobarbital Hydroxylase	No definition available.	
PROD	Pentylresorufin O-deethylase	No definition available.	
PPSN	Pepsin	any of several enzymes of the gastric juice that catalyze the hydrolysis of proteins to form polypeptides.	www.mercksource.com

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
PPID	Peptidylprolyl isomerase D	An enzyme which is encoded by the PPID gene. A member of the peptidyl-prolyl cis-trans isomerase (PPIase) family. PPIases catalyze the cis-trans isomerization of proline imidic peptide bonds in oligopeptides and accelerate the folding of proteins. This protein can bind to the immunosuppressant ciclosporin. Also: Cyclophilin D.	http://en.wikipedia.org/wiki/Peptidylprolyl_isomerase_D
PODA	Peroxidase Activity	An enzyme that catalyzes reactions in which hydrogen peroxide is an electron acceptor. Also: POD activity, myeloperoxidase; lactoperoxidase; verdoperoxidase; guaiacol peroxidase; thiocyanate peroxidase; eosinophil peroxidase; Japanese radish peroxidase; horseradish peroxidase (HRP); extensin peroxidase; heme peroxidase; MPO; oxyperoxidase; protoheme peroxidase; pyrocatechol peroxidase; scopoletin peroxidase.	http://www.chem.qmul.ac.uk
PHLD	Phenoloxidase	An enzyme that catalyzes oxidation of benzenediols to semiquinones with O2.	Farlex Partner Medical Dictionary, 2012
PBES	Phenyl Benzoate Esterase	No definition available.	
PHLL	Phenylalanine ammonia lyase	A nonmammalian enzyme that catalyzes the conversion of l-phenylalanine to trans-cinnamate and ammonia; it has been used in the treatment of phenylketonuria.	Farlex Partner Medical Dictionary, 2012
PNMT	Phenylethanolamine N-methyl transferase	A key enzyme in catecholamine biosynthesis that catalyzes the conversion of norepinephrine to epinephrine, using S-adenosyl-l-methionine; found in the adrenal medulla and some neurons; this enzyme's biosynthesis is induced by cortisol.	Farlex Partner Medical Dictionary, 2012
PHTS	Phosphatase	Phosphoric Monoester Hydrolases is an enzyme group also called phosphatases or phosphor-monoesterases. These enzymes catalyse the hydrolysis of various bonds.	http://www.chem.qmul.ac.uk
PDPT	Phosphatidate phosphatase	Other name(s): phosphatic acid phosphatase; acid phosphatidyl phosphatase; phosphatic acid phosphohydrolase;phosphatidic acid phosphatase; 3-sn-phosphatidate phosphohydrolase	http://www.chem.qmul.ac.uk and www.expasy.org
PSPM	Phosphoamidase	An enzyme catalyzing the hydrolysis of phosphorus-nitrogen bonds, notably the hydrolysis of N-phosphocreatine to creatine and orthophosphate. Also, Phosphamidase	Farlex Partner Medical Dictionary, 2012

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
PPDE	Phosphodiesterase	Any of a group of enzymes that catalyze the hydrolytic cleavage of an ester linkage in a phosphoric acid compound containing two such ester linkages.	Dorland's Medical Dictionary for Health Consumers, 2007
PPPC	Phosphoenol pyruvate carboxylase	An enzyme that catalyses a two-step reaction: formation of carboxyphosphate and enolate form of pyruvate, and carboxylation of enolate with the release of phosphate. It replenishes oxaloacetate in the tricarboxylic acid cycle when operating in reverse. Also, EC 4.1.1.31, PEP carboxylase, PEPCase, Phosphoenolpyruvic carboxylase.	Segen's Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/4.1.1.31
PPPA	Phosphoenolpyruvic acid	The phosphoric ester of pyruvic acid in the latter's enol form; an intermediate in the conversion of d-glucose to pyruvate and an example of a high-energy phosphate ester.	Farlex Partner Medical Dictionary, 2012
PFRC	Phosphofructokinase	An enzyme that functions in carbohydrate metabolism and especially in glycolysis by catalyzing the transfer of a second phosphate (as from ATP) to fructose	http://www.merriam-webster.com/dictionary/phosphofructokinase
PPCM	Phosphoglucomutase (alpha-D-glucose-1,6-bisphosphate-dependent)	An enzyme that participates in both the breakdown and synthesis of glucose. Also: Phosphoglucomutase 1, Glucose phosphomutase 1, Glucose phosphomutase, Phosphoglucose mutase, EC 5.4.2.2.	http://enzyme.expasy.org/EC/5.4.2.2 and http://www.uniprot.org/uniprot/P38652
PGKS	Phosphoglycerate kinase	An enzyme that catalyses the formation of ATP to ADP and vice versa. In the second step of the second phase in glycolysis, 1,3-diphosphoglycerate is converted to 3-phosphoglycerate, forming one molecule of ATP. If the reverse were to occur, one molecule of ADP would be formed. This reaction is essential in most cells for the generation of ATP in aerobes, for fermentation in anaerobes and for carbon fixation in plants. Alternate names: PGK, 3-PGK, ATP-3-phospho-D-glycerate-1-phosphotransferase, ATP:D-3-phosphoglycerate 1-phosphotransferase, 3-phosphoglycerate kinase, 3-phosphoglycerate phosphokinase, 3-phosphoglyceric acid kinase, 3-phosphoglyceric acid phosphokinase, 3-phosphoglyceric kinase, glycerate 3-phosphate kinase, glycerophosphate kinase, phosphoglyceric acid kinase, phosphoglyceric kinase, phosphoglycerokinase, Phosphoglycerate kinase 1, EC 2.7.2.3.	http://enzyme.expasy.org/EC/2.7.2.3, http://www.ebi.ac.uk/interpro/IEntry?ac=IPR001576 and http://www.uniprot.org/uniprot/P09411

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
PHGP	phospholipid-hydroperoxide glutathione peroxidase (PHGPx)	Selenoenzyme found in biological materials; a protein thiol peroxidase. Other name(s): peroxidation-inhibiting protein; PHGPX; peroxidation-inhibiting protein: peroxidase, glutathione (phospholipid hydroperoxide-reducing); phospholipid hydroperoxide glutathione peroxidase; hydroperoxide glutathione peroxidase.	http://www.ncbi.nlm.nih.gov and http://www.chem.qmul.ac.uk
PLA2	Phospholipase A2	An enzyme that catalyzes the hydrolysis of a lecithin to a lysolecithin by removing the 2-acyl group; also acts on other phospholipids by removing a fatty acid from the 2-position; this enzyme has an important role in prostaglandin and leukotriene biosynthesis. Also, Lecithinase A, Phosphatidase, Phosphatidolipase, Phosphatidylcholine 2-acylhydrolase, EC 3.1.1.4	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/3.1.1.4
PHLC	Phospholipase C	An enzyme that catalyzes the hydrolysis of phosphatidylcholine (and possibly other phospholipids) to produce choline phosphate and 1,2-diacylglycerol; also acts on sphingomyelin; a key enzyme in the formation of inositol 1,4,5-trisphosphate ; C. welchii and C. oedematiens β- and γ- toxins all have phospholipase C activity. Also, Lecithinase C, Lipophosphodiesterase I, Clostridium oedematiens beta- and gamma-toxins, Clostridium welchii alpha-toxin, EC 3.1.4.3	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/3.1.4.3
PHPD	Phospholipase D	An enzyme found mostly in plant tissue. It hydrolyzes glycerophosphatidates with the formation of a phosphatidic acid and a nitrogenous base such as choline. This enzyme also catalyzes transphosphatidylation reactions. Other name(s): lipophosphodiesterase II; lecithinase D; choline phosphatase; phosphatidylcholine phosphatidohydrolase	http://www.chem.qmul.ac.uk and http://www.ncbi.nlm.nih.gov
PPVH	Phosphopyruvate hydratase	A crystalline enzyme that is found especially in muscle and yeast and is important in the metabolism of carbohydrates. An essential glycolytic enzyme that catalyses the interconversion of 2-phosphoglycerate and phosphoenolpyruvateenolase. Alternate names: 2-phosphoglycerate dehydratase, 14-3-2-protein, nervous-system specific enolase, phosphoenolpyruvate hydratase, 2-phosphoglycerate dehydratase, 2-phosphoglyceric dehydratase, 2-phosphoglycerate enolase, gamma-enolase, 2-phospho-D-glycerate hydro-lyase, Enolase 3, EC 4.2.1.11.	http://www.uniprot.org/uniprot/P13929, http://www.merriam-webster.com/dictionary/enolase and http://enzyme.expasy.org/EC/4.2.1.11

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
PPHL	Phosphorylase	Any of a group of enzymes that catalyze phosphorolysis with the formation of organic phosphates (as glucose-1-phosphate in the breakdown and synthesis of glycogen) and that occur in animal and plant tissues.	http://www.merriam-webster.com/dictionary/phosphorylase
PHLA	Phosphorylase A	The active form of glycogen phosphorylase that is derived from the phosphorylation of phosphorylase b. Phosphorylase a is deactivated via hydrolysis of phosphoserine by phosphorylase phosphatase to form phosphorylase b.	http://www.ncbi.nlm.nih.gov/mesh/68010762
PHLB	Phosphorylase B	The inactive form of glycogen phosphorylase that is converted to the active form phosphorylase A via phosphorylation by phosphorylase kinase and ATP.	http://www.ncbi.nlm.nih.gov/mesh/68010763
PYST	Phytochelatin synthase	An enzyme involved in the synthesis of phytochelatins (PC) and homophytochelatins (hPC), the heavy-metal-binding peptides of plants. This enzyme is required for detoxification of heavy metals such as cadmium and arsenate. Also: glutathione gamma-glutamylcysteinyltransferase, gamma-glutamylcysteine dipeptidyl transpeptidase and EC 2.3.2.15.	http://www.ebi.ac.uk/interpro/entry/IPR007719 and http://www.genome.jp/dbget-bin/www_bget?ec:2.3.2.15
PCCX	Picolinate carboxylase	Converts alpha-amino-beta-carboxymuconate-epsilon-semialdehyde (ACMS) to alpha-aminomuconate semialdehyde (AMS). ACMS can be converted non-enzymatically to quinolate (QA), a key precursor of NAD, and a potent endogenous excitotoxin of neuronal cells which is implicated in the pathogenesis of various neurodegenerative disorders. In the presence of ACMSD, ACMS is converted to AMS, a benign catabolite. ACMSD ultimately controls the metabolic fate of tryptophan catabolism along the kynurenine pathway. Also, EC 4.1.1.45, Aminocarboxymuconate-semialdehyde decarboxylase, Picolinic acid carboxylase, Picolinic acid decarboxylase, alpha-Amino-beta-carboxymuconate-epsilon-semialdehade decarboxylase, alpha-Amino-beta-carboxymuconate-epsilon-semialdehyde beta-decarboxylase, 2-Amino-3-(3-oxoprop-2-enyl)but-2-enedioate carboxy-lyase, 2-Amino-3-(3-oxoprop-1-en-1-yl)but-2-enedioate carboxy-lyase	http://www.nextprot.org/db/entry/NX_Q8TDX5 and http://www.genome.jp/dbget-bin/www_bget?ec:4.1.1.45
PCLX	Picoline carboxylase	An enzyme.	
PNAD	p-Nitroanisole demethylase	No definition available.	
NPHL	p-Nitrophenol hydroxylase	A Cytochrome P450-dependent monooxygenase activity	ECOTOX

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
PPOX	Polyphenol oxidase	Catechol oxidase - any group of enzymes of the oxidoreductase class that catalyze the oxidation of catechols to 1,2-benzoquinones. The group includes enzymes called also diphenol oxidase or polyphenol oxidase, based on their substrates	Dorland's Medical Dictionary
PHBG	Porphobilinogen	An intermediary product in the biosynthesis of heme; it is produced in excess and excreted in the urine in acute intermittent porphyria.	Dorland's Medical Dictionary for Health Consumers, 2007
PPBD	Porphobilinogen deaminase	Porphobilinogen deaminase is an enzyme. Also: hydroxymethylbilane synthase; HMB-synthase; pre-uroporphyrinogen synthase; uroporphyrinogen I synthase; uroporphyrinogen I synthetase; uroporphyrinogen synthase; uroporphyrinogen synthetase; porphobilinogen ammonia-lyase (polymerizing); (4-[2-carboxyethyl]-3-[carboxymethyl]pyrrol-2-yl)methyltransferase (hydrolysing)	http://www.chem.qmul.ac.uk
P6BH	Progesterone 6beta-hydroxylase	Progesterone 6beta-hydroxylase an isoform of the unspecific monooxygenase EC 1.14.14.1 that oxidizes a variety of structurally unrelated compounds.	ECOTOX and http://www.ncbi.nlm.nih.gov
PCOD	Propoxycoumarin O-dealkylase	No definition available.	
PPDO	Prolyl hydroxylase	Accepted name: procollagen-proline dioxygenase; Other name(s): protocollagen hydroxylase; proline hydroxylase; proline,2-oxoglutarate 4-dioxygenase; collagen proline hydroxylase; hydroxylase, collagen proline; peptidyl proline hydroxylase; proline protocollagen hydroxylase; proline, 2-oxoglutarate dioxygenase; prolylprotocollagen dioxygenase; prolylprotocollagen hydroxylase; protocollagen proline 4-hydroxylase; protocollagen proline dioxygenase; protocollagen proline hydroxylase; protocollagen prolyl hydroxylase; prolyl 4-hydroxylase; prolyl-glycyl-peptide, 2-oxoglutarate:oxygen oxidoreductase, 4-hydroxylating; procollagen-L-proline,2-oxoglutarate:oxygen oxidoreductase (4-hydroxylating)	http://www.chem.qmul.ac.uk
PGES	Prostaglandin-endoperoxide synthase	An enzyme (EC 1.14.99.1) that is responsible for formation of important biological mediators called prostanoids, including prostaglandins, prostacyclin and thromboxane. Also known as Cyclooxygenase (COX), prostaglandin synthase, prostaglandin G/H synthase, (PG)H synthase, PG synthetase, prostaglandin synthetase, fatty acid cyclooxygenase, prostaglandin endoperoxide synthetase.	http://www.chem.qmul.ac.uk/iubmb/enzyme/EC1/14/99/1.html and http://en.wikipedia.org/wiki/Cyclooxygenase

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Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
PRTS	Protease	Any of various enzymes, including the proteinases and peptidases, that catalyze the hydrolytic breakdown of proteins	The American Heritage® Medical Dictionary, 2007, 2004
PRCE	Protein C (activated)	A peptidase of family S1 (trypsin family), one of the gamma-carboxyglutamic acid-containing coagulation factors. Formed from protein C, the proenzyme that circulates in plasma, by the action of a complex of thrombin with thrombomodulin, or by serine endopeptidases present in several snake venoms. Other name(s): blood-coagulation factor XIVa; activated blood coagulation factor XIV; activated protein C; autoprothrombin II-A; protein Ca; APC; GSAPC	http://www.chem.qmul.ac.uk
PDSI	Protein disulfide-isomerase	An enzyme that catalyzes the rearrangement of -S-S- bonds in proteins. Also, EC 5.3.4.1, S-S rearrangase	http://enzyme.expasy.org/EC/5.3.4.1
PDA3	Protein disulfide-isomerase A3	Protein disulfide-isomerase A3 (PDIA3) is an enzyme that has protein disulfide isomerase activity which is the catalysis of the rearrangement of both intrachain and interchain disulfide bonds in proteins. PDIA3 is also part of the major histocompatibility complex (MHC) class I peptide-loading complex, which is essential for formation of the final antigen conformation and export from the endoplasmic reticulum to the cell surface. Also: disulfide-isomerase A3 precursor, Protein disulfide isomerase family A member 3, 58 kDa glucose-regulated protein, 58 kDa microsomal protein, ER protein 60, Endoplasmic reticulum resident protein 60 , ER protein 57, Endoplasmic reticulum resident protein 57, Disulfide isomerase ER-60, Pdia3, Erp60, Grp58, ERp60, HIP-70, Q-2.	http://www.uniprot.org/uniprot/P11598, http://www.ebi.ac.uk/QuickGO/GTerm?id=GO:0003756 and http://en.wikipedia.org/wiki/PDIA3
PKSA	cAMP-dependent protein kinase	An enzyme that has several functions in the cell, including regulation of glycogen, sugar, and lipid metabolism. Also known as, PKA; PKA C; protein kinase A; STK22 , EC 2.7.11.11.	http://www.wikipedia.org and http://enzyme.expasy.org/EC/2.7.11.11

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
PKSC	Protein kinase C	A family of serine- and threonine-specific protein kinases that depend on lipids for activity. They can be activated by calcium but have a requirement for the second messenger diacylglycerol. Members of this group of enzymes phosphorylate a wide variety of protein targets and are known to be involved in diverse cell-signalling pathways. Members of the protein kinase C family also serve as major receptors for phorbol esters, a class of tumour promoters. Also, EC 2.7.11.13, Calcium-dependent protein kinase C, Calcium-independent protein kinase C, Calcium/phospholipid dependent protein kinase, Protein kinase Cepsilon	http://www.genome.jp/dbget-bin/www_bget?ec:2.7.11.13
PRTA	Proteolytic activity	An enzyme that promotes proteolysis (= the splitting of proteins by hydrolysis of the peptide bonds with formation of smaller polypeptides).	Dorland's Illustrated Medical Dictionary
PRTX	Protoporphyrinogen oxidase	A membrane-bound flavoenzyme that catalyzes the oxygen-dependent aromatization of protoporphyrinogen IX (Protogen) to protoporphyrin IX (Proto IX). It is the last enzyme of the common branch of the Heme and Chorophyll pathways in plants, and is the molecular target of diphenyl ether-type herbicides. Also: Protox, Protoporphyrinogenase, Protoporphyrinogen Dehydrogenase, Protoporphyrinogen IX Oxidase, EC 1.3.3.4.	http://www.ncbi.nlm.nih.gov/mesh/68050768
PXPK	Pyridoxal phosphokinase	An enzyme that catalyzes reversibly the phosphorylation of pyridoxal in the presence of ATP with the formation of pyridoxal 5-phosphate and ADP. Pyridoxine, pyridoxamine and various derivatives can also act as acceptors. EC 2.7.1.35.	www.online-medical-d
PGP1	Pyroglutamyl-peptidase I	Pyroglutamyl-peptidase I is an enzyme. Other names: 5-oxoprolyl-peptidase; pyrase; pyroglutamate aminopeptidase; pyroglutamyl aminopeptidase; L-pyroglutamyl peptide hydrolase; pyrrolidone-carboxyl peptidase; pyrrolidone-carboxylate peptidase; pyrrolidonyl peptidase; L-pyrrolidonecarboxylate peptidase; pyroglutamidase; pyrrolidonecarboxylyl peptidase	http://www.chem.qmul.ac.uk
P5CR	Pyrroline-5-carboxylate reductase	This enzyme is involved in step 1 of the subpathway that synthesizes L-proline from L-glutamate 5-semialdehyde. Also: proline oxidase, L-proline oxidase, P5CR, EC 1.5.1.2.	http://www.brenda-enzymes.org/enzyme.php?ecno=1.5.1.2 and http://www.uniprot.org/uniprot/O04016

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
PYRC	Pyruvate carboxylase	Catalyzes a 2-step reaction, involving the ATP-dependent carboxylation of the covalently attached biotin in the first step and the transfer of the carboxyl group to pyruvate in the second, leading to oxaloacetate production. Also, EC:6.4.1.1, Pyruvic carboxylase	http://www.uniprot.org/uniprot/Q9KWU4
PYKN	Pyruvate kinase	A phosphotransferase that catalyzes reversibly the phosphorylation of pyruvate to phosphoenolpyruvate in the presence of ATP. It has four isozymes (l, r, m1, and m2). Also, EC 2.7.1.40 , Phosphoenol transphosphorylase, Phosphoenolpyruvate kinase.	http://www.ncbi.nlm.nih.gov/mesh/68011770 and http://enzyme.expasy.org/EC/2.7.1.40
QNPT	Quinolinate phosphoribosyltransferase	An enzyme involved in the catabolism of quinolinic acid (QA). Also EC 2.4.2.19, Nicotinate-nucleotide pyrophosphorylase [carboxylating],	http://www.ncbi.nlm.nih.gov/IEB/Research/Acembly/av.cgi?exdb=AceView&db=35g&term=QPRT and http://www.uniprot.org/uniprot/P43619
QORD	Quinone oxidoreductase	A flavoprotein similar to NADH dehydrogenase (quinone), but oxidizing NADPH.	Biology-online.org
RNIN	Renin	A proteinase of high specificity that is released by the kidney and acts to raise blood pressure by activating angiotensin. Not to be confused with rennin (chymosin). Also, EC 3.4.23.15, Angiotensin-forming enzyme, Angiotensinogenase. Formerly EC 3.4.4.15 and EC 3.4.99.19.	The American Heritage® Dictionary of the English Language, 2000 and http://enzyme.expasy.org/EC/3.4.23.15
REHL	Retinyl ester hydrolase	The liver enzymes that hydrolyze retinyl esters, the form in which newly absorbed dietary vitamin A is delivered to the liver. These enzymes (retinyl ester hydrolases or REHs) are important in both the uptake of dietary vitamin A by the liver and in the mobilization of stored vitamin A from the liver when dietary input is inadequate to meet the body's need for this essential nutrient.	http:www.ars.usda.govresearchpublicationspublications.htm?seq_no_115=173015
RHDS	Rhodanese	A transferase that catalyzes the formation of thiocyanate and sulfite from cyanide and thiosulfate. Also, EC 2.8.1.1. Thiosulfate cyanide transsulfurase, Thiosulfate thiotransferase	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/2.8.1.1

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
RUBI	Ribulose bisphosphate carboxylase/oxygenase (Rubisco)	A dimerizing carboxy-lyase; an enzyme that catalyzes the addition of carbon dioxide to d-ribulose 1,5-bisphosphate and the hydrolysis of the addition product to two molecules of 3-d-phosphoglyceric acid, a key reaction in the fixation of CO2 in photosynthesis. Also, EC 4.1.1.39, Carboxydismutase, D-ribulose 1,5-diphosphate carboxylase, D-ribulose-1,5-bisphosphate carboxylase, Diphosphoribulose carboxylase, Ribulose 1,5-bisphosphate carboxylase, Ribulose 1,5-bisphosphate carboxylase/oxygenase, Ribulose 1,5-diphosphate carboxylase, Ribulose 1,5-diphosphate carboxylase/oxygenase, Ribulose bisphosphate carboxylase/oxygenase, Ribulose diphosphate carboxylase, Ribulose diphosphate carboxylase/oxygenase, RuBisCO, RuBP carboxylase.	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/4.1.1.39
RNSE	Ribonuclease	Any of various enzymes that catalyze the hydrolysis of RNA. Also called RNase. Also, EC 3.1.27.-	The American Heritage® Medical Dictionary, 2007, 2004 and http://www.uniprot.org/uniprot/P48068
CB2P	Sb:cb283	An uncharacterized enzyme at LOC767682 involved in aminopeptidase activity and ion binding.	ECOTOX and http://www.uniprot.org/uniprot/Q32LS3
SPGX	Selenium dependent glutathione peroxidase	Selenium has a main role as an antioxidant in the enzyme selenium-glutathione-peroxidase.	http://www.uphs.upenn.edu/ency/article/002414.htm
SCMT	Selenocysteine methyltransferase	An enzyme that catalyzes the methylation of selenocysteine with S-methylmethionine as donor. Does not methylate cysteine.	http://www.uniprot.org/uniprot/P56707
SRDT	Serine dehydratase	Serine dehydratases are enzymes in the lyase class and currently classified as Ammonia-Lyases (previously as Hydro-Lyases).	ECOTOX and http://www.chem.qmul.ac.uk
SGOT	Serum glutamate oxalo acetate transaminase	Serum glutamic aminotransferase; an enzyme that catalyzes the transfer of the amino group from glutamic acid to oxaloacetic acid forming alpha-ketoglutaric acid and aspartic acid, used to measure liver function. Also called aspartate transaminase, AST, GOT, glutamic-oxaloacetic transaminase.	The American Heritage® Medical Dictionary, 2007, 2004

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
SSAR	Serum glutamate oxalo acetate transaminase and serum glutamic pyruvic transaminase to alkaline phosphatase ratio (SGOT & SPGT to ALPH ratio)	Ratio of Serum Glutamate Oxalo Acetate Transaminase and Serum Glutamic Pyruvic Transaminase to Alkaline Phosphatase	
SSRA	Serum glutamate oxalo acetate transaminase to serum glutamic pyruvic transaminase ratio (SGOT to SPGT ratio)	Ratio of Serum Glutamate Oxalo Acetate Transaminase to Serum Glutamic Pyruvic Transaminase.	
SGPT	Serum glutamic pyruvic transaminase	Serum pyruvate aminotransferase; an enzyme in serum and body tissues that catalyzes the transfer of amino acid groups from l-alanine to 2-ketoglutarate or the reverse, thus allowing nitrogen to be excreted or incorporated into other compounds, used to measure liver function. Also called alanine aminotransferase, ALT, glutamic-pyruvic transaminase, GPT	The American Heritage® Medical Dictionary, 2007, 2004
NAAT	Sodium adenosine triphosphatase	No definition available.	
NKAT	Sodium potassium ATPase	Na+,K+-ATPase an enzyme that spans the plasma membrane and hydrolyzes adenosine triphosphate to provide the energy necessary to drive the cellular sodium pump.	Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, 2003
SBDH	Sorbitol dehydrogenase	Converts sorbitol to fructose. Part of the polyol pathway that plays an important role in sperm physiology. May play a role in the sperm motility by providing an energetic source for sperm. Also, EC 1.1.1.14, L-iditol 2-dehydrogenase, Glucitol dehydrogenase, Polyol dehydrogenase.	http://enzyme.expasy.org/EC/1.1.1.14 and http://www.uniprot.org/uniprot/Q00796
STCS	Starch synthase	Starch synthase is an enzyme. Other name(s): ADP-glucoseþstarch glucosyltransferase; adenosine diphosphate glucose-starch glucosyltransferase; adenosine diphosphoglucose-starch glucosyltransferase; ADP-glucose starch synthase; ADP-glucose synthase; ADP-glucose transglucosylase; ADP-glucose-starch glucosyltransferase; ADPG starch synthetase; ADPG-starch glucosyltransferase; starch synthetase; ADP-glucose:1,4-alpha-D-glucan 4-alpha-D-glucosyltransferase	http://www.chem.qmul.ac.uk

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
S17A	Steroid 17-alpha-hydroxylase/17,20 lyase	An enzyme that acts upon pregnenolone and progesterone to add a hydroxyl (-OH) group at carbon 17 of the steroid D ring (the hydroxylase activity), or acts upon 17-hydroxyprogesterone and 17-hydroxypregnenolone to split the side-chain off the steroid nucleus (the lyase activity). Involved in sexual development during fetal life and at puberty. Also: CYPXVII; Cytochrome P450 17A1; Cytochrome P450-C17steroid 17alpha-monooxygenase; steroid 17alpha-hydroxylase; cytochrome P-45017alpha; cytochrome P-450 (P-45017alpha,lyase); 17alpha-hydroxylase-C17,20 lyase; Cytochrome P450, family 17, subfamily A, polypeptide 1; steroid 17-alpha-monooxygenase; 17α-hydroxylase/17,20 lyase/17,20 desmolase; EC1.14.99.9.	http://www.genome.jp/dbget-bin/www_bget?enzyme+1.14.99.9, http://www.uniprot.org/uniprot/P05093#section_comments and http://en.wikipedia.org/wiki/CYP17A1
SSTT	Steryl-sulfatase	An arylsulfatase with high specificity towards sulfated steroids. Defects in this enzyme are the cause of ichtyosis, x-linked. Also, EC 3.1.6.2, Arylsulfatase C, Steroid sulfatase, Steryl-sulfate sulfohydrolase.	http://www.ncbi.nlm.nih.gov/mesh/?term=steryl-sulfatase and http://enzyme.expasy.org/EC/3.1.6.2
SCDH	Succinate dehydrogenase	A flavoenzyme that catalyzes the removal of hydrogen from succinic acid and converts it into fumaric acid; for example, succinate + FAD ⇄ fumarate + FADH2; this complex is a part of the tricarboxylic acid cycle. Also, fumarate reductase (NADH), fumaric hydrogenase	Farlex Partner Medical Dictionary, 2012
SUPS	Sucrose phosphate synthase	This enzyme participates in starch and sucrose metabolism. Also, EC 2.4.1.14, Sucrosephosphate--UDP glucosyltransferase, UDP-glucose-fructose-phosphate glucosyltransferase..	http://en.wikipedia.org/wiki/Sucrose-phosphate_synthase and http://enzyme.expasy.org/EC/2.4.1.14
SCRS	Sucrose synthase	Sucrose synthase has a dual role in producing both UDP-glucose (necessary for cell wall and glycoprotein biosynthesis) and ADP-glucose (necessary for starch biosynthesis). Other name(s): UDPglucose-fructose glucosyltransferase; sucrose synthetase; sucrose-UDP glucosyltransferase; sucrose-uridine diphosphate glucosyltransferase; uridine diphosphoglucose-fructose glucosyltransferase	http://www.chem.qmul.ac.uk
SADT	Sulfate adenylyltransferase	An enzyme, EC 2.7.7.4. Other name(s): ATP-sulfurylase, adenosine-5'-triphosphate sulfurylase, adenosinetriphosphate sulfurylase, adenylylsulfate pyrophosphorylase, ATP sulfurylase, ATP-sulfurylase, sulfurylase.	http://www.chem.qmul.ac.uk/iubmb/enzyme/EC2/7/7/4.html

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Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
SOXE	Sulfite oxidase	Sulfite oxidase is a molybdenum requiring enzyme that catalyzes the terminal reaction in the oxidative degradation of sulfur amino acids with the formation of a sulfate.	http://www.ncbi.nlm.nih.gov and http://www.chem.qmul.ac.uk
SFTA	Sulfotransferase	Generic term for enzymes in EC sub-subclass 2.8.2 catalyzing the transfer of a sulfate group from 3'-phosphoadenylyl sulfate (active sulfate) to the hydroxyl group of an acceptor, producing the sulfated derivative and 3'-phosphoadenosine 5'-phosphate.	lex Partner Medical Dictionary, 2012
SODA	Superoxide dismutase (SOD)	An enzyme that catalyzes the decomposition of a superoxide into hydrogen peroxide and oxygen. Other name(s): superoxide dismutase I; superoxide dismutase II; SOD; Systematic name: superoxide:superoxide oxidoreductase	www.chem.qmul.ac.uk
TC6H	Taurochenodeoxycholate 6alpha-hydroxylase	A heme-thiolate protein (P-450). Requires cytochrome b5 for maximal activity. Acts on taurochenodeoxycholate, taurodeoxycholate and less readily on lithocholate and chenodeoxycholate. Also known as: Cytochrome P450 3A4, CYP3A4, CYP4A21, taurochenodeoxycholate 6alpha-monooxygenase, taurochenodeoxycholic acid 6alpha-hydroxylase, EC 1.14.13.97.	http://www.brenda-enzymes.org/php/result_flat.php4?ecno=1.14.13.97
T15A	Testosterone 15-alpha hydroxylase	An enzyme that acts on Testosterone at the 15-alpha position	ECOTOX
TBHY	Testosterone 16 beta-hydroxylase	An enzyme that acts on testosterone at the 16-beta position.	ECOTOX
T16A	Testosterone 16-alpha hydroxylase	An enzyme that acts on testosterone at the 16-alpha position.	ECOTOX
TT2A	Testosterone 2-alpha hydroxylase	Testosterone 2-alpha hydroxylase is an enzyme that acts on testosterone at the 2-alpha position	ECOTOX
T2BH	Testosterone 2beta-hydroxylase	Testosterone 2beta-hydroxylase is an enzyme that acts on testosterone at the 2-beta position.	ECOTOX
TT6A	Testosterone 6-alpha hydroxylase	An enzyme that acts on testosterone at the 6-alpha position.	ECOTOX
TT6B	Testosterone 6-beta-hydroxylase	An enzyme that acts on testosterone at the 6-beta position.	ECOTOX
TT7A	Testosterone 7alpha-hydroxylase	An enzyme that acts on testosterone at the 7-alpha position.	ECOTOX
T15B	Testosterone 15-beta hydroxylase	An enzyme that acts on Testosterone at the 15-beta position.	ECOTOX
TTRH	Testosterone hydroxylase	An enzyme that is used as a marker for cytochrome expression. A metabolite of testosterone.	http://www.ncbi.nlm.nih.gov/pubmed/9313945

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TSST	Testosterone sulfotransferase	An enzyme involved in the sulfonation of testosterone.	https://www.collectiveip.com/grants/NIH:6432501
THMN	Thiaminase	An enzyme that catalyzes the splitting of thiamin into a pyrimidine and a thiazole derivative. Is present in some ferns, e.g. bracken, and in some species of fish so that diets containing these materials are likely to be deficient in thiamin.	Saunders Comprehensive Veterinary Dictionarty, 2007
THTR	Thiol transferase	A family of small molecular weight proteins with thiol-disulfide exchange activity.	http://www.ncbi.nlm.nih.gov/pubmed/8430514
TDPD	Thioredoxin peroxidase	An enzyme also known as thiol peroxidase activity; TrxPx activity; TPx activity. Catalysis of the reaction: thioredoxin + H2O2 = thioredoxin disulfide + H2O.	http://db.yeastgenome.org/cgi-bin/GO/goTerm.pl?goid=8379
TDRS	Thioredoxin reductase	A flavoprotein enzyme that catalyzes the oxidation of thioredoxins to thioredoxin disulfide in the presence of NADP+. EC 1.8.1.9.	http://www.online-medical-dictionary.org/definitions-t/thioredoxin-reductase.html
TUOX	Thiourea oxygenase	An enzyme.	
TYKN	Thymidine kinase	An enzyme of the transferase class that catalyzes a phosphorylation reaction of pyrimidine salvage and phosphorylation of drugs, such as acyclovir and ganciclovir, into a form that will be active against viruses. Also, EC 2.7.1.21. Formerly EC 2.7.1.75.	Mosby's Medical Dictionary, 2009 and http://enzyme.expasy.org/EC/2.7.1.21
T5D3	thyroxine 5-deiodinase	Thyroxine 5-deiodinase enzyme activity has only been demonstrated in the direction of 5-deiodination. The removal of the 5-iodine from the inner ring largely inactivates the hormone thyroxine. Other names: diiodothyronine 5'-deiodinase[ambiguous]; iodothyronine 5-deiodinase; iodothyronine inner ring monodeiodinase; type III iodothyronine deiodinase.	http://www.chem.qmul.ac.uk/iubmb
TAMN	Transaminase	Any of a group of enzymes that catalyze the reversible transfer of an amino group from a donor, usually an amino acid, to an acceptor, usually a 2-keto acid. Most use pyridoxal phosphate as a coenzyme.	Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, 2003

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TSKT	Transketolase	A transferase bringing about the reversible interconversion of sedoheptulose 7-phosphate and d-glyceraldehyde 3-phosphate to produce d-ribose 5-phosphate and d-xylulose 5-phosphate, and also other similar reactions, such as hydroxypyruvate and an aldehyde into CO2 and an extended hydroxypyruvate; a part of the nonoxidative phase of the pentose phosphate pathway. Also, EC 2.2.1.1, Glycolaldehydetransferase	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/2.2.1.1
TRHL	Trehalase	An enzyme which hydrolyzes the disaccharide trehalose, yielding glucose. It is widespread in nature and found in various human tissues as well as in human plasma.	http://www.ncbi.nlm.nih.gov/pubmed/2619709
TRIE	Triacetin esterase	No definition available.	
TRBA	Tributyrinase	The fat-splitting enzyme in pancreatic juice; it hydrolyzes triacylglycerol to produce a diacylglycerol and a fatty acid anion; a deficiency of the hepatic enzyme results in hypercholesterolemia and hypertriglyceridemia. Synonym(s): lipase, steapsin, tributyrase, tributyrinase.	Farlex Partner Medical Dictionary, 2012
T3GL	Triiodotyrosine (T3) glucuronidation	Glucuronidation represents a major means of metabolizing hormones so that they can then be excreted. In this case triiodotyrosine (T3).	http://www.anapsid.org/cnd/hormones/glucuronidation.html
TPIM	Triosephosphate isomerase	A ubiquitously distributed enzyme of the glycolysis pathway. Also: EC 5.3.1.1.	http://www.brenda-enzymes.org/php/result_flat.php4?ecno=5.3.1.1
TPSY	Trypsin	A crystallizable proteolytic enzyme that differs from pepsin in several ways (as in being most active in a slightly alkaline medium and in hydrolyzing esters as well as amides) and that is produced and secreted in the pancreatic juice in the form of inactive trypsinogen and activated in the intestine. Also, EC 3.4.21.4, Alpha-trypsin, Beta-trypsin. Formerly EC 3.4.4.4.	http://www.merriam-webster.com/medical/trypsin and http://enzyme.expasy.org/EC/3.4.21.4
TPS2	Trypsin 208	A proteolytic digestive enzyme.	ECOTOX
TYPT	Tryptase	Tryptase is an enzyme that is released, along with histamine and other chemicals, from mast cells when they are activated as part of a normal immune response as well as in allergic (hypersensitivity) responses. EC 3.4.21.59.	https://labtestsonline.org/understanding/analytes/tryptase/tab/sample/ and http://www.chem.qmul.ac.uk/iubmb/enzyme/EC3/4/21/59.html

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T23D	Tryptophan 2,3-dioxygenase	An oxidoreductase catalyzing the reaction of L-tryptophan and O2 to produce L-N-formylkynurenine; an adaptive enzyme, the level (in the liver) being controlled by adrenal hormones; a step in tryptophan catabolism; also, a step in the synthesis of NAD+ from tryptophan. Also, EC 1.13.11.11, Pyrrolase, Tryptophan oxygenase, Tryptophan peroxidase, Tryptophan pyrrolase, Tryptophanase, Indolamine 2,3-dioxygenase, Indoleamine 2,3-dioxygenase, L-tryptophan 2,3-dioxygenase, L-tryptophan pyrrolase, Tryptamin 2,3-dioxygenase, Tryptamine 2,3-dioxygenase.	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/1.13.11.11
TPHX	Tryptophan hydroxylase	An enzyme that catalyzes the hydroxylation of tryptophan to 5-hydroxytryptophan in the presence of NADPH and molecular oxygen. It is important in the biosynthesis of serotonin. Also, EC 1.14.16.4, Tryptophan 5-monooxygenase, Indoleacetic acid-5-hydroxylase, L-tryptophan hydroxylase, Tryptophan 5-hydroxylase.	http://www.ncbi.nlm.nih.gov/mesh/68014365 and http://enzyme.expasy.org/EC/1.14.16.4
TPOX	Tryptophan oxidase	An enzyme	
T5D1	Type I iodothyronine deiodinase	Type I iodothyronine deiodinase is one form of thyroxine 5'-deiodinase that renders thyroid hormone more active. The first reaction is a reductive deiodination converting the -Se-H group of the enzyme into an -Se-I group; the reductant then reconverts this into -Se-H, releasing iodide.	http://www.ncbi.nlm.nih.gov and http://www.chem.qmul.ac.uk
T5D2	Type II iodothyronine deiodinase	Type II iodothyronine deiodinase is one form of thyroxine 5'-deiodinase that renders thyroid hormone more active by converting the prohormone thyroxine (T4) by outer ring deiodination (ORD).	http://www.ncbi.nlm.nih.gov and http://www.chem.qmul.ac.uk
TATS	Tyrosine aminotransferase	an enzyme that catalyzes the reversible reaction of l-tyrosine and α-ketoglutarate producing p-hydroxyphenylpyruvate and l-glutamate; this enzyme catalyzes a step in l-phenylalanine and l-tyrosine catabolism; a deficiency of this enzyme is associated with tyrosinemia II. Also, EC 2.6.1.5, yrosine transaminase, TyrAT.	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/2.6.1.5
TSHX	Tyrosine hydroxylase	Tyrosine hydroxylase or tyrosine 3-monooxygenase is the enzyme responsible for catalyzing the conversion of the amino acid L-tyrosine to L-3,4-dihydroxyphenylalanine (L-DOPA). L-DOPA is a precursor for dopamine, which, in turn, is a precursor for the important neurotransmitters norepinephrine (noradrenaline) and epinephrine (adrenaline). Also, EC 1.14.16.2, Tyrosine 3-monooxygenase, L-tyrosine hydroxylase, Tyrosine 3-hydroxylase.	http://en.wikipedia.org/wiki/Tyrosine_hydroxylase and http://enzyme.expasy.org/EC/1.14.16.2

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TKNS	Tyrosine kinases	An enzyme that phosphorylates tyrosyl residues on certain proteins; many are products of viral oncogenes; a number of receptors (for example, receptors for epidermal growth factor, insulin, etc.) have this enzymatic activity; a misnomer, in that the physiologic substrate is not tyrosine but tyrosyl residues in a protein.	Farlex Partner Medical Dictionary, 2012
USP5	Ubiquitin specific protease 5	Ubiquitin-dependent proteolysis is a complex pathway of protein metabolism implicated in such diverse cellular functions as maintenance of chromatin structure, receptor function, and degradation of abnormal proteins. A late step of the process involves disassembly of the polyubiquitin chains on degraded proteins into ubiquitin monomers. Ubiquitin specific protease 5 (USP5) disassembles branched polyubiquitin chains by a sequential exo mechanism, starting at the proximal end of the chain. Also: Isopeptidase T.	Wilkinson et al., 1995, http://www.omim.org/entry/601447
UDPG	UDP glucose pyrophosphorylase	An enzyme associated with glycogenesis. It synthesizes UDP-glucose from glucose-1-phosphate and UTP. Also, EC 2.7.7.9, UTP-glucose-1-phosphate uridylyltransferase, Glucose-1-phosphate uridylyltransferase, UDP-glucose diphosphorylase.	http://en.wikipedia.org/wiki/UDP-glucose_pyrophosphorylase and http://enzyme.expasy.org/EC/2.7.7.9
UCKN	UMP/CMP kinase	A bifunctional enzyme that catalyzes the phosphorylation of both CMP and UMP with similar efficiency. Catalyzes the phosphorylation of pyrimidine nucleoside monophosphates at the expense of ATP. Plays an important role in de novo pyrimidine nucleotide biosynthesis. Also: Cytidine monophosphate kinase 1, CMP kinase, dCMP kinase, Deoxycytidine kinase, Deoxycytidylate kinase, UMP-CMP kinase, Uridine monophosphate-cytidine monophosphate phosphotransferase, EC 2.7.4.14.	http://enzyme.expasy.org/EC/2.7.4.14 and http://www.uniprot.org/uniprot/P30085
URSE	Urease activity	An enzyme that catalyzes the hydrolysis of urea to ammonia and carbon dioxide; it is a nickel protein of microorganisms and plants that is used in clinical assays of plasma urea concentrations. Also, EC 3.5.1.5	Dorland's Medical Dictionary for Health Consumers, 2007 and http://enzyme.expasy.org/EC/3.5.1.5

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UDPT	Uridine diphosphate (UDP) glucuronyl transferase	The enzymatic addition of sugars to fat-soluble chemicals is an important process that increases their solubility in water and aids in their excretion. The UDP glucuronosyltransferases that carry out this reaction are part of a super family of UDP glycosyltransferases found in animals, plants and bacteria. Other name(s): 1-naphthol glucuronyltransferase; 1-naphthol-UDP-glucuronosyltransferase; 17beta-hydroxysteroid UDP-glucuronosyltransferase; 3alpha-hydroxysteroid UDP-glucuronosyl-transferase; 4-hydroxybiphenyl UDP-glucuronosyltransferase; 4-methylumbelliferone UDP-glucuron-osyltransferase; 4-nitrophenol UDP-glucuronyltransferase; 4-nitrophenol UDPGT; 17-OH steroid UDPGT; 3-OH androgenic UDPGT; bilirubin uridine diphosphoglucuronyltrans-ferase; bilirubin UDP-glucuronosyl-transferase; bilirubin monoglucuron-ide glucuronyl-transferase; bilirubin UDPGT; bilirubin glucuronyltrans-ferase; ciramadol UDP-glucuronyl-transferase; estriol UDP-glucurono-syltransferase; estrone UDP-glucuronosyltransferase; uridine diphosphoglucurono-syltransferase; uridine diphosphoglucuronatebili-rubin glucuronoside glucuronosyl-transferase; uridine diphosphoglu-curonate-bilirubin glucuronosyltrans-ferase; uridine diphosphoglucu-ronate-estriol glucuronosyltransfer-ase; uridine diphosphoglucuronate-estradiol glucuronosyltransferase; uridine diphosphoglucuronate-4-hydroxybiphenyl glucuronosyltrans-ferase; uridine diphosphoglucuron-ate-1,2-diacylglycerol glucuronosyl-transferase; uridine diphosphoglu-curonate-estriol 16alpha-glucurono-syltransferase; uridine diphospho-glucuronosyl-transferase; GT; morphine glucu-ronyltransferase; p-hydroxybiphenyl UDP glucuronyl-transferase; p-nitrophenol UDP-glucuronosyl-transferase; p-nitro-phenol UDP-glucuronyltransferase; p-nitrophenylglucuronosyltransfer-ase; p-phenylphenol glucuronyl-transferase; phenyl-UDP-glucurono-syltrans-ferase; PNP-UDPGT; UDP glucuronate-estradiol-glucuronosyl-transferase; UDP glucuronosyl-transferase; UDP glucuronate-estriol glucuronosyltransferase; UDP glucuronic acid transferase; UDP glucuronyltransferase; UDP-glucuronate-4-hydroxybiphenyl glucuronosyltransferase; UDP-glucuronate-bilirubin glucuronyl-transferase; UDP-glucuronosyl-transferase; UDP-glucuronyltrans-ferase; UDPGA transferase; UDPGA-glucuronyltransferase; UDPGT; uridine diphosphoglucu-ronyltransferase; uridine diphospho-glucuronate-bilirubin glucuronosyl-transferase; uridine diphosphate glucuronyltransferase; uridine 5'-diphosphoglucuronyltransferase; uridine diphosphoglucuronosyl-transferase	www.unisa.edu.au/pharm_medsci/Gluc_trans/intro.htm and http://www.chem.qmul.ac.uk
URON	Uronolactonase	Also known as glucuronolactonase, an enzyme involve in the metabolism of L-ascorbic acid.	ECOREF 58373
UPIS	Uroporphyrinogen I synthetase	Uroporphyrinogen I synthetase is an enzyme. Also: hydroxymethylbilane synthase, HMB-synthase; porphobilinogen deaminase; pre-uroporphyrinogen synthase; uroporphyrinogen I synthase; uroporphyrinogen synthase; uroporphyrinogen synthetase; porphobilinogen ammonia-lyase (polymerizing); (4-[2-carboxyethyl]-3-[carboxymethyl]pyrrol-2-yl)methyltransferase (hydrolysing)	http://www.chem.qmul.ac.uk

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UP3S	Uroporphyrinogen III synthase	Uroporphyrinogen III synthase is an enzyme. Also: porphobilinogenase; uroporphyrinogen isomerase; uroporphyrinogen III cosynthase; URO-synthase; hydroxymethylbilane hydro-lyase (cyclizing)	http://www.chem.qmul.ac.uk
UPDC	Uroporphyrinogen decarboxylase	Uroporphyrinogen decarboxylase, also known as UROD, is an enzyme. Also: uroporphyrinogen III decarboxylase; porphyrinogen carboxy-lyase; porphyrinogen decarboxylase; uroporphyrinogen-III carboxy-lyase.	http://www.chem.qqmu.ac.uk and www.wikipedia.org/wiki
VAAM	Valine aminopeptidase	Any of various enzymes that catalyze the hydrolysis of the terminal peptide bond at the amino end of a polypeptide, in this case, valine.	The American Heritage® Medical Dictionary, 2007, 2004 and ECOTOX
XTDH	Xanthine dehydrogenase	An enzyme that catalyzes the oxidation of Xanthine in the presence of NAD+ to form Uric acid and NADH. It acts also on a variety of other purines and aldehydes. (EC 1.17.1.4). Also known as: NAD-xanthine dehydrogenase, Xanthine oxidoreductase, Xanthine-NAD oxidoreductase, Xanthine/NAD(+) oxidoreductase.	http://www.ncbi.nlm.nih.gov/mesh?term=Xanthine%20Oxidoreductase and http://enzyme.expasy.org/EC/1.17.1.4
XODA	Xanthine oxidase	A flavoprotein enzyme that catalyzes the oxidation of hypoxanthine to xanthine and then to uric acid, the final steps in the degradation of purines. Generates hydrogen peroxide, which can be a generator of free radicals in biological systems through reactions with superoxide ions. Deficiency, an autosomal recessive trait, causes xanthinuria. Also, EC 1.17.3.2, Hypoxanthine oxidase, Hypoxanthine-xanthine oxidase, Schardinger enzyme, Xanthine oxidoreductase.	Dorland's Medical Dictionary for Health Consumers, 2007 and http://enzyme.expasy.org/EC/1.17.3.2
XBME	Xenobiotic metabolizing enzymes	The xenobiotic metabolizing enzymes have a primary role in protection against harmful insult from the environment. Playing a key role in the metabolism and elimination of potentially toxic compounds. They are capable of actively metabolising numerous foreign substances such as chemical pollutants, drugs and other xenobiotics	http://www.irsn.fr/EN/Research/publications-documentation/Aktis/envirhom/xenobiotic/Pages/xeno1.aspx#.VHOkX2f5sdU

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Note**
XTAP	Xenobiotic-transporting ATPase	A 170-kDa transmembrane glycoprotein from the superfamily of ATP-Binding cassette transporters. It serves as an ATP-dependent efflux pump for a variety of chemicals, including many Antineoplastic agents. Overexpression of this glycoprotein is associated with multidrug resistance. It is responsible for decreased drug accumulation in multidrug-resistant cells and often mediates the development of resistance to anticancer drugs. Involved in Multixenobiotic resistance mechanism. Also: ATP phosphohydrolase (steroid-exporting), MDR protein, Multidrug-resistance protein, P-glycoprotein, permeability glycoprotein, PDR protein, Pleiotropic-drug-resistance protein, Steroid-transporting ATPase, ATP-binding cassette sub-family B member 1, MDR1 Protein, Multidrug Resistance Protein 1, cluster of differentiation 243, AaeL_AAEL010379,EC 3.6.6.44, previously EC 3.6.3.45.	http://enzyme.expasy.org/EC/3.6.3.44, http://www.nlm.nih.gov/cgi/mesh/2011/MB_cgi?mode=&term=P-Glycoprotein, http://www.ncbi.nlm.nih.gov/gene?Db=gene&Cmd=ShowDetailView&TermToSearch=5243, http://www.ncbi.nlm.nih.gov/gene/5573277, http://www.genome.jp/dbget-bin/www_bget?aag:AaeL_AAEL010379

HRM	Hormone Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	
HZ11	(Z)11-Hexadecenal:	(Z)11-Hexadecenal: is an insect phermone	http://www.pherobase.net
11BA	11 beta-hydroxyandrostenedione	11 beta-hydroxyandrostenedione refers to an Androstenedione without isomeric designation. Also known as: 11-hydroxy-4-androstene-3,17-dione; 11-hydroxyandrostenedione, (11alpha)-isomer; 11-hydroxyandrostenedione, (11beta)-isomer; 11-hydroxyandrostenedione, (9beta,10alpha,11alpha)-isomer; 11-hydroxyandrostenedione, (9beta,10alpha,11beta)-isomer; 11 beta-hydroxyandrost-4-ene-3,17-dione.	http://www.ncbi.nlm.nih.gov
11BT	11beta - hydroxytestosterone	Hydroxytestosterone: 17 beta-Hydroxy-4-androsten-3-ones. Testosterone derivatives formed by the substitution of one or more hydroxyl groups in any position.	http://www.reference.md/files/D006/mD006915.html

HRM	Hormone Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	
11DC	11-Deoxycortisol	The immediate precursor of cortisol, accumulates in the peripheral circulation when there is a deficiency of adrenal 11b-hydroxylase activity.	http://www.sas-centre.org/hormones/hormpages/hormone11deoxycortisol.html
DECL	11-Deoxycortisol glucuronide	11-Deoxycortisol is the immediate precursor of cortisol, accumulates in the peripheral circulation when there is a deficiency of adrenal 11b-hydroxylase activity. (http://www.sas-centre.org/hormones/hormpages/hormone11deoxycortisol.html) Glucuronide is a substance produced by attaching glucuronic acid to another substance with glycosidic bonds	http://cancerweb.ncl.ac.uk/omd/
KTST	11-Ketotestosterone	A potent androgenic steroid and major product secreted by the leydig cells of the testis. Its production is stimulated by luteinizing hormone from the pituitary gland. In turn, testosterone exerts feedback control of the pituitary LH and FSH secretion. Depending on the tissues, testosterone can be further converted to dihydrotestosterone or estradiol.	http://www.reference.md/files/C003/mC003600.html
15AP	15-alpha-Hydroxyprogesterone	15-alpha-Hydroxyprogesterone is an oxidative product of progesterone.	ECOTOX
15AT	15-alpha-Hydroxytestosterone	15-alpha-Hydroxytestosterone is an oxidative product of testosterone.	ECOTOX
15BH	15 Beta-hydroxytestosterone	An oxidative product of testosterone.	ECOTOX
16BH	16 beta-Hydroxytestosterone	An oxidative product of testosterone.	ECOTOX
16AH	16-alpha-Hydroxytestosterone	An oxidative product of testosterone.	ECOTOX
16AT	16alpha-Testosterone	A potent steroid hormone secreted mainly by the testes. It can be extracted from the testes of animals or synthesized and used to treat androgen deficiency or promote anabolism.	http://www.thefreedictionary.com/testosterone
AHPG	17 alpha-Hydroxyprogesterone	A metabolite of progesterone with a hydroxyl group at the 17-alpha position. It serves as an intermediate in the biosynthesis of hydrocortisone and gonadal steroid hormones. Also known as:17a-Hydroxy-4-pregnen-3,20-dione.	http://www.reference.md/files/D019/mD019326.html
BDPG	17,20beta-Dihydroxy-4-pregnen-3-one	A female preovulatory hormone.	ECOTOX
DHPT	17alpha,20beta-dihydroxyprogesterone	A maturation-inducing hormone	Pang,Y. and Ge, W., Biol Reprod. (1999) 61(4):987-992

HRM	Hormone Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	
ESDL	17-beta Estradiol	Estradiol: Generally refers to the 17-beta-isomer of estradiol, an aromatized C18 steroid with hydroxyl group at 3-beta- and 17-beta-position. Estradiol-17-beta is the most potent form of mammalian estrogenic steroids. In humans, it is produced primarily by the cyclic ovaries and the placenta. It is also produced by the adipose tissue of men and postmenopausal women. Various isomers can be synthesized. Other name: 17 beta-Estradiol	http://www.reference.md/files/D004/mD004958.html
ESKE	17beta-Estradiol:11-Ketotestosterone ratio	The ratio of the amount of 17beta-estradiol to the amount of 11-ketotestosterone in an organism.	ECOTOX
ELTR	17beta-estradiol:Testosterone ratio	The ratio of the amount of 17beta-estradiol to the amount of testosterone in an organism.	
18HD	18-Hydroxy-11-deoxycorticosterone	An analog of desoxycorticosterone which is substituted by a hydroxyl group at the C-18.	http://www.reference.md/files/D015/mD015070.html
18HC	18-Hydroxycorticosterone	18-Hydroxycorticosterone is a derivative of corticosterone. It serves as an intermediate in the synthesis of aldosterone by the enzyme aldosterone synthase in the zona glomerulosa	http://en.wikipedia.org/wiki/18-Hydroxycorticosterone
19HD	19-Hydroxytestosterone	An oxidative product of testosterone.	ECOTOX
2AHT	2-alpha-Hydroxytestosterone	An oxidative product of testosterone.	ECOTOX
2BHT	2-beta-Hydroxytestosterone	An oxidative product of testosterone.	ECOTOX
HEDS	20-hydroxyecdysone	A steroid hormone that regulates the processes of molting or ecdysis in insects. Also: beta-Ecdysone, crustecdysone.	http://www.ncbi.nlm.nih.gov
ABBD	4-androstene-3beta,17beta-diol	A steroid	ECOTOX
5AAD	5alpha-Androstene-3alpha(beta),17beta-diol	A steroid metabolite.	ECOTOX
5A3D	5-Androstene-3alpha(beta),17beta-diol	A steroid metabolite.	ECOTOX
6AHT	6-alpha-Hydroxytestosterone	An oxidative product of testosterone.	ECOTOX
6BHT	6-beta-Hydroxytestosterone	An oxidative product of testosterone.	ECOTOX

HRM	Hormone Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	
6BTT	6beta-Testosterone	Testosterone is a hormone that is a hydroxy steroid ketone produced especially by the testes or made synthetically and that is responsible for inducing and maintaining male secondary sex characters	http://www.merriam-webster.com/dictionary/testosterone
7AHT	7-alpha-Hydroxytestosterone	An oxidative product of testosterone.	ECOTOX
7ATT	7alpha-Testosterone	Testosterone is a hormone that is a hydroxy steroid ketone produced especially by the testes or made synthetically and that is responsible for inducing and maintaining male secondary sex characters	http://www.merriam-webster.com/dictionary/testosterone
ABSA	Abscisic Acid	A lipid hormone that inhibits cell growth in plants, it is associated with fruit drop, leaf death and seed dormancy. It is synthesised in the plastids from carotenoids. This hormone helps plants deal with water loss, and its effects can be reversed with gibberellins. Partly responsible for leaf Abscission in aging or diseased plants and also responsible for promoting dormancy in buds and seeds, abscisic acid is a plant growth substance which is also involved in the induction of dormant buds and seeds.	http://www.biology-online.org/dictionary/Abscisic_acid
ACTH	Adrenocorticotropic hormone	ACTH: a protein hormone of the anterior lobe of the pituitary gland that stimulates the adrenal cortex —called also adrenocorticotropic hormone.	http://www.merriam-webster.com/dictionary/acth
ALDS	Aldosterone	A steroid hormone produced by the adrenal cortex, that controls salt and water balance in the kidney. Abnormally high levels of this hormone cause sodium retention, high blood pressure, heart rhythum irregularities and possibly paralysis a corticosteroid hormone that is secreted by the cortex of the adrenal gland; regulates salt (sodium and potassium) and water balance.Aldosterone is a hormone that is involved in regulating sodium and potassium concentration in the body, and is excreted by the adrenal gland. It promotes the re-absorption of sodium back into the body and removes excess potassium.	http://www.biology-online.org/dictionary/Aldosterone
AMSH	Alpha-Melanocyte Stimulating Hormone	Pituitary hormone which causes darkening skin pigmentation from amphibians to humans. In mammals, it can also have behavioral effects on learning, attention, and memory.	http://www.sigmaaldrich.com/catalog/product/sigma/m4135?lang=en&region=US

HRM	Hormone Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	
ANDR	Androgen	Any of a group of hormones that mainly influence the development of the male reproductive system. The main and most active androgen is testosterone, produced by cells in the testes. Androgens produced in smaller quantities, mainly by the adrenal gland but also by the testes, support the functions of testosterone. Androgens cause the normal changes of puberty in boys' bodies and then influence sperm-cell formation, sexual interest and behaviour, and male pattern baldness. Females produce trace quantities of androgens, mostly in the adrenal glands, as well as in the ovaries.	http://www.merriam-webster.com/dictionary/androgen
ABPT	Androgen binding protein	Carrier proteins produced in the Sertoli cells of the testis, secreted into the seminiferous tubules, and transported via the efferent ducts to the epididymis. They participate in the transport of androgens. Androgen-binding protein has the same amino acid sequence as sex hormone-binding globulin. They differ by their sites of synthesis and post-translational oligosaccharide modifications.	http://www.reference.md/files/D000/mD000727.html
ADDL	Androstanediol	An androgen implicated in the regulation of gonadotropin secretion; *a. glucuronide*, a metabolite of dihydroxytestosterone formed in the peripheral tissues, is used to estimate peripheral androgen activity. Also called: 5alpha-Androstane-3b,17b-diol	Dorland's Medical Dictionary for Health Consumers, 2007
ADDN	Androstenedione	An androgenic steroid produced by the testis, adrenal cortex, and ovary; converted metabolically to testosterone and other androgens.	Dorland's Medical Dictionary for Health Consumers, 2007
ASTN	Androstenone	Androstenone, or 5alpha-androst-16-en-3-one, is a steroid found in both male and female sweat and urine.	http://en.wikipedia.org/wiki
AUXN	Auxin	A group of plant growth substances (often called phytohormones or plant hormones), the most common example being indole Acetic Acid (IAA), responsible for raising the ph around cells, making the cell wall less rigid and allowing elongation. auxins include indoleacetic acid, phenylacetic acid, and 4-chloro-indoleacetic acid. Commercially, auxins are used to promote root growth, to promote uniform flowering, and to set fruit and prevent premature fruit drop.	http://www.biology-online.org/dictionary/Auxin
<BOES> Code ESDL	beta-Oestradiol (E2)	A hormone (272 D) synthesized mainly in the ovary, but also in the placenta, testis and possibly adrenal cortex. A potent oestrogen.	http://cancerweb.ncl.ac.uk/omd/

HRM	Hormone Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	
CCTN	Calcitonin	A protein hormone secreted in humans and other mammals by parafollicular cells (C cells) in the thyroid gland and secreted in birds, fishes, and other nonmammalian vertebrates by cells of the glandular ultimobranchial bodies. Calcitonin lowers the concentration of calcium in the blood when it rises above the normal value. Also: thyrocalcitonin.	http://www.britannica.com/EBchecked/topic/88945/calcitonin
CTCL	Catecholamine	Any of a group of sympathomimetic amines (including dopamine, epinephrine, and norepinephrine), the aromatic portion of whose molecule is catechol. The catecholamines play an important role in the body's physiological response to stress. Their release at sympathetic nerve endings increases the rate and force of muscular contraction of the heart, thereby increasing cardiac output; constricts peripheral blood vessels, resulting in elevated blood pressure; elevates blood glucose levels by hepatic and skeletal muscle glycogenolysis; and promotes an increase in blood lipids by increasing the catabolism of fats.	Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, Seventh Edition, 2003
CORT	Corticosterone (Corticoid)	A corticosteroid produced in the adrenal cortex that functions in the metabolism of carbohydrates and proteins.	http://dictionary.reference.com/browse/corticosterone
CRFF	Corticotropin Releasing Factor	A peptide of about 41 Amino Acids that stimulates the release of Adrenocorticotropic Hormone. Synthesized by neurons in the paraventricular nucleus of the hypothalamus. After being released into the pituitary portal circulation, CRF stimulates the release of ACTH from the Pituitary Gland. CRF can also be synthesized in other tissues, such as placenta, adrenal medulla and testis. Also: Corticotropin Releasing Hormone, CRH.	http://www.online-medical-dictionary.org/definitions-c/corticotropin-releasing-factor.html
CRTS	Cortisol	A major hormone produced by the adrenal cortex, which is the primary glucocorticoid secreted by the adrenal gland in response to ACTH stimulation or stress; cortisol has anti-inflammatory activity, and is involved in gluconeogenesis, glycogen storage in the liver, immune regulation, mediation of physiologic stress responses, Ca2+ absorption, secretion of gastric acid and pepsin, conversion of proteins to carbohydrates, and nutrient metabolism. Synthetic cortisol administered as a drug is usually known by the alternative name hydrocortisone.	Farlex Partner Medical Dictionary, 2012
CRCT	Cortisol and cortisone	Amount of both cortisol and cortisone found in a sample.	ECOTOX

HRM	Hormone Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	
CRSN	Cortisone	A naturally occurring adrenocorticoid hormone that is produced in minute amounts by the adrenal gland.	http://www.medicinenet.com/script/main/art.asp?articlekey=6547
CTKY	Cytokines	Cytokines are small secreted proteins which mediate and regulate immunity, inflammation, and hematopoiesis.	http://microvet.arizona.edu/Courses/MIC419/Tutorials/cytokines.html
CYTK	Cytokinin	Class of plant growth substances (plant hormones) active in promoting cell division. Also involved in cell growth and differentiation and in other physiological processes.	http://www.biology-online.org/dictionary/Cytokinin
DHEA	Dehydroepiandrosterone	A steroid hormone made by the adrenal glands, that acts on the body much like testosterone and is converted into testosterone and estrogen. Also: DHEA.	http://www.medicinenet.com/script/main/art.asp?articlekey=25613
DOCS	Deoxycorticosterone	An adrenocortical steroid, principally a biosynthetic precursor of corticosterone, which occasionally appears in adrenocortical secretions; a potent mineralocorticoid with no appreciable glucocorticoid activity. Synonym(s): 21-hydroxyprogesterone, cortexone, deoxycortone, desoxycortone	Farlex Partner Medical Dictionary, 2012
DHTR	Dihydrotestosterone	The synthetic form is stanolone. (5alpha,17beta)-17-Hydroxyandrostan-3-one	Dorland's medical dictionary
DITS	Diiodotyrosine	An iodinated tyrosine C9H9I2NO3 that is produced in the thyroid gland from monoiodotyrosine and that combines with monoiodotyrosine to form triiodothyronine—called also iodogorgoic acid	http://www.merriam-webster.com/medlineplus/Diiodotyrosine
DOPA	Dopamine	A monoamine $C_8H_{11}NO_2$ that is a decarboxylated form of dopa and occurs especially as a neurotransmitter in the brain and as an intermediate in the biosynthesis of epinephrine. One of the catecholamines, widely distributed in the central nervous system. Through a series of enzymatic reactions, it is formed from levodopa and converted to norepinephrine and then epinephrine. It is a central nervous system neurotransmitter essential to control of motion; it also acts as a hormone. Degeneration of certain dopamine-producing brain cells results in parkinsonism.	http://www.merriam-webster.com/dictionary/dopamine
ECDY	Ecdysone	A steroid hormone that regulates the processes of molting or ecdysis in insects	http://www.ncbi.nlm.nih.gov
ECDS	Ecdysteroids	Ecdysteroids are cholesterol derivitives that control molting and reproduction in insects and crustaceans	ECOREF #86051

HRM	Hormone Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	
EPIN	Epinephrine	A colorless crystalline feebly basic sympathomimetic hormone $C_9H_{13}NO_3$ that is the principal blood-pressure-raising hormone secreted by the adrenal medulla, is prepared from adrenal extracts or made synthetically, and is used medicinally especially as a heart stimulant, as a vasoconstrictor (as to treat open-angle glaucoma and life-threatening allergic reactions and to prolong the effects of local anesthetics), and as a bronchodilator—called also *adrenaline*	http://www.thefreedictionary.com/epinephrine
EPNO	Epinephrine to norepinephrine ratio	Ratio of epinephrine to norepinephrine	ECOTOX
ERTP	Erythropoietin	Erythropoietin is a glycoprotein (46 kD) hormone produced by specialised cells in the kidneys that regulates the production of red blood cells in the marrow.	http://www.biology-online.org/dictionary/Erythropoietin
ESTR	Estrogen (Oestrogen)	Any of various natural steroids (as estradiol) that are formed from androgen precursors, that are secreted chiefly by the ovaries, placenta, adipose tissue, and testes, and that stimulate the development of female secondary sex characteristics and promote the growth and maintenance of the female reproductive system; *also* **:** any of various synthetic or semisynthetic steroids (as ethinyl estradiol) that mimic the physiological effect of natural estrogens.	http://www.merriam-webster.com/dictionary/estrogen
ESTO	Estrone	A natural estrogenic hormone that is a ketone $C_{18}H_{22}O_2$ found in the body chiefly as a metabolite of estradiol, is also secreted especially by the ovaries, and is used to treat various conditions (as ovarian failure and menopausal symptoms) relating to estrogen deficiency. Also: 3-hydroxyestra-1,3,5(10)-trien-17-one.	http://www.merriam-webster.com/medical/estrone
FOSH	Follicle stimulating hormone (FSH)	One of the most important hormones involved in the natural menstrual cycle as well as in pharmacological (drug-induced) stimulation of the ovaries. It is the main hormone involved in producing mature eggs.	http://www.advancedfertility.com/day3fsh.htm
FHBU	Follicle Stimulating Hormone, beta Subunit	The beta subunit of follicle stimulating hormone. It is a 15-kDa glycopolypeptide. Mutation of the FSHB gene causes delayed puberty, or infertility.	http://www.ncbi.nlm.nih.gov
GAST	Gastrin	Gastrins belong to a family of gastrointestinal peptide hormones that excite the secretion of gastric juice. They may also occur in the central nervous system where they are presumed to be neurotransmitters.	http://www.ncbi.nlm.nih.gov

HRM	Hormone Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	
GHRL	Ghrelin	A 28-amino acid, acylated, orexigenic peptide that is a ligand for growth hormone secretagogue receptors. Ghrelin is widely expressed but primarily in the stomach in the adults. Ghrelin acts centrally to stimulate growth hormone secretion and food intake, and peripherally to regulate energy homeostasis.	http://www.ncbi.nlm.nih.gov
GIBB	Gibberellin	Plant hormones that regulate growth and influence various developmental processes, including stem elongation, germination, dormancy, flowering, sex expression, enzyme induction, and leaf and fruit senescence.	http://www.plant-hormones.info/gibberellins.htm
GCRT	Glucocorticoid	Any of a group of corticosteroids (as cortisol or dexamethasone) that are involved especially in carbohydrate, protein, and fat metabolism, that tend to increase liver glycogen and blood sugar by increasing gluconeogenesis, that are anti-inflammatory and immunosuppressive, and that are used widely in medicine (as in the alleviation of the symptoms of rheumatoid arthritis).	http://www.merriam-webster.com/medical/glucocorticoid
GBDP	Glucoronidated 17,20beta-Dihydroxy-4-pregnen-3-one	17, 20-beta-dihydroxy-4-pregenen-3-one: Metabolites or derivatives of progesterone with hydroxyl group substitution at various sites; a maturation-inducing hormone.	http://www.reference.md/files/C007/mC007433.html
G11K	Glucuronidated 11-Ketotestosterone	A metabolite of 11-Ketotestosterone	ECOTOX
GHAU	Glycoprotein Hormones, alpha Subunit	The alpha chain of pituitary glycoprotein hormones (thyrotropin; follicle stimulating hormone; luteinizing hormone) and the placental chorionic gonadotropin. Within a species, the alpha subunits of these four hormones are identical; the distinct functional characteristics of these glycoprotein hormones are determined by the unique beta subunits. Both subunits, the non-covalently bound heterodimers, are required for full biologic activity.	http://www.ncbi.nlm.nih.gov
GNTP	Gonadotropin	A hormone that stimulates the growth and activity of the gonads, especially any of several pituitary hormones that stimulate the function of the ovaries and testes. Also called *gonadotropic hormone*.	http://medical-dictionary.thefreedictionary.com/Gonadotropins
GRHM	Gonadotropin releasing hormone	A hormone secreted by the hypothalamus that stimulates the anterior lobe of the pituitary gland to release gonadotropins (as luteinizing hormone and follicle-stimulating hormone). Abbreviation GnRH; called also luteinizing hormone-releasing hormone.	http://www.merriam-webster.com/dictionary/gonadotropin-releasing%20hormone

HRM	**Hormone Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	
GTHH	Growth hormone	Any substance that stimulates or controls the growth of an organism, especially a species-specific hormone, as the human hormone somatotropin, secreted by the anterior pituitary gland. Abbreviation: GH	http://dictionary.reference.com/browse/growth+hormone
GHRM	Hormone, General Changes in	Unspecified or multiple growth measurements	ECOTOX
HCHH	Hyperglycemic hormone, crustacean	Crustacean hyperglycemic hormone ia a neuropeptide primarily synthesized within the eyestalk which controls glucose concentration. Also: CHH	ECOREF#116681 and http://www.ncbi.nlm.nih.gov/
IPTH	Immunoreactive parathyroid hormone	No definition available.	
INHI	Inhibin	A glycoprotein hormone that is secreted by the pituitary gland and in the male by the Sertoli cells and in the female by the granulosa cells and that inhibits the secretion of follicle-stimulating hormone.	http://www.merriam-webster.com/medlineplus/Inhibin
INHB	Inhibin B	Inhibin B is a form of inhibin that suppresses the secretion of pituitary follicle stimulating hormone.	http://www.ncbi.nlm.nih.gov
INSL	Insulin	A protein hormone that is synthesized in the pancreas from proinsulin and secreted by the beta cells of the islets of Langerhans, that is essential for the metabolism of carbohydrates, lipids, and proteins, that regulates blood sugar levels by facilitating the uptake of glucose into tissues, by promoting its conversion into glycogen, fatty acids, and triglycerides, and by reducing the release of glucose from the liver, and that when produced in insufficient quantities results in diabetes mellitus.	http://www.merriam-webster.com/medlineplus/Insulin
LPTN	Leptin	A peptide hormone that is produced by fat cells and plays a role in body weight regulation by acting on the hypothalamus to suppress appetite and burn fat stored in adipose tissue.	http://www.merriam-webster.com
4TO3	L-thyroxine outer ring 5'-monodeiodination	The conversion of L-Thyroxine (T4) to triiodotyrosine (T3) where the T4 enters target cells where it undergoes outer ring 5'-monodeiodination to T3.	ECOREF#73485

HRM	Hormone Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	
LUTH	Luteinizing hormone (LH)	A glycoprotein hormone that is secreted by the adenohypophysis and that in the female stimulates ovulation and the development of the corpora lutea and together with follicle-stimulating hormone the secretion of estrogen from developing ovarian follicles and in the male the development of interstitial tissue in the testis and the secretion of testosterone—abbreviation LH; called also interstitial-cell stimulating hormone, lutropin.	http://www.merriam-webster.com/medlineplus/Luteinizing%20hormone%20
LHBU	Luteinizing Hormone, beta Subunit	The beta subunit of luteinizing hormone. It is a 15-kDa glycopolypeptide with structure similar to the beta subunit of the placental chorionic gonadatropin. Mutation of the LHB gene causes hypogonadism and infertility.	http://decs.bvs.br/cgi-bin/wxis1660.exe/decsserver/?IsisScript=../cgi-bin/decsserver/decsserver.xis&task=exact_term&previous_page=homepage&interface_language=i&search_language=i&search_exp=Luteinizing%20Hormone,%20beta%20Subunit
MELA	Melatonin	A vertebrate hormone $C_{13}H_{16}N_2O_2$ that is derived from serotonin, is secreted by the pineal gland especially in response to darkness, and has been linked to the regulation of circadian rhythms.	http://www.merriam-webster.com/medlineplus/Melatonin
MTSR	Melatonin to Serotonin ratio	The ratio of Melatonin to Serotonin in a sample.	ECOTOX
MITS	Monoiodotyrosine	An iodinated tyrosine $C_9H_{10}INO_3$ that is produced in the thyroid gland by the substitution of one iodine atom in the amino acid for an atom of hydrogen, that undergoes further iodination to produce diiodotyrosine, and that combines with diiodotyrosine to form triiodothyronine.	http://www.merriam-webster.com/medlineplus/Monoiodotyrosine
IAIA	N6(delta2-Isopentenyl)adenine to N6(delta2-Isopentenyl)adenoside ratio	The ratio of N6(delta2-Isopentenyl)adenine to N6(delta2-Isopentenyl)adenoside	ECOTOX

HRM	Hormone Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	
NORE	Norepinephrine	A catecholamine C8H11NO3 that is the chemical means of transmission across synapses in postganglionic neurons of the sympathetic nervous system and in some parts of the central nervous system, is a vasopressor hormone of the adrenal medulla, and is a precursor of epinephrine in its major biosynthetic pathway—called also arterenol, noradrenaline.	http://www.merriam-webster.com/medlineplus/Norepinephrine
OBCL	Orobanchol	A germination stimulant for root parasitic weeds.	http://www.ncbi.nlm.nih.gov/mesh/67472678
PTHH	Parathyroid hormone (PTH)	A polypeptide hormone secreted by the parathyroid glands which performs the essential role of maintaining intracellular calcium levels in the body. Parathyroid hormone increases intracellular calcium by promoting the release of calcium from bone, increases the intestinal absorption of calcium, increases the renal tubular reabsorption of calcium, and increases the renal excretion of phosphates. Alternate names: parathormone, parathyrin	http://www.ncbi.nlm.nih.gov
PHRM	Pheromone	A chemical substance that is usually produced by an animal and serves especially as a stimulus to other individuals of the same species for one or more behavioral responses.	http://www.merriam-webster.com/dictionary/pheromone
PRGN	Pregnenolone	An unsaturated hydroxy steroid ketone C21H32O2 that is formed by the oxidation of steroids (as cholesterol) and yields progesterone on dehydrogenation.	http://www.merriam-webster.com
PRGS	Progesterone	A female steroid sex hormone $C_{21}H_{30}O_2$ that is secreted by the corpus luteum to prepare the endometrium for implantation and later by the placenta during pregnancy to prevent rejection of the developing embryo or fetus; *also* **:** a synthetic steroid resembling progesterone in action, progestogen, progestogen, progestin.	http://www.merriam-webster.com/medlineplus/Progesterone
PRLC	Prolactin	A protein hormone of the adenohypophysis of the pituitary gland that induces and maintains lactation in the postpartum mammalian female—abbreviation PRL; called also luteotropic hormone, luteotropin, mammotropin	http://www.merriam-webster.com/medlineplus/Prolactin
SRTN	Serotonin	A phenolic amine neurotransmitter C10H12N2O that is a powerful vasoconstrictor and is found especially in the brain, blood serum, and gastric mucous membrane of mammals—called also 5-HT, 5-hydroxytryptamine	http://www.merriam-webster.com/medlineplus/Serotonin

HRM	Hormone Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	
SMTC	Somatomedin C (or IGF-1)	Somatotropin or human growth hormone is secreted by the pituitary gland under the influence of growth hormone releasing hormone. IGF-I is the main effector of growth hormone activity.3 IGF-I or Somatomedin C is the major member of a family of proteins synthesized by the liver in response to growth hormone stimulus. It circulates in the peripheral blood bound on a tertiary complex with IGFBP-3 and acid labile subunit (ALS)	http://www.aal.xohost.com/IGF-1.htm
SMMD	Somatomedins	Insulin-like polypeptides made by the liver and some fibroblasts and released into the blood when stimulated by somatotropin. They cause sulfate incorporation into collagen, RNA, and DNA synthesis, which are prerequisites to cell division and growth of the organism. Also known as: Insulin Like Growth Factors (I & II), Sulfation Factor.	http://www.ncbi.nlm.nih.gov
SRIF	Somatostatin	A polypeptide hormone that is produced by the hypothalamus and inhibits the release of growth hormone by the anterior pituitary. It is also produced in the delta cells of the endocrine pancreas where it inhibits the secretion of insulin and glucagon and decreases intestinal motility and absorption.	www.harcourt.com/dictionary
STRD	Steroids	Any of a large class of organic compounds having as a basis 17 carbon atoms arranged in four rings fused together. Steroids include many biologically important compounds, including cholesterol and other sterols, the sex hormones (such as testosterone and estrogen), bile acids, adrenal hormones, plant alkaloids, and certain forms of vitamins.	The American Heritage Science Dictionary, 2005
STRG	Strigolactones	Strigolactones are plant hormones that regulate shoot branching as well as root-derived signals for parasitic and symbiotic interactions.	http://www.sciencedirect.com/science/article/pii/S1369526614000867
S11K	Sulfated 11-Ketotestosterone	A metabolite of 11-Ketotestosterone	ECOTOX
SBDP	Sulfated 17,20-beta-Dihydroxy-4-pregnen-3-one	Metabolite of 17,20-beta-Dihydroxy-4-pregnen-3-one	ECOTOX
STST	Sulfated Testosterone	A metabolite of testosterone	http://www.ncbi.nlm.nih.gov/pubmed/19051232

HRM	Hormone Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	
TSTR	Testosterone	The principal androgenic hormone, produced by the interstitial (Leydig) cells of the testes in response to stimulation by the luteinizing hormone of the anterior pituitary gland; it is thought to be responsible for regulation of gonadotropic secretion, spermatogenesis, and wolffian duct differentiation. It is also responsible for other male characteristics after its conversion to dihydrotestosterone. In addition, testosterone possesses protein anabolic properties..	Dorland's Medical Dictionary for Health Consumers, 2007
TGLD	Testosterone glucuronide	A metabolite of testosterone. Testosterone glucuronide comes from the hepatic transformation of testosterone, DHT and androstenedione.	http://www.estetik.com/datamed/Anti_Aging/male_hormones.htm
TSHT	Thyrotropin	A thyroid-stimulating hormone; a recombinant form of thyroid-stimulating hormone used especially as a diagnostic agent (as in the detection of thyroid cancer). Also: TSH, thyrotropic hormone, thyrotropin alfa, thyroid stimulating hormone.	http://www.merriam-webster.com/medlineplus/Thyrotropin and http://www.merriam-webster.com/dictionary/thyroid-stimulating%20hormone
TRHH	Thyrotropin Releasing Hormone	Thyrotropin Releasing Hormone is a tripeptide that stimulates the release of thyrotropin and prolactin. It is synthesized by the neurons in the paraventricular nucleus of the hypothalamus. Also: Protirelin, Thyroliberin, TRH, TRF	http://www.ncbi.nlm.nih.gov
THYR	Thyroxine	An iodine containing hormone $C_{15}H_{11}I_4NO_4$ that is an amino acid produced by the thyroid gland as a product of the cleavage of thyroglobulin, increases the metabolic rate, and is used to treat thyroid disorders—called also *T4.*	http://www.merriam-webster.com/dictionary/thyroxine
T4T3	Thyroxine:Triidothyronine	The ratio of Thyroxine (T4) and Triiodothyronine (T3).	ECOTOX
ST5T	Total (Delta)5-sterols	Sterol - any of a group of steroids with a long (8 to 10 carbons) aliphatic side-chain at position 17 and at least one alcoholic group; they have lipidlike solubility.	Dorland's Medical Dictionary for Health Consumers, 2007
ST8T	Total (Delta)8-sterols	Sterol - any of a group of steroids with a long (8 to 10 carbons) aliphatic side-chain at position 17 and at least one alcoholic group; they have lipidlike solubility.	Dorland's Medical Dictionary for Health Consumers, 2007

HRM	**Hormone Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	
ME4T	Total 4a-Methylsterols	Plants contain a rather different range of sterols from animals. Many different sterols may be present in photosynthetic organisms, and the amounts and relative proportions are dependent on the species. Phytosterols can be further classified on a structural or biosynthetic basis as 4-desmethyl sterols (i.e. with no substituent on carbon-4), 4α-monomethyl sterols and 4,4-dimethyl sterols.	http://lipidlibrary.aocs.org/Lipids/plant_st/index.htm
TZRS	trans-Zeatin riboside	A cytokinin plant growth regulator that induces cell division and shoot fomation.	http://www.toku-e.com/product/trans-zeatin_riboside/
TT34	Triiodothyronine and Thyroxine	The total amount of the Triiodothyronine (T3) and Thyroxine (T4) found in a sample.	ECOTOX
T3T4	Triidothyronine (T3) to thyroxine (T4)	The ratio of Triiodothyronine (T3) to Thyroxine (T4).	ECOTOX
TRII	Triiodothyronine	A crystalline iodine-containing hormone $C_{15}H_{12}I_3NO_4$ that is an amino acid derived from thyroxine and is used especially in the form of its soluble sodium salt $C_{15}H_{11}I_3NNaO_4$ in the treatment of hypothyroidism and metabolic insufficiency—called also *liothyronine, T3*	http://www.merriam-webster.com/medical/triiodothyronine
VASO	Vasopressin	A peptide hormone released from the posterior pituitary lobe but synthesised in the hypothalamus. There are 2 forms, differing only in the amino acid at position 8: arginine vasopressin is widespread, while lysine vasopressin is found in pigs. Have antidiuretic and vasopressor actions. Used in the treatment of diabetes insipidus.	http://www.biology-online.org/dictionary/Vasopressin
ZZRR	Zeatin to Zeatin riboside ratio	The ratio of zeatin to zeatin riboside.	ECOTOX

CEL Cellular Group

CEL	**Cellular Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
AGGR	Aggregation/ Adhesion	Massing of materials together as in clumping or the binding of a cell to another cell, or a cell to a surface, via specific cell adhesion molecules.	http://www.biology-online.org/dictionary/Aggregation and http://www.biology-online.org/dictionary/Adhesion

CEL	**Cellular Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
ANGR	Androgen Receptors	Proteins, generally found in the cytoplasm, that specifically bind androgens and mediate their cellular actions. The complex of the androgen and receptor migrates to the cell nucleus where it induces transcription of specific segments of DNA.	http://www.ncbi.nlm.nih.gov
AREA	Area	A particular extent of space or surface or one serving a special function.	http://www.merriam-webster.com/dictionary/area Use CEL (Cellular) AREA when measuring the area of a single cell in a multiple celled organism.
ARGY	Argyrophilic cells	Enterochromaffin cells that require exposure to a reducing substance before their granules will react with silver; they are located in the fundic and pyloric glands in the walls of the stomach.	http://www.encyclo.co.uk/define/argyrophilic%20cells
AHRC	Aryl Hydrocarbon Receptor	The Aryl hydrocarbon receptor (AhR) is member of the family of basic-helix-loop-helix transcription factors. AhR is a cytosolic transcription factor that is normally inactive, bound to several co-chaperones. Upon ligand binding to chemicals such as 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD), the chaperones dissociate resulting in AhR translocating into the nucleus and dimerizing with ARNT (AhR nuclear translocator), leading to changes in gene transcription	http://en.wikipedia.org
BASO	Basophil	A type of white blood cell (leukocyte) with coarse, bluish-black granules of uniform size within the cytoplasm. Basophils are so named because their cytoplasmic granules stain with basic dyes. Basophils normally constitute 0.5 to 3 percent of the peripheral blood leukocytes, and contain histamine and serotonin. Also known as a basophilic leukocyte.	http://www.medterms.com/script/main/art.asp?articlekey=33464
BSNC	Basophilic normoblast (erythroblast)	A cell that is smaller (10 to 17 µm in diameter) than a pronormoblast but similar in cellular and nuclear shape. The chromatin is somewhat condensed; the nuclei of large or early basophilic normoblasts may reveal single nucleoli, but those of small or late basophilic normoblasts lack nucleoli; a perinuclear halo is often visible. the cytoplasm is greater in amount than in the pronormoblasts, surrounds the nucleus and is uniformly deep blue; the N:C ratio is ± 6:1.	Segen's Medical Dictionary, 2012

CEL	**Cellular Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
BCEL	B-cell	Any of the lymphocytes that have antigen-binding antibody molecules on the surface, that comprise the antibody-secreting plasma cells when mature, and that in mammals differentiate in the bone marrow—called also B lymphocyte	http://www.merriam-webster.com/medlineplus/B-cell
BADR	Beta-adrenergic receptor	Any of various cell membrane receptors that can bind with epinephrine and related substances that activate or block the actions of cells containing such receptors. These cells initiate physiological responses such as increasing the rate and force of contraction of the heart as well as relaxing bronchial and vascular smooth muscle. Also called beta-receptor.	The American Heritage® Medical Dictionary, 2007, 2004
BPCL	Bipolar Cell	A class of retinal interneurons, named after their morphology that receive input from the photoreceptors and send it to the ganglion cells.	http://www.biology-online.org/dictionary/Bipolar_cell
BWDD	Blood-water diffusion distance	The distance between the lamellar epithelium to the nearest erythrocytic surface	ECOREF 16098
CCHG	Cell Changes	Cytology, change in organelle structure, cell size or cell volume. Used when more than one measurement is coded.	(do not use GRO), phagocytosis. For algae, use for change in optical density, location of pigments, cell shape, size. Another example of where it might be appropriate to initiate use of a morph code.
CDRT	Cell division rate	Cell division = The process by which living cells multiply; may be mitotic or amitotic.	McGraw-Hill, 1994
CMGR	Cell migration	Implies movement of a population of cells from one place to another as in the movement of neural crest cells during morphogenesis.	http://www.biology-online.org/dictionary/Cell_migration
CTRV	Cell Turnover	The replacement of old cells with newly generated ones	http://en.wikipedia.org/wiki/Turnover
CVIA	Cell Viability	The number of healthy cells in a sample.	http://www.bionity.com/en/whitepapers/83226/helpcorner-cell-proliferation-and-viability.html
CLCE	Chloride Cell	No definition available.	

CEL	**Cellular Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
CIRC	Choline acetyltransferase (ChAT) immunoreactive cells	Cell exhibiting an immunologic reaction to Choline acetyltransferase which is an enzyme that controls the production of acetylcholine.	partial definition: http://cancerweb.ncl.ac.uk/omd/
CILR	Ciliated Type II Receptors	No definition available.	
CRCM	Circumference	The length of a line that goes around something or that makes a circle or other round shape; the outer edge of a shape or area; the perimeter of a circle; the external boundary or surface of a figure or object.	http://www.merriam-webster.com/dictionary/circumference
CESR	Cytosolic Estrogen Receptor	When the cytosolic estrogen receptor binds hormone, the complex moves into the nucleus where it acts as a transcription factor, binding to estrogen responsive elements (ERE) in the DNA and thereby modulating a myriad of cellular functions.	http://www.invitrogen.com/downloads/FP4.pdf
CYTO	Cytotoxicity	Toxic to cells	http://www.merriam-webster.com/medlineplus/cytotoxicity
DEND	Dendrite Receptors	No definition available.	
DNSY	Density	The quantity per unit volume, unit area, or unit length: as *a* **:** the mass of a substance per unit volume	http://www.merriam-webster.com/dictionary/density
DPTH	Depth	The perpendicular measurement downward from a surface or the direct linear measurement from front to back.	http://www.merriam-webster.com
DMTR	Diameter	The length of a straight line through the center of an object.	http://www.merriam-webster.com/dictionary/diameter (Used when measuring a single cell in an organism)
DIVC	Dividing Cells	Cell division is the process by which a parent cell divides into two or more daughter cells. All cell divisions, regardless of organism, are preceded by a single round of DNA replication.	http://en.wikipedia.org/wiki/Cell_division
EOSN	Eosinophil	A white blood cell or other granulocyte with cytoplasmic inclusions readily stained by eosin	http://www.merriam-webster.com/medlineplus/Eosinophil

CEL	**Cellular Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
ERTH	Erythoroblasts	A polychromatic nucleated cell of red marrow that synthesizes hemoglobin and that is an intermediate in the initial stage of red blood cell formation; broadly : a cell ancestral to red blood cells	http://www.merriam-webster.com/medlineplus/Erythroblasts
ESRS	Estradiol receptor sites	Proteins that bind estradiol	ECOTOX
ESRB	Estrogen Receptor Beta	One of the Estrogen receptors that has greater affinity for Isoflavones than Estrogen receptor alpha does. There is great sequence homology with ER alpha in the DNA-binding domain but not in the ligand binding and hinge domains.	http://www.ncbi.nlm.nih.gov/mesh/68047629
FLEX	Flexibility	Capable of being flexed : capable of being turned, bowed, or twisted without breaking .	http://www.nlm.nih.gov/medlineplus/mplusdictionary.html
FOCI	Foci	A center of activity, attraction, or attention, plural of focus	http://www.merriam-webster.com/dictionary/foci
GABR	gamma aminobutyric acid receptor	A class of receptors that respond to the neurotransmitter gamma-aminobutyric acid (GABA), the chief inhibitory neurotransmitter in the vertebrate central nervous system.	http://en.wikipedia.org/wiki/GABA_receptor
GTIM	Generation time	Time taken for a cell population to double in numbers and thus equivalent to the average length of the cell cycle.	http://www.biology-online.org/dictionary/Generation_time
GRCN	Germinal Center	The activated center of a lymphoid follicle in secondary lymphoid tissue where B-Lymphocytes are stimulated by antigens and helper T cells (T-Lymphocytes, Helper-Inducer) are stimulated to generate memory cells.	http://www.ncbi.nlm.nih.gov/mesh/68018858
GLCL	Gland Cells	No definition available.	
GLCR	Glucocorticoid receptor	The glucocorticoid receptor (GR) or nuclear receptor subfamily 3, group C, member 1 is a ligand-activated intracytoplasmatic transcription factor that interacts with high affinity to cortisol and other glucocorticoids.	Wikipedia
GBLT	Goblet Cells	A mucus-secreting epithelial cell (as of columnar epithelium) that is distended with secretion or its precursors at the free end. Also known as Chalice cell.	http://www.merriam-webster.com/medlineplus/Goblet%20Cells
GNDT	Gonadotrophs	The cells of the anterior pituitary that regulate reproduction are known as gonadotrophs and make the gonadotrophins- luteinizing hormone and follicle-stimulating hormone.	mumus.med.monash.edu.au

CEL	**Cellular Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
GRAN	Granulocyte	A polymorphonuclear white blood cell (as a basophil, eosinophil, or neutrophil) with granule-containing cytoplasm	http://www.merriam-webster.com/medlineplus/Granulocyte
HGHT	Height	The distance from the bottom to the top of something standing upright	http://www.merriam-webster.com/dictionary/height
HMPS	Hematopoiesis	the formation of blood or of blood cells in the living body	http://www.merriam-webster.com/dictionary/hematopoiesis
HSCS	Hematopoietic stem cells	Hematopoietic Stem Cells are progenitor cells from which all blood cells derive. Also hemocytoblast.	http://www.ncbi.nlm.nih.gov/ and http://en.wikipedia.org/wiki
HCYT	Hemocyte	A blood cell especially of an invertebrate animal (as an insect).	http://www.merriam-webster.com/dictionary/hemocyte
HTCY	Heterocyst frequency	Frequency of large, transparent, thick-walled cell found in the filaments of certain blue-green algae and in certain fungi.	http://www.merriam-webster.com/dictionary/heterocyst
HLCR	Heterophil to lymphocyte cell ratio	Ratio of heterophil to lymphocyte cells.	ECOTOX
HYAL	Hyalinocyte	Hyalinocytes are haemocytes that contain few or no granules, and a round well-centred nucleus.	Auffret M. Bivalve hemocyte morphology. In: Fisher, W.S. (Ed). Disease processes in marine bivalve mollusks. Bethesda: MD American Fisheries Society; 1988. p. 169e77.
ILDS	Interlamellar distance	The distance between lamellae	Farlex Partner Medical Dictionary, 2012
LMFI	Lamellar fusion index	An index related to the fusion of the lamellae which is an area of the gills where exchange of gasses / waste products takes place.	partial definition http://www.aquatext.com/list-l.htm#Lamellae
LGTH	Length	The longer or longest dimension of an object	http://www.merriam-webster.com/dictionary/length

CEL	**Cellular Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
LEUK	Leukocytes	A colorless blood corpuscle capable of ameboid movement, whose chief function is to protect the body against microorganisms causing disease and which may be classified in two main groups: granular and nongranular.	Dorland's Medical Dictionary for Health Consumers, 2007
LYPB	Lymphoblast	A lymphocyte that has enlarged following stimulation by an antigen, has the capacity to recognize the stimulating antigen, and is undergoing proliferation and differentiation either to an effector state in which it functions to eliminate the antigen or to a memory state in which it functions to recognize the future reappearance of the antigen. Also: lymphocytoblast.	http://www.merriam-webster.com/dictionary/lymphoblast
LMPH	Lymphocyte	Any of the colorless weakly motile cells that originate from stem cells and differentiate in lymphoid tissue (as of the thymus or bone marrow), that are the typical cellular elements of lymph, that include the cellular mediators of immunity, and that constitute 20 to 30 percent of the white blood cells of normal human blood—see b cell, t cell	http://www.merriam-webster.com/medlineplus/Lymphocyte
LRBR	Lymphocyte to Red blood cell ratio	The ratio of Lymphocytes to Red blood cells found in a sample.	ECOTOX
MPGC	Macrophage	A phagocytic tissue cell of the immune system that may be fixed or freely motile, is derived from a monocyte, functions in the destruction of foreign antigens (as bacteria and viruses), and serves as an antigen-presenting cell—see histiocyte, mononuclear phagocyte system	http://www.merriam-webster.com/medlineplus/Macrophage
MAST	Mast Cells	Granulated cells that are found in almost all tissues, most abundantly in the skin and the gastrointestinal tract. Like the basophils, mast cells contain large amounts of histamine and heparin. Unlike basophils, mast cells normally remain in the tissues and do not circulate in the blood. Mast cells, derived from the bone marrow stem cells, are regulated by the stem cell factor	http://www.ncbi.nlm.nih.gov
MTMC	Metamyelocyte	A transitional form of myelocyte having a nuclear construction intermediate between the mature myelocyte and the two-lobed granulocyte.	The American Heritage Medical Dictionary
NCPC	Micronucleated Normochromatic cell to micronucleated Polychromatic cell ratio	Ratio of micronucleated Normochromatic cells to micronucleated polychromatic cells	ECOTOX

CEL	**Cellular Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
MONO	Monocyte	A large white blood cell with finely granulated chromatin dispersed throughout the nucleus that is formed in the bone marrow, enters the blood, and migrates into the connective tissue where it differentiates into a macrophage	http://www.merriam-webster.com/medlineplus/Monocyte
MUCR	Muscarinic Cholinergic Receptor	One of the two major classes of cholinergic receptors. Muscarinic receptors were originally defined by their preference for muscarine over nicotine. There are several subtypes (usually M1, M2, M3....) that are characterized by their cellular actions, pharmacology, and molecular biology. Also: Muscarinic receptor, Muscarinic Acetylcholine Receptors, or mAChR	www.wikipedia.org/en and http://www.ncbi.nlm.nih.gov
MYLO	Myelocyte	A bone marrow cell; especially : a motile cell with cytoplasmic granules that gives rise to the blood granulocytes and occurs abnormally in the circulating blood (as in myelogenous leukemia)	http://www.merriam-webster.com/medlineplus/myelocyte
MYCT	Myocyte	A contractile cell; specifically : a muscle cell	http://www.merriam-webster.com/medlineplus/myocyte
NEUT	Neutrophil	A type of white blood cell (leukocyte) that is characterized histologically by its ability to be stained by neutral dyes and functionally by its role in mediating immune responses against infectious microorganisms.	http://www.britannica.com/EBchecked/topic/410999/neutrophil
NLCR	Neutrophil Lymphocyte cell ratio	Ratio of Neutrophil to lymphocyte cells.	ECOTOX
NTRR	Neutrophil and Thrombocyte to Red blood cell ratio	The ratio of Neutrophils and Thrombocytes to Red blood cells in a sample.	ECOTOX
NCRC	Nicotinic receptors	Cholinergic receptors that are stimulated initially and blocked at high doses by the alkaloid nicotine and blocked by tubocurarine; they are found on automatic ganglion cells, on striated muscle cells, and on spinal central neurons.	Dorland's Medical Dictionary for Health Consumers, 2007
NMDR	NMDA Receptor	A brain receptor activated by the amino acid glutamate, which when excessively stimulated may cause cognitive defects in Alzheimer's disease. Also called N-methyl-d-aspartate receptor.	The American Heritage Medical Dictionary 2007, 2004
NCCM	Normochromatic cells, micronucleated	Micronucleated cells being of normal color.	ECOTOX

CEL	**Cellular Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
NESR	Nuclear Estrogen Receptor	Nuclear hormone receptor proteins form a class of ligand activated proteins that, when bound to specific sequences of DNA serve as on-off switches for transcription within the cell nucleus. These switches control the development and differentiation of skin, bone and behavioral centers in the brain, as well as the continual regulation of reproductive tissues.	http://www.ks.uiuc.edu/Research/pro_DNA/ster_horm_rec/
NRBC	Nucleated red blood cells	Nucleated red blood cells, (nrbcs or normoblasts), represent the stages of a red blood cell before it matures. Cells of this stage are usually seen in newborn infants, and in patients with responses to hemolytic crises, such as in megaloblastic anemia and iron deficiency anemia. The average size of the normoblast is 7-12 □m in diameter. The cytoplasm is pink. The nucleus is pyknotic (a homogeneous blue-black mass with no structure).	http://www.wadsworth.org/chemheme/heme/microscope/nrbc.htm
NLEI	Nuclei	A cellular organelle of eukaryotes that is essential to cell functions (as reproduction and protein synthesis), is composed of nucleoplasm and a nucleoprotein-rich network from which chromosomes and nucleoli arise, and is enclosed in a definite membrane	http://www.merriam-webster.com/dictionary/nuclei
NCEL	Number/Frequency of Cells	No definition available.	
OGNL	Organelle	A specialized cellular part (as a mitochondrion, lysosome, or ribosome) that is analogous to an organ	http://www.merriam-webster.com/dictionary/organelle
OCNC	Orthochromatic normoblast (erythroblast)	The final stage of the nucleated, immature erythrocyte, before nuclear loss. Typically the cytoplasm is described as acidophilic, but it still shows a faint polychromatic tint. The nucleus is small and initially may still have very coarse, clumped chromatin, as in its precursor, the polychromatic normoblast, but ultimately it becomes pyknotic, and appears as a deeply staining, blue-black, homogeneous structureless mass. The nucleus is often eccentric and is sometimes lobulated. Called also late , acidophilic , oxyphilic , or eosinophilic normoblast ; late , orthochromatic , acidophilic , oxyphilic , or eosinophilic erythroblast ; and metarubricyte	http://www.ndif.org/public/terms/13590-orthochromatic_normoblast
OSRS	Osmotic Resistance/RBC	No definition available.	

CEL	**Cellular Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
OSCT	Osteoclast	A large multinuclear cell associated with the absorption and removal of bone...A cell that dissolves the fibers and matrix of bone. An odontoclast, also called cementoclast, is cytomorphologically the same as an osteoclast and is involved in cementum resorption.	http://www.biology-online.org/dictionary/Osteoclasts
PRKY	Perikarya, perikaryon	The cytoplasm around the nucleus, such as that of the cell body of nerve cells; the body of the odontoblast, excluding the odontoblastic process; the cell body of the nerve cell, as distinguished from its axon and dendrites.	http://medical-dictionary.thefreedictionary.com/perikarya
PSMC	Plasma cells	A type of immune cell that makes large amounts of a specific antibody. Plasma cells develop from B cells that have been activated. A plasma cell is a type of white blood cell. Also called plasmacyte.	http://www.cancer.gov/dictionary?cdrid=46230
PLAS	Plasmolysis	The shrinking of protoplasm away from the cell wall of a plant or bacterium due to water loss from osmosis, thereby resulting in gaps between the cell wall and cell membrane.	http://www.biology-online.org/dictionary/Plasmolysis
PCRC	Polychromatic cells	A primitive erythrocyte in bone marrow, with basophilic material as well as hemoglobin (acidophilic) in the cytoplasm. Synonym(s): polychromatophil cell	Farlex Partner Medical Dictionary 2012
PCCM	Polychromatic cells, micronucleated	A primitive erythrocyte in bone marrow, with basophilic material as well as hemoglobin (acidophilic) in the cytoplasm that has been damaged by a genotoxin	Farlex Partner Medical Dictionary 2012 and http://en.wiktionary.org/wiki/micronucleated
PCNC	Polychromatic to normochromatic micronucleated cells ratio	Ratio of polychromatic micronucleated cells to normochromatic micronucleated cells	ECOTOX
PMNC	Polymorphonuclear cells	A leukocyte with a multilobed nucleus, such as a neutrophil	Mosby's Medical Dictionary 2009
PGRC	Progesterone Receptor	A specific protein bound to progesterone that moves with the hormone into the nucleus and forms a transcription factor.	http://users.rcn.com/jkimball.ma.ultranet/BiologyPages/P/Progesterone.html
PNBL	Pronormoblast	The earliest erythrocyte precursor, having a relatively large nucleus containing several nucleoli, surrounded by a small amount of cytoplasm. Called also proerythroblast and rubriblast.	http://medical-dictionary.thefreedictionary.com/pronormoblast
PKNJ	Purkinje cells	Largest brain neuron involved synaptic processing.	www.omnimag.com/live_science/purkwrld

CEL	**Cellular Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
PKNS	Pyknosis	A degenerative condition of a cell nucleus marked by clumping of the chromosomes, hyperchromatism, and shrinking of the nucleus.	http://www.merriam-webster.com/medical/pyknosis
ROXB	Reactive oxygen species scavenging capacity	Reactive oxygen species scavenging capacity related to the converstion or consumption of reactive oxygen species, including both radicals and non-radicals. Oxidative stress is the imbalance between the production of reactive oxygen and a biological system's ability to convert the reactive intermediates or repair the resulting damage.	http://en.wikipedia.org/wiki and ECOTOX
RSBC	Receptor site, binding capacity	No definition available.	
RBCE	Red Blood Cell	A disk-shaped, biconcave cell in the blood that contains hemoglobin lacks a nucleus, and transports oxygen and carbon dioxide to and from the tissues. Also called erythrocyte, red cell, red corpuscle or abbreviated as RBC	The American Heritage® Medical Dictionary Copyright, 2007, 2004
RDCP	Relative diffusing capacity	The gas exchange area over the blood-water diffusion distance of the experiment organism divided by the gas exchange area over the blood-water diffusion distance of the experiment organism.	ECOREF 89704
RETI	Reticulocytes	A young red blood cell showing a basophilic reticulum under vital staining.	Dorland's Medical Dictionary for Health Consumers, 2007
RTMC	Reticulum cell	Cells of the reticuloendothelial system, found particularly in lymph nodes, bone marrow and spleen. In lymph nodes they are stromal cells and probably not reticuloendothelial cells in the current sense of that term.	http://www.biology-online.org/dictionary/Reticulum_cell
NROD	Rods	One of the two photoreceptor cell types of the vertebrate retina. In rods the photopigment is in stacks of membranous disks separate from the outer cell membrane. Rods are more sensitive to light than cones, but rod mediated vision has less spatial and temporal resolution than cone vision.	http://www.biology-online.org/dictionary/Rods
SRTL	Sertoli cells	Any of the elongated cells located in the seminiferous tubules of the testis, and whose main function is to nourish the spermatids attached to it. Also called: nurse cell	http://www.biology-online.org/dictionary/Sertoli_cell
SGDN	Signal Density	No definition available.	

CEL	**Cellular Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
SIZE	Size	The physical magnitude, extent, or bulk: relative or proportionate dimensions of a cell.	http://www.merriam-webster.com/dictionary/size
SPLO	Splenocytes	The monocyte characteristic of the spleen.	http://medical-dictionary.thefreedictionary.com/splenocyte
STCL	Stippled cells	Cells that have an appearance of being engraved by means of dots and flicks.	partial definition: http://www.merriam-webster.com
STRC	Structural Changes	No definition available.	
TCEL	T-cell	A principal type of white blood cell that completes maturation in the thymus and that has various roles in the immune system, including the identification of specific foreign antigens in the body and the activation and deactivation of other immune cells. Also called T lymphocyte.	The American Heritage Medical Dictionary. 2007, 2004 by Houghton Mifflin Company.
TCRA	T-cell receptor ab (TCR)	No definition available.	
THRM	Thrombocytes	An irregularly shaped, disclike cytoplasmic fragment of a megakaryocyte that is shed in the marrow sinus and subsequently found in the peripheral blood, where it functions in clotting. A platelet contains granules in its central part (granulomere) and, peripherally, clear protoplasm (hyalomere), but no nucleus, is about one third to one half the size of an erythrocyte, and contains no hemoglobin. Synonym(s): Bizzozero corpuscle, blood disc, elementary bodies, third corpuscle, thrombocyte, thromboplastid, Zimmermann corpuscle	Farlex Partner Medical Dictionary, Farlex 2012
VOLU	Volume	The amount of space occupied by a three-dimensional object as measured in cubic units (as quarts or liters) : cubic capacity	http://www.merriam-webster.com/dictionary/volume
TWBC	White Blood Cell Count, Total	The number of white blood cells (leukocytes) in the blood	ECOTOX
WBCI	White blood cell index	White blood cell count multiplied by the percentage of immature white blood cells called marrow blasts	http://patient.cancerconsultants.com/leukemia_cancer_news.aspx?id=17792
UBWB	White Blood Cell, Undifferentiated Blasts	Absence of normal differentiation of white blood cell blasts.	

CEL	**Cellular Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
WDTH	Width	The horizontal measurement taken at right angles to the length.	http://www.merriam-webster.com/dictionary/width (The width of a single cell within an organism)

GEN	**Genetic Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
BHSM	11beta-Hydroxysteroid dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 11beta-Hydroxysteroid dehydrogenase.	ECOTOX			
BHMR	17 beta-hydroxysteroid dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 17 beta-hydroxysteroid dehydrogenase	ECOTOX			
17BR	17 beta-hydroxysteroid dehydrogenase type 11 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 17 beta-hydroxysteroid dehydrogenase type 11. Also: 17beta-HSD-11.	ECOTOX and http://www.uniprot.org/uniprot/E7EIH3	170739	HQ699520	GenBank
12BR	17 beta-hydroxysteroid dehydrogenase type 12 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 17 beta-hydroxysteroid dehydrogenase type 12. Also: 17beta-HSD-12.	ECOTOX and http://www.uniprot.org/uniprot/D6PW91	170739	GU984783	GenBank
18RM	18S ribosomal RNA mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 18S rRNA.	ECOTOX			
TP5M	1-Cys thioredoxin peroxidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 1-Cys thioredoxin peroxidase. Also: tpx5,acctpx5.	ECOTOX and http://www.uniprot.org/uniprot/W8Q918	170902		

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
HM2M	2-domain Hemoglobin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 2-domain hemoglobin. Also: dhb2, dmag-Hb7, dhb3, dmag-Hb5.	ECOTOX, http://www.uniprot.org/uniprot/Q9XTL1 and http://www.uniprot.org/uniprot/Q9XTM2			
2ODM	2-Oxoglutarate dehydrogenase, mitochondrial-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 2-Oxoglutarate dehydrogenase, mitochondrial-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=413768			
2PSM	2-Pyrone synthase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 2-Pyrone synthase. Also: G2ps1, 2-PS, CHS2.	ECOTOX and http://www.uniprot.org/uniprot/P48391	171794		
20BM	20 beta-hydroxysteroid dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 20 beta-hydroxysteroid dehydrogenase	ECOTOX			
28RM	28S ribosomal RNA mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 28S ribosomal RNA. Also: 28S rRNA.	ECOTOX			
HHMR	3B-Hydroxysteroid dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 3 beta-Hydroxysteroid dehydrogenase. Also: hsbd3, 3B-Hydroxysteroid dehydrogenase, 3beta-HSD.	ECOTOX and http://www.uniprot.org/uniprot/Q91381			
3HMM	3-Hydroxy-3-methylglutaryl coenzyme A reductase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 3-hydroxy-3-methylglutaryl coenzyme A reductase	ECOTOX			

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
HMAM	3-Hydroxy-3-methylglutaryl-Coenzyme A reductase a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 3-Hydroxy-3-methylglutaryl-Coenzyme A reductase a. Also: HMGRA.	ECOTOX and http://www.uniprot.org/uniprot/A9JSZ0			
HMBM	3-Hydroxy-3-methylglutaryl-Coenzyme A reductase b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 3-hydroxy-3-methylglutaryl-Coenzyme A reductase b. Also: HMGRB.	ECOTOX and http://www.uniprot.org/uniprot/Q58ER2			
5RMR	5alpha-reductase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 5alpha-reductase.	ECOTOX			
5R2M	5alpha-reductase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 5alpha-reductase 2.	ECOTOX			
5ASM	5-Aminolevulinate synthase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 5-Aminolevulinate synthase. Also: 5-aminolevulinic acid synthase, ALAS, ALAS1, ALAS-H, Delta-ALA synthetase, Delta-aminolevulinate synthase, 5-aminolevulinate synthase nonspecific mitochondrial, 5-aminolevulinic acid synthase 1, Delta-ALA synthase 1, Delta-aminolevulinate synthase 1, EC 2.3.1.37.	ECOTOX, http://enzyme.expasy.org/EC/2.3.1.37 and http://www.uniprot.org/uniprot/P13195			
5HTM	5-Hydroxytryptamine receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 5-Hydroxytryptamine receptor. Also Serotonin receptor, 5-HT receptor.	ECOTOX and http://www.uniprot.org/uniprot/Q25414			

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
5HAM	5-Hydroxytryptamine receptor 1A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 5-hydroxytryptamine receptor 1A. Also: Serotonin receptor 1A, 5-HT1A.	ECOTOX and http://www.uniprot.org/uniprot/Q64264			
5NTM	5'-Nucleotidase, ecto (CD73) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 5'-nucleotidase, ecto (CD73). Also: 5'-nucleotidase precursor.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/393906	166599	BC055243.1	GenBank
PKBR	6-phosphofructo-2-kinase/fructose-2,6-biphosphatase 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 6-phosphofructo-2-kinase/fructose-2,6-biphosphatase 3. Also: zgc:73257, wu:fc31e01, pfkfb3.	ECOTOX, http://www.uniprot.org/uniprot/Q6P951 and http://www.ncbi.nlm.nih.gov/gene/?term=NM_213397	170362	NM_213397	GenBank
6PGM	6-Phosphogluconate dehydrogenase, decarboxylating mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 6-phosphogluconate dehydrogenase, decarboxylating. Also: 6PGD, 6-PGD, Phosphogluconate dehydrogenase (NADP(+)-dependent, decarboxylating), 6-phosphogluconic carboxylase, 6-phosphogluconic dehydrogenase, Phosphogluconic acid dehydrogenase, EC 1.1.1.44.	ECOTOX, http://enzyme.expasy.org/EC/1.1.1.44 and http://www.uniprot.org/uniprot/O60037			
R18M	40S ribosomal protein S18 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 40S ribosomal protein S18. Also: rps18.	ECOTOX and http://www.uniprot.org/uniprot/P41094			

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
7DRM	7-Dehydrocholesterol reductase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 7-dehydrocholesterol reductase. Also: dhcr7, 7-DHC reductase, Sterol Delta(7)-reductase, 7-dehydrocholesterol dehydrogenase/cholesterol oxidase, Delta(7)-sterol reductase, EC 1.3.1.21.	ECOTOX, http://enzyme.expasy.org/EC/1.3.1.21 and http://www.uniprot.org/uniprot/Q7ZXH1			
33ZM	14-3-3 protein zeta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 14-3-3 protein zeta. Also: 14-3-3zeta, 14-3-3 protein z, 14-3-3, 14-3-3EZ, leo, THAP, 14-3-3-like protein, Protein Leonardo.	ECOTOX and http://www.uniprot.org/uniprot/P29310	166650	2895520	GenBank
SA5M	20S proteasome alpha5 subunit, partial mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 20S proteasome alpha5 subunit, partial. Also: 20S Proteasome a5.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/51968292	166650	51968292	GenBank
RL5M	60S ribosomal protein l5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 60S ribosomal protein l5. Also: rpl5, RL5.	ECOTOX and http://www.uniprot.org/uniprot/E3TG98	169101	GU589384	NCBI/UNIPROT
R32M	60S ribosomal protein L32 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 60S ribosomal protein L32. Also: rpl32, Ribosomal protein L32.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/NM_001200127 and http://www.uniprot.org/uniprot/Q90YT6	169101	NM_001200127	NCBI/UNIPROT
72CM	72 kDa type IV collagenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 72 kDa type IV collagenase. Also: MMP-2, MMP 2, 72 kDa gelatinase, Gelatinase A, Matrix metalloproteinase-2, EC 3.4.24.24.	ECOTOX and http://www.uniprot.org/uniprot/P33434			

GEN	**Genetic Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
AB9R	ABCC9 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ATP-binding cassette, sub-family C (CFTR/MRP), member 9. Also: Sur2, SUR2A, SUR2B, AI414027, AI449286, sulfonylurea receptor 2, sulfonylurea-binding protein 2.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/20928	170259		
ABTM	ABC transporter mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter. Also: abcc1/3.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/EFX72783	172260	EFX72783	GenBank
ABMM	ABC transporter ATP-binding protein McyH mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter ATP-binding protein McyH. Also: mcyH.	ECOTOX and http://www.uniprot.org/uniprot/L8NWN2			
AB1M	ABC transporter B family member 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter B family member 1. Also: ABCB1, Multidrug resistance protein 1, P-glycoprotein 1, ABC transporter ABCB.1, AtABCB1, MDR1, PGP1.	ECOTOX and http://www.uniprot.org/uniprot/Q9ZR72			
AB2M	ABC transporter B family member 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter B family member 2. Also: ABCB2, Multidrug resistance protein 2, P-glycoprotein 2, ABC transporter ABCB.2, AtABCB2, MDR2, PGP2.	ECOTOX and http://www.uniprot.org/uniprot/Q8LPK2			

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
AB3M	ABC transporter B family member 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter B family member 3. Also: ABCB3, Putative multidrug resistance protein 3, P-glycoprotein 3, ABC transporter ABCB.3, AtABCB3, MDR3, PGP3.	ECOTOX and http://www.uniprot.org/uniprot/Q9SYI2			
AB4M	ABC transporter B family member 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter B family member 4. Also: ABCB4, Multidrug resistance protein 4, P-glycoprotein 4, ABC transporter ABCB.4, AtABCB4, MDR4, PGP4.	ECOTOX and http://www.uniprot.org/uniprot/O80725			
AB5M	ABC transporter B family member 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter B family member 5. Also: ABCB5, ABC transporter ABCB.5, AtABCB5, P-glycoprotein 5, Putative multidrug resistance protein 5, MDR5, PGP5.	ECOTOX and http://www.uniprot.org/uniprot/Q9SYI3			
AB6M	ABC transporter B family member 6 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter B family member 6. Also: ABCB6, Multidrug resistance protein 6, P-glycoprotein 6, ABC transporter ABCB.6, AtABCB6, MDR6, PGP6.	ECOTOX and http://www.uniprot.org/uniprot/Q8LPT1			
AB7M	ABC transporter B family member 7 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter B family member 7. Also: ABCB7, Multidrug resistance protein 7, P-glycoprotein 7, ABC transporter ABCB.7, AtABCB7, MDR7, PGP7.	ECOTOX and http://www.uniprot.org/uniprot/Q9FHF1			

GEN	**Genetic Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
TC1M	ABC transporter C family member 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter C family member 1. Also: ABCC1, ABC transporter ABCC.1, AtABCC1, ATP-energized glutathione S-conjugate pump 1, Glutathione S-conjugate-transporting ATPase 1, Multidrug resistance-associated protein 1, EST1, MRP1.	ECOTOX and http://www.uniprot.org/uniprot/Q9C8G9			
TC2M	ABC transporter C family member 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter C family member 2. Also: ABCC2, ABC transporter ABCC.2, AtABCC2, ATP-energized glutathione S-conjugate pump 2, Glutathione S-conjugate-transporting ATPase 2, Multidrug resistance-associated protein 2, MRP2.	ECOTOX and http://www.uniprot.org/uniprot/Q42093			
TC3M	ABC transporter C family member 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter C family member 3. Also: ABCC3, ABC transporter ABCC.3, AtABCC3, ATP-energized glutathione S-conjugate pump 3, Glutathione S-conjugate-transporting ATPase 3, Multidrug resistance-associated protein 3, MRP3.	ECOTOX and http://www.uniprot.org/uniprot/Q9LK64			

GEN	**Genetic Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
TC4M	ABC transporter C family member 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter C family member 4. Also: ABCC4, ABC transporter ABCC.4, AtABCC4, ATP-energized glutathione S-conjugate pump 4, Glutathione S-conjugate-transporting ATPase 4, Multidrug resistance-associated protein 4, EST4, MRP4.	ECOTOX and http://www.uniprot.org/uniprot/Q7DM58			
TC5M	ABC transporter C family member 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter C family member 5. Also: ABCC5, ABC transporter ABCC.5, AtABCC5, ATP-energized glutathione S-conjugate pump 5, Glutathione S-conjugate-transporting ATPase 5, Multidrug resistance-associated protein 5, MRP5.	ECOTOX and http://www.uniprot.org/uniprot/Q7GB25			
AF1M	ABC transporter F family member 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter F family member 1. Also: ABCF1, ABC transporter ABCF.1, AtABCF1, GCN20-type ATP-binding cassette protein GCN1, GCN1.	ECOTOX and http://www.uniprot.org/uniprot/Q9FJH6			
AG1M	ABC transporter G family member 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter G family member 1. Also: ABCG1, ABC transporter ABCG.1, AtABCG1, White-brown complex homolog protein 1, AtWBC1, WBC1.	ECOTOX and http://www.uniprot.org/uniprot/O80946			

GEN	**Genetic Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
G10M	ABC transporter G family member 10 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter G family member 10. Also: ABCG10, ABC transporter ABCG.10, AtABCG10, Probable white-brown complex homolog protein 10, AtWBC10, WBC10.	ECOTOX and http://www.uniprot.org/uniprot/Q9MAH4			
G11M	ABC transporter G family member 11 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter G family member 11. Also: ABCG11, ABC transporter ABCG.11, AtABCG11, Protein Cuticular Defect AND Organ Fusion 1, Protein Desperado, Protein Permeable Leaves 1, White-brown complex homolog protein 11, AtWBC11, COF1, DSO, PEL1, WBC11.	ECOTOX and http://www.uniprot.org/uniprot/Q8RXN0			
G12M	ABC transporter G family member 12 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter G family member 12. Also: ABCG12, ABC transporter ABCG.12, AtABCG12, Protein Eceriferum 5, White-brown complex homolog protein 12, AtWBC12, CER5, D3, WBC12.	ECOTOX and http://www.uniprot.org/uniprot/Q9C8K2			
G13M	ABC transporter G family member 13 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter G family member 13. Also: ABCG13, ABC transporter ABCG.13, AtABCG13, White-brown complex homolog protein 13, AtWBC13, WBC13,	ECOTOX and http://www.uniprot.org/uniprot/Q9C8J8			

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
AG2M	ABC transporter G family member 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter G family member 2. Also: ABCG2, ABC transporter ABCG.2, AtABCG2, White-brown complex homolog protein 2, AtWBC2, WBC2.	ECOTOX and http://www.uniprot.org/uniprot/Q9ZUT0			
AG3M	ABC transporter G family member 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter G family member 3. Also: ABCG3, ABC transporter ABCG.3, AtABCG3, White-brown complex homolog protein 3, AtWBC3, WBC3.	ECOTOX and http://www.uniprot.org/uniprot/Q9ZUU9			
AG4M	ABC transporter G family member 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter G family member 4. Also: ABCG4, ABC transporter ABCG.4, AtABCG4, White-brown complex homolog protein 4, AtWBC4, WBC4.	ECOTOX and http://www.uniprot.org/uniprot/Q9SW08			
AG5M	ABC transporter G family member 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter G family member 5. Also: ABCG5, ABC transporter ABCG.5, AtABCG5, White-brown complex homolog protein 5, AtWBC5, WBC5.	ECOTOX and http://www.uniprot.org/uniprot/Q9SIT6			
AG6M	ABC transporter G family member 6 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter G family member 6. Also: ABCG6, ABC transporter ABCG.6, AtABCG6, White-brown complex homolog protein 6, AtWBC6, WBC6.	ECOTOX and http://www.uniprot.org/uniprot/Q9FNB5			

GEN	**Genetic Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
AG7M	ABC transporter G family member 7 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter G family member 7. Also: ABCG7, ABC transporter ABCG.7, AtABCG7, White-brown complex homolog protein 7, AtWBC7, WBC7.	ECOTOX and http://www.uniprot.org/uniprot/Q9ZU35			
AG8M	ABC transporter G family member 8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter G family member 8. Also: ABCG8, ABC transporter ABCG.8, AtABCG8, Probable white-brown complex homolog protein 8, AtWBC8, WBC8.	ECOTOX and http://www.uniprot.org/uniprot/Q9FLX5			
AG9M	ABC transporter G family member 9 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter G family member 9. Also: ABCG9, ABC transporter ABCG.9, AtABCG9, Probable white-brown complex homolog protein 9, AtWBC9, WBC9.	ECOTOX and http://www.uniprot.org/uniprot/Q9SZR9			
ACRD	Abnormal chromosomal distribution	Abnormal chromosomal distribution. Aneuploidy is the chromosomal constitution of cells which deviate from the normal by the addition or subtraction of chromosomes, chromosome pairs, or chromosome fragments.	http://www.ncbi.nlm.nih.gov			
ACLM	Acetoacetyl-CoA synthetase-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Acetoacetyl-CoA synthetase-like.	ECOTOX and http://www.uniprot.org/uniprot/J3S8F5			

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
ACHR	Acetylcholinesterase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ACHE (acetylcholinesterase). Also: Ace, ACE1, ACHE1, ACHE2, Choline esterase I, Cholinesterase, true cholinesterase, EC 3.1.1.7.	ECOTOX, http://enzyme.expasy.org/EC/3.1.1.7 and http://www.uniprot.org/uniprot/Q869C3			
AACM	Acetyl-CoA acetyltransferase, cytosolic mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Acetyl-CoA acetyltransferase, cytosolic. Also: Cytosolic acetoacetyl-CoA thiolase, Acetyl-CoA acetyltransferase, ACAT2.	ECOTOX and http://www.uniprot.org/uniprot/Q8CAY6			
ACCR	Acetyl-CoA carboxylase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Acetyl-CoA carboxylase 1. Also: Acetyl-CoA carboxylase alpha, acaca.	ECOTOX and http://www.uniprot.org/uniprot/Q13085	173197		
ACBR	Acetyl-CoA carboxylase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Acetyl-CoA carboxylase 2. Also: Acetyl-CoA carboxylase beta, acacb.	ECOTOX and http://www.uniprot.org/uniprot/Q13085	173197		
AADM	Acyl-CoA Delta(11) desaturase-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Acyl-CoA Delta(11) desaturase-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=100576797			
AY1M	Acyl-coenzyme A thioesterase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Acyl-coenzyme A thioesterase 1. Also: Acyl-CoA thioesterase 1, CTE-I, Inducible cytosolic acyl-coenzyme A thioester hydrolase, LACH2, ACH2, Long chain acyl-CoA thioester hydrolase, Long chain acyl-CoA hydrolase, Acot1.	ECOTOX and http://www.uniprot.org/uniprot/O88267			

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
AF4R	Activating transcription factor 4 alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Activating transcription factor 4 alpha. Also: ATF4.	ECOTOX	170196	XM_004066069.1	Unknown
AF6R	Activating transcription factor 6 alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Activating transcription factor 6 alpha. Also: atf6a, ATF6.	http://www.ncbi.nlm.nih.gov/gene/?term=NM_001278901.1 and http://www.uniprot.org/uniprot/G5ELX0	170196	NM_001278901.1	GenBank
ABAM	Activin beta A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Activin beta A.	ECOTOX			
AB2R	Activin beta A, isoform 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Activin beta A, isoform 2. Also: inhibin, beta Ab, inhbab, inhbal, activin beta A2, ztc: 158348.	ECOTOX, http://www.uniprot.org/uniprot/Q56E97 and http://www.ncbi.nlm.nih.gov/gene/553816	170532	AY962560	GenBank
ABBM	Activin beta B subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to activin beta B subunit	ECOTOX			
ARBM	Activin receptor IIB mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Activin receptor IIB.	ECOTOX			
AE1M	Acyl-coenzyme A oxidase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Acyl-coenzyme A oxidase 1. Also: Acyl-CoA oxidase, ACOX-1,acox1.	ECOTOX and http://www.uniprot.org/uniprot/D1MER5			
AA1R	Adenosine A1 receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Adenosine A1 receptor	ECOTOX			

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
ADAM	Adenosine deaminase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Adenosine deaminase. Also: Adenosine aminohydrolase, ADA, ADA1, EC 3.5.4.4.	ECOTOX, http://www.uniprot.org/uniprot/Q6DG22 and http://www.uniprot.org/uniprot/P00813			
A21M	Adenosine deaminase CECR1-A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Adenosine deaminase CECR1-A. Also: ADA2.1, Cat eye syndrome critical region protein 1 homolog A, cecr1a, cecr1.	ECOTOX and http://www.uniprot.org/uniprot/P58781			
ADPM	Adenosine deaminase-like protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Adenosine deaminase-like protein. Also: adal.	ECOTOX and http://www.uniprot.org/uniprot/Q4V9P6	166599	NP_001028916	GenBank
ATNR	Adenosine triphosphatase Na/K pump mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Adenosine triphosphatase Na/K pump. Also: Sodium/potassium-transporting ATPase subunit alpha-1 and ATP1A1.	ECOTOX and http://www.uniprot.org/uniprot/M1QVN2	166306	JX137275	GenBank
AC1R	Adenylate cyclase type 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Adenylate cyclase type 1. Also: adcy1, ac1.	ECOTOX and http://www.uniprot.org/uniprot/O88444	170801		
AFBM	Adipocyte fatty acid-binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Adipocyte fatty acid-binding protein. Also: FABP11b, Fatty acid binding protein 11b.	ECOTOX and http://www.uniprot.org/uniprot/Q503X5			
B2AM	Adrenoceptor beta 2, surface a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Adrenoceptor beta 2, surface a. Also: adrb2a.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=nm_001102652)	170323	NM_001102652	GenBank

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
B2BM	Adrenoceptor beta 2, surface b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Adrenoceptor beta 2, surface b. Also: zgc:162188, adrb2b, beta-2b-adrenergic receptor.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=NM_001089471	170323	NM_001089471	Genbank
AHRM	Adrenocorticotropic hormone receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Adrenocorticotropic hormone receptor. Also: ACTH receptor, ACTH-R, Adrenocorticotropin receptor, Melanocortin receptor 2, MC2-R, MC2R.	ECOTOX and http://www.uniprot.org/uniprot/P70115			
ARFM	ADP ribosylation factor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ADP ribosylation factor.	ECOTOX and http://www.uniprot.org/uniprot/P22274			
ASMR	Agrin, SEA mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Agrin, SEA.	ECOTOX			
ADHR	Alcohol dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to alcohol dehydrogenase	ECOTOX			
ADHD	Aldehyde dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to aldehyde dehydrogenase	ECOTOX			
AD1M	Aldehyde dehydrogenase 1a1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aldehyde dehydrogenase 1a1. (Aldh1a1)	ECOTOX			
ADBM	Aldehyde dehydrogenase 1b1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aldehyde dehydrogenase 1b1. (Aldh1b1)	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
AD2M	Aldehyde dehydrogenase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aldehyde dehydrogenase 2. (Aldh2)	ECOTOX			
A2BM	Aldehyde dehydrogenase 2b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aldehyde dehydrogenase 2b.	ECOTOX			
AD3M	Aldehyde dehydrogenase 3a1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aldehyde dehydrogenase 3a1. (Aldh3a1)	ECOTOX			
AD5M	Aldehyde dehydrogenase family 5,subfamily A1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aldehyde dehydrogenase family 5,subfamily A1 (Aldh5a1).	ECOTOX and http://www.uniprot.org/uniprot/G3V945			
ALFR	Allele frequency	The frequency of any one of a series of two or more different genes that occupy the same position (locus) on a chromosome.	http://cancerweb.ncl.ac.uk/omd/			
A2MR	Alpha-2-macroglobulin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Alpha-2-macroglobulin. Also: A2M, alpha2m.	ECOTOX and http://www.uniprot.org/uniprot/P01023	166302		
AATR	alpha-Actin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to alpha-Actin. Also: Actin muscle.	ECOTOX and http://www.uniprot.org/uniprot/P86700			
AATM	alpha,alpha-Trehalase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to alpha,alpha-Trehalase. Also: Trehalase, alpha,alpha-Trehalose glucohydrolase, Trehalase 1, TRE1, AtTRE1, EC 3.2.1.28.	ECOTOX, http://enzyme.expasy.org/EC/3.2.1.28 and http://www.uniprot.org/uniprot/Q9SU50			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
AMLM	alpha-Amylase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to alpha-Amylase. Also: AMY1.1, 1,4-alpha-D-glucan glucanohydrolase, Alpha-amylase isozyme 1B, AMY1A, EC 3.2.1.1.	ECOTOX and http://www.uniprot.org/uniprot/P17654			
AEDM	alpha-Enolase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to alpha-Enolase. Also: Eno1, Eno-1, Endolase 1, 2-phospho-D-glycerate hydro-lyase, Non-neural enolase, NNE.	ECOTOX and http://www.uniprot.org/uniprot/P17182	166650	148235689	GenBank
AAGR	Alpha globin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Alpha globin. Also: si:ch211-5k11.6, bY187G17.5, zgc:112086, si:xx-187g17.5, si:xx-by187g17.5.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/497166 and http://www.uniprot.org/uniprot/Q6ZM13	163503		
ATRN	Alpha-induced tumor necrosis factor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to alpha-induced tumor necrosis factor	ECOTOX			
A2MM	alpha-2 Microglobulin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to alpha-2 Microglobulin.	ECOTOX			
N67M	alpha-7 Nicotinic acetylcholine receptor subunit mRNA to alpha-6 Nicotinic acetylcholine receptor subunit mRNA ratio	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ratio of alpha-7 Nicotinic acetylcholine subunit to alpha-6 Nicotinic acetylcholine subunit.	ECOTOX			
AVMR	alpha vitelline envelope protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to alpha vitelline envelope protein.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
AMHR	Anti-mullerian hormone mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Anti-mullerian hormone. Also: amh, mullerian inhibiting substance, mis, mullerian inhibiting factor, mif.	ECOTOX,http://www.uniprot.org/uniprot/Q6B6Q2 and http://medical-dictionary.thefreedictionary.com/Mullerian+inhibiting+factor			
ATPR	Amino acid-polyamine transporter mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to the Amino acid-polyamine transporter.	ECOTOX and http://www.ncbi.nlm.nih.gov/nucest/CO729459	171021	CO729459	GenBank
AMTM	Ammonium transporter mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ammonium transporter. Also: amt.	ECOTOX and http://www.uniprot.org/uniprot/B0JQV5			
RHAM	Ammonium transporter Rh type A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ammonium transporter Rh type A. Also: Rhag, Erythrocyte membrane glycoprotein Rh50, Rhesus blood group family type A glycoprotein.	ECOTOX and http://www.uniprot.org/uniprot/Q7TNK7			
RHBM	Ammonium transporter Rh type B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ammonium transporter Rh type B. Also: Rhbg, Rhesus blood group family type B glycoprotein.	ECOTOX and http://www.uniprot.org/uniprot/Q8BUX5			
RC1M	Ammonium transporter Rh type C 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ammonium transporter Rh type C 1. Also: Rhcg1, Rhesus blood group family type C glycoprotein 1, FRhcg1.	ECOTOX and http://www.uniprot.org/uniprot/Q18PF5			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
RC2M	Ammonium transporter Rh type C 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ammonium transporter Rh type C 2. Also: Rhcg2, FRhcg2, Rhesus blood group family type C glycoprotein 2.	ECOTOX and http://www.uniprot.org/uniprot/Q7T3R4			
ATPM	Ammonium transport protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ammonium transport protein. Also: amtP.	ECOTOX and http://www.uniprot.org/uniprot/B0JT37			
AP2M	Amyloid beta (A4) precursor-like protein 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Amyloid beta (A4) precursor-like protein 2. Also: aplp2, si:dkey-11k4.3.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/796801	170801		
ARMR	Androgen receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to androgen receptor.	ECOTOX			
ARAM	Androgen receptor alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to androgen receptor alpha.	ECOTOX			
AREM	Androgen receptor beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to androgen receptor beta.	ECOTOX			
AX1M	Annexin A1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Annexin A1a.	ECOTOX			
A1BM	Annexin A1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Annexin A1b. Also: anxa1b.	ECOTOX and http://www.ncbi.nlm.nih.gov/UniGene/clust.cgi?ORG=Dr&CID=159442			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
A11M	Annexin A11 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Annexin A11. Also: Annexin XI,56 kDa autoantigen, Annexin-11, Calcyclin-associated annexin 50.	ECOTOX and http://www.uniprot.org/uniprot/P50995			
AN3M	Anoctamin 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Anoctamin 3. Also: ano3, tmem16c.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=553392	170801		
APMR	Antimicrobial peptides mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Antimicrobial peptides.	ECOTOX			
A14M	Apidaecins type 14 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apidaecins type 14. Also: APID14.	ECOTOX and http://www.uniprot.org/uniprot/Q06601			
AA1M	Apolipoprotein A1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apolipoprotein A1 (ApoA1 or ApoA-I).	ECOTOX			
AA4M	Apolipoprotein A4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apolipoprotein A4 (Apolipoprotein A-IV, apoA-IV, apoAIV, or apoA4).	ECOTOX			
AABM	Apolipoprotein B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apolipoprotein B (ApoB).	ECOTOX			
AC1M	Apolipoprotein C1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apolipoprotein C1 (Apolipoprotein C-I, ApoC1 or ApoC-I).	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
AC2M	Apolipoprotein C2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apolipoprotein C2 (Apolipoprotein C-II, ApoC2 or ApoC-II).	ECOTOX			
AAEM	Apolipoprotein E mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apolipoprotein E (ApoE).	ECOTOX			
14AM	Apolipoprotein 14 kDa mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apolipoprotein 14 kDa. Also: apo14, apo-14 kDa.	ECOTOX and http://www.uniprot.org/uniprot/B3VTP7			
AALM	Apolipoprotein L mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apolipoprotein L (ApoL).	ECOTOX			
APMM	Apolipoprotein M mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apolipoprotein M (ApoM).	ECOTOX			
AAOM	Apolipoprotein O mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apolipoprotein O (ApoO).	ECOTOX			
AIFM	Apoptosis-inducing factor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apoptosis-inducing factor. Also: AIF.	ECOTOX			
AI3M	Apoptosis-inducing factor 3-like protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apoptosis-inducing factor 3-like protein. Also: accaif3, aif3, aifm3.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/KF745895.1	170896		

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
APOP	Apoptosis, Programmed Cell Death, DNA Fragmentation	A genetically determined process of cell self-destruction that is marked by the fragmentation of nuclear DNA, is activated either by the presence of a stimulus or by the removal of a stimulus or suppressing agent, is a normal physiological process eliminating DNA-damaged, superfluous, or unwanted cells (as immune cells targeted against the self in the development of self-tolerance or larval cells in amphibians undergoing metamorphosis), and when halted (as by genetic mutation) may result in uncontrolled cell growth and tumor formation—called also programmed cell death	http://www.merriam-webster.com/medical/apoptosis			
ARXM	Apoptosis regulator Bcl-X mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apoptosis regulator Bcl-X. Also: BCLX.	ECOTOX and http://www.uniprot.org/uniprot/B5XAY3	168528	NM_001141086	GenBank
APFM	Apoptotic protease-activating factor 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apoptotic protease-activating factor 1 (Apaf1).	ECOTOX and http://www.uniprot.org/uniprot/Q9I9H8			
AVTM	Arginine vasotocin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Arginine vasotocin. Also: AVT.	ECOTOX			
AAMR	Aromatase A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to aromatase A	ECOTOX			
ABMR	Aromatase B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aromatase B.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
ALDM	Aromatic-L-amino-acid decarboxylase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aromatic-L-amino-acid decarboxylase. Also: AADC, DDC, Ddc, 5-hydroxytryptophan decarboxylase, Aromatic amino acid decarboxylase, DOPA decarboxylase, Hydroxytryptophan decarboxylase, L-DOPA decarboxylase, Tryptophan decarboxylase, EC 4.1.1.28.	ECOTOX, http://www.uniprot.org/uniprot/P14173 and http://enzyme.expasy.org/EC/4.1.1.28			
ARCM	Arrestin-C mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Arrestin-C. Also: ARR3, Arrestin 3 retinal, Cone arrestin, Retinal cone arrestin-3.	ECOTOX and http://www.uniprot.org/uniprot/Q9EQP6			
ARHM	Arrestin homolog mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Arrestin homolog.	ECOTOX and http://www.uniprot.org/uniprot/P32122	168274	P32122	UniProt
AR1R	Aryl hydrocarbon receptor 1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aryl hydrocarbon receptor 1b. Also: ahr1b.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/NM_001024816 and http://www.uniprot.org/uniprot/Q4U3K9	170323	NM_001024816	GenBank
AR2M	Aryl hydrocarbon receptor 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aryl hydrocarbon receptor 2. Also: AhR2.	ECOTOX and http://www.uniprot.org/uniprot/E4W694			
ARIR	Aryl hydrocarbon receptor interacting protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aryl hydrocarbon receptor interacting protein. Also: aip, aryl hydrocarbon receptor interacting protein.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/nm_214712 and http://www.uniprot.org/uniprot/Q90ZC5	170323	NM_214712	GenBank

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
ARNM	Aryl hydrocarbon receptor nuclear translocator mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aryl hydrocarbon receptor nuclear translocator. Also: ARNT protein, Dioxin receptor nuclear translocator, Hypoxia-inducible factor 1-beta, HIF-1-beta, HIF1-beta, Arnt.	ECOTOX and http://www.uniprot.org/uniprot/P53762			
AR2R	Aryl hydrocarbon receptor nuclear translocator 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aryl hydrocarbon receptor nuclear translocator 2. Also: arnt2, arnt protein 2, zfarnt2.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/nm_131674 and http://www.uniprot.org/uniprot/Q9DG12	170323	NM_131674	GenBank
A1AR	Aryl hydrocarbon receptor nuclear translocator-like 1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aryl hydrocarbon receptor nuclear translocator-like 1a. Also: arntl1a, bmal1.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/NM_131577 and http://www.uniprot.org/uniprot/Q9I879	170323	NM_131577	GenBank
A2BR	Aryl hydrocarbon receptor nuclear translocator-like 1B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aryl hydrocarbon receptor nuclear translocator-like 1b. Also: arntl1b, BHLH-PAS transcription factor, zfbmal3.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/nm_178300 and http://www.uniprot.org/uniprot/Q8JIG1	170323	NM_178300	GenBank
AT2M	Aryl Hydrocarbon receptor nuclear translocator-like protein 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aryl Hydrocarbon receptor nuclear translocator-like protein 2. Also: ARNTL2, Brain and muscle ARNT-like 2.	ECOTOX and http://www.uniprot.org/uniprot/Q2VPD4			
AHMR	Aryl Hydrocarbon Receptor protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aryl Hydrocarbon Receptor protein (AhR)	ECOTOX			

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
AHAM	Aryl hydrocarbon receptor repressor a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to aryl hydrocarbon receptor repressor a (AhRRa).	ECOTOX			
AHBM	Aryl hydrocarbon receptor repressor b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to aryl hydrocarbon receptor repressor b (AhRRb).	ECOTOX			
AHRR	aryl hydrocarbon receptor repressor (AhRR) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to aryl hydrocarbon receptor repressor (AhRR)	ECOTOX			
ASXR	Ascorbate peroxidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ascorbate peroxidase mRNA. Also: APX.	ECOTOX and http://www.uniprot.org/uniprot/C9E3F3			
ASCM	Aspartoacylase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aspartoacylase. Also: Aminoacylase-2.	ECOTOX and http://www.uniprot.org/uniprot/A8KB34			
ANKA	ATPase Na+/K+ alpha 1a.4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ATPase Na+/K+ alpha 1a.4.	ECOTOX			
ALDR	ATP-binding cassette, sub-family D, member 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ATP-binding cassette, sub-family D, member 2. Also: abcd2, ald1, aldl1.	ECOTOX, http://zfin.org/ZDB-GENE-050517-28 and http://www.ncbi.nlm.nih.gov/gene/26874	170801		
ABCM	ATP-binding cassette sub-family F member 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ATP-binding cassette sub-family F member 2. Also:Iron-inhibited ABC transporter 2, ABCF2.	ECOTOX and http://www.genecards.org/cgi-bin/carddisp.pl?gene=ABCF2&search=ABCF2			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
ACBM	ATP-binding cassette transporter subfamily B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ATP-binding cassette transporter subfamily B. Also: abcb.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/NM_001257054.1			
ABCR	ATP binding cassette subfamily C mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to the ATP binding cassette subfamily C gene family. Also: ABCC.	ECOTOX and http://www.genenames.org/cgi-bin/genefamilies/set/807	172259		
A5AM	ATP synthase, H+ transporting, mitochondrial F1 complex, alpha subunit 1, cardiac muscle mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ATP synthase, H+ transporting, mitochondrial F1 complex, alpha subunit 1. Also: atp5a1.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=NM+001077355	172238	NM_001077355	GenBank
ABFM	ATP synthase, H+ transporting, mitochondrial Fo complex, subunit B1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ATP synthase, H+ transporting, mitochondrial Fo complex, subunit B1. Also: atp5f1,fb59g11, and fj08b08.	ECOTOX and http://zfin.org/ZDB-GENE-041010-33	172238	BC083308	GenBank
ASAM	ATP synthase subunit a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ATP synthase subunit a Also: ATP synthase F0 subunit 6, F-ATPase protein 6, mt-atp6, atp6, atpase6, mtatp6.	ECOTOX and http://www.uniprot.org/uniprot/Q9MIY5			
ASBM	ATP synthase subunit beta, mitochondrial mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ATP synthase subunit beta, mitochondrial. Also: ATPsyn-beta, ATP5B, ATP2.	ECOTOX and http://www.uniprot.org/uniprot/Q05825	166650	148223359	GenBank
CRNR	Atrial natriuretic peptide-converting enzyme mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Atrial natriuretic peptide-converting enzyme. Also: corin.	ECOTOX and http://www.uniprot.org/uniprot/Q80YN4	170801		

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
APHY	Autophagy	The segregation and degradation of damaged or unwanted cytoplasmic constituents by autophagic vacuoles (cytolysosomes) composed of lysosomes containing cellular components in the process of digestion. Autophagic cell death (also known as Type II programmed cell death to distinguish it from apoptosis or Type I programmed cell death) has been described as a distinct form of cell death that differs from other death mechanisms such as apoptosis and necrosis.	http://www.online-medical-dictionary.org/definitions-a/autophagy.html and http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2601595/	170832		
A4BM	Autophagy-specific gene 4b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Autophagy-specific gene 4b. Also: Atg4b, CG6194-RA, CG6194, Dmel_CG6194.	ECOTOX and http://www.uniprot.org/uniprot/Q9VF80	167678	AAF55180	GenBank
BA1M	B(0,+)-type amino acid transporter 1-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to B(0,+)-type amino acid transporter 1-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=409932			
B22M	Balbiani repeat gene 2.2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Balbiani repeat gene 2.2. Also: CrBR2.2.	ECOTOX			
BAXR	bax mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Bcl-2–associated X protein, or BAX	ECOTOX			
LL2M	B-cell lymphoma/leukemia 2-gene mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to B-cell lymphoma/leukemia 2-gene.	ECOTOX			

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BX1M	Bcl-XL-like protein 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Bcl-XL-like protein 1. Also:bcl2l1, bcl2l, Blp1, Bcl2l protein.	ECOTOX and http://www.uniprot.org/uniprot/Q90Z98			
BC2M	Bcl-2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Bcl-2.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/kc479077	166007	KC479077	GenBank
B23M	Bcl-2-binding component 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Bcl-2-binding component 3. Also: Bbc3, p53 up-regulated modulator of apoptosis, PUMA.	ECOTOX and http://www.uniprot.org/uniprot/Q99ML1	163146		
B1AM	Beta-1 adrenergic receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Beta-1 adrenergic receptor. Also: adrb1, Adrenoceptor beta 1, Beta-1 adrenoreceptor, Adrb1r.	ECOTOX and http://www.uniprot.org/uniprot/P18090	168060	NM_001128689	GenBank
BADF	beta-Actin cDNA fragments	cDNA is DNA that is synthesized from a messenger RNA template, the single-stranded form is often used as a probe in physical mapping to locate the gene or can be cloned in the double stranded form. In this case specific to the protein beta-actin.	http://cancerweb.ncl.ac.uk/omd/			
ACMR	beta-Actin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins. Beta-Actin is a muscle protein that is the chief constituent of the Z-band myofilaments of each sarcomere.				
BDFM	beta-Defensin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to beta-Defensin. Also: b-Defensin.	ECOTOX			

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BGLM	Beta-galactosidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Beta-galactosidase. Also: Lactase, Exo-(1->4)-beta-D-galactanase, beta-Lactosidase, Maxilact, Hydrolact, beta-D-lactosidase, S 2107, Lactozym, Trilactase, beta-D-galactanase, Oryzatym, Sumiklat, EC 3.2.1.23.	ECOTOX, http://www.genome.jp/dbget-bin/www_bget?ec:3.2.1.23, and http://enzyme.expasy.org/EC/3.2.1.23			
BGDM	beta-Glucuronidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to beta-Glucuronidase. Also: Gusb, EC 3.2.1.31.	ECOTOX and http://www.uniprot.org/uniprot/P12265			
HD2M	11-beta-Hydroxysteroid dehydrogenase type 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 11-beta-hydroxysteroid dehydrogenase type 2 (hsd11b2).	ECOTOX			
B2MM	beta-2 Microglobulin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to beta-2 Microglobulin.	ECOTOX and http://www.uniprot.org/uniprot/Q9DD37			
BVMR	beta vitelline envelope protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to beta vitelline envelope protein.	ECOTOX			
BHTR	betaine homocysteine S-methyltransferase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to betaine homocysteine S-methyltransferase mRNA	ECOTOX			
BGPM	Biogenesis protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to the Biogenesis protein. Also: sync_1495.	ECOTOX and http://www.uniprot.org/uniprot/Q0IA22	167909		

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
BM2M	Bone morphogenetic protein 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Bone morphogenetic protein 2. Also: bmp2, bmp-2, Bone morphogenetic protein 2A.	ECOTOX and http://www.uniprot.org/uniprot/P21274			
BM4M	Bone morphogenetic protein 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Bone morphogenetic protein 4. Also: bmp4, bmp-4, Bone morphogenetic protein 2B.	ECOTOX and http://www.uniprot.org/uniprot/P21275			
BM7M	Bone morphogenetic protein 7a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Bone morphogenetic protein 7a. Also: bmp7, bmp7a, fb83f09, wu:fb83f09.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=NM_131321 and http://www.uniprot.org/uniprot/Q9PTF9	170362	NM_131321	GenBank
BMLR	Brain and muscle ARTN-like protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Brain and muscle ARTN-like protein. Also: bmal, bmal1.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/KF956101	170524	KF956101	GenBank

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
BNFM	Brain-derived neurotrophic factor mRNA	Small basic protein purified from pig brain, a member of the family of neurotrophic factors that also includes Nerve Growth Factor and neurotrophin 3. In contrast to nerve growth factor, brain-derived neurotrophic factor is predominantly (though not exclusively) localized in the CNS. It supports the survival of primary sensory neurons originating from the neural crest and ectodermal placodes that are not responsive to NGF.In the brain brain-derived neurotrophic factor has a trophic action on retinal, cholinergic, and dopaminergic neurons, and in the peripheral nervous system it acts on both motor and sensory neurons. Messenger RNA	http://cancerweb.ncl.ac.uk/omd/			
BAI2	Brain-specific angiogenesis inhibitor 2 (BAI2) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Brain-specific angiogenesis inhibitor 2 (BAI2).	ECOTOX			
BAI3	Brain-specific angiogenesis inhibitor 3 (BAI3) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Brain-specific angiogenesis inhibitor 3 (BAI3).	ECOTOX			
BFAM	Brain-type fatty acid binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Brain-type fatty acid binding protein. Also: FABP7a, Brain-type fatty-acid binding protein, Fatty acid binding protein 7 brain a.	ECOTOX and http://www.uniprot.org/uniprot/Q9I8N9			
BFBM	Brain-type fatty acid-binding protein b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Brain-type fatty acid-binding protein b. Also: FABP7b, Fatty acid binding protein 7 brain b.	ECOTOX and http://www.uniprot.org/uniprot/Q6U1J7			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
CHKM	C-C Chemokine mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to C-C Chemokine.	ECOTOX	163146		
CTLR	C-Type Lysozyme mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to c-type lysozyme. Also: clyz, lysc.	ECOTOX http://www.uniprot.org/uniprot/B0LVZ3	172685		
C1DR	C1D nuclear receptor corepressor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to C1D nuclear receptor corepressor. Also: c1d, zgc:103509, nuclear nucleic acid-binding protein c1d.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/nm_001007059 and http://www.uniprot.org/uniprot/Q5XJ97	170323	NM_001007059	GenBank
CEFM	Ca2+ binding protein (EF-hand domain) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ca2+ binding protein (EF-hand domain)	ECOTOX			
CBP9	CaBP-9K mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CaBP-9K. (Calbindin-D9K)	ECOTOX			
CK1M	Ca2+/Calmodulin-dependent protein kinase 1-gamma splice 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ca2+/Calmodulin-dependent protein kinase 1-gamma splice 1 (Camk1g1)	ECOTOX			
CK2M	Ca2+/Calmodulin-dependent protein kinase 1-gamma splice 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ca2+/Calmodulin-dependent protein kinase 1-gamma splice 2 (Camk1g2)	ECOTOX			
C28M	Calbindin-D28K mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Calbindin-D28K. Also calbindin-28kD.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
CC2M	Calcium/calmodulin-dependent protein kinase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Calcium/calmodulin-dependent protein kinase 2. Also:CaMK2.	ECOTOX and http://www.uniprot.org/uniprot/B5AMP2			
CAMM	Calmodulin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Calmodulin. Also CaM.	ECOTOX and http://www.uniprot.org/uniprot/B5AS02			
CMTR	Calmodulin binding transcription activator 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Calmodulin binding transcription activator 2. Also: camta2, si:ch1073-98b4.2.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=100307072	170801		
CL1M	Calponin-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Calponin-1. Also: Calponin smooth muscle, calponin basic smooth muscle, Basic calponin.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/101688825 and http://www.uniprot.org/uniprot/P26932	163520		
CLRM	Calreticulin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Calreticulin. Also: Calr, CALBP, CRP55, Calcium-binding protein 3, CABP3, Calregulin, Endoplasmic reticulum resident protein 60, ERp60, HACBP.	ECOTOX and http://www.uniprot.org/uniprot/P18418	166557	AJ624756	GenBank
CSPM	cAMP-specific phosphodiesterase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cAMP-specific phosphodiesterase.	ECOTOX and http://www.ncbi.nlm.nih.gov/nucest/CO729450	171021	CO729450	GenBank
CRBM	cAMP response element binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cAMP response element binding protein. Also:creb.	ECOTOX and http://www.uniprot.org/uniprot/A7LCL2			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
CH2M	Carbonic anhydrase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Carbonic anhydrase 2. Also: CA2, Carbonate dehydratase II, Carbonic anhydrase C, Carbonic anhydrase II.	ECOTOX and http://www.uniprot.org/uniprot/P00918			
CI1M	Carboxylesterase clade I, member 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Carboxylesterase clade I, member 1. Also: CCE-I1.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=413247			
CXEM	Carboxylesterase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Carboxylesterase.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=726134			
CPTM	Carnitine O-palmitoyltransferase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Carnitine O-palmitoyltransferase. Also: Carnitine palmitoyltransferase-1, Carnitine palmitoyl transferase-1, Cpt1.	ECOTOX and http://www.uniprot.org/uniprot/Q8AYL4			
CY2M	Carnitine O-palmitoyltransferase 2, mitochondrial mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Carnitine O-palmitoyltransferase 2, mitochondrial. Also: Carnitine palmitoyltransferase II, CPT II, cpt2.	ECOTOX and http://www.uniprot.org/uniprot/Q5U3U3			
CPTR	Carnitine palmitoyltransferase 1a, liver mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Carnitine palmitoyltransferase 1a, liver. Also: cpt1a, cpti, cpt1.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/12894	171290	GmE100215i04260	GenBank
CN2M	Casein kinase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Casein kinase 2.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
CP3R	Caspase-3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Caspase-3 mRNA.	ECOTOX and http://www.uniprot.org/uniprot/Q1KZF6			
C3BM	Caspase 3B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Caspase 3B. Also: casp3b.	ECOTOX and http://www.uniprot.org/uniprot/Q0PKX2			
CP6M	Caspase 6 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Caspase 6.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/kc479074	166007	KC479074	GenBank
CP8M	Caspase 8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Caspase 8.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/kc479075	166007	KC479075	GenBank
CP9M	Caspase-9 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Caspase-9 (Cas9).	ECOTOX and http://www.uniprot.org/uniprot/I3XLC7			
CTLM	Catalase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Catalase.	ECOTOX			
CT1M	Catalase-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Catalase-1. Also: CAT1, Catalase 1.	ECOTOX and http://www.uniprot.org/uniprot/Q96528			
CT2M	Catalase-2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Catalase-2. Also: ctl-1, cat-2.	ECOTOX and http://www.uniprot.org/uniprot/O61235			
A22M	Cat eye syndrome chromosome region, candidate 1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cat eye syndrome chromosome region, candidate 1b. Also: cecr1b, Adenosine deaminase 2.2, ADA2.2.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/XM_682627.2			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
CBLM	Cathepsin b-like precursor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cathepsin b-like precursor.	ECOTOX			
CTBM	Cathepsin B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cathepsin B. Also: Cathepsin B1, RSG-2, EC 3.4.22.1.	ECOTOX and http://www.uniprot.org/uniprot/P00787			
CTDM	Cathepsin D mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cathepsin D. Also: ctsd.	ECOTOX and http://www.uniprot.org/uniprot/P24268	170513		
CPLM	Cathepsin L mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cathepsin L. Also: Cysteine proteinase 1, CathL, EC 3.4.22.15.	ECOTOX and http://www.uniprot.org/uniprot/Q95029			
CT4M	Caudal type homeobox 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Caudal type homeobox 4. Also: cdx4, caudal type homeo box transcription factor 4, cb546.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=NM_131109 and http://zfin.org/ZDB-GENE-980526-330	170520	NM_131109	GenBank
CVRM	Cavortin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cavortin.	ECOTOX and http://www.uniprot.org/uniprot/Q86FW9			
CEBM	CCAATT/Enhancer binding proteins mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CCAATT/Enhancer binding proteins.	ECOTOX			
CPAM	CCAAT/enhancer binding protein alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CCAAT/enhancer binding protein alpha. Also: CCAAT/enhancer binding protein (C/EBP), alpha.	ECOTOX and http://www.uniprot.org/uniprot/Q8UVZ1			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
CPBM	CCAAT/enhancer binding protein beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CCAAT/enhancer binding protein beta. Also: CCAAT/enhancer binding protein (C/EBP), beta.	ECOTOX and http://www.uniprot.org/uniprot/Q7ZU07			
CPDM	CCAAT/enhancer binding protein delta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CCAAT/enhancer binding protein delta. Also: CCAAT/enhancer binding protein (C/EBP), delta.	ECOTOX and http://www.uniprot.org/uniprot/Q00322			
CPGM	CCAAT/enhancer binding protein gamma mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CCAAT/enhancer binding protein gamma. Also: CCAAT/enhancer binding protein (C/EBP), gamma.	ECOTOX and http://www.uniprot.org/uniprot/Q8UVY8			
CARN	CD36 antigen mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CD36 antigen	ECOTOX			
CD1M	Cell differentiation protein RCD1 homolog mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cell differentiation protein RCD1 homolog. Also: rcd1, rqcd1.	ECOTOX and http://www.uniprot.org/uniprot/Q6NWL4			
C42M	Cell division control protein 42 homolog mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cell division control protein 42 homolog. Also: cdc42.	ECOTOX and http://www.uniprot.org/uniprot/Q05062			
CR1M	Cellular retinoic acid binding protein 1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cellular retinoic acid binding protein 1a. Also: crabp1a, crabp1, Cellular retinoic acid-binding protein, Crabp1a protein.	ECOTOX, http://www.uniprot.org/uniprot/Q7T0F4 and http://www.ncbi.nlm.nih.gov/gene/?term=nm_182858	166633	NM_182858	GenBank

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CR2R	Cellular retinoic acid binding protein 2, a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cellular retinoic acid binding protein 2, a. Also: Cellular retinoic acid binding protein type II, Crabp2a protein, crabp2a, cb432, cb434, crabp2.	ECOTOX, http://www.uniprot.org/uniprot/Q801Y4 and http://www.ncbi.nlm.nih.gov/gene/?term=NM_182859	166633	NM_182859	GenBank
CNTM	Centractin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Centractin. Also: ARP1, Actin-like protein, Actin-related protein 1, ACT3, ACT5.	ECOTOX and http://www.uniprot.org/uniprot/P38696			
CE1M	Centrin-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Centrin-1. Also: Centrin 1, Caltractin isoform 2.	ECOTOX and http://www.uniprot.org/uniprot/Q12798			
CE2M	Centrin-2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Centrin-2. Also: Centrin 2, Caltractin isoform 1.	ECOTOX and http://www.uniprot.org/uniprot/P41208			
CFSM	c-fos mRNA	Retrovirus-associated DNA sequences (fos) originally isolated from the Finkel-Biskis-Jinkins (FBJ-MSV) and Finkel-Biskis-Reilly (FBR-MSV) murine sarcoma viruses. The proto-oncogene protein c-fos codes for a nuclear protein which is involved in growth-related transcriptional control. The insertion of c-fos into FBJ-MSV or FBR-MSV induces osteogenic sarcomas in mice. The human c-fos gene is located at 14q21-31 on the long arm of chromosome 14.	http://cancerweb.ncl.ac.uk/omd/			
CGCM	CG1399, isoform C mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CG1399, isoform C.	ECOTOX and http://www.uniprot.org/uniprot/E1JGZ8			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
CG2M	cGMP-dependent protein kinase, isozyme 2 forms cD4/T1/T3A/T3B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cGMP-dependent protein kinase, isozyme 2 forms cD4/T1/T3A/T3B. Also: cGK, Foraging protein, for, DG2, PGK2, Pkg24A.	ECOTOX and http://www.uniprot.org/uniprot/Q03043	169087	FJ816699	GenBank
CGMR	CG30344 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CG30344. Also: CG8054, Dmel\CG30344, Multidrug efflux transporter.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene?Db=gene&Cmd=DetailsSearch&Term=246552			
CLSM	Chalcone synthase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Chalcone synthase. Also: Naringenin-chalcone synthase, Protein TRANSPARENT TESTA 4, CHS, TT4, 6'-Deoxychalcone synthase, Flavonone synthase, EC 2.3.1.74.	ECOTOX, http://enzyme.expasy.org/EC/2.3.1.74 and http://www.uniprot.org/uniprot/P13114	171790	At5g13930	GenBank
CCCM	Chain A, 2.0 A Crystal Structure Of The Cav1.2 Iq Domain-CaCAM COMPLEX mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Chain A, 2.0 A Crystal Structure Of The Cav1.2 Iq Domain-CaCAM COMPLEX.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/83754384	166650	83754384	GenBank
C34R	Chemokine (C-C motif) ligand 34a, duplicate 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Chemokine (C-C motif) ligand 34a, duplicate 4. Also: ccl34a.4, Si:ch211-122l24.4 protein.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=BC162421.1 and http://www.uniprot.org/uniprot/B3DGJ7	170393	BC162421.1	GenBank
CX1M	Chemokine CXCL-C1c mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Chemokine CXCL-C1c. Also: cxcl18b, cxcl-c1c, si:ch73-6k14.1.	ECOTOX and http://www.uniprot.org/uniprot/A9ZPF8	163146		

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
CHSM	Chitinase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Chitinase.	ECOTOX			
CT5M	Chitinase 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Chitinase 5. Also: Cht5, Class IV chitinase a, OsChia4a, Pathogenesis related (PR)-3 chitinase 5.	ECOTOX, http://www.uniprot.org/uniprot/Q7Y1Z0 and http://www.ncbi.nlm.nih.gov/gene/?term=551600			
CLBM	chlB mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to chlB.	ECOTOX			
CABM	Chlorophyll A-B binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Chlorophyll A-B binding protein. Also: F7H2.16 protein, Lhcb6 protein, Light harvesting complex photosystem II subunit 6, Putative chlorophyll binding protein.	ECOTOX and http://www.uniprot.org/uniprot/Q9LMQ2	171768		
CHLM	Chlorophyll Mutation/Albino Mutants	Mutation: a change in form, quality or some other characteristic; in genetics - a permanent transmissible change in the genetic material.				
CCKM	Cholecystokinin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cholecystokinin. Also: CCK8.	ECOTOX and http://www.uniprot.org/uniprot/O93464			
CKAR	Choline kinase alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Choline kinase alpha. Also: chka.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=nm_001044865	170520	NM_001044865	GenBank

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
CPCM	Choline-phosphate cytidylyltransferase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Choline-phosphate cytidylyltransferase. Also: CTP:phosphocholine cytidylyltransferase, Phosphorylcholine transferase, CTP, EC 2.7.7.15.	ECOTOX and http://www.uniprot.org/uniprot/P49587			
CHDF	Choriogenin H cDNA fragments	cDNA is DNA that is synthesized from a messenger RNA template, the single-stranded form is often used as a probe in physical mapping to locate the gene or can be cloned in the double stranded form. In this case specific to the protein Choriogenin H.	ECOTOX			
CHMR	Choriogenin H mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Choriogenin H.	ECOTOX and http://www.uniprot.org/uniprot/A3FK62			
CHMM	Choriogenin H minor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Choriogenin H minor. Also: chghm.	ECOTOX and http://www.uniprot.org/uniprot/D5MRY5			
CLDF	Choriogenin L cDNA fragments	cDNA is DNA that is synthesized from a messenger RNA template, the single-stranded form is often used as a probe in physical mapping to locate the gene or can be cloned in the double stranded form. In this case specific to the protein Choriogenin L.	ECOTOX			
CLMR	Choriogenin L mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Choriogenin L.	ECOTOX and http://www.uniprot.org/uniprot/Q8JI23			
CPMR	Chorion protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Chorion protein.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
CMTN	Chromatin	The nucleoprotein material of chromosomes. Chromatin is essentially the substance of chromosomes. It is made up of DNA attached to a protein structure, together with chromosomal RNA. Chromatin exists in two states, euchromatin and heterochromatin, with different staining and functional properties.	http://www.medterms.com/script/main/art.asp?articlekey=26409			
CH9R	Chromodomain helicase DNA binding protein 9 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Chromodomain helicase DNA binding protein 9. Also: chd9, wu:fb08b06, wu:fb34c12.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=572355[uid]	170801		
CABR	Chromosomal aberrations	Modification of the normal chromosome complement due to deletion, duplication, or rearrangement of genetic material.				
BRAK	Chromosomal breaks	Chromosome breakage - A type of chromosomal aberration which may result from spontaneous or induced breakage. Alkylating agents, various types of irradiation and chemical mutagens have been found to cause induced chromosomal breakage. Breakage can induce base pair translocations, deletions, or chromatid breakage**.**				
CGAP	Chromosomal gap	A localized area of thinning in a chromatid which may simulate a complete break.	Steadman's Medical Dictionary 2006, Lippincott Williams & Wilkins			
POLY	Chromosomal Polyploidy	The state or condition of having more than two complete sets of chromosomes.	Mosby's Medical Dictionary, 8th edition, 2009			

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CSMR	Citrate synthase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Citrate synthase. Also: Citrate (Si)-synthase, (R)-citrate synthase, Citrogenase, EC 2.3.3.1.	ECOTOX, http://www.uniprot.org/uniprot/Q7ZVY5 and http://enzyme.expasy.org/EC/2.3.3.1			
JTKM	c-Jun NH(2)-terminal kinase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to c-Jun NH(2)-terminal kinase. Also: JNK.	ECOTOX			
CLTM	Cla transcript mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cla transcript.	ECOTOX			
C1EM	Claudin 10e mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Claudin 10e. Also: cldn10e.	ECOTOX and http://www.uniprot.org/uniprot/Q6E5P5			
C30M	Claudin 30 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Claudin 30.	ECOTOX			
CLOM	CLOCK mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CLOCK.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/EU867504	170524	EU867504	GenBank
CIPR	CLOCK-interacting pacemaker mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CLOCK-interacting pacemaker. Also: cipc, kiaa1737.	ECOTOX and http://www.uniprot.org/uniprot/Q8R0W1	170801		
C5MR	clone CDA56-A07, 5'end mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to clone CDA56-A07, 5'end. Also: EST CD502323.	ECOTOX and http://www.ncbi.nlm.nih.gov/UniGene/seq.cgi?ORG=Gac&SID=24327545			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
CATM	Cocaine and amphetamine regulated transcript protein type I mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cocaine and amphetamine regulated transcript protein type I.	ECOTOX and http://www.uniprot.org/uniprot/Q8UVZ2			
CFAM	Cofilin-1A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cofilin-1A. Also: cofA, cof1, dcof1.	ECOTOX and http://www.uniprot.org/uniprot/P0DJ26	166650	148232082	GenBank
C21M	Collagen alpha-1(II) chain mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Collagen alpha-1(II) chain. Also: Alpha-1 type II collagen, Collagen type 2 alpha, col2a1.	ECOTOX and http://www.uniprot.org/uniprot/Q91717			
CG3M	Collagenase 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Collagenase 3. Also: MMP-13, MMP 13, Matrix metalloproteinase-13, EC3.4.24.-.	ECOTOX and http://www.uniprot.org/uniprot/Q10835			
CSFM	Colony stimulating factor 1, macrophage, mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Colony stimulating factor 1 (macrophage). Also: MCSF, CSF-1.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/1435			
GCS3	Colony stimulating factor 3. Granulocyte , mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Granulocyte Colony stimulating factor 3.	ECOTOX			
GMC2	Colony stimulating factor 2, Granulocyte-macrophage, mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Granulocyte-macrophage Colony stimulating factor 2.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
CDNA	Complementary DNA (cDNA)	cDNA. DNA that is synthesised from a messenger RNA template, the single-stranded form is often used as a probe in physical mapping to locate the gene or can be cloned in the double stranded form.	http://cancerweb.ncl.ac.uk/omd/			
CC3M	Complement C3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Complement C3. Also: Complement 3.	ECOTOX and http://www.uniprot.org/uniprot/P98093			
CC3R	Complement component c3a, duplicate 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Complement component c3a, duplicate 2 mRNA. Also: c3a.2, C3B, C3-1, C3-2.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=AF047414 and http://www.uniprot.org/uniprot/O73758	170393	AF047414	GenBank
CC7M	Complement component C7 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Complement component C7. Also: C7.	ECOTOX and http://www.uniprot.org/uniprot/P10643			
CC9M	Complement component C9 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Complement component C9. Also: c9, Complement component 9.	ECOTOX and http://www.uniprot.org/uniprot/P06682			
CUTR	Copper transporter I mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Copper transporter I. Also: Copper transporter 1, CTR type copper ion transporter, COPT1, CTR1, Transmembrane copper transporter CTR1, Copper transport protein CTR1, High affinity copper uptake protein 1, SLC31A1, Solute carrier family 31 member 1.	ECOTOX, http://www.uniprot.org/uniprot/P49573, http://www.uniprot.org/uniprot/Q4U0V9 and http://www.uniprot.org/uniprot/O15431)			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
CTAM	Copper-transporting ATPase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Copper-transporting ATPase 1. Also: atp7a, Menkes syndrome.	ECOTOX and http://www.genecards.org/cgi-bin/carddisp.pl?gene=ATP7A&search=atp7a			
C3OM	Coproporphyrinogen III oxidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Coproporphyrinogen III oxidase. Also: Cpx1, CPX1.	ECOTOX and http://www.uniprot.org/uniprot/Q9S7V1	166194	XM_001701677	GenBank
CAPM	Cortactin binding protein-like protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cortactin binding protein-like protein.	ECOTOX and http://www.uniprot.org/uniprot/Q56UE7	164140	AY577343	GenBank
CRMR	Corticotropin-releasing factor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to corticotropin-releasing factor	ECOTOX			
CFBM	Corticotropin-releasing factor-binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Corticotropin-releasing factor-binding protein. Also: Corticotropin-releasing hormone-binding protein, CRHBP, CRF-BP, CRF-binding protein, CRH-BP, crhbp.	ECOTOX and http://www.uniprot.org/uniprot/Q91653			
CRFA	Corticotropin releasing factor mRNA to Acidic ribosomal phosphoprotein P0 mRNA ratio	Ratio of Corticotropin releasing factor mRNA to Acidic ribosomal phosphoprotein P0 mRNA.	ECOTOX			

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CR2M	Corticotropin-releasing factor receptor 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Corticotropin-releasing factor receptor 2. Also: CRF-R-2, CRF-R2, CRFR-2, Corticotropin-releasing hormone receptor 2, CRH-R-2,CRH-R2, crhr2, crf2, CRHR2.	ECOTOX and http://www.uniprot.org/uniprot/O42603			
CX1R	Cox1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cox1. Also: Prostaglandin G/H synthase 1, Cyclooxygenase-1, Prostaglandin H2 synthase 1, PGH synthase 1, PGHS-1, PHS 1, Prostaglandin-endoperoxide synthase 1, PTGS1.	ECOTOX and http://www.uniprot.org/uniprot/P05979			
CX2R	COX2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to COX2. Also: Prostaglandin G/H synthase 2, Cyclooxygenase-2, COX-2, PHS II, Prostaglandin H2 synthase 2, PGH synthase 2, PGHS-2, Prostaglandin-endoperoxide synthase 2.	ECOTOX and http://www.uniprot.org/uniprot/P35355			
CRKM	Creatine kinase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Creatine kinase.	ECOTOX			
CHBM	CR/20beta-HSD B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CR/20beta-HSD B (Carbonyl reductase/20beta-hydroxysteroid dehydrogenase B).	ECOTOX			

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CY1R	Cryptochrome 1-like 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cryptochrome 1-like 1. Also: cry1.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/KF956103	170524	KF956103	GenBank
CY2R	Cryptochrome 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cryptochrome 2. Also: cry2.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/KF956107	170524	KF956107	GenBank
C2BM	Cryptochrome 2b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cryptochrome 2b. Also: CRY2b, zcry2b.	ECOTOX and http://www.uniprot.org/uniprot/Q9I914			
CC5M	Cryptochrome 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cryptochrome 5. Also: CRY5, 6-4 Photolyase, z64phr.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/NM_131788.1 and http://zfin.org/action/marker/view/ZDB-GENE-010426-8			
C1TM	CTRT1 transcript mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CTRT1 transcript.	ECOTOX			
CLLM	C-type Lectin like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to C-type Lectin like (CLECT).	ECOTOX			
C17R	Cuticular protein 17 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cuticular protein 17. Also: CPR17.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=724556			
C28R	Cuticular protein 28 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cuticular protein 28. Also: CPR28.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=412202			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
CNCM	Cyclic nucleotide-gated cation channel mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyclic nucleotide-gated cation channel. Also: tax-4, tax4, tax 4, Abnormal chemotaxis protein 4.	ECOTOX and http://www.uniprot.org/uniprot/Q03611	166810		
CBMR	Cyclin B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyclin B	ECOTOX			
CD1R	Cyclin D1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyclin D1. Also: ccnd1, cb161, cycd1, etID37810.7, fb52e01, fc45c08, fc83a12, id:ibd1198, wu:fb52e01, wu:fc45c08, wu:fc83a12.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/NM_131025	170323	NM_131025	Genbank
CG2R	Cyclin G2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyclin G2. Also: ccng2, cb438, zgc:77125, wu:fa08f07, wu:fk28c06, wu:fk91a03.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=Q6NZ31	156369		
CDKM	Cyclin-dependent kinase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyclin-dependent kinase 1.	ECOTOX and http://www.uniprot.org/uniprot/E3UP93			
CB1M	Cyclin-dependent kinase B1-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyclin-dependent kinase B1-1. Also:Cell division control protein 2 homolog B, CDKB1;1,CDKB1-1, CDC2B.	ECOTOX and http://www.uniprot.org/uniprot/P25859			
CB2M	Cyclin B2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyclin B2.	ECOTOX			

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COXM	Cyclooxygenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyclooxygenase (COX).	ECOTOX			
CYPM	Cyclophilin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyclophilin. Also: Also: Peptidylprolyl isomerase, Peptidyl-prolyl cis-trans isomerase, Peptidylprolyl cis-trans isomerase, PPIase, Rotamase, Peptidyl-prolyl cis-trans isomerase FKBP4, PPIase FKBP4, 52 kDa FK506-binding protein, 52 kDa FKBP, FKBP-52, 59 kDa immunophilin, p59, FK506-binding protein 4, FKBP-4, FKBP59, HSP-binding immunophilin, HBI, Immunophilin FKBP52, *Fkbp52,* EC 5.2.1.8.	ECOTOX, http://enzyme.expasy.org/EC/5.2.1.8 and http://www.uniprot.org/uniprot/Q9QVC8			
11BR	CYP11beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP11beta. Also: CYP11B1.	ECOTOX			
C19M	CYP19 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP19	ECOTOX			
C1A1	CYP19A1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP19A1. Also:, Aromatase, CYPXIX, Cytochrome P-450AROM, Cytochrome P450 19A1, Estrogen synthase, Arom, CYP19, Cytochrome P450 19A1a, cyp19a1a, EC 1.14.14.14.	ECOTOX, http://www.uniprot.org/uniprot/O42145 and http://www.uniprot.org/uniprot/P22443			

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C9A2	CYP19A2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP19A2. Also: Aromatse 2, CYPXIXA2, Cytochrome P450 19 Type II.	ECOTOX and http://www.uniprot.org/uniprot/P79430			
C9LM	CYP19a-luciferase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP19a-luciferase.	ECOTOX			
C92M	CYP9AT2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP9AT2.	ECOTOX and http://www.uniprot.org/uniprot/J9PI83			
C9BM	CYP19b-luciferase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP19b-luciferase.	ECOTOX			
CA1M	CYP1A1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyp1A1.				
CA3M	CYP1A3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyp1A3.				
CYRN	Cyp1b1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyp1b1	ECOTOX			
C11A	CYP11A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP11A.	ECOTOX			
C17M	CYP17 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP17.	ECOTOX			
17BM	CYP17B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP17B.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
C9AM	CYP19A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP19A.	ECOTOX			
C19B	CYP19b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP19b. Also: cytochrome P450, family 19, subfamily A, polypeptide 1b, cyp19a1b protein, cyp19a1b, P450aromB, zgc:92614.	ECOTOX, http://www.uniprot.org/uniprot/Q6DH75 and http://zfin.org/action/marker/view/ZDB-GENE-001103-4			
C212	CYP2B1/2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP2B1/2	ECOTOX			
CB10	Cyp2b10 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyp2b10	ECOTOX			
2E1R	CYP2E1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP2E1.	ECOTOX			
2KMR	Cyp2K mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyp2K.				
2K1R	CYP2K1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP2K1	ECOTOX			
2M1R	CYP2M1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP2E1	ECOTOX			
3A27	CYP3A27 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP3A27	ECOTOX			
57AM	CYP357A1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP357A1.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
336M	CYP336A1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP336A1.	ECOTOX and http://www.uniprot.org/uniprot/A0A140DJT3	172664		
58AM	CYP358A1i mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP358A1i.	ECOTOX			
4S1M	CYP4BS1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP4BS1.	ECOTOX			
4S2M	CYP4BS2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP4BS2.	ECOTOX			
4S3M	CYP4BS3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP4BS3.	ECOTOX			
4T1M	CYP4BT1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP4BT1.	ECOTOX			
4U1M	CYP4BU1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP4BU1.	ECOTOX			
4U2M	CYP4BU2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP4BU2.	ECOTOX			
4V1M	CYP4BV1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP4BV1.	ECOTOX			
G38M	CYP4G38 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP4G38.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
G39M	CYP4G39 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP4G39.	ECOTOX			
C4TM	CYP4T11 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP4T11.	ECOTOX			
6F1M	CYP6CF1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP6CF1.	ECOTOX			
6G1M	CYP6CG1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP6CG1.	ECOTOX			
6G2M	CYP6CG2i mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP6CG2i.	ECOTOX			
6G4M	CYP6CG4i mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP6CG4i.	ECOTOX			
6J1M	CYP6CJ1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP6CJ1.	ECOTOX			
C61R	Cysteine-rich, angiogenic inducer, 61 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cysteine-rich, angiogenic inducer, 61. Also: cyr61, cyr61-l2, zgc:158158, zcyr61-c8.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=nm_001080987 and http://zfin.org/ZDB-GENE-060404-5	169181	NM_001080987	GenBank
CFTM	Cystic Fibrosis Transmembrane Conductance Regulator mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cystic Fibrosis Transmembrane Conductance Regulator.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
CC1R	Cytochrome b-c1 complex subunit 1, mitochondrial mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome b-c1 complex subunit 1, mitochondrial. Also: Complex III subunit 1, Core protein I, Ubiquinol-cytochrome-c reductase complex core protein 1, Uqcrc1.	ECOTOX and http://www.uniprot.org/uniprot/Q9CZ13	166650	147902934	GenBank
CYBM	Cytochrome b, mitochondrial mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome b, mitochondrial. Also: mt-cyb, cytb.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/140512	172238	AJ388456	GenBank
CB5M	Cytochrome b5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cytochrome b5.	ECOTOX			
CO1R	Cytochrome c oxidase subunit 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome c oxidase subunit 1. Also, COI.	ECOTOX and http://www.uniprot.org/uniprot/A3DVC3	171802	HO056265	GenBank
CC4M	Cytochrome c oxidase subunit IV isoform 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome c oxidase subunit IV isoform 1. Also: coxI, cox4i1, mg:bb02d03, and agc:110058.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=BC095163, and http://www.uniprot.org/uniprot/Q4VBT9	172238	BC095163	GenBank
CVBM	Cytochrome c oxidase subunit Vb 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome c oxidase subunit Vb 2. Also: cox5b2.	ECOTOX and http://zfin.org/ZDB-GENE-060825-71	170518		

GEN	**Genetic Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
CC6M	Cytochrome c6, chloroplastic mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome c6, chloroplastic. Also: Cytochrome c6, petJ, Cytochrome c-552, Cytochrome c-553, Cytochrome c553, Soluble cytochrome f.	ECOTOX and http://www.uniprot.org/uniprot/P08197	166194	M67448	GenBank
CCOI	Cytochrome C oxidase chain I mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome C oxidase chain I. Also: Cytochrome c oxidase, cco-1, Cytochrome C oxidase chain 1, Cytochrome-c oxidase, Complex IV (mitochondrial electron transport), Cytochrome a3, Cytochrome aa3, Warburg's respiratory enzyme, EC 1.9.3.1.	ECOTOX, http://www.uniprot.org/uniprot/W8SI78 and http://enzyme.expasy.org/EC/1.9.3.1			
CO1M	Cytochrome c oxidase copper chaperone 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome c oxidase copper chaperone 1. Also: Cytochrome c oxidase-17, COX-17, Cytochrome c oxidase 17 copper chaperone, AtCOX17, COX17-1.	ECOTOX and http://www.uniprot.org/uniprot/Q9LJQ9			
CO2M	Cytochrome oxidase subunit II mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome oxidase subunit II.	ECOTOX			
COSM	Cytochrome oxidase subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome oxidase.	ECOTOX			
CPRN	Cytochrome P1A Messenger RNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyp1A.				

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
CA2M	Cytochrome P-450 1A2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P-450 1A2. Also: CYP1A2 mRNA	ECOTOX			
1A4M	Cytochrome P450 1A4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 1A4. Also: CYPIA4, CYP1A4, Cytochrome P450 TCDDAHH.	ECOTOX and http://www.uniprot.org/uniprot/P79760			
C2BR	Cytochrome P-450 2B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P-450 2B .	ECOTOX			
C2KM	Cytochrome P450 2K5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 2K5.	ECOTOX			
CYPR	Cytochrome P450 21A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 21A. Also: CYP21.	ECOTOX and http://www.uniprot.org/uniprot/W0GJ50	170535	KF742614	GenBank
26AM	Cytochrome P450 26A1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 26A1. Also: cyp26a1, cb24, CYP26, P450RAI, Cytochrome P450 subfamily XXVIA polypeptide 1.	ECOTOX, http://www.uniprot.org/uniprot/Q7SXV4 and http://www.ncbi.nlm.nih.gov/gene/?term=nm_1311466	166633	NM_131146	GenBank
P3AM	Cytochrome P450 3A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cytochrome P450 3A. Also: CYP3A, Cytochrome P3A, CYP3, cytochrome P450, subfamily IIIA (niphedipine oxidase), CYP3A43.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
3A1M	Cytochrome P450 301A1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 301A1. Also: CYP301A1.	ECOTOX and http://www.uniprot.org/uniprot/D2A102			
C4FM	Cytochrome P450 4F-similar mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 4F-similar. Also: cyp4f.	ECOTOX			
C4EM	Cytochrome P450 4e2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 4e2. Also: Cyp4e2, CYPIVE2.	ECOTOX and http://www.uniprot.org/uniprot/Q27606			
C4PM	Cytochrome P450 4p1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 4p1. Also: Cyp4p1, CYPIVP1.	ECOTOX and http://www.uniprot.org/uniprot/Q9V558			
C62M	Cytochrome P450 6a2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 6a2. Also: Cyp6a2, CYPVIA2, Cytochrome P450-B1, CYT-P450-B1.	ECOTOX and http://www.uniprot.org/uniprot/P33270			
C68M	Cytochrome P450 6a8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 6a8. Also: Cyp6a8, CYPVIA8.	ECOTOX and http://www.uniprot.org/uniprot/Q27593			
C6AM	Cytochrome P450 6AE12 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 6AE12 (CYP6AE12).	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
9E2M	Cytochrome P450 9e2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 9e2. Also: cytochrome P450 9AG1, CYP9AG1, cytochrome P450 9AG2, CYP9AG2.	ECOTOX, http://www.genome.jp/dbget-bin/www_bget?nvi:100124147 and http://www.ncbi.nlm.nih.gov/gene/100124146			
CAAM	Cytochrome P450 aromatase A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cytochrome P450 aromatase A	ECOTOX			
AMRN	Cytochrome P450 aromB mRNA	Cytochrome P450 aromatase messenger RNA. Part of an enzyme which converts androgens to oestrogens by desaturating ring a of the steroid. mRNA (messenger RNA) is the mediating template between DNA and proteins. P450arom is a major player in estrogen signaling. Also known as Cytochrome P450 aromatase mRNA and Estrogen sythetase mRNA				
CALM	Cytochrome P450 c17 alpha hydroxylase/17,20 lyase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cytochrome P450 c17 alpha hydroxylase/17,20 lyase	ECOTOX			
C3AM	Cytochrome P450, CYP3A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450, CYP3A. Also: Cytochrome P450, family 3, subfamily a, polypeptide 44, MCG115423, Protein Cyp3a44, cyp3a.	ECOTOX and http://www.uniprot.org/uniprot/Q9EQW4			
314M	Cytochrome P450 CYP314 family-like protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 CYP314 family-like protein. Also: CYP314.	ECOTOX and http://www.uniprot.org/uniprot/D3KSX2			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
CC1M	Cytochrome P450, family 1, subfamily C, polypeptide 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450, family 1, subfamily C, polypeptide 1. Also: CYP1C1.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/NM_001020610 and http://www.uniprot.org/uniprot/A0PJ31			
CP2M	Cytochrome P450, family 1, subfamily C, polypeptide 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450, family 1, subfamily C, polypeptide 2. Also: CYP1C2.	ECOTOX, http://www.uniprot.org/uniprot/B0JZN5 and http://www.ncbi.nlm.nih.gov/nuccore/NM_001114849			
CP1M	Cytochrome P450, family 2, subfamily AA, polypeptide 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450, family 2, subfamily AA, polypeptide 1. Also: cyp2aa1.	ECOTOX and http://zfin.org/ZDB-GENE-070424-33			
C22M	Cytochrome P450, family 2, subfamily AA, polypeptide 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450, family 2, subfamily AA, polypeptide 2. Also: cyp2aa2.	ECOTOX and http://zfin.org/ZDB-GENE-061027-232			
C65M	Cytochrome P450, family 3, subfamily A, polypeptide 65 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450, family 3, subfamily A, polypeptide 65. Also: cyp3a65.	ECOTOX and http://www.uniprot.org/uniprot/Q32LT1			
CF4M	Cytochrome P450 family 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 family 4. Also: CYP4.	ECOTOX and http://www.uniprot.org/uniprot/D3JTH3			
C4GM	Cytochrome p450 family 4 subfamily G mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome p450 family 4 subfamily G. Also: CYP4G.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/JN162670.1	170188		

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
C11M	Cytochrome P450, family 11, subfamily C, polypeptide 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450, family 11, subfamily C, polypeptide 1 Also: cyp11c1.	ECOTOX and http://zfin.org/action/marker/sequence/view/ZDB-GENE-070828-1			
C2MR	Cytochrome P4502N2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P4502N2	ECOTOX			
CKMR	cytokine mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cytokine.	ECOTOX			
CCAM	Cytoplasmic carbonic anydrase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytoplasmic carbonic anydrase. Also: CasCac.	ECOTOX and http://www.uniprot.org/uniprot/A3FFY1	156269	EF375490	GenBank
ST1M	Cytosolic sulfotransferase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytosolic sulfotransferase 1. Also: SULT1 ST1, ST1.	ECOTOX and http://www.uniprot.org/uniprot/Q6PH37			
DAMG	Damage	No definition available.				
DP3R	Death associated protein 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Death associated protein 3. Also: im:6905684, dap3.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=nm_001098737	170323	NM_001098737	GenBank
DF1M	Defensin 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Defensin 1. Also: Def1.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=406143			
DARM	Dehydroascorbate reductase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Dehydroascorbate reductase mRNA. Also:DHAR.	ECOTOX and http://www.uniprot.org/uniprot/C9E3F1			

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DTPR	Deoxyuridine triphosphatase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Deoxyuridine triphosphatase. Also: dut, dutp pyrophosphatase.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/NM_001006005 and http://www.uniprot.org/uniprot/Q5XJ23	170323	NM_001006005	GenBank
D3BM	Dihydropyrimidanase-related protein 3-B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Dihydropyrimidinase-related protein 3-B.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/148231542	166650	148231542	GenBank
DR3M	Dihydropyrimidinase-related protein 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Dihydropyrimidinase-related protein 3. Also: DRP3, Dihydropyrimidinase related protein 3, Dpysl3, DRP-3, Unc-33-like phosphoprotein 1, ULIP-1.	ECOTOX and http://www.uniprot.org/uniprot/Q62188	166650	3122041	GenBank
DMDM	Diphosphomevalonate decarboxylase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Diphosphomevalonate decarboxylase. Also: mvd, Mevalonate (diphospho)decarboxylase, MDDase, Mevalonate diphosphate decarboxylase, Mevalonate pyrophosphate decarboxylase, mevalonate (diphospho) decarboxylase a, mvda, EC 4.1.1.33.	ECOTOX, http://enzyme.expasy.org/EC/4.1.1.33, http://www.uniprot.org/uniprot/Q5U403 and http://www.ncbi.nlm.nih.gov/nuccore/NM_001007422.1	169182	NM_001007422.1	GenBank
DPLT	Diplotene	A stage of meiotic prophase which follows the pachytene and during which the paired homologous chromosomes begin to separate and chiasmata become visible.	Webster's			
DMRT	dmrt1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to dmrt1. Also: Doublesex and mab-3 related transcription factor 1.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/1761			

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D1AM	DMRT1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to DMRT1a (Doublesex-and mab-3-related transcription factor 1 a).	ECOTOX			
D1BM	DMRT1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to DMRT1b (Doublesex-and mab-3-related transcription factor 1 b).	ECOTOX			
DN3R	DNA (cytosine-5)-methyltransferase 3A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to DNA (cytosine-5)-methyltransferase 3A . Also: dnmt3a, and DNA methyltransferase 3A.	ECOTOX, http://www.uniprot.org/uniprot/O88508 and http://www.ncbi.nlm.nih.gov/gene/13435	171290	GmE090818r466	GenBank
DNAD	DNA Adducts	Adducts are damaged cellular machinery when compounds bind irreversibly with DNA, proteins or other cellular components.	www.vetmed.ucdavis.edu			
DNRM	DNA alkylation repair protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to DNA alkylation repair protein.	ECOTOX			
DNAB	DNA binding	DNA binding to chemical.	ECOTOX			
DNAC	DNA Concentration	No definition available.				
DNMT	DNA methylation	A process by which methyl groups are added to certain nucleotides in genomic DNA. This affects gene expression, as methylated DNA is not easily transcribed. The degree of methylation is passed on to daughter strands at mitosis by maintainence DNA methylases. Accordingly, DNA methylation is thought to play an important developmental role in sequentially restricting the transcribable genes available to distinct cell lineages.	http://www.biology-online.org/dictionary/Dna_methylation			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
DM1M	DNA (cytosine-5-)-methyltransferase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to DNA (cytosine-5-)-methyltransferase 1. Also: dnmt1.	ECOTOX and http://zfin.org/ZDB-GENE-990714-15			
DM3M	DNA (cytosine-5-)-methyltransferase 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to DNA (cytosine-5-)-methyltransferase 3. Also: dnmt3.	ECOTOX and http://zfin.org/ZDB-GENE-990712-11			
DM4M	DNA (cytosine-5-)-methyltransferase 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to DNA (cytosine-5-)-methyltransferase 4. Also: dnmt4.	ECOTOX and http://zfin.org/ZDB-GENE-050314-1			
DM5M	DNA (cytosine-5-)-methyltransferase 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to DNA (cytosine-5-)-methyltransferase 5. Also: dnmt5.	ECOTOX and http://zfin.org/ZDB-GENE-050314-2			
DM6M	DNA (cytosine-5-)-methyltransferase 3 alpha b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to DNA (cytosine-5-)-methyltransferase 3 alpha b. Also: dnmt3ab, DNA (cytosine-5-)-methyltransferase 6, dnmt6.	ECOTOX and http://zfin.org/ZDB-GENE-050314-3			
DM7M	DNA (cytosine-5-)-methyltransferase 3 beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific DNA (cytosine-5-)-methyltransferase 3 beta. Also: dnmt3b, DNA (cytosine-5-)-methyltransferase 7, dnmt7, dnmt3bl, dnmt7, cb91, fb16h07, sb:cb91, wu:fb16h07.	ECOTOX and http://zfin.org/ZDB-GENE-050314-4			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
DM8M	DNA (cytosine-5-)-methyltransferase 3 alpha a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to DNA (cytosine-5-)-methyltransferase 3 alpha a. Also: dnmt3aa, dnmt8, DNA (cytosine-5-)-methyltransferase 8.	ECOTOX and http://zfin.org/ZDB-GENE-050314-5			
D51M	DNA repair protein RAD51 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to DNA repair protein RAD51. Also: RAD51.	ECOTOX and http://www.uniprot.org/uniprot/Q99133			
R51M	DNA repair protein RAD51 homolog 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to DNA repair protein RAD51 homolog 1. Also: RAD51 homolog A, rad51a, reca.	ECOTOX and http://www.uniprot.org/uniprot/Q08297			
DNAS	DNA Synthesis Rate	The linking together of nucleotides (as deoxyribonucleotide triphosphates) to form DNA. In vivo, most synthesis is DNA replication, but incorporation of precursors also occurs in repair. In the special case of retroviruses, DNA synthesis is directed by an RNA template (see reverse transcriptase). H3 thymidine incorporation - Thymidine, an essential DNA building block can be radioactively labeled with H3 (tritium) and used to measure DNA synthesis as a reflection of cell division.				
DNPR	DNA to protein ratio	A ratio of DNA to protein.				
DNRN	DNA to RNA ratio	The ratio between DNA and RNA concentrations in a sample.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
DBHM	Dopamine beta-hydroxylase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Dopamine beta-hydroxylase. Also: Dopamine beta-monooxygenase.	ECOTOX and http://www.uniprot.org/uniprot/P15101			
D22M	Dopamine D2 receptor 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Dopamine D2 receptor 2. Also: Dopamine receptor 2a, D2R2.	ECOTOX, http://www.uniprot.org/uniprot/Q90WQ6 and http://www.ncbi.nlm.nih.gov/nuccore/NM_001124372.1	169754	NM_001124372.1	GenBank
DPTR	Dopamine Transporter Expression	The dopamine transporter or DAT is a monoamine transporter that is specific for clearing the neurotransmitter dopamine out of the synaptic cleft and into a glial cell or the presynaptic neuron.	http://en.wikipedia.org/wiki/Dopamine_transporter			
DTMR	Dopamine transporter mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Dopamine transporter	ECOTOX			
DCIM	Dynein, cytoplasmic 1, intermediate chain 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Dynein, cytoplasmic 1, intermediate chain 1. Also: dync1i1, sb:eu1013, zgc:158394.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/561525	170947	NM001079990	GenBank
D6AM	Dynein heavy chain 6, axonemal-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Dynein heavy chain 6, axonemal-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=411602			
E3UM	E3 ubiquitin-protein ligase	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to E3 ubiquitin-protein ligase. Also: Mdm2, Double minute 2 protein, p53-binding protein Mdm2.	ECOTOX and http://www.uniprot.org/uniprot/O42354	163146		

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
E74R	Ecdysone-induced protein 74EF mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ecdysone-induced protein 74EF. Also: Eip74EF, E74, GJ13098, vE74.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/6623774 and http://www.uniprot.org/uniprot/Q7M3M6			
ECRM	Ecdysone receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ecdysone receptor (EcR).	ECOTOX			
ERBM	Ecdysone receptor B isoform mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ecdysone receptor B isoform. Also: EcR-B.	ECOTOX and http://www.uniprot.org/uniprot/D1L3C3			
EGFR	egfr mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to epidermal growth factor receptor. Also known as Errp; ERBB1; ErbB-1	http://www.ncbi.nlm.nih.gov			
EG3R	Egl-9 family hypoxia-inducible factor 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Egl-9 family hypoxia-inducible factor 3 mRNA. Also: egln3, Egl nine homolog 3, zgc:77019, wu:fj78a08.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=NM_213310 and http://www.uniprot.org/uniprot/Q6NY85	170362	NM_213310	GenBank
ELVM	ELAV like neuron-specific RNA binding protein 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Embryonic lethal abnormal vision-like neuron-specific RNA binding protein 3. Also: HuC, elrc, zHuC, id:ibd1248, wu:fb77b03, elav-related C, elavC, embryonic lethal, abnormal vision-related C.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=NM_131449	170392	NM_131449	

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
EFAM	Elongation factor-1 alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Elongation factor-1 alpha. Also: EF-1-alpha, 42Sp50, and Thesaurin A.	ECOTOX			
E11M	Elongation factor 1-alpha 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Elongation factor 1-alpha 1. Also: Eukaryotic translation elongation factor 1 alpha 1, EF-1-alpha-1, Elongation factor Tu, EF-Tu, Eukaryotic elongation factor 1 A-1, eEF1A-1, Eef1a1, Eef1a, and EF1A.	ECOTOX and http://www.uniprot.org/uniprot/P10126	166557	AJ624922	GenBank
EFTM	Elongation factor Tu GTP binding domain containing 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Elongation factor Tu GTP binding domain containing 1. Also: Elongation factor-like 1, Protein FAM42A, EFTUD1, EFL1, FAM42A.	ECOTOX and http://www.uniprot.org/uniprot/Q7Z2Z2			
EPLM	Endoplasmin-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Endoplasmin-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=412150			
EF1M	Enhancer of filamentation 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Enhancer of filamentation 1. Also: mEF1, CRK-associated substrate-related protein, CAS-L, Neural precursor cell expressed developmentally down-regulated protein 9, NEDD-9, p105, Nedd9, Casl.	ECOTOX and http://www.uniprot.org/uniprot/O35177			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
EHMM	Enoyl-CoA hydratase, mitochondrial mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Enoyl-CoA hydratase, mitochondrial Also: Enoyl-CoA hydratase 1, Short-chain enoyl-CoA hydratase, SCEH, Echs1, Enoyl hydrase, Unsaturated acyl-CoA hydratase, EC 4.2.1.17.	ECOTOX, http://enzyme.expasy.org/EC/4.2.1.17 and http://www.uniprot.org/uniprot/P14604			
ETPM	Enteropeptidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Enteropeptidase. Also: Enterkinase.	ECOTOX and http://www.uniprot.org/uniprot/P98072			
E75M	E75 nuclear receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to E75 nuclear receptor. Also: E75.	ECOTOX and http://www.uniprot.org/uniprot/Q3I5Q8			
ETMR	Eotaxin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Eotaxin. Also: C-C motif chemokine 11, Eosinophil chemotactic protein, Small-inducible cytokine A11, Ccl11, Scya11.	ECOTOX and http://www.uniprot.org/uniprot/P48298			
ECCM	Epithelial calcium channel mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to epithelial calcium channel (ECaC).	ECOTOX			
EMRN	Estrogen mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins. Estrogen - Any of various natural or synthetic substances possessing the biological activity of estrus-producing hormones.				
EMRR	Estrogen receptor : Estrogen mRNA ratio	The ratio of estrogen receptor to estrogen receptor messenger RNA.	ECOTOX			

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ESRM	Estrogen receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Estrogen receptor.	ECOTOX			
ERAM	Estrogen receptor alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to estrogen receptor alpha. Also: Estrogen receptor 1, Nuclear receptor subfamily 3 group A member 1, esr1, nr3a1.	ECOTOX and http://www.uniprot.org/uniprot/P16058			
EA2M	Estrogen receptor alpha 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Estrogen receptor alpha 2. Also: ERalpha2, ERa2.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=dq177438	170556	DQ177438	GenBank
ERBR	Estrogen receptor beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to estrogen receptor beta	ECOTOX			
EB1M	Estrogen receptor beta1 protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Estrogen receptor beta1 protein. Also: estrogen receptor beta1, esr2b.	ECOTOX and http://www.uniprot.org/uniprot/Q90WS9			
EB2M	Estrogen receptor beta2 protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Estrogen receptor beta2 protein. Also: estrogen receptor beta2, esr2a	ECOTOX and http://www.uniprot.org/uniprot/Q90WS8			
ERGM	Estrogen receptor gamma mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Estrogen receptor gamma. Also: esr3, ER-gamma, Nuclear receptor subfamily 3 group A member 3.	ECOTOX and http://www.uniprot.org/uniprot/P57783	170535	JF907360	GenBank

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
ESRG	Estrogen receptor gene	The estrogen-activated receptor binds to its responsive element in the 5' flanking region of estrogen-responsive genes and modulates the transcription of these genes through its interactions with others transcription factors and the components if the transcription initiation complex.	ECOREF 60619			
ERRM	Estrogen receptor response element mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Estrogen receptor response element.	ECOTOX			
ESRR	Estrogen related receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Estrogen related receptor. Also: ERR.	ECOTOX and http://www.uniprot.org/uniprot/D1LUZ3	170801		
EIMR	Eukaryotic initiation factor 2B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Eukaryotic initiation factor 2B	ECOTOX			
EFMR	Eukaryotic initiation factor 4A1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Eukaryotic initiation factor 4A1 (EIF4A1).	ECOTOX			
EP1M	Eukaryotic peptide chain release factor subunit 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Eukaryotic peptide chain release factor subunit 1.	ECOTOX			
ETIR	Eukaryotic translation initiation factor 2 subunit 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Eukaryotic translation initiation factor 2 subunit 3 mRNA	ECOTOX			
ET3M	Eukaryotic translation initiation factor 3 subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Eukaryotic translation initiation factor 3 subunit.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
E42M	Eukaryotic translation initiation factor 4E-binding protein 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Eukaryotic translation initiation factor 4E-binding protein 2. Also: 4E-BP.	ECOTOX and http://www.uniprot.org/uniprot/F8RP76	168602	HQ010440	GenBank
EL5R	ELOVL fatty acid elongase 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ELOVL fatty acid elongase 5. Also: elovl5.	ECOTOX and http://zfin.org/ZDB-GENE-040407-2	171290	GmE100215i19804	GenBank
FTTM	Facilitated trehalose transporter Tret1-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Facilitated trehalose transporter Tret1-like.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=413575 and http://www.ncbi.nlm.nih.gov/gene/?term=412007			
FCBM	F-actin-capping protein subunit beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to F-actin-capping protein subunit beta. Also: Capzb, capping protein (actin filament) muscle Z-line beta, CapZ beta, Cappb1.	ECOTOX, http://www.ncbi.nlm.nih.gov/protein/148238173 and http://www.uniprot.org/uniprot/P47757	166650	148238173	GenBank
FGAM	Factor in the germline alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Factor in the germline alpha. Also: Figla, FIGalpha, Transcription factor FIGa.	ECOTOX and http://www.uniprot.org/uniprot/O55208			
FDOM	FAD-dependent oxidoreductase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to FAD-dependent oxidoreductase.	ECOTOX			
F12M	Family with sequence similarity 120C mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Family with sequence similarity 120C. Also: fam120c, si:dkey-206f21.2.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=557842	170801		

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
FAMR	Family with sequence similarity 213, member Aa mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Family with sequence similarity 213, member Aa. Also: fam213aa, fam213a, fc08d10, selU, and sepu.	ECOTOX and http://zfin.org/ZDB-GENE-030131-2459	171300		
FPSM	Farnesyl pyrophosphate synthase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Farnesyl pyrophosphate synthase. Also: Farnesyl diphosphate synthase, FPP synthase, (2E,6E)-farnesyl diphosphate synthase, Geranyltranstransferase, Farnesyl-diphosphate synthase, EC 2.5.1.10.	ECOTOX and http://www.uniprot.org/uniprot/P14324			
FU1M	Far upstream element-binding protein 1	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Far upstream element-binding protein 1. Also: FUSE binding protein 1, Fubp1, FBP.	ECOTOX and http://www.uniprot.org/uniprot/Q32PX7	166650	147906092	GenBank
FABM	Fatty acid binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid binding protein. Also: fabp.	ECOTOX and http://www.uniprot.org/uniprot/M1GM72			
F1AM	Fatty acid binding protein 1-A, liver mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid binding protein 1-A, liver. Also: FABP1a.	ECOTOX and http://www.uniprot.org/uniprot/Q1AMT3			
10FM	Fatty acid-binding protein 10-A, liver basic mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid-binding protein 10-A, liver basic. Also: FABP10a, Fatty acid-binding protein liver, Liver bile acid-binding protein, Liver-type fatty acid-binding protein, L-FABP.	ECOTOX and http://www.uniprot.org/uniprot/Q9I8L5			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
11AM	Fatty acid binding protein 11a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid binding protein 11a. Also: FABP11a, Fatty acid-binding protein H6-isoform.	ECOTOX and http://www.uniprot.org/uniprot/Q66I80			
10BM	Fatty acid-binding protein 10b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid-binding protein 10b. Also: FABP10b.	ECOTOX			
F1BM	Fatty acid binding protein 1-B.1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid binding protein 1-B.1. Also: FABP1b, Fatty acid binding protein 1b, fabp1b.1.	ECOTOX and http://www.uniprot.org/uniprot/Q4VBT1			
FARN	Fatty acid binding protein 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid binding protein 5	ECOTOX			
F11M	Fatty acid binding protein 11 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid binding protein 11.	ECOTOX			
FA6M	Fatty acid binding protein 6, ileal (Gastrotropin) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid binding protein 6, ileal (Gastrotropin). Also: FABP6.	ECOTOX and http://www.uniprot.org/uniprot/Q6IMW5			
FAMM	Fatty acid-binding protein, muscle mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid-binding protein, muscle. Also: M-FABP.	ECOTOX and http://www.uniprot.org/uniprot/P41496			
FA3M	Fatty acid binding protein 3, muscle and heart mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid binding protein 3, muscle and heart . Also: FABP3, Heart-type fatty-acid binding protein.	ECOTOX and http://www.uniprot.org/uniprot/Q8UVG7			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
FD1M	Fatty acid desaturase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid desaturase 1. Also: FADS1, Fatty Acid Delta-5-desaturase, Delta(5) fatty acid desaturase.	ECOTOX and http://www.uniprot.org/uniprot/Q920L1			
FD2M	Fatty acid desaturase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid desaturase 2. Also: Delta(6) fatty acid desaturase, Fatty Acid Delta-6-desaturase.	ECOTOX and http://www.uniprot.org/uniprot/Q9Z0R9			
FAEM	Fatty acid elongase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid elongase.	ECOTOX			
FASM	Fatty acid synthase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid synthase. Also: Fatty-acid synthase.	ECOTOX and http://www.uniprot.org/uniprot/P12276			
FNAM	Ferredoxin-nitrate reductase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ferredoxin-nitrate reductase. Also: narB.	ECOTOX and http://www.uniprot.org/uniprot/B0JGF2			
FNIM	Ferredoxin-nitrite reductase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ferredoxin-nitrite reductase. Also: nirA.	ECOTOX and http://www.uniprot.org/uniprot/B0JM77			
FRTM	Ferritin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ferritin.	ECOTOX and http://www.uniprot.org/uniprot/Q2PDG9			
FG8M	Fibroblast growth factor 8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fibroblast growth factor 8. Also: fgf8, Androgen-induced growth factor, Heparin-binding growth factor 8, AIGF.	ECOTOX and http://www.uniprot.org/uniprot/P55075			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
FLDM	Fibrinogen-like domain mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fibrinogen-like domain.	ECOTOX			
FR1M	Fibroblast growth factor receptor 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fibroblast growth factor receptor 1. Also: FGFR-1, Fgfr1, Flg, Basic fibroblast growth factor receptor 1, MFR, Proto-oncogene c-Fgr, CD_antigen: CD331.	ECOTOX and http://www.uniprot.org/uniprot/P16092	168257	JQ973864	GenBank
F18M	Fibroblast growth factor 18-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fibroblast growth factor 18-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=100577390			
FZ1M	Fizzy-related protein homolog mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fizzy-related protein homolog. Also: FZR1, Fizzy-related protein 1, Cdh1/Hct1 homolog, Fyr, Fzr.	ECOTOX, http://www.ncbi.nlm.nih.gov/nucest/aw173921 and http://www.uniprot.org/uniprot/Q5Q9A8	169185	AW173921	GenBank
FKPM	FK506-binding protein 15 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to FK506-binding protein 15. Also: 133 kDa FK506-binding protein.	ECOTOX and http://www.uniprot.org/uniprot/Q6P9Q6			
F1CM	Flotillin 1c mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Flotillin 1c. Also: Flot1c, Flot1c protein, Flot1.	ECOTOX and http://www.uniprot.org/uniprot/Q8AWZ4	166650	147902024	GenBank
FSMR	Follicle stimulating hormone beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to follicle stimulating hormone. Also: Follitropin subunit beta, Follicle stimulating hormone beta subunit, FSHB, FSH-B, FHS-beta, Follitropin beta chain.	ECOTOX and http://www.uniprot.org/uniprot/P01228			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
FSRM	Follicle-stimulating hormone receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Follicle-stimulating hormone receptor.	ECOTOX			
FLSM	Follistatin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Follistatin.	ECOTOX			
FD3M	FoxD3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to FoxD3.	ECOTOX			
FX2M	Foxl2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Foxl2 (Forkhead transcription factor gene 2).	ECOTOX			
FRS1	Fraser extracellular matrix complex subunit 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fraser extracellular matrix complex subunit 1. Also: fras1, pif, id:ibd5080, wu:fc10b09.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/563428	170801		
FZZM	Frizzled cysteine rich domain region mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Frizzled cysteine rich domain region.	ECOTOX			
FBMR	Fructose-bisphosphatase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fructose-bisphosphatase.	ECOTOX			
FBAM	Fructose-bisphosphate aldolase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fructose-bisphosphate aldolase. Also: Aldolase C.	ECOTOX and http://www.uniprot.org/uniprot/Q92007	166650	148226082	GenBank

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
FBCM	Fructose-bisphosphate aldolase C-B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fructose-bisphosphate aldolase C-B. Also: Brain-type aldolase-B, aldocb.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=nm_001044865	170520	NM_194384	GenBank
FB1M	Fructose-1,6-bisphosphatase 1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fructose-1,6-bisphosphatase 1a. Also: fbp1a, fbp1, fbp11, fk92h02, wu:fk92h02, zgc:64096.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/NM_199942.1 and http://www.uniprot.org/uniprot/Q6PFT1	169101		
FAAM	Fumarylacetoacetase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fumarylacetoacetase. Also: FAA, Fah, Beta-diketonase, Fumarylacetoacetate hydrolase, EC 3.7.1.2.	ECOTOX and http://www.uniprot.org/uniprot/P35505			
FP1M	Furin-like protease 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Furin-like protease 1. Also: Fur1.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=725466			
FRBR	FUS RNA binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to FUS RNA binding protein. Also: fus, zgc:56390.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/nm_201083	170323	NM_201083	GenBank
GTLM	G-Type Lysozyme mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to g-type lysozyme. Also: glyz, lysg.	ECOTOX and http://www.uniprot.org/uniprot/B1B725	172685		
G1PN	G1 Phase Nuclei	No definition available.				
G6MR	G6A11 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to G6A11	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
GBRM	GABAa Receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to GABAa receptor-associated protein 2.	ECOTOX and http://www.uniprot.org/uniprot/B6GVL8			
GD67	GAD67 (glutamate decarbosylase) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to GAD67 (glutamate decarbosylase).	ECOTOX			
AR1M	gamma-Aminobutyric acid receptor subunit rho-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gamma-aminobutyric acid receptor subunit rho-1. Also: gamma-Aminobutryic acid (GABA) receptor rho 1, Gabrr1, GABA(A) receptor subunit rho-1, GABA(C) receptor.	ECOTOX and http://www.uniprot.org/uniprot/P56475			
GGSM	Gamma glutamylcysteine synthetase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gamma glutamylcysteine synthetase.	ECOTOX			
GVMR	gamma vitelline envelope protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to gamma vitelline envelope protein	ECOTOX			
G2AM	Ganglioside GM2 activator mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ganglioside GM2 activator. Also: GM2-Activator protein, Cerebroside sulfate activator protein, GM2-AP, Shingolipid activator protein 3.	ECOTOX and http://www.uniprot.org/uniprot/Q60648			
GJ1M	Gap junction alpha-1 protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gap junction alpha-1 protein. Also: gja1, Connexin-43, Cx43, Short fin protein, shf, sof.	ECOTOX and http://www.uniprot.org/uniprot/O57474			

GEN	**Genetic Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
GP1M	GDP-L-galactose phosphorylase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to GDP-L-galactose phosphorylase 1. Also: Protein Vitamin C Defective 2, VTC2, EC 2.7.7.69.	ECOTOX and http://www.uniprot.org/uniprot/Q8RWE8			
GEXP	Gene Expression	Gene Expression: The conversion of the information from the gene into mRNA via transcription and then to protein via translation resulting in the phenotypic manifestation of the gene.	http://www.biology-online.org/dictionary/Gene_Expression			
GGEN	Genetics, General	Changes in the genetic processes of cell (e.g. RNA, DNA).				
GTPF	Genotype Frequencies	No definition available.				
GL2R	GLI family zinc finger 2a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to GLI family zinc finger 2a. Also: gli2, etID12892.9, gli2a.	ECOTOX and http://zfin.org/ZDB-GENE-990706-8	171280		
GFAM	Glial fibrillary acidic protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glial fibrillary acidic protein mRNA. Also: cb345, gfapl, wu:fb34h11, wu:fk42c12, zgc:110485, etID36982.3, xx:af506734, zrf-1 antigen.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=nm_131373	170392	NM_131373	
GNRM	Global nitrogen regulator Ycf28 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Global nitrogen regulator Ycf28. Also:ntcA.	ECOTOX and http://www.uniprot.org/uniprot/B0JRG0			

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
GCRR	Glucocorticoid receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glucocorticoid receptor. Also: fb13f09, gr, utouto, utut, zgc:113038, nuclear receptor subfamily 3, group c, member 1, nr3c1.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene?cmd=retrieve&list_uids=553740	170323	Ef567112	GenBank
GCKM	Glucokinase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glucokinase. Also: Hexokinase type IV, Hexokinase-4, Hexokinase-D, EC 2.7.1.2.	ECOTOX and http://www.uniprot.org/uniprot/P35557			
GY2M	Glucose dehydrogenase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glucose dehydrogenase 2.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=551044			
G6PM	Glucose-6-phosphate 1-dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glucose-6-phosphate 1-dehydrogenase. Also: G6PD, g6pd, Glucose-6-phosphate dehydrogenase (NADP(+)), G6PDH, Glucose-6-phosphate dehydrogenase, EC 1.1.1.49.	ECOTOX, http://enzyme.expasy.org/EC/1.1.1.49 and http://www.uniprot.org/uniprot/P54996			
GLT1	Glucose transporter 1 mRNA	Glucose transporter 1 mediates glucose transport into red cells, and throughout the blood brain barrier. It is ubiquitously expressed and transport glucose in most cells. Messenger RNA.	http://www.4adi.com/flr/glutsflr.html			
GLT3	Glucose transporter 3 mRNA	Glucose transporter 3 is the main transporter in neurons. Messenger RNA.	http://www.4adi.com/flr/glutsflr.html			
GSPM	Glucosinolate sulphatase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glucosinolate sulphatase.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=551758			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
GCLM	Glutamate cysteine-ligase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutamate cysteine-ligase.	ECOTOX			
GCCM	Glutamate--cysteine ligase catalytic subunit-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutamate--cysteine ligase catalytic subunit-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=XM_002126507.3	160508	XM_002126507	GenBank
G65M	Glutamate decarboxylase 65 kDa isoform mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutamate decarboxylase 65 kDa isoform mRNA	ECOTOX			
G67M	Glutamate decarboxylase 67 kDa isoform mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to glutamate decarboxylase 67 kDa isoform	ECOTOX			
GORN	Glutamate oxaloacetate transaminase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to glutamate oxaloacetate transaminase 1	ECOTOX			
GK2M	Glutamate receptor, ionotropic, kainate 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutamate receptor, ionotropic, kainate 2. Also: GRIK2.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=408645			
GN2R	Glutamate receptor, ionotropic, N-methyl D-aspartate 2C mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutamate receptor, ionotropic, N-methyl D-aspartate 2C. Also: Grin2c, NR2c, GluN2C.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/24411 and http://www.uniprot.org/uniprot/Q00961	170324	NM_012575	GenBank
GS2M	Glutamine synthetase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutamine synthetase 2. Also:glulb.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/np_878286.1			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
GC4R	Glutaredoxin-C4, chloroplastic mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutaredoxin-C4, chloroplastic. Also: grxc4, glutaredoxin-c2 homolog 2.	ECOTOX and http://www.uniprot.org/uniprot/Q6K953	170368		
GPMR	Glutathione Peroxidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione Peroxidase.	ECOTOX			
GX1M	Glutathione peroxidase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione peroxidase 1. Also: Glutathione peroxidase 1. Also: GPX1, GPx-1, GSHPx-1, Cellular glutathione peroxidase, Selenium-dependent glutathione peroxidase 1, PHGPX1.	ECOTOX and http://www.uniprot.org/uniprot/P11352	168529	DW566563	GenBank
G1AR	Glutathione peroxidase 1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione peroxidase 1a. Also: Gpx1a protein, gpx1a.	ECOTOX and http://www.uniprot.org/uniprot/Q5XJ48	168602	JF411605	GenBank
G1BR	Glutathione peroxidase 1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione peroxidase 1b. Also: gpx1b, Gpx1b protein.	ECOTOX and http://www.uniprot.org/uniprot/Q66IE1	168602	JF411606	GenBank
GX2M	Glutathione peroxidase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione peroxidase 2. Also: GPX2, GPx-2.	ECOTOX and http://ciliate.org/index.php/feature/details/TTHERM_00895660	172755		
GX3M	Glutathione peroxidase 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione peroxidase 3. Also: Gpx3, GPx-3, GSHPx-3, Plasma glutathione peroxidase, GPx-P, GSHPx-P.	ECOTOX and http://www.uniprot.org/uniprot/P46412			

GEN	**Genetic Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
GX4M	Glutathione peroxidase 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione peroxidase 4. Also: Gpx4, Phospholipid hydroperoxide glutathione peroxidase nuclear, GPx-4, GSHPx-4.	ECOTOX and http://www.uniprot.org/uniprot/Q91XR8			
G4AM	Glutathione peroxidase 4a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione peroxidase 4a. Also: gpx4a, cb563, cb691, and phgpxa.	ECOTOX and http://zfin.org/ZDB-GENE-030410-2	171300		
GP4M	Glutathione peroxidase 4b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione peroxidase 4b. Also: gpx4b, cb692, and phgpxb.	ECOTOX and http://zfin.org/ZDB-GENE-030410-3	171290	EX721840	GenBank
GX5M	Glutathione peroxidase 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione peroxidase 5. Also: Gpx5, GPXH, Epididymal secretory glutathione peroxidase, Epididymis-specific glutathione peroxidase-like protein, EGLP, GPx-5, GSHPx-5, Major androgen-regulated protein, arMEP24.	ECOTOX and http://www.uniprot.org/uniprot/P21765			
GX7M	Glutathione peroxidase 7 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione peroxidase 7. Also: GPX7, GPx-7.	ECOTOX and http://ciliate.org/index.php/feature/details/TTHERM_00046110	172755		
X10M	Glutathione peroxidase 10 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione peroxidase 7. Also: GPX10, GPx-10.	ECOTOX and http://ciliate.org/index.php/feature/details/GPX10	172755		

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
G1LM	Glutathione peroxidase-like 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione peroxidase-like 1.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=494523			
G2LM	Glutathione peroxidase-like 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione peroxidase-like 2.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=726269			
GLRR	Glutathione reductase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione reductase. Also: GSR.	ECOTOX			
RNGT	Glutathione S-transferase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase.	ECOTOX			
GS4R	Glutathione S-transferase 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase 4. Also: CeGST1, GST class-sigma, gst-4.	ECOTOX and http://www.uniprot.org/uniprot/Q21355			
GTAM	Glutathione S-transferase alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase alpha.	ECOTOX			
GA1M	Glutathione S-transferase alpha-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase alpha-1. Also: GST 1-1, GST 1a-1a, GST A1-1, GST B, Glutathione S-transferase Ya-1, Gsta1.	ECOTOX and http://www.uniprot.org/uniprot/P00502			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
GD1M	Glutathione S-transferase delta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase delta. Also: Glutathione S-transferase delta 1, GSTD1.	ECOTOX and http://www.uniprot.org/uniprot/E7BTM5			
GD2M	Glutathione S-transferase D2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase D2. Also: Glutathione S-transferase delta 2, GstD2, gstD21.	ECOTOX and http://www.uniprot.org/uniprot/Q9VG98			
GD3M	Glutathione S-transferase D3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase D3. Also: Glutathione S-transferase delta 3, GstD3, gstD22.	ECOTOX and http://www.uniprot.org/uniprot/Q9VG97			
GD5M	Glutathione S-transferase D5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase D5. Also: GstD5, DmGST24, gstD24.	ECOTOX and http://www.uniprot.org/uniprot/Q9VG95			
GE1M	Glutathione S-transferase E1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase E1. Also: Glutathione S-transferase epsilon 1, GSTe1.	ECOTOX and http://www.uniprot.org/uniprot/Q8WQM1			
GE2M	Glutathione S-transferase epsilon 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase epsilon 2.	ECOTOX			
GTKM	Glutathione S-transferase kappa mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase kappa.	ECOTOX and http://www.uniprot.org/uniprot/G4W8Z2			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
GTMM	Glutathione S-transferase mu mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase mu.	ECOTOX			
GM5M	Glutathione S-transferase Mu 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase Mu 5. Also: Gstm5, Fibrous sheath component 2, GST class-mu 5, Fsc2, Gstm3.	ECOTOX and http://www.uniprot.org/uniprot/P48774	166007	EU747061	GenBank
GSTM	Glutathione S-transferase mu 9 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase mu 9. Also: GSTm9.	ECOTOX and http://ciliate.org/index.php/feature/details/GST9	172755		
GTOR	Glutathione S-transferase omega mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase omega.	ECOTOX and http://www.uniprot.org/uniprot/B3VHS2	166007	EU747055	GenBank
GTOM	Glutathione S-transferase omega-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase omega-1. Also: Glutathione transferase omega-1, GSTO1.	ECOTOX and http://www.uniprot.org/uniprot/Q9N1F5			
GOMM	Glutathione S-transferase omega class mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase omega class.	ECOTOX and http://www.uniprot.org/uniprot/Q7VCF4			
G10R	Glutathione S-transferase P 10 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase P 10. Also: GST 5.4, GST class-pi, GSTP2-2, gst-10.	ECOTOX and http://www.uniprot.org/uniprot/Q9N4X8			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
GTPM	Glutathione S-transferase pi mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase pi. Also: gstpi, Glutathione S-transferase P, GSTP1, Chain 7, GST 7-7, GST class-pi.	ECOTOX and http://www.uniprot.org/uniprot/P04906	168528	BQ036247	GenBank
GTRM	Glutathione S-transferase rho mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase rho.	ECOTOX and http://www.uniprot.org/uniprot/Q0GZP3			
GSSM	Glutathione S-transferase sigma class mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase sigma class.	ECOTOX and http://www.uniprot.org/uniprot/B2BR08			
GS1M	Glutathione S-transferase S1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase S1. Also: GST class-sigma 1, Glutathione S-transferase sigma 1, Glutathione S-transferase 2 , GstS1, GST2.	ECOTOX and http://www.uniprot.org/uniprot/P41043			
G2SM	Glutathione S-transferase S2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase S2. Also: Glutathione S-transferase sigma 2, GSTs2.	ECOTOX and http://www.uniprot.org/uniprot/F6KX43			
GS3M	Glutathione S-transferase S3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase S3. Also: Glutathione S-transferase sigma 3, GSTs3.	ECOTOX and http://www.uniprot.org/uniprot/F6KX44			
GS4M	Glutathione S-transferase S4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase S4. Also: Glutathione S-transferase sigma 4. GSTs4.	ECOTOX and http://www.uniprot.org/uniprot/H6CSZ2			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
GTTM	Glutathione S-transferase theta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase theta.	ECOTOX			
GT1M	Glutathione S-transferase theta-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase theta-1. Also: GST 5-5, GST class-theta-1, Glutathione S-transferase 5, GSTt1.	ECOTOX and http://www.uniprot.org/uniprot/Q01579			
GTBM	Glutathione S-transferase theta 1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase theta 1b. Also: gstt1b.	ECOTOX and http://www.uniprot.org/uniprot/Q6PH41			
GSZM	Glutathione S-transferase zeta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase zeta. Also: GST zeta.	ECOTOX and http://www.uniprot.org/uniprot/E6Y352			
GZ1M	Glutathione S-transferase Z1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase Z1. Also: GST class-zeta member 1, Glutathione S-transferase 18, Maleylacetone isomerase, GSTZ1, GST18.	ECOTOX and http://www.uniprot.org/uniprot/Q9ZVQ3			
GZTM	Glutathione S-transferase zeta 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase zeta 2. Also: GSTZ2, GST class-zeta member 2.	ECOTOX and http://www.uniprot.org/uniprot/Q9ZVQ4	172755		
GSMR	Glutathione synthetase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione synthetase.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
GSLM	Glutathione synthetase-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione synthetase-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=XM_002125287.1	160508	XM_002125287	GenBank
GPHM	Glyceraldehyde 3-phosphate dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glyceraldehyde 3-phosphate dehydrogenase. Also: GAPDH mRNA.	ECOTOX			
G32M	Glyceraldehyde 3-phosphate dehydrogenase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glyceraldehyde 3-phosphate dehydrogenase 2 mRNA. Also: cb350, g3pdh, gapdhs, gapds, fb71f08, fk58c09, gapdh-2, zgc:76908, wu:fb71f08, wu:fk58c09.	ECOTOX, http://www.uniprot.org/uniprot/Q5MJ86 and http://www.ncbi.nlm.nih.gov/gene/?term=NM_213094	170362	NM_213094	GenBank
G3AR	Glycerol-3-phosphate acyltransferase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glycerol-3-phosphate acyltransferase 1. Also: gpat1, gpam.	ECOTOX and http://www.uniprot.org/uniprot/Q615862	173197		
GNMM	Glycine N-methyltransferase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glycine N-methyltransferase. Also: Folate-binding protein, Gnmt, EC 2.1.1.20.	ECOTOX and http://www.uniprot.org/uniprot/P13255	166328	NM_212816.1	GenBank
GL1M	Glycogenin-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glycogenin-1. Also: GYG1.	ECOTOX and http://www.uniprot.org/uniprot/P46976			
GPPM	Glycogen phosphorylase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glycogen phosphorylase.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
GHAM	Glycoprotein hormone alpha subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glycoprotein hormone alpha subunit.	ECOTOX			
GCAM	Glycosyl-phosphatidylinositol-linked carbonic anhydrase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glycosyl-phosphatidylinositol-linked carbonic anhydrase. Also: CasCag.	ECOTOX and http://www.uniprot.org/uniprot/A3FFY2	156269	EF375491	GenBank
GO3M	GMC oxidoreductase 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to GMC oxidoreductase 3. Also: GMCOX3.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=410747			
GL2M	Gonadoliberin-2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Also: GnRH2, Gonadoliberin II, Gonadotropin-releasing hormone II, Gonadotropin-releasing hormone 2, GnRH-II, Luliberin II, Luteinizing hormone-releasing hormone II, Luteinizing hormone-releasing hormone 2, LH-RH II.	ECOTOX and http://www.uniprot.org/uniprot/P68075			
GL3M	Gonadoliberin-3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gonadoliberin-3. Also: GnRH3, Gonadoliberin III, Gonadotropin-releasing hormone III, Gonadotropin-releasing hormone 3, GnRH-II, Luliberin III, Luteinizing hormone-releasing hormone III, Luteinizing hormone-releasing hormone 3, LH-RH III.	ECOTOX and http://www.uniprot.org/uniprot/P69105			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
GRHR	gonadotrophin releasing hormone (GnRH) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to gonadotrophin releasing hormone (GnRH).	ECOTOX			
GNRR	gonadotrophin releasing hormone (GnRH) receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to gonadotrophin releasing hormone (GnRH) receptor.	ECOTOX			
GR1M	Gonadotropin-releasing hormone receptor-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gonadotropin-releasing hormone receptor-1. Also: GnRHR1.	ECOTOX and http://www.uniprot.org/uniprot/B9P4N3			
G1AM	Gonadotropin-releasing hormone receptor 1 type A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gonadotropin-releasing hormone receptor 1 type A. Also: GnRHR1A.	ECOTOX and http://www.uniprot.org/uniprot/I2B312	164893	AFJ44818	GenBank
G1BM	Gonadotropin-releasing hormone receptor 1 type B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gonadotropin-releasing hormone receptor 1 type B. Also: GnRHR1B.	ECOTOX and http://www.uniprot.org/uniprot/I2B311	164893	AFJ44817	GenBank
GR2M	Gonadotropin-releasing hormone II receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gonadotropin-releasing hormone II receptor. Also: GnRHR2, Gonadotropin-releasing hormone 2 receptor, Type II GnRH receptor.	ECOTOX and http://www.uniprot.org/uniprot/Q95MG6			
GR3M	Gonadotrophin-releasing hormone receptor 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gonadotropin-releasing hormone receptor-3. Also: gnrhr3.	ECOTOX and http://www.uniprot.org/uniprot/B9P4N5			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
GR4M	Gonadotropin-releasing hormone receptor-4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gonadotropin-releasing hormone receptor-4. Also: GnRHR4.	ECOTOX and http://www.uniprot.org/uniprot/B9P4N6			
GASR	Gonadotropin alpha subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gonadotropin alpha subunit.	ECOTOX			
GBPR	Gonadotropin beta-like protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gonadotropin beta-like protein.	ECOTOX			
GOMR	goosecoid mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to goosecoid.	ECOTOX			
GPAR	G protein alpha subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to G protein alpha subunit mRNA.	http://www.uniprot.org/uniprot/M9P1E6 and http://www.ncbi.nlm.nih.gov/nuccore/JQ914104	170397	JQ914104	GenBank
G27M	G protein-coupled receptor 27 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to G protein-coupled receptor 27. Also: Gpr27 protein, Gpr27.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/NM_001114434.1 and http://www.uniprot.org/uniprot/A9JRY2			
GZBR	Granzyme B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Granzyme B.	ECOTOX			
GFPM	Green fluorescent protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Green fluorescent protein. Also: GFP.	ECOTOX and http://www.uniprot.org/uniprot/P42212			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
GO1M	Green-sensitive opsin-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Green-sensitive opsin-1. Also: Opsin 1 (cone pigments) medium-wave-sensitive 1, opn1mw1, RH2-1, rh21, zfgr1, grops1, Green cone photoreceptor pigment 1, Opsin RH2-1, Opsin-1 medium-wave-sensitive 1.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=NM_131253 and http://www.uniprot.org/uniprot/Q9W6A5	166633	NM_131253	GenBank
GDRN	Growth arrest and DNA-damage-inducible 45 beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Growth arrest and DNA-damage-inducible 45 beta	ECOTOX			
GDAM	Growth arrest and DNA damage-inducible protein alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Growth arrest and DNA damage-inducible protein alpha. Also: GADD45, DNA damage-inducible transcript 1 protein, DDIT-1, Gadd45a.	ECOTOX and http://www.uniprot.org/uniprot/P48316			
GAPM	Growth associated protein 43 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Growth associated protein 43 mRNA. Also: gap, cb310, neuromodulin mRNA.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=nm_131341	170392	NM_131341	
GD8M	Growth/differentiation factor 8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Growth/differentiation factor 8. Also: Myostatin, Mstn, Gdf8.	ECOTOX and http://www.uniprot.org/uniprot/O35312			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
GHMR	Growth hormone mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins. Growth hormone is a polypeptide hormone secreted by the anterior pituitary which promotes an increase in body size. Any hormone that regulates growth in plants and animals.	ECOTOX			
GH1R	Growth hormone 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Growth hormone 1. Also: gh1.	ECOTOX, http://www.uniprot.org/uniprot/Q1JQ34	169181	NM_001020492.2	GenBank
GHMM	Growth hormone receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Growth hormone receptor.	ECOTOX and http://www.uniprot.org/uniprot/Q90ZB0			
G2AR	Growth hormone receptor type 2a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Growth hormone receptor type 2a. Also: GHR2a.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/AY861675	170516	AY861675	GenBank
G2BR	Growth hormone receptor type 2b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Growth hormone receptor type 2b. Also: GHR2b.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/56718397/	170516	AY751531	GenBank
GMMR	Guanidinoacetate N-Methyltransferase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Guanidinoacetate N-Methyltransferase.	ECOTOX			
GNAM	Guanine nucleotide-binding protein G(o) subunit alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Guanine nucleotide-binding protein G(o) subunit alpha.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/147905738	166650	147905738	GenBank

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
GP1R	Guanylate binding protein 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Guanylate binding protein 1. Also: gbp1, zgc:92185, wu:fd36d06.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=436615	170801		
HP5R	Heat shock 70kDa protein 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock 70kDa protein 5. Also: BiP, Immunoglobulin binding protein.	http://www.ncbi.nlm.nih.gov/gene/?term=NM_001278801.1 and http://www.uniprot.org/uniprot/G5ELX5	170196	NM_001278801.1	Genbank
H75M	Heat shock 70kDa protein 5 (glucose-regulated protein, 78kDa) precursor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock 70kDa protein 5 (glucose-regulated protein, 78kDa) precursor.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/147906703	166650	GI:147906703	GenBank
H10M	Heat shock protein 10 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein 10. Also: Hsp10.	ECOTOX and http://www.uniprot.org/uniprot/B8PXK8	166007	EU306559	GenBank
HACM	Heat shock protein 20/alpha-crystallin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein 20/alpha-crystallin. Also: Hsp20/alpha-crystallin.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/AY522572	166007	AY522572	GenBank
HT7M	Heat shock protein 20.7 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein 20.7. Also: Hsp20.7.	ECOTOX and http://www.uniprot.org/uniprot/B8PXK9	166007	EU306560	GenBank
H22M	Heat Shock Protein 22 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein 22. Also: Hsp22.	ECOTOX and http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4360758/	171183		
H26M	Heat shock protein 22.6 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein 22.6. Also: Hsp22.6	ECOTOX and http://www.uniprot.org/uniprot/B9VTS8	172774		

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
H27M	Heat Shock Protein 27 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein 27. Also: Hsp27.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/KC495957	170530	KC495957	GenBank
H30M	Heat shock protein 30 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein 30. Also: HSP 30.	ECOTOX and http://www.uniprot.org/uniprot/P42931			
HC7M	Heat shock cognate protein 70 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock cognate protein 70 (hsc70). Also: HSPA8, Heat shock 70 kDa protein 8, heat shock cognate 71 kDa protein.	ECOTOX			
H40M	Heat shock protein 40 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein 40 (hsp40).	ECOTOX			
H60M	Heat shock protein 60 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein 60. Also: HSP 60, 60 kDa chaperonin, Protein Cpn60.	ECOTOX and http://www.uniprot.org/uniprot/Q5B041			
H71M	Heat shock 70kDa protein 1-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock 70kDa protein 1-like. Also: hspa1l.	ECOTOX and http://www.uniprot.org/uniprot/Q0V9A5	166650	148222597	GenBank
HSPM	Heat shock protein 70 precursor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein 70 precursor. Also: Hsp70p.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/EU306563	166007	EU306563	GenBank

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
H90R	Heat shock protein 90 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to HSP90 (Heat shock protein 90). Also: HSP90, Abnormal dauer formation protein 21, daf-21.	ECOTOX and http://www.uniprot.org/uniprot/Q18688			
H9AM	Heat shock protein 90 alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein 90 alpha (hsp90a). Also: hsp90aa1, fb17b01, hsp90a.1, hsp90alpha, wu:fb17b01.	ECOTOX, http://www.uniprot.org/uniprot/G4W8Y9 and http://www.ncbi.nlm.nih.gov/gene/?term=nm_131328			
H9BM	Heat shock protein 90 beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein 90 beta (hsp90b).	ECOTOX and http://www.uniprot.org/uniprot/G4W8Z0			
90BM	Heat shock protein 90kDa alpha (cytosolic), class B member 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein 90kDa alpha (cytosolic), class B member 1.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/148232054	166650	148232054	GenBank
H94M	Heat shock protein 94 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein 94. Also: Hsp94.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/EU306565	166007	EU306565	GenBank
H16M	Heat shock protein Hsp-16.1/Hsp-16.11 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein Hsp-16.1/Hsp-16.11. Also: hsp-16.1, hsp16-1b, hsp-16.11, hsp16-1a.	ECOTOX and http://www.uniprot.org/uniprot/P34696#gene_name_table			
HEMH	Hematopoietically-expressed homeobox protein hhex mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hematopoietically-expressed homeobox protein hhex. Also: hhex.	ECOTOX and http://www.uniprot.org/uniprot/Q9IAV3			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
HOMR	Heme oxygenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heme oxygenase (HO-1).	ECOTOX			
HM1R	Heme oxygenase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heme oxygenase 1. Also: hmox1, HO1, hmox, hemox, and hsp32.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/15368	171290	EX738947	GenBank
HC1R	Hemocyanin alpha (or 1) chain mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hemocyanin alpha (or 1) chain mRNA	ECOTOX			
HC2R	Hemocyanin beta (2-like) chain mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hemocyanin beta (2-like) chain mRNA	ECOTOX			
HC6M	Hemocyanin subunit 6 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hemocyanin subunit 6.	ECOTOX and http://www.uniprot.org/uniprot/K4EJG5	169482	JF802122	GenBank
HMGM	Hemoglobin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hemoglobin. Also: Dhb1.	ECOTOX and http://www.uniprot.org/uniprot/Q9NG92			
HM4M	Hemoglobin 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hemoglobin 4.	ECOTOX and http://www.uniprot.org/uniprot/Q5XU11			
HA3R	Hemoglobin alpha embryonic-3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hemoglobin alpha embryonic-3. Also: hbae3, fb57a06, si:by119c3.4, wu:fb57a06, zgc:86867, globin.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=hbae3 and http://zfin.org/ZDB-GENE-990706-3	163503		

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
HSAM	Hemoglobin subunit alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hemoglobin subunit alpha. Also: Hemoglobin alpha chain, hemoglobin alpha 1 globin chain.	ECOTOX and http://www.uniprot.org/uniprot/E7F4I1			
BA2M	Hemoglobin subunit beta-2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hemoglobin subunit beta-2. (ba2) Also: Beta-2-globin, Hemoglobin beta-2 chain.	ECOTOX and http://www.uniprot.org/uniprot/p02140			
HMPM	Hemopexin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hemopexin.	ECOTOX and http://www.uniprot.org/uniprot/Q6PHG2			
HSER	Heparanase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heparanase. Also: hpse, im:7144134.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=nm_001045005	170323	NM_001045005	GenBank
HLPM	Hepatic lipase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hepatic lipase. Also: lipc.	ECOTOX and http://www.uniprot.org/uniprot/M1GNY1			
HSSM	Heparan sulfate N-deacetylase/ N-sulfotransferase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heparan sulfate N-deacetylase/ N-sulfotransferase.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=413242			
H4AR	Hepatocyte nuclear factor 4 alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to HNF-4alpha	ECOTOX			
HPCR	Hepcidin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hepcidin.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
HNKM	Heterogeneous nuclear ribonucleoprotein K mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heterogeneous nuclear ribonucleoprotein K. Also: Hnrpk, hnRNP K, Hnrnpk.	ECOTOX and http://www.uniprot.org/uniprot/P61979	166650	147903924	GenBank
HA1M	Heterogeneous nuclear ribonucleoproteins A1 homolog mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heterogeneous nuclear ribonucleoproteins A1 homolog. Also: hnRNP A1, Helix-destabilizing protein, Single-strand-binding protein, hnRNP core protein A1, hnrnpa1, hnrpa1.	ECOTOX and http://www.uniprot.org/uniprot/P17130	166650	147900728	GenBank
HTZY	Heterozygosity	Having different alleles at one or more corresponding chromosomal loci.	American Heritage Dictionary of the English Language, Fifth Edition, 2011			
HXSM	Hexosaminidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hexosaminidase.	ECOTOX			
ML4R	Histone-lysine N-methyltransferase MLL4-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Histone-lysine N-methyltransferase MLL4-like. Also: mll4.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/718835	170801		
HD3R	Histone deacetylase 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Histone deacetylase 3. Also: hdac3, zgc:55927, hd3.	(ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/nm_200990 and http://www.uniprot.org/uniprot/Q803C3)	170323	NM_200990	GenBank
HH3R	Histone H3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to histone H3 mRNA	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
HH4M	Histone H4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Histone H4. Also: His4, H4-I, H4-II, H4-III, H4-IV, H4-V, H4-VI, H4-VII, H4.1, H4.2, H4.3, H4.4, H4.5, H4.6, H4.7.	ECOTOX and http://www.uniprot.org/uniprot/P62801#gene_name_table			
HX1R	Homeobox A10b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Homeobox A10b. Also: hoxa10b, hoxa-10, hoxa10, z-140.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=nm_131155	169181	NM_131155	GenBank
H11M	Homeobox A11b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Homeobox A11b. Also: hoxa11, hoxa11b, Hoxa-11, im:7142641.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=nm_131147.1	169181	NM_131147	GenBank
HX4R	Homeobox B4a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Homeobox B4a. Also: Z-17, zf13, ZF-13, hoxb4, HOX-B4.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/30340 and http://www.uniprot.org/uniprot/P22574	169181		
HX5R	Homeobox B5b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Homeobox B5b. Also: z-2, ZF54, ZF-54, hoxa5, hoxzf54, hoxb5-like, id:ibd2566, zgc:101134.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/58052	169181		
H14M	Homeobox protein ceh-14 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Homeobox protein ceh-14. Also: ceh-14.	ECOTOX and http://www.uniprot.org/uniprot/P20271	166810		

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
H4BM	Homeobox protein Nkx2.4b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Homeobox protein Nkx2.4b. Also: nkx2.4b, nk2.1a, nkx2.1a, titf1a, nkx2.1, nkx2.4a.	ECOTOX, http://www.uniprot.org/uniprot/Q9I8L7 and http://www.ncbi.nlm.nih.gov/gene/58112	168455	NM_131589	GenBank
HPKM	Homeodomain interacting protein kinase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Homeodomain interacting protein kinase. Also: hipk, Homeodomain interacting protein kinase isoform A, Homeodomain interacting protein kinase isoform B.	ECOTOX, http://www.uniprot.org/uniprot/Q9W0Q1 and http://www.ncbi.nlm.nih.gov/gene/?term=408664			
HB1M	Homeodomain protein HB1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Homeodomain protein HB1.	ECOTOX and http://www.uniprot.org/uniprot/Q6S3D9			
HB2M	Homeodomain protein HB2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Homeodomain protein HB2.	ECOTOX and http://www.uniprot.org/uniprot/Q6S3E0			
HBCM	Homeobox protein MSH-C mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Muscle segment homeobox C. Also: Muscle segment homeobox C, msxc, msh-c.	ECOTOX and http://www.uniprot.org/uniprot/Q01703	168257	JQ973863	GenBank
H25M	Homeobox protein Nkx-2.5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Homeobox protein Nkx-2.5. Also: Cardiac-specific homeobox, Homeobox protein CSX, Homeobox protein NK-2 homolog E, Nkx2-5, Csx, Nkx-2.5, Nkx2e.	ECOTOX and http://www.uniprot.org/uniprot/P42582			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
TT1M	Homeodomain protein TTX-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Homeodomain protein TTX-1.	ECOTOX and http://www.uniprot.org/uniprot/Q95W17			
H23R	HR23B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to HR23B	ECOTOX			
H70R	HSP70 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to HSP70 (Heat shock protein 70).	ECOTOX			
HCHM	Hydrocephalus-inducing protein homolog mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hydrocephalus-inducing protein homolog.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=726796			
HCLM	Hydrocephalus-inducing protein-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hydrocephalus-inducing protein-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=100578512			
H32M	Hydroxy-delta-5-steroid dehydrogenase, 3 beta- and steroid delta-isomerase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hydroxy-delta-5-steroid dehydrogenase, 3 beta- and steroid delta-isomerase 2. Also: hsd3b1, cb723, zgc:122972.	ECOTOX and http://zfin.org/ZDB-GENE-030828-2	170801		
HCDM	Hydroxyacyl-Coenzyme A dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hydroxyacyl-Coenzyme A dehydrogenase. Also: Hydroxyacyl Coenzyme A dehydrogenase, Hydroxyacyl-CoA dehydrogenase, Hydroxyacyl CoA dehydrogenase, hadh, hadhsc.	ECOTOX and http://www.uniprot.org/uniprot/Q6DI22			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
HASM	Hydroxymethylglutaryl-CoA synthase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hydroxymethylglutaryl-CoA synthase.	ECOTOX			
HD1M	Hydroxysteroid 11-beta-dehydrogenase 1-like protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hydroxysteroid 11-beta-dehydrogenase 1-like protein. Also: hsd11b3, 11-beta-hydroxysteroid dehydrogenase type 3, hsd3.	ECOTOX and http://www.uniprot.org/uniprot/Q6PUF3			
HYPM	Hymenoptaecin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hymenoptaecin.	ECOTOX and http://www.uniprot.org/uniprot/Q10416			
HP5M	Hypothetical protein HMPREF9474_04637 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to hypothetical protein HMPREF9474_04637. Also: Expressed Sequence Tag EG591503, EST EG591503.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/323399095			
H1AM	Hypoxia-inducible factor 1-alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hypoxia-inducible factor 1-alpha. Also: HIF1A, HIF-1-alpha, HIF1-alpha, ARNT-interacting protein.	ECOTOX and http://www.uniprot.org/uniprot/Q61221	168528	DY708816	GenBank
IGMR	Immunoglobin M mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to immunoglobin M. Also: IGM	ECOTOX	172685		
IGHM	Immunoglobulin heavy chain, partial cds mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Immunoglobulin heavy chain, partial cds. Also: IgM.	ECOTOX and http://www.imgt.org/ligmdb/view?format=EMBL&id=AB004105			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
IN2M	Innexin 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Innexin 2. Also: Innexin inx2, Innexin-2, Gap junction protein prp33, Pas-related protein 33, Inx2, prp33.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=724832 and http://www.uniprot.org/uniprot/Q9V427			
IOLM	Inositol oxygenase-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Inositol oxygenase-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=408650			
I3SM	Inositol-3-phosphate synthase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Inositol-3-phosphate synthase. Also: Inos, IPS, MIP synthase, MI-1-P synthase, Myo-inositol 1-phosphate synthase, Myo-inositol-1-phosphate synthase, Inositol 1-phosphate synthetase, Glucose 6-phosphate cyclase, Glucocycloaldolase, D-glucose 6-phosphate cycloaldolase, 1L-myo-inositol-1-phosphate lyase (isomerizing), EC 5.5.1.4.	ECOTOX, http://enzyme.expasy.org/EC/5.5.1.4 and http://www.uniprot.org/uniprot/O97477			
INS3	insl3 (insulin-like peptide 3) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to insl3 (insulin-like peptide 3)	ECOTOX			
IG1M	insulin-like growth factor 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to insulin-like growth factor 1 (IGF-1).	ECOTOX			
IB1M	Insulin-like growth factor binding protein-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Insulin-like growth factor binding protein-1. Also: IGFBP1.	ECOTOX and http://www.uniprot.org/uniprot/Q5GBG2	168528	AY662657	GenBank

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
IA1R	Insulin-like growth factor binding protein 1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Insulin-like growth factor binding protein 1a. Also: cb656, igfbp1, IGFBP-1, igfbp1a.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=nm_173283	169181	NM_173283	GenBank
IB1R	Insulin-like growth factor binding protein 1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Insulin-like growth factor binding protein 1b. Also: igfbp1b.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=NM_001098257	169181	NM_001098257	GenBank
IFRM	Insulin-like growth factor 1 receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Insulin-like growth factor 1 receptor. Also: Insulin like growth factor 1 receptor, Insulin-like growth factor I receptor, Receptor protein-tyrosine kinase, Receptor protein tyrosine kinase, EC 2.7.10.1.	ECOTOX, http://enzyme.expasy.org/EC/2.7.10.1 and http://www.uniprot.org/uniprot/Q60751			
I1AM	Insulin-like growth factor receptor 1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Insulin-like growth factor receptor 1a. Also: IGFR1A.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/3135375/	170516	AF062499	GenBank
I2AM	Insulin-like growth factor receptor 1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Insulin-like growth factor receptor 1b. Also: IGFR1B.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/3135377/	170516	AF062500	GenBank
IG2M	insulin-like growth factor 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to insulin-like growth factor 2 (IGF-2).	ECOTOX			
I1BM	Insulin-like growth factor binding protein 1 paralog B1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Insulin-like growth factor binding protein 1 paralog B1. Also: IGFBP-1B1.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/NM_001123624.1 and http://www.uniprot.org/uniprot/M4Q8Z6			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
IGLR	Integrin alpha-L mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Integrin alpha-L. Also: itgal.	ECOTOX and http://www.uniprot.org/uniprot/P24063	170801		
ITFM	Interferon mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interferon. Also: IFN.	ECOTOX	163146		
IA1M	Interferon alpha 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interferon alpha 1. Also: IFNA1.	ECOTOX and http://www.uniprot.org/uniprot/Q6XQG7			
IFGR	Interferon gamma mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interferon gamma.	ECOTOX			
IF1M	Interferon gamma 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to interferon gamma 1. Also: IFN-y1, IFNY1.	ECOTOX	172397		
IF2M	Interferon gamma 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to interferon gamma 2. Also: IFN-y2, IFNY2.	ECOTOX	172397		
IM1M	Interferon-induced GTP-binding protein Mx1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interferon-induced GTP-binding protein Mx1. Also: Myxoma resistance protein 1, Myxovirus resistance protein 1,MX 1.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/1519383 and http://www.uniprot.org/uniprot/P79135			
IR4M	Interleukin-1 receptor-associated kinase 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin-1 receptor-associated kinase 4. Also: irak4 and zgc.55553.	ECOTOX and http://zfin.org/ZDB-GENE-040426-738	172465		

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
I1AR	Interleukin 1 alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin 1 alpha.	ECOTOX			
I1BR	Interleukin 1 beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin 1 beta.	ECOTOX			
IL2R	Interleukin-2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin-2.	ECOTOX			
I3MR	Interleukin 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin 3.	ECOTOX			
I4MR	Interleukin 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin 4.	ECOTOX			
I6MR	Interleukin 6 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin 6. Also: IL-6.	ECOTOX and http://www.uniprot.org/uniprot/P20607			
I10R	Interleukin 10 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin 10. Also: IL-10, Cytokine synthesis inhibitory factor, CSIF.	ECOTOX and http://www.uniprot.org/uniprot/Q29408			
I8MR	Interleukin 8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin 8. Also: IL-8, C-X-C motif chemokine 8, Chemokine (C-X-C motif) ligand 8. CXCL8.	ECOTOX and http://www.uniprot.org/uniprot/P41324			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
I12A	Interleukin 12a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin 12a.	ECOTOX			
I12B	Interleukin 12b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin 12b.	ECOTOX			
I17R	Interleukin 17 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin 17.	ECOTOX			
ILRM	Interleukin receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin receptor.	ECOTOX			
IFAM	Intestinal fatty acid-binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Intestinal fatty acid-binding protein. Also: FABP2.	ECOTOX and http://www.uniprot.org/uniprot/Q8AX65			
ISPM	Iron starvation induced protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Iron starvation induced protein. Also: ISIP1.	ECOTOX and http://www.uniprot.org/uniprot/B7GA90			
IDHM	Isocitrate dehydrogenase [NADP], mitochondrial precursor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Isocitrate dehydrogenase [NADP], mitochondrial precursor (idh2). Also: Isocitrate dehydrogenase [NADP], mitochondrial, isocitrate dehydrogenase 2 (NADP+), mitochondrial.	ECOTOX and http://www.uniprot.org/uniprot/Q7ZUP6			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
ISTM	Isotocin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Isotocin. Also: Isotocin precursor, oxytocin, oxt, itnp, oxtl, it-np, fj33a01, wu:fj33a01, wu:fq40d10.	ECOTOX, http://www.uniprot.org/uniprot/Q98SU8,http://getentry.ddbj.nig.ac.jp/getentry/na/AF322651 and http://www.ncbi.nlm.nih.gov/gene/352920			
JHAM	Juvenile hormone esterase isoform A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Juvenile hormone esterase isoform A.	ECOTOX and http://www.uniprot.org/uniprot/E2QC34			
JZFR	Juxtaposed with another zinc finger protein 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Juxtaposed with another zinc finger protein 1. Also: jazf1.	ECOTOX and http://www.uniprot.org/uniprot/Q80ZQ5	170801		
KSPR	Kazal-type serine peptidase inhibitor domain 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Kazal-type serine peptidase inhibitor domain 2. Also: kazald2.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=NM_001105124	170520	NM_001105124	GenBank
K1AM	Kelch-like ECH-associated protein 1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Kelch-like ECH-associated protein 1a. Also: keap1 and keap1a.	ECOTOX and http://www.uniprot.org/uniprot/Q1ECZ2	168602 172465	JX470752 NM182864.2	GenBank
K1BM	Kelch-like ECH-associated protein 1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Kelch-like ECH-associated protein 1b. Also: Keap1b, klhl19.	ECOTOX and http://zfin.org/action/marker/view/ZDB-GENE-080508-1	168602	JX470753	source unknown
KT8M	Keratin 8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Keratin 8 (krt8).	ECOTOX			
KNGM	Kringle mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Kringle.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
LAPR	L-ascorbate peroxidase 1, cytosolic mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to L-ascorbate peroxidase 1, cytosolic. Also: apx1, apxa, osapx01.	ECOTOX and http://www.uniprot.org/uniprot/Q10N21	170365		
LDAR	L-lactate dehydrogenase A chain mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to L-lactate dehydrogenase A chain mRNA. Also: ldha, lactate dehydrogenase A4.	(ECOTOX, http://www.uniprot.org/uniprot/Q9PVK5 and http://www.ncbi.nlm.nih.gov/gene/30496)	170362	NM_131246	GenBank
LCMR	Laccase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Laccase.	ECOTOX and http://www.uniprot.org/uniprot/F1BQP3			
LDBR	Lactate Dehydrogenase B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Lactate Dehydrogenase B.	ECOTOX			
LFNR	lactoferrin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to lactoferrin.	ECOTOX			
LG2M	Laminin G, subdomain 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Laminin G, subdomain 2.	ECOTOX			
L14M	Lanosterol 14-alpha demethylase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Lanosterol 14-alpha demethylase. Also: Cytochrome p450 51A1, CYP51A1, Cytochrome P450-14DM, Cytochrome P450LI, Sterol 14-alpha demethylase, CYPLI, Cytochrome P450 51, Cytochrome P450-LIA1, CYP51, EC 1.14.13.70.	ECOTOX, http://www.uniprot.org/uniprot/P49602 and http://www.uniprot.org/uniprot/Q16850			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
LSSM	Lanosterol synthase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Lanosterol synthase. Also: lss, 2,3-oxidosqualene-lanosterol cyclase.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/nm_001083567.1	169182	NM_001083567.1	GenBank
LRMR	Leptin receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Leptin receptor. Also: Lepr, B219, OB receptor.	ECOTOX and http://www.uniprot.org/uniprot/P48356			
LEPT	Leptotene	Early stage of prophase in meiosis in which the chromosomes contract and become visible as long filaments well separated from each other. Synonym: leptonema	Farlex Partner Medical Dictionary, Farlex 2012			
LRIM	Leucine-rich repeats and immunoglobulin-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Leucine-rich repeats and immunoglobulin-like.	ECOTOX			
LCTR	Leucine Specific tRNA	A transfer RNA which is specific for carrying leucine to sites on the ribosomes in preparation for protein synthesis.	http://www.ncbi.nlm.nih.gov			
LSCM	Leucyl-tRNA synthetase, cytoplasmic-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Leucyl-tRNA synthetase, cytoplasmic-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=412282			
GLDM	L-galactono-1,4,-lactone dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to L-galactono-1,4,-lactone dehydrogenase mRNA. Also: GalLDH.	ECOTOX and http://www.uniprot.org/uniprot/C9E3E9			
LSPM	LIM and SH3 domain protein Lasp-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to LIM and SH3 domain protein Lasp-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=725777			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
LHPM	LIM/homeobox protein Lhx3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to LIM/homeobox protein Lhx3. Also: Lim3 homeobox, Lhx3, LIM homeobox protein 3, Homeobox protein LIM-3, Homeobox protein P-LIM, Lim-3, Lim3, Plim.	ECOTOX and http://www.uniprot.org/uniprot/P50481			
LPSM	Lipase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Lipase (Lip). Also: Triacylglycerol lipase.	ECOTOX and http://www.uniprot.org/uniprot/O59952			
L3LM	Lipase 3-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to lipase 3-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=411353			
LHAM	Lipase member H-A-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Lipase member H-A-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=727037			
LPDN	Lipid to DNA ratio	The amount of lipid as compared to the amount of DNA in a sample.	ECOTOX			
L13M	Lipopolysaccharide and beta-1,3-glucan binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Lipopolysaccharide and beta-1,3-glucan binding protein. Also: LGBP.	ECOTOX and http://www.uniprot.org/uniprot/Q2QF31	166302		
LMPM	Lipopolysaccharide-binding protein/mammalian bactericidal/permeability increasing protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Lipopolysaccharide-binding protein/mammalian bactericidal/permeability increasing protein.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
LLRN	Lipoprotein lipase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Lipoprotein lipase. Also: lpl, EC 3.1.1.34.	ECOTOX and http://www.uniprot.org/uniprot/P11152			
LLDM	L-lactate dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to L-lactate dehydrogenase. Also: Lactate dehydrogenase, ldh, L-lactic acid dehydrogenase, L-lactic dehydrogenase, EC 1.1.1.27.	ECOTOX, http://enzyme.expasy.org/EC/1.1.1.27, http://www.uniprot.org/uniprot/P00343 and http://www.uniprot.org/uniprot/D2DSR9			
LDRM	Low-density lipoprotein receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Low-density lipoprotein receptor. Also: Low density lipoprotein receptor, LDLR.	ECOTOX and http://www.uniprot.org/uniprot/Q28832	168071	DT361328	GenBank
LLRM	Low-density lipoprotein receptor associated protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to low-density lipoprotein receptor associated protein	ECOTOX			
LNFM	Low molecular weight neuronal intermediate filament mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Low molecular weight neuronal intermediate filament. Also: XNIF, neuronal intermediate filament protein.	ECOTOX and http://www.uniprot.org/uniprot/P35617	166650	1107470	GenBank
LBKM	Lumbrokinase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Lumbrokinase.	ECOTOX and http://www.uniprot.org/uniprot/Q5MBA0			
LHMR	Lutenizing hormone mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Lutenizing hormone.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
LHAR	Luteinizing hormone alpha-subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to luteinizing hormone alpha-subunit	ECOTOX			
LHBR	Luteinizing hormone beta-subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to luteinizing hormone beta-subunit	ECOTOX			
LH1R	Luteinizing hormone beta 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Luteinizing hormone beta 1. Also: lhbeta1, lhb1.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=NM_205623	170532	NM_205623	GenBank
LHGR	Luteinizing hormone/choriogonadotropin receptor (LHCGR) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Luteinizing hormone/choriogonadotropin receptor (LHCGR), mRNA. This gene encodes the receptor for both luteinizing hormone and choriogonadotropin. This receptor belongs to the G-protein coupled receptor 1 family, and its activity is mediated by G proteins which activate adenylate cyclase. Also: hypergonadotropic hypogonadism, lutropin/choriogonadotropin receptor.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/3973	170402		
LHRM	Luteinizing hormone receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Luteinizing hormone receptor. Also: Lutropin-choriogonadotropic hormone receptor.	ECOTOX,http://www.uniprot.org/uniprot/P16235 and http://www.uniprot.org/uniprot/F1B1E3			
LZMR	Lysozyme mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Lysozyme.	ECOTOX and http://www.uniprot.org/uniprot/P05105			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
LZ1M	Lysozyme 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Lysozyme 1. Also: 1,4-beta-N-acetylmuramidase 1, cv-lysozyme 1, lysoz1, lysoz.	ECOTOX and http://www.uniprot.org/uniprot/P83673			
MEPM	Macrophage expressed protein 1-like protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Macrophage expressed protein 1-like protein.	ECOTOX and http://www.uniprot.org/uniprot/B3F732			
MMRM	Macrophage mannose receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Macrophage mannose receptor.	ECOTOX			
MG1M	Magnesium-dependent phosphatase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Magnesium-dependent phosphatase 1. Also: MDP1.	ECOTOX and http://www.uniprot.org/uniprot/Q9D967			
MGRN	Magnesium superoxide dismutase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Magnesium superoxide dismutase.	ECOTOX			
MORM	Main olfactory receptor-like protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Main olfactory receptor-like protein. Also: SORB.	ECOTOX and http://www.uniprot.org/uniprot/Q1KY06			
HIIM	Major histocompatibility complex class II alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Major histocompatibility complex class II alpha. Also: MHC class II alpha antigen.	ECOTOX and http://www.uniprot.org/uniprot/Q4U1C7			
MVPM	Major vault protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Major vault protein.	ECOTOX and http://www.uniprot.org/uniprot/Q6P3L0			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
MDHM	Malate dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Malate dehydrogenase. Also: Cytosolic malate dehydrogenase, Malic dehydrogenase, Mdh2, Mdh2a, EC 1.1.1.37.	ECOTOX, http://www.uniprot.org/uniprot/Q6B4U5 and http://www.uniprot.org/uniprot/P11708			
MD1M	Malate dehydrogenase 1a, NAD (Soluble) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Malate dehydrogenase 1a, NAD (Soluble) (mdh1a).	ECOTOX			
MNSM	Manganese superoxide dismutase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Manganese superoxide dismutase.	ECOTOX			
MLPM	Masquerade-like protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Masquerade-like protein.	ECOTOX and http://www.uniprot.org/uniprot/P91777			
MFPR	MatE family protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to MatE family protein. Also: oj1217b09.6, putative ripening regulated protein.	ECOTOX and http://www.uniprot.org/uniprot/Q8H7P0	170367		
MM9M	Matrix metalloproteinase-9 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Matrix metalloproteinase-9. Also: MMP-9, MMP 9, 792 kDa gelatinase, 92 kDa type IV collagenase, Gelatinase B, EC 3.4.24.35.	ECOTOX and http://www.uniprot.org/uniprot/P50282			
MCPM	m-Calpain mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to m-Calpain.	ECOTOX and http://www.uniprot.org/uniprot/D6NLA6	169409	GU564439	GenBank

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
MCDM	McyD protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to McyD protein. Also: mcyD.	ECOTOX and http://www.uniprot.org/uniprot/B0JPV8	154141	5864684	GenBank
MEIR	Meiosis Rate	No definition available.				
ME1A	Meiotic Abnormalities, 1st Anaphase	No definition available.				
ME1M	Meiotic Abnormalities, 1st Metaphase	No definition available.				
ME2A	Meiotic Abnormalities, 2nd Anaphase	No definition available.				
ME2M	Meiotic Abnormalities, 2nd Metaphase	No definition available.				
MEDM	Meiotic Abnormalities, Diakinesis and 1st Metaphase	No definition available.				
MEIA	Meiotic Abnormalities, General	No definition available.				
MEIX	Meiotic Index	The number of round spermatids for each pachytene primary spermatocytes	http://www.biolreprod.org/cgi/content/short/biolreprod.102.010652v1			
MM1M	Membrane metallo-endopeptidase-like 1-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Membrane metallo-endopeptidase-like 1-like. Also: Membrane metallo-endopeptidase-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=726421			
MPBM	Membrane progestin receptor beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Membrane progestin receptor beta. Also: Progestin and adipoQ receptor family member VIII, Paqr8, Mprb.	ECOTOX and http://www.uniprot.org/uniprot/Q80ZE5			

GEN	**Genetic Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
MRNA	Messenger RNA	mRNA (messenger RNA) is the mediating template between DNA and proteins.				
M18M	metalloproteinase 18 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to metalloproteinase 18 mRNA .	ECOTOX			
MTAM	Metallothionein-A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Metallothionein-A.	ECOTOX			
MTBM	Metallothionein-B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Metallothionein-B.	ECOTOX			
MMRN	Metallothionein mRNA	No definition available.				
MRMT	Metallothionein mRNA metallothionein ratio	The ratio of metallothionein messenger RNA to metallothionein.	ECOTOX			
M1MR	Metallothionein-I mRNA	A metallothionein isoform messenger RNA.	ECOTOX			
M2MR	Metallothionein-II mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Metallothionein-II. Also: mt-II, mt-2, Metallothionein 2, Metallothionein-2, Metallothionein II.	ECOTOX and http://www.uniprot.org/uniprot/P04355			
M3MR	Metallothionein-3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Metallothionein-3. Also: MT-3, Metallothionein-III, Metallothionein 3, Metallothionein III, Growth inhibitory factor, GIF, MT-III.	ECOTOX and http://www.uniprot.org/uniprot/P28184			

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
M4MR	Metallothionein-4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Metallothionein-4. Also: MT-4, Metallothionein-IV, Metallothionein 4, Metallothionein IVI, MT-IV.	ECOTOX and http://www.uniprot.org/uniprot/P47945			
MT1M	Metal-responsive transcription factor 1.1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Metal-responsive transcription factor 1.1.	ECOTOX			
M1AM	Metal-responsive transcription factor 1.1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Metal-responsive transcription factor 1.1a.	ECOTOX			
MA1R	Methionine adenosyltransferase I, alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Methionine adenosyl transferase I, alpha. Also, mat1a.	ECOTOX and http://zfin.org/ZDB-GENE-030131-6127	171802	HO056261	GenBank
MSRM	Methionine sulfoxide reductase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Methionine sulfoxide reductase.	ECOTOX			
MS1R	Methionine-S-sulfoxide reductase A1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Methionine-S-sulfoxide reductase A1. Also: MSRA1	ECOTOX and http://www.uniprot.org/uniprot/Q8H6T1	172734		
MB1R	Methionine sulfoxide reductase B1.1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Methionine sulfoxide reductase B1.1. Also: MSRB1.1	ECOTOX	172734		

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
MB2R	Methionine sulfoxide reductase B1.2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Methionine sulfoxide reductase B1.2. Also: MSRB1.2	ECOTOX	172734		
MR1R	Methionine sulfoxide reductase B2.1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Methionine sulfoxide reductase B2.1. Also: MSRB2.1	ECOTOX	172734		
MR2R	Methionine sulfoxide reductase B2.2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Methionine sulfoxide reductase B2.2. Also: MSRB2.2	ECOTOX	172734		
MB2M	Methyl-CpG binding domain protein 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Methyl-CpG binding domain protein 2. Also: MDB2.	ECOTOX and http://zfin.org/action/marker/sequence/view/ZDB-GENE-030131-9049			
MO1M	Methylsterol monooxygenase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Methylsterol monooxygenase 1. Also: msmo1, sc4mol, 4-methylsterol oxidase, C-4 methylsterol oxidase, Methylsterol hydroxylase, sterol-C4-methyl oxidase-like, EC 1.14.13.72.	ECOTOX, http://enzyme.expasy.org/EC/1.14.13.72, http://www.ncbi.nlm.nih.gov/nuccore/BC050163 and http://www.uniprot.org/uniprot/Q7ZW77	169182	BC050163	GenBank
M8PM	MGC132184 protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to MGC132184 protein. Also: basp1, uncharacterized protein LOC734877.	ECOTOX, http://www.ncbi.nlm.nih.gov/protein/148232076 and http://www.uniprot.org/uniprot/Q3KPN5	166650	GI:148232076	NCBI

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
M9PM	MGC81949 protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to MGC81949 protein. Also: cct6a.	ECOTOX and http://www.uniprot.org/uniprot/Q6GMA6	166650	148233826	GenBank
MG4M	MGC84000 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to MGC84000 protein.	ECOTOX and http://www.uniprot.org/uniprot/Q6GM38	166650	148236454	GenBank
M84M	MGC84072 protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to MGC84072 protein.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/148222322	166650	148222322	GenBank
MNUC	Micronuclei	Micronuclei formation or micronuclei frequency. A micronucleus (MN) is formed during the metaphase/anaphase transition of mitosis (cell division). The micronucleus test is used to identify substances that cause cytogenetic damage which results in the formation of micronuclei containing lagging chromosome fragments or whole chromosomes.	http://www.crios.be/genotoxicitytests/micronucleus_test.htm and http://www.oecd.org/chemicalsafety/assessmentofchemicals/1948442.pdf			
MS1M	Microsomal glutathione S-transferase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Microsomal glutathione S-transferase 1.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/EU747057	166007	EU747057	GenBank
MS3M	Microsomal glutathione S-transferase 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to microsomal glutathione S-transferase 3.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/EU747058	166007	EU747058	GenBank

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
MAPM	Microtubule-associated protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Microtubule-associated protein. Also: Xtp protein, xtp, mapt.	ECOTOX, http://www.uniprot.org/uniprot/Q6AX34, http://www.ncbi.nlm.nih.gov/protein/50925070 and http://www.uniprot.org/uniprot/C5I786			
LC3M	Microtubule-associated protein 1 light chain 3 beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Microtubule-associated protein 1 light chain 3 beta. Also: map1lc3b, lc3, wu:fb60g11, zgc:56434, LC3 phospholipid conjugate.	ECOTOX, http://zfin.org/ZDB-GENE-030131-1145 and http://www.uniprot.org/uniprot/Q7ZUD8	170947	NM199604	GenBank
MCMR	Mineralocorticoid mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Mineralocorticoid.	ECOTOX			
MCRM	Mineralocorticoid receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Mineralocorticoid receptor. Also: MR, Nuclear receptor subfamily 3 group C member 2, Nr3c2, Mlr.	ECOTOX and http://www.uniprot.org/uniprot/P22199			
M15A	miRNA 15a-5p	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 15a-5p(miR-15a-5p). Also: miRNA 15a.	ECOTOX and http://www.mirbase.org/			
M23A	miRNA 23a	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 23a (miR-23a).	ECOTOX and http://www.mirbase.org/			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
M122	miRNA 122	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 122 (miR-122).	ECOTOX and http://www.mirbase.org/			
M133	miRNA 133b-5p	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 133b-5p (miR-133b-5p). Also: miR-133b*.	ECOTOX and http://www.mirbase.org/			
M135	miRNA 135a	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 135a (miR-135a).	ECOTOX and http://www.mirbase.org/			
M140	miRNA 140	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 140 (miR-140).	ECOTOX and http://www.mirbase.org/cgi-bin/mirna_entry.pl?acc=MI0002003	166630	mimat0003159	miRBase
M145	miRNA 145	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 145 (miR-145).	ECOTOX and http://www.mirbase.org/			

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
M187	miRNA 187	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 187 (miR-187).	ECOTOX and http://www.mirbase.org/cgi-bin/mirna_entry.pl?acc=MI0001370			
M192	miRNA 192	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 192 (miR-192).	ECOTOX and http://www.mirbase.org/			
M202	miRNA 202-5p	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 202-5p (miR-202-5p).	ECOTOX and http://www.mirbase.org/			
M204	miRNA 204	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 204 (miR-204).	ECOTOX and http://www.mirbase.org/			
M216	miRNA 216b	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 216b (miR-216b).	ECOTOX and http://www.mirbase.org/			

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
M217	miRNA 217	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 217 (miR-217).	ECOTOX and http://www.mirbase.org/			
M363	miRNA 363	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 363 (miR-363).	ECOTOX and http://www.mirbase.org/			
M338	miRNA 338	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 338 (miR-338).	ECOTOX and http://www.mirbase.org/			
M365	miRNA 365	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 365 (miR-365).	ECOTOX and http://www.mirbase.org/			
M499	miRNA 499	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 499 (miR-499).	ECOTOX and http://www.mirbase.org/			

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
M728	miRNA 728	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 728 (miR-728).	ECOTOX and http://www.mirbase.org/			
M733	miRNA 733	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 733 (miR-733).	ECOTOX and http://www.mirbase.org/			
MLT7	miRNA let-7h	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA let-7h (miR-let-7h).	ECOTOX and http://www.mirbase.org/			
MP1M	Mitogen-activated protein kinase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to mitogen-activated protein kinase 1 (MAPK1). Mitogen-activated protein kinase 1 is also known as PRKM1, PRKM2, ERK, ERK2, MAPK2, p41mapk.	ECOTOX and http://www.genenames.org/data/hgnc_data.php?hgnc_id=6871			
M11M	Mitogen-activated protein kinase 11 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to mitogen-activated protein kinase 11 (MAPK11). Mitogen-activated protein kinase 11 is also known as PRKM11, p38-2, p38Beta, SAPK2.	ECOTOX and http://www.genenames.org/data/hgnc_data.php?hgnc_id=6873			

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
M14M	Mitogen-activated protein kinase 14 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Mitogen-activated protein kinase 14 (MAPK14). Mitogen-activated protein kinase 14 is also known as CSBP1, CSBP2, CSPB1, Mxi2, p38, p38 MAP kinase, PRKM14, PRKM15, p38-alpha.	ECOTOX, http://www.genenames.org/data/hgnc_data.php?hgnc_id=6876 and http://en.wikipedia.org/wiki/MAPK14			
MP6M	Mitogen-activated protein kinase 6 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to mitogen-activated protein kinase 6 (MAPK6). mitogen-activated protein kinase 6 is also known as PRKM6, ERK3, HsT17250, p97MAPK.	ECOTOX and http://www.genenames.org/data/hgnc_data.php?hgnc_id=6879			
MP9M	Mitogen-activated protein kinase 9 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to mitogen-activated protein kinase 9 (MAPK9). Mitogen-activated protein kinase 9 is also known as JNK2, Jun kinase, p54a, SAPK, PRKM9.	ECOTOX and http://www.genenames.org/data/hgnc_data.php?hgnc_id=6886			
MLKR	Mitogen activated protein kinase phosphatase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Mitogen activated protein kinase phosphatase. Also: MPK.	ECOTOX and http://www.uniprot.org/uniprot/M1Q6U0	166306	JX137276	GenBank
MTOS	Mitosis	A method of indirect cell division in which the two daughter nuclei normally receive identical complements of the number of chromosomes characteristic of the somatic cells of the species	Dorland's Medical Dictionary for Health Consumers, 2007			
MIAT	Mitotic Abnormalities, Ana-telophase	No definition available.				
MIBC	Mitotic Abnormalities, Binucleate Cell	No definition available.				

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
MIBG	Mitotic Abnormalities, Bridge	No definition available.				
MICL	Mitotic Abnormalities, Clumping	No definition available.				
MICY	Mitotic Abnormalities, Cytomixis	No definition available.				
MIPO	Mitotic Abnormalities, Disturbed Polarity	No definition available.				
MIES	Mitotic Abnormalities, Early Separation	No definition available.				
MIEX	Mitotic Abnormalities, Exclusion	No definition available.				
MIFR	Mitotic Abnormalities, Fragment	No definition available.				
MITA	Mitotic Abnormalities, General	No definition available.				
MIIN	Mitotic Abnormalities, Interphase Cells	No definition available.				
MILG	Mitotic Abnormalities, Laggard	No definition available.				
MIMT	Mitotic Abnormalities, Metaphase	No definition available.				
MIMN	Mitotic Abnormalities, Micronuclei	No definition available.				
MINB	Mitotic Abnormalities, Nuclear Budding	No definition available.				
MINF	Mitotic Abnormalities, Nuclear Fusion	No definition available.				
MIPR	Mitotic Abnormalities, Prophase	No definition available.				

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
MISK	Mitotic Abnormalities, Stickiness	No definition available.				
MITI	Mitotic Index (#Mitoses/Total Cells)	No definition available.				
MITR	Mitotic Rate	The proportion of cells in a tissue that are undergoing mitosis, expressed as a mitotic index or, roughly, as the number of cells in mitosis in each microscopic high-power field in tissue sections.	Stedman's Medical Dictionary Copyright, 2002, 2001, 1995			
MAOM	Mono amine oxidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Mono amine oxidase (MAO) .	ECOTOX			
MDAR	Monodehydroascorbate reductase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Monodehydroascorbate reductase mRNA. Also: MDHAR.	ECOTOX and http://www.uniprot.org/uniprot/C9E3F2			
MR1M	Multidrug-Resistance like Protein 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Multidrug-Resistance like Protein 1. Also: CG6214, Dmel\CG6214, dMRP, dMRP/CG6214, dMRP1, MRP1.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=cg6214			
MUTA	Mutation	The process by which such a sudden structural change occurs, either through an alteration in the nucleotide sequence of the DNA coding for a gene or through a change in the physical arrangement of a chromosome.	The American Heritage Medical Dictionary, 2007			
MXPM	Mx protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Mx protein.	ECOTOX			

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
MYCR	MYC binding protein 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to MYC binding protein 2. Also: mycbp2, myc.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=368439	170801		
MF5M	Myogenic factor 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Myogenic factor 5. Also: MYF5.	ECOTOX and http://www.uniprot.org/uniprot/P34061			
MBPM	Myelin basic protein A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Myelin basic protein a mRNA. Also: mbp, cb274, fj33b11, wu:fj33b11, wu:fq15b02, zgc:136630, myelin basic protein.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=ay860977	170392	AY860977	
MP0M	Myelin protein zero mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Myelin protein zero (p0).	ECOTOX and http://www.uniprot.org/uniprot/C5I789			
M1BM	Myeloid cell leukemia sequence 1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Myeloid cell leukemia sequence 1b. Also: mcl1b, Mcl1b protein.	ECOTOX and http://www.uniprot.org/uniprot/Q568W5			
M88M	Myeloid differentiation primary response protein MyD88 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Myeloid differentiation primary response protein MyD88. Also: Myeloid differentiation factor 88,MyD88.	ECOTOX and http://www.uniprot.org/uniprot/P22366			
MYPM	Myeloperoxidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Myeloperoxidase.	ECOTOX			

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
MEFR	Myocyte enhancer factor 2c mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Myocyte enhancer factor 2c. Also: mef2c, mef2ca, zgc:64184, zgc:85726, id:ibd5026, wu:fc05b06.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/30575	170801		
MYDM	MyoD mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to MyoD.	ECOTOX and http://www.uniprot.org/uniprot/Q98SS8			
MYMM	Myohemerytherin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Myohemerytherin.	ECOTOX and http://www.uniprot.org/uniprot/P22761			
MYZM	Myozenin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Myozenin.	ECOTOX			
MACM	Myristoylated alanine rich protein kinase C substrate mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Myristoylated alanine rich protein kinase C substrate. Also: marcks.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/148233446	166650	GI:148233446	NCBI
NRSR	N-ras mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to the oncogene N-ras.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/162424326	170525		
NDBM	NADH dehydrogenase (ubiquinone) 1 Beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to NADH dehydrogenase 1 Beta.	ECOTOX			
NDUM	NADH dehydrogenase (ubiquinone) Fe-S protein 3, (NADH-coenzyme Q reductase) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to NADH dehydrogenase (ubiquinone) Fe-S protein 3, (NADH-coenzyme Q reductase). Also: ndufs3, zgc:112520.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=BC093359	172238	BC093359	GenBank

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
NURM	NADH:ubiquinone reductase (H(+)-translocating) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to NADH:ubiquinone reductase (H(+)-translocating). Also: NADH-ubiquinone oxidoreductase chain 1, NADH dehydrogenase subunit, NDI.	ECOTOX, http://www.uniprot.org/uniprot/E1CI17 and http://enzyme.expasy.org/EC/1.6.5.3			
RNRD	NAD(P)H dehydrogenanse, quinone 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to NAD(P)H dehydrogenanse, quinone 1	ECOTOX			
NHRM	NADPH--hemoprotein reductase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to NADPH--hemoprotein reductase. Also: NADPH-cytochrome P450 oxidoreductase.	ECOTOX and http://enzyme.expasy.org/EC/1.6.2.4			
NK1M	Na+/H+ ATPase alpha1a-subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Na+/H+ ATPase alpha1a-subunit.	ECOTOX			
NKAM	Na+ K+ ATPase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Na+ K+ ATPase (Sodium Potassium ATPase).	ECOTOX			
NAAM	Na+/K+ ATPase alpha 1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Na+/K+ ATPase alpha 1a. Also: Sodium/potassium-transporting ATPase alpha 1a.	ECOTOX			
NABM	Na+/K+ ATPase alpha 1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Na+/K+ ATPase alpha 1b. Also: Sodium/potassium-transporting ATPase alpha 1b.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
NACM	Na+/K+ ATPase alpha 1c mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Na+/K+ ATPase alpha 1c. Also: Sodium/potassium-transporting ATPase alpha 1c.	ECOTOX and http://www.uniprot.org/uniprot/I6T811			
NA3M	Na+/K+ ATPase alpha 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Na+/K+ ATPase alpha 3. Also: Sodium/potassium-transporting ATPase subunit alpha-3, Sodium/potassium-transporting ATPase alpha 3, Na(+)/K(+) ATPase alpha(III) subunit, Sodium pump subunit alpha-3, atp1a3.	ECOTOX and http://www.uniprot.org/uniprot/P58312			
NKCM	Na+ K+ 2Cl- Cotransporter mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Na+ K+ 2Cl- Cotransporter (Sodium Potassium Chlorine cotransporter).	ECOTOX			
NRTM	Neuritin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Neuritin. Also: NRN1.	ECOTOX and http://www.uniprot.org/uniprot/C0H972			
NCPM	Neurocan core protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Neurocan core protein. Also: Chondroitin sulfate proteoglycan 3, ncan, Cspg3.	ECOTOX and http://www.uniprot.org/uniprot/P55066	168274	P55066	Uniprot
NNLM	Neuronal acetylcholine receptor, Neurotransmitter-gated ion-channel ligand binding domain mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Neuronal acetylcholine receptor, Neurotransmitter-gated ion-channel ligand binding domain.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
NNTM	Neuronal acetylcholine receptor, Neurotransmitter-gated ion-channel transmembrane region mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Neuronal acetylcholine receptor, Neurotransmitter-gated ion-channel transmembrane region.	ECOTOX			
ND1R	Neuronal differentiation 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Neuronal differentiation 1. Also: neuro-d, neurod, neurod1, nrd, ndf1.	ECOTOX and http://zfin.org/ZDB-GENE-990415-172	171280		
DCXM	Neuronal migration protein doublecortin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Neuronal migration protein doublecortin. Also: Dcx, Doublin, Lissencephalin-X.	ECOTOX and http://www.uniprot.org/uniprot/O88809			
NG1M	Neurongenin 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Neurongenin 1 mRNA. Also: ngn1, ngr1, cb260, zNgn1, neurod3, chunp6899, NGN-1, Zath4c, neurogenic differentiation 3, neurogenic differentiation factor 3, neurogenin-related protein 1.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=NM_131041	170392	NM_131041	
NFFR	Neuropeptide FF-amide peptide precursor like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Neuropeptide FF-amide peptide precursor like. Also: npffl, pqrf.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/368264	170801		
NF2R	Neuropeptide FF receptor 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Neuropeptide FF receptor 2. Also: npffr2, G-protein coupled receptor 74, Neuropeptide NPFF receptor, gpr74, npff2, HG31.	ECOTOX, http://www.uniprot.org/uniprot/Q924H0 and http://www.ncbi.nlm.nih.gov/gene/104443	169181		

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
NPYM	Neuropeptide Y mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Neuropeptide Y.	ECOTOX			
NY8B	Neuropeptide Y receptor Y8b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Neuropeptide Y receptor Y8b. Also: zyb, npyryb, zgc:194624, zgc:194648.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=nm_131436	169181	NM_131436	GenBank
DD1M	N(G),N(G)-dimethylarginine dimethylaminohydrolase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to N(G),N(G)-dimethylarginine dimethylaminohydrolase 1. Also: DDAH1, DDAH-1, Dimethylarginine dimethylaminohydrolase 1, DDAHI, Dimethylargininase-1.	ECOTOX and http://www.uniprot.org/uniprot/P56965	166650	33417138	GenBank
NCMM	Neutral ceramidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Neutral ceramidase. Also: Cdase, N-Cdase, NCDase, Neutral N-acylsphingosine amidohydrolase, Neutral acylsphingosine deacylase, Slug-a-bed protein, slab.	ECOTOX and http://www.uniprot.org/uniprot/Q9VA70			
NOSR	nitric oxide synthase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to nitric oxide synthase mRNA	ECOTOX			
NMRM	N-methyl-D-aspartate receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to N-methyl-D-aspartate receptor. Also:NMDAR.	ECOTOX and http://www.uniprot.org/uniprot/A7YJZ0			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
NPSM	Nonribosomal peptide sythetase McyA protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nonribosomal peptide sythetase McyA protein. Also: mcyA.	ECOTOX and http://www.uniprot.org/uniprot/L8NWM7			
NTCM	Notch mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Notch.	ECOTOX			
NT1R	Notch 1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to notch 1a. Also: n1a, des, notch1a.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/30718	171280		
NGRN	Notch gene homolog 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Notch gene homolog 1	ECOTOX			
UC3M	Novel protein similar to vertebrate urocortin 3 (Stresscopin) (UCN3) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Novel protein similar to vertebrate urocortin 3 (Stresscopin) (UCN3). Also: ucn3L.	ECOTOX and http://www.uniprot.org/uniprot/Q1LYP1			
NQO1	Nqo1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nqo1 mRNA	ECOTOX			
NS1M	Nsep1 protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nsep1 protein.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/27503841	166650	27503841	GenBank
NTAM	N-Terminal acetyltransferase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to N-Terminal acetyltransferase.	ECOTOX			
NABN	Nuclear Abnormalities	No definition available.				

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
NF2M	Nuclear Factor erythroid 2-related factor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear Factor erythroid 2-related factor (Nrf2).	ECOTOX			
NL2M	Nuclear factor, erythroid 2-like 2b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear factor, erythroid 2-like 2b. Also: nfe2l2b, nrf2b.	ECOTOX and http://zfin.org/ZDB-GENE-120320-3	171290	GmE090818c13982	GenBank
NFCR	Nuclear factor I/C mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear factor I/C. Also: nfic.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/100005568	170801		
NCPF	Nuclear phase frequency	Number of phases that a cell goes through during cell division.				
NR3M	Nuclear receptor 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor 3. Also: HR3.	ECOTOX and http://www.uniprot.org/uniprot/Q9NH86			
NR2M	Nuclear receptor-binding factor 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor-binding factor 2. Also: nrbf2, NRBF-2.	ECOTOX and http://www.uniprot.org/uniprot/Q8VCQ3			
NR1R	Nuclear receptor coactivator 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor coactivator 1. Also: ncoa1, dkey-34f16.7, si:dkey-34f16.6, si:dkey-5g7.6, src1.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/XM_686652 and http://zfin.org/ZDB-GENE-041001-175	170323	XM_686652	GenBank
NC2R	Nuclear receptor coactivator 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor coactivator 2. Also: ncoa2. ncoa-2, glucocorticoid receptor-interacting protein 1, tteroid receptor coactivator 2, transcriptional intermediary factor 2, grip1, src2, tif2, wu:fc41a10, wu:fe26a11.	ECOTOX, http://www.uniprot.org/uniprot/Q98TW1 and http://zfin.org/ZDB-GENE-010406-3	170323	NM_131777	GenBank

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
NR3R	Nuclear receptor coactivator 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor coactivator 3. Also: ncoa3, sb:eu248, sb:eu484, SRC3.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/xm_687846 and http://zfin.org/ZDB-GENE-051107-8	170323	XM_687846	GenBank
NRCR	Nuclear receptor corepressor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor co-repressor. Also: ncor1, ncor.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/ef016488 and http://www.uniprot.org/uniprot/A8B6H7	170323	EF016488	GenBank
NR2R	Nuclear receptor corepressor 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor corepressor 2. Also: ncor2, SMRT; gb:be017685; si:bz71m17.2.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/NM_001007032	170323	NM_001007032	GenBank
ROAM	Nuclear receptor ROR-alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor ROR-alpha. Also: Nuclear receptor RZR-alpha, Nuclear receptor subfamily 1 group F member 1, Retinoid-related orphan receptor-alpha, Rora, Nr1f1, Rzra.	ECOTOX and http://www.uniprot.org/uniprot/P51448			
ROBM	Nuclear receptor ROR-beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor ROR-beta. Also: Nuclear receptor RZR-beta, Nuclear receptor subfamily 1 group F member 2, Retinoid-related orphan receptor-beta, Rorb, Nr1f2.	ECOTOX and http://www.uniprot.org/uniprot/Q8R1B8			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
N0BM	Nuclear receptor subfamily 0 group B member 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor subfamily 0 group B member 1. Also: DSS-AHC critical region on the X chromosome protein 1, Nuclear receptor DAX-1, NR0B1, AHC, DAX1.	ECOTOX and http://www.uniprot.org/uniprot/P51843			
ND1M	Nuclear receptor subfamily 1 group D member 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor subfamily 1 group D member 1. Also: Rev-erbA-alpha, V-erbA-related protein 1, Nr1d1, Ear1.	ECOTOX and http://www.uniprot.org/uniprot/Q3UV55			
ND2M	Nuclear receptor subfamily 1 group D member 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor subfamily 1 group D member 2. Also: Orphan nuclear receptor RVR, Rev-erb-beta, Nr1d2.	ECOTOX and http://www.uniprot.org/uniprot/Q60674			
NRRM	Nuclear receptor subfamily 4 group A member 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor subfamily 4 group A member 2 . Also: Immediate-early response protein NOT, Orphan nuclear receptor, NURR1, Transcriptionally-inducible nuclear receptor, NR4A2, NOT, TINUR.	ECOTOX and http://www.uniprot.org/uniprot/P43354	170852		
5AAM	Nuclear receptor subfamily 5 group A member 1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor subfamily 5 group A member 1a. Also: Nr5a1a.	ECOTOX and http://www.uniprot.org/uniprot/M9UU09	170160		

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
N52R	Nuclear receptor subfamily 5 group A member 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor subfamily 5 group A member 2 mRNA. Also: Nr5a2, Alpha-1-fetoprotein transcription factor, B1-binding factor, CYP7A promoter-binding factor, Hepatocytic transcription factor, Liver receptor homolog 1.	ECOTOX, http://www.uniprot.org/uniprot/M9V032 and http://www.uniprot.org/uniprot/O00482	170402	KC476440	GenBank
N55R	Nuclear receptor subfamily 5 group A member 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor subfamily 5 group A member 5 mRNA. Also: Nr5a5, ff1c, fd46g06, wu:fd46g06, zgc:111842, zgc:153866.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/407626 and http://www.uniprot.org/uniprot/M9UWG5	170402	KC476441	GenBank
5ABM	Nuclear receptor subfamily 5, group A, member 1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor subfamily 5, group A, member 1b. Also: nr5a1b, Novel protein similar to Carassius auratus nuclear hormone receptor FTZ-F1, nr5a2l, Ff1d.	ECOTOX and http://www.uniprot.org/uniprot/Q800U8	170160	405759	GenBank
NLMR	Nucleolin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nucleolin. Nucleolin = A major nucleolar protein (100 kD) that functions as a shuttle protein between nucleus and cytoplasm and is also found on the cell surface. Nucleolin binds midkine and heparin binding growth associated molecule (HB GAM).	http://cancerweb.ncl.ac.uk/omd//omd/			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
NDKM	Nucleoside diphosphate kinase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nucleoside diphosphate kinase 1. Also: NDKP1, Nucleoside diphosphate kinase I, NDK I, NDP kinase I, NDPK I, Nucleoside 5'-diphosphate phosphotransferase, Nucleoside diphosphokinase, Nucleoside-diphosphate kinase, EC 2.7.4.6.	ECOTOX, http://enzyme.expasy.org/EC/2.7.4.6 and http://www.uniprot.org/uniprot/O81372	155054		
NRXR	Neurexin 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Neurexin 2. Also: nrxn2, kiaa0921.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/18190	170801		
OMGR	O6-MGMT mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to O6-MGMT mRNA. Also: O6-methylguanine-DNA methyltransferase.	ECOTOX, http://www.uniprot.org/uniprot/D2Y3F1 and http://www.ncbi.nlm.nih.gov/nuccore/283825502	170525	GU296409	
OCRM	Octopamine receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Octopamine receptor.	ECOTOX and http://www.uniprot.org/uniprot/Q17232			
OCHM	omChgH mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to omChgH	ECOTOX			
OCLM	omChgL mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to omChgL	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
OS1M	Opsin-1, short-wave-sensitive 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Opsin-1, short-wave-sensitive 1. Also: opn1sw1, SWS1, zfuv, uvops, opn1sw2, Opsin 1 (cone pigments) short-wave-sensitive 1, Opsin SWS-1, Ultraviolet cone photoreceptor pigment, Ultraviolet-sensitive opsin.	ECOTOX, http://www.uniprot.org/uniprot/Q9W6A9 and http://www.ncbi.nlm.nih.gov/gene/?term=nm_131319	166633	NM_131319	GenBank
OS2M	Opsin-1, short-wave-sensitive 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Opsin-1, short-wave-sensitive 2. Also: Opsin 1 (cone pigments) short-wave-sensitive 2, opn1sw2, SWS2, bluops, zfblue, Blue cone photoreceptor pigment, Blue-sensitive opsin, Opsin SWS-2.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=NM_131192 and http://www.uniprot.org/uniprot/Q9W6A8	166633	NM_131192	GenBank
OXNR	Orexin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to orexin	ECOTOX			
OATM	Organic anion transporting polypeptide 58Dc mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Organic anion transporting polypeptide 58Dc. Also: CG3380, Dmel\CG3380, OATP, oatp 58Dc.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/37545			
ODCM	Ornithine decarboxylase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ornithine decarboxylase. Also: ODC1, ODC, EC 4.1.1.17.	ECOTOX and http://www.uniprot.org/uniprot/P00860			
OAP8	OsAPx8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to OsAPx8	ECOTOX			

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A26M	Ovulin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ovulin. Also: Accessory gland-specific peptide 26Aa, Male accessory gland secretory protein 355A, Acp26Aa, Mst26Aa, mst355a, CG8982.	ECOTOX and http://www.uniprot.org/uniprot/P10333	170845		
OB2M	Oxysterol-binding protein 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Oxysterol-binding protein 2. Also: Osbp2.	ECOTOX and http://www.uniprot.org/uniprot/Q5QNQ6			
P21M	p21 (CDKN1A)-activated kinase 2a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to p21 (CDKN1A)-activated kinase 2a. Also: pak2a, Pak2a protein, cb422, pak2, redhead, rhd.	ECOTOX, http://zfin.org/action/marker/view/ZDB-GENE-021011-2 and http://www.uniprot.org/uniprot/Q6DG42			
21PM	p21-ras protein mRNA, long form	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to the long form p21-ras protein. Also: Ki-ras, KRAS prot-oncogene GTPase	ECOTOX and https://www.ncbi.nlm.nih.gov/nuccore/AY886900	95944	AY886900	GenBank
21SM	p21-ras protein mRNA, short form	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to the short form p21-ras protein. Also: Ki-ras	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=AY886901	95944	AY886901	GenBank
P2LM	p21 protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to the p21 protein. Also: Ha-ras	ECOTOX and https://www.ncbi.nlm.nih.gov/nuccore/DQ078265	95944	DG078265	GenBank
PAMR	P450-17alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to P450-17alpha. Also: CYP17A.	ECOTOX			

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
P4MR	P450scc mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cholesterol side-chain cleavage enzyme, mitochondrial. Also:P450scc, Cholesterol side chain cleavage CYPXIA1, cyp11a1, Cholesterol desmolase, Cytochrome P450 11A1, Cytochrome P450(scc), Cholesterol monooxygenase (side-chain-cleaving), Cholesterol 20-22-desmolase, Cholesterol C(20-22) desmolase., Cholesterol side-chain cleavage enzyme, Steroid 20-22 desmolase, Steroid 20-22-lyase, EC 1.14.15.6. ,	ECOTOX, http://enzyme.expasy.org/EC/1.14.15.6 and http://www.uniprot.org/uniprot/Q07217			
P53M	p53 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to p53. Also: protein 53,, tumor protein 53, brp53, drp53, fb40d06, wu:fb40d06, zgc:111919, etID22686.5, tp53.	ECOTOX, http://www.uniprot.org/uniprot/G1K2L5 and http://www.ncbi.nlm.nih.gov/gene/?term=NM_001271820	170362	NM_001271820	GenBank
PACH	Pachytene	The stage of meiotic prophase that immediately follows the zygotene and that is characterized by paired chromosomes thickened and visibly divided into chromatids and by the occurrence of crossing-over.				
PX2M	Paired box protein Pax-2a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Paired box protein Pax-2a. Also: PAX2a, No isthmus protein, Pax[Zf-b], noi, pax2.1, paxzf-b.	ECOTOX and http://www.uniprot.org/uniprot/Q90268	170179		
PX8M	Paired box protein Pax-8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Paired box protein Pax-8. Also: Paired box gene Pax-8.	ECOTOX and http://www.uniprot.org/uniprot/A0JMA6			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
PLRM	Paramyosin-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Paramyosin-like mRNA.	ECOTOX and http://www.ncbi.nlm.nih.gov/nucest/CO729458	171021	CO729458	GenBank
PARK	Parkin	Parkin encodes for a protein-ubiquitin E3 ligase. Mutations are linked to Parkinson#s disease	http://www.acsu.buffalo.edu/~jianfeng/parkin-DAT.pdf			
PVAM	Parvalbumin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Parvalbumin.	ECOTOX and http://www.uniprot.org/uniprot/Q8UUS2			
P6MR	pax6 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to pax6.	ECOTOX			
PCNA	PCNA Index	Proliferating cell nuclear a. (PCNA) a 36-kd nuclear acidic protein whose levels in the body correlate with the rates of DNA synthesis and cellular proliferation in transformed cells of certain tumors. Called also cyclin.	http://www.mercksource.com/pp/us/			
MS2R	Peptide methionine-S-sulfoxide reductase A2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peptide methionine-S-sulfoxide reductase A2. Also: MSRA2	ECOTOX and http://www.uniprot.org/uniprot/A8HXY3	172734		
MS3R	Peptide methionine sulfoxide reductase A3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peptide methionine sulfoxide reductase A3. Also: MSRA3	ECOTOX and http://www.uniprot.org/uniprot/A8IZ70	172734		
MS5R	Peptide methionine sulfoxide reductase A5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peptide methionine sulfoxide reductase A5. Also: MSRA5	ECOTOX and http://www.uniprot.org/uniprot/A8I1K5	172734		

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
MS4R	Peptidyl-prolyl cis-trans isomerase A4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peptidyl-prolyl cis-trans isomerase A4. Also: MSRA4	ECOTOX and http://www.uniprot.org/uniprot/A8HPB8	172734		
PP3M	Period circadian clock 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Period circadian clock 3. Also: per3, period3.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/58107	170801		
PP1M	Period circadian protein homolog 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Period circadian protein homolog 1. Also: Circadian clock protein PERIOD 1, Per1.	ECOTOX and http://www.uniprot.org/uniprot/Q8CHI5			
PP2M	Period circadian protein homolog 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Period circadian protein homolog 2. Also: Circadian clock protein PERIOD 2, Per2.	ECOTOX and http://www.uniprot.org/uniprot/Q9Z301			
PONR	Peroxinectin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to peroxinectin mRNA	ECOTOX			
PX1M	Peroxiredoxin-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxiredoxin-1. Also: PRDX1.	ECOTOX and http://www.uniprot.org/uniprot/B5X7X7			
PQAM	Peroxiredoxin Q A-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxiredoxin Q A-1. Also: prxQ-A1.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
PBEM	Peroxisomal bifunctional enzyme mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxisomal bifunctional enzyme, in cluding the following 2 domains: Enoyl-CoA hydratase/3,2-trans-enoyl-CoA isomerase and 3-hydroxyacyl-CoA dehydrogenase. Also: ehhadh, PBFE, echd.	ECOTOX and http://www.uniprot.org/uniprot/Q6NYL3	168071	NM_207068	GenBank
PAAM	Peroxisome proliferator-activated receptor alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxisome proliferator-activated receptor alpha.	ECOTOX			
AAAM	Peroxisome proliferator-activated receptor alpha a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxisome proliferator-activated receptor alpha a. Also: PPARalphaa, pparaa.	ECOTOX and http://zfin.org/ZDB-GENE-041210-169			
PPRM	Peroxisome proliferator-activated receptor gamma mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxisome proliferator-activated receptor gamma. Also: pparg, ppar, arf6, nr1c3, and nr1c3.	ECOTOX and http://zfin.org/ZDB-GENE-990415-213	171290	ES475236	GenBank
PGCR	Peroxisome proliferator activated receptor gamma coactivator 1 alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxisome proliferator activated receptor gamma coactivator 1 alpha. Also: pgc-1alpha, ppargc1a.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/AY998087 and http://www.uniprot.org/uniprot/Q52MY8	170323	AY998087	GenBank
PPBM	Peroxisome proliferator activated receptor alpha b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxisome proliferator activated receptor alpha b. Also: PPARalphab.	ECOTOX and http://zfin.org/action/marker/sequence/view/ZDB-GENE-990415-211			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
PABM	Peroxisome proliferator-activated receptor beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxisome proliferator-activated receptor beta.	ECOTOX			
PPDM	Peroxisome proliferator-activated receptor delta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxisome proliferator-activated receptor delta. Also: PPARda.	ECOTOX and http://www.genscript.com/cgi-bin/orf/refseq.pl?acc=XM_694808			
PDBM	Peroxisome proliferator-activated receptor delta b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxisome proliferator-activated receptor delta b. Also: PPARdb.	ECOTOX and http://www.uniprot.org/uniprot/A9C4A5			
PAGM	Peroxisome proliferator-activated receptor gamma mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxisome proliferator-activated receptor gamma.	ECOTOX			
PHFQ	Phenotype frequencies	The frequency at which a phenotype is displayed. A phenotype is the total characteristics displayed by an organism under a particular set of environmental factors, regardless of the actual genotype of the organism. Results from interaction between the genotype and the environment.	http://cancerweb.ncl.ac.uk/omd/			
PHMR	Phenylalanine Hydroxylase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phenylalanine Hydroxylase.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
PA1M	Phorbol-12-myristate-13-acetate-induced protein 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phorbol-12-myristate-13-acetate-induced protein 1. Also: noxa, pmaip1.	ECOTOX, http://zfin.org/action/marker/view/ZDB-GENE-070119-3 and http://www.uniprot.org/uniprot/Q0GKC8			
PBPM	Phosphate-binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phosphate-binding protein. Also: pstS.	ECOTOX and http://www.uniprot.org/uniprot/B0JWI0			
PTAM	Phosphate-specific transport system accessory protein PhoU mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phosphate-specific transport system accessory protein PhoU. Also: phoU.	ECOTOX and http://www.uniprot.org/uniprot/B0JY50			
PPPM	Phosphate transport system permease protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phosphate transport system permease protein. Also: pstA.	ECOTOX and http://www.uniprot.org/uniprot/B0JWH8			
PCRN	Phosphoenolpyruvate carboxykinase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phosphoenolpyruvate carboxykinase 1	ECOTOX			
PCGM	Phosphoenolpyruvate carboxykinase (GTP) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phosphoenolpyruvate carboxykinase (GTP). Also: pckG, PEPCK, EC 4.1.1.32.	ECOTOX and http://www.uniprot.org/uniprot/Q9Z755			
PC2M	Phosphoenolpyruvate carboxykinase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phosphoenolpyruvate carboxykinase 2. Also: pck2, zgc:77867.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=BC063985	170520	BC063985	GenBank

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P10R	Phosphodiesterase 10A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phosphodiesterase 10A. Also: pde10a, zgc:56689.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/394077	170801		
PTCM	Phosphoinositide phospholipase C mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phosphoinositide phospholipase C. Also: plcg1,1-phosphatidyl-D-myo-inositol-4,5-bisphosphate inositoltrisphosphohydrolase, 1-phosphatidylinositol-4,5-bisphosphate phosphodiesterase, Monophosphatidylinositol phosphodiesterase, Phosphatidylinositol phospholipase C, Phosphoinositidase C, PI-PLC, Triphosphoinositide phosphodiesterase, EC 3.1.4.11.	ECOTOX, http://enzyme.expasy.org/EC/3.1.4.11 and http://www.uniprot.org/uniprot/Q804J6			
PA2M	Phospholipase A2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phospholipase A2.	ECOTOX			
P2AM	Phospholipase A2-activating protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phospholipase A2-activating protein. Also: plaa.	ECOTOX and http://www.uniprot.org/uniprot/Q7SXM2			
PHCM	Phospholipase C mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phospholipase C.	ECOTOX			
NAP4	Phospholipase C gamma-binding protein (NAP4) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to phospholipase C gamma-binding protein (NAP4).	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
PIBM	Photosystem I reaction center protein subunit B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Photosystem I reaction center protein subunit B (psaB) .	ECOTOX			
PD2M	Photosystem II D2 protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Photosystem II D2 protein. Also: Photosystem Q(A) protein, psbD.	ECOTOX and http://www.uniprot.org/uniprot/P56319			
PD1M	Photosystem II D2 protein 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Photosystem II D2 protein 1. Also: psbD1, Photosystem Q(A) protein 1.	ECOTOX and http://www.uniprot.org/uniprot/Q5N3Q7			
PBCM	Photosystem II psbC mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Photosystem II psbC protein.	ECOTOX			
PQBM	Photosystem Q(B) protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Photosystem Q(B) protein. Also: 32 kDa thylakoid membrane protein, Photosystem II protein D1, psbA.	ECOTOX and http://www.uniprot.org/uniprot/P56318			
PD1R	Phosphotyrosine interaction domain containing 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phosphotyrosine interaction domain containing 1. Also: pid1, wu:fb36h10, zgc:113478.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/541377	170801		
PYDM	Phytoene desaturase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phytoene desaturase.	ECOTOX and http://www.uniprot.org/uniprot/A1YEB2	171826	DQ924534	GenBank

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PLCR	Piccolo presynaptic cytomatrix protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Piccolo presynaptic cytomatrix protein. Also: pclo, pcloa, wu:fj53e09, si:dkey-108d22.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/100148002	170801		
PH2M	Pituitary homeobox 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Pituitary homeobox 2. Also: ALL1-responsive protein ARP1, BRX1 homeoprotein, Homeobox protein PITX2, Orthodenticle-like homeobox 2, Paired-like homeodomain transcription factor 2, Paired-like homeodomain transcription factor Munc 30, Solurshin, Pitx2, Arp1, Brx1, Otlx2, Ptx2, Rgs, PITX2.	ECOTOX and http://www.uniprot.org/uniprot/P97474			
PSMR	Pituitary specific transcription factor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins.				
PWIM	Piwi-like protein 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Piwi-like protein 1. Also: piwil1.	ECOTOX and http://www.uniprot.org/uniprot/Q8UVX0			
PO2R	Pleckstrin homology domain containing, family O member 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Pleckstrin homology domain containing, family O member 2. Also: plekho2.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/100334463	170801		
PK1M	Polyketide synthase type 1 McyD mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Polyketide synthase type 1 McyD. Also: mycD.	ECOTOX and http://www.uniprot.org/uniprot/L8NTG4			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
PCTR	Potassium channel tetramerisation domain containing 15 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Potassium channel tetramerisation domain containing 15. Also: kctd15, kctd15b.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/445133	170801		
P2FM	POU domain, class 2, transcription factor 3-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to POU domain, class 2, transcription factor 3-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=727092			
LX1M	PREDICTED: leucine-rich repeat-containing protein 16A-like isoform X1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to PREDICTED: leucine-rich repeat-containing protein 16A-like isoform X1. Also: Amel\CLR.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/328788969	167678	XP_003251213	GenBank
PXMR	Pregnane X receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Pregnane X receptor (also known as NR1I2 (nuclear receptor subfamily 1, group I, member 2).	ECOTOX and http://www.uniprot.org/uniprot/A5A0Y5			
MCHM	Prepro-melanin-concentrating hormone mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Prepro-melanin-concentrating hormone (pp-MCH).	ECOTOX			
PPIN	Preproinsulin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Preproinsulin. Also: ins, zgc:109842.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=NM_131056	169181	NM_131056	GenBank
PYYM	Prepropeptide YY mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Prepropeptide YY.	ECOTOX and http://www.uniprot.org/uniprot/R4I355			

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PPVM	Preprovasotocin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Preprovasotocin.	ECOTOX and http://www.uniprot.org/uniprot/D9IFL6			
DX5M	Probable ATP-dependent RNA helicase DDX5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Probable ATP-dependent RNA helicase DDX5 (DDX5). Also:DEAD (Asp-Glu-Ala-Asp) box helicase 5, probable ATP-dependent RNA helicase DDX5, DEAD box protein 5.	ECOTOX and http://www.genecards.org/cgi-bin/carddisp.pl?gene=DDX5			
PCTM	Probable cation-transporting ATPase 13A3-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Probable cation-transporting ATPase 13A3-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=410527			
PC5M	Probable copper-transporting ATPase HMA5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Probable copper-transporting ATPase HMA5. Also: Probable copper-transporting ATPase 3, Protein HEAVY METAL ATPASE 5.	ECOTOX and http://www.uniprot.org/uniprot/Q9SH30			
P12M	Probable cytochrome P450 12d1 proximal, mitochondrial mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Probable cytochrome P450 12d1 proximal, mitochondrial. Also: Cyp12d1-p, CYPXIID1, Cyp12d1.	ECOTOX and http://www.uniprot.org/uniprot/P82712			
GS5R	Probable glutathione S-transferase 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Probable glutathione S-transferase 5. Also: gst-5, GST class-sigma.	ECOTOX and http://www.uniprot.org/uniprot/Q09596			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
GH3M	Probable indole-3-acetic acid-amido synthetase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Probable indole-3-acetic acid-amido synthetase. Also: GH3.2, and GH3-2.	ECOTOX and http://www.uniprot.org/uniprot/P0C0M2	171223		
L8CR	Probable lipoxygenase 8, chloroplastic mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Probable lipoxygenase 8, chloroplastic. Also: cm-lox2.	ECOTOX and http://www.uniprot.org/uniprot/Q84YK8	170364		
PMIM	Probable maleylacetoacetate isomerase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Probable maleylacetoacetate isomerase. Also: MAAI, Glutathione S-transferase gst-42, gst-42.	ECOTOX and http://www.uniprot.org/uniprot/Q18938			
PO2M	Probable oxygen-evolving enhancer protein 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Probable oxygen-evolving enhancer protein 2. Also: PsbP subunit of photosystem II, psbP1.	ECOTOX and http://www.uniprot.org/uniprot/Q6XNL9	169205	AY222741	GenBank
PEGM	Pro-epidermal growth factor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Pro-epidermal growth factor. Also: Epidermal Growth Factor, HOMG4, URG, Epidermal Growth Factor (Beta-Urogastrone), beta-urogastrone, egf.	ECOTOX, http://www.genecards.org/cgi-bin/carddisp.pl?gene=EGF and http://www.uniprot.org/uniprot/P01132			
PL1R	Procollagen-lysine, 2-oxoglutarate 5-dioxygenase 1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Procollagen-lysine, 2-oxoglutarate 5-dioxygenase 1a mRNA. Also: plod, plod1, plod1a, wu:fc29c10, wu:fc95g08, wu:fi18a05, zgc:152876, ik:tdsubs_rzpd609-29b19.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=NM_001077742 and http://www.uniprot.org/uniprot/A8WIN7	170362	NM_001077742	GenBank

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
PRAM	Progesterone membrane receptor alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Progesterone membrane receptor alpha.	ECOTOX			
PRMR	Progesterone receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Progesterone receptor. Also: pgr, gb:dq017620, nr3c3, pr.	ECOTOX and http://zfin.org/ZDB-GENE-990415-214	170323	NM_001166335	GenBank
PM1M	Progestin membrane receptor component 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Progestin membrane receptor component 1. Also: PGMRC1.	ECOTOX and http://www.uniprot.org/uniprot/Q8AY40			
PR2M	Progestin membrane receptor component 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to progestin membrane receptor component 2	ECOTOX			
PG2M	Progonadoliberin-2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Progonadoliberin-2. Also: Chicken-type II gonadotropin-releasing hormone, Progonadoliberin II, cGnRH-II, gnrh2.	ECOTOX and http://www.uniprot.org/uniprot/Q9DGC9			
PCAM	Programmed cell death activator egl-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Programmed cell death activator egl-1. Also: Egg-laying defective protein 1, egl-1.	ECOTOX and http://www.uniprot.org/uniprot/O61667			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
PLMR	Prolactin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins. Prolactin is a protein hormone produced by the adenohypophysis; stimulates lactation and promotes functional activity of the corpus luteum.				
PR1R	Prolactin receptor 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Prolactin receptor 1. Also: prl1, prlr1, prla, prlra, prolactin receptor a.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/GU270842.1	170526		
PR2R	Prolactin receptor 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Prolactin receptor 2. Also: prl2, prlr2, prlb, prlrb, prolactin receptor b.	ECOTOX	170526		
PRLM	Proline--tRNA ligase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Proline--tRNA ligase. Also: Prolyl-tRNA Synthetase(mitochondrial).	ECOTOX and http://www.uniprot.org/uniprot/Q58635			
POOM	Pro-opiomelanocortin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Pro-opiomelanocortin. Also: POMC, Proopiomelanocortin, Proopiomelanocortin a, Corticotropin-lipotropin.	ECOTOX and http://www.uniprot.org/uniprot/P10000			
PPOM	Prophenoloxidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Prophenoloxidase.	ECOTOX			

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
PC1M	Proprotein Convertase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Proprotein Convertase 1. Also: Neuroendocrine Convertase PC1, PC1 Endoprotease, PC1 Prohormone Convertase, PC3 Endoprotease, PC3 Prohormone Convertase, Prohormone Convertase 1, Prohormone Convertase 3, Prohormone Convertase PC1, Proinsulin Convertase 1, Proprotein Convertase SPC3.	ECOTOX and http://www.nlm.nih.gov/cgi/mesh/2011/MB_cgi?mode=&term=Proprotein+Convertase+1			
PE2M	Prostaglandin E synthase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Prostaglandin E synthase 2. Also: ptgsl, ptges2, pges2, ptgesl, Microsomal prostaglandin E synthase 2, mPGES-2.	ECOTOX and http://www.uniprot.org/uniprot/Q7ZUC7			
PS1M	Prostaglandin G/H synthase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Prostaglandin G/H synthase 1. Also: ptgs1.	ECOTOX and http://www.uniprot.org/uniprot/Q8JH44			
PS2M	Prostaglandin G/H synthase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Prostaglandin G/H synthase 2. Also: Prostaglandin-endoperoxide synthase 2a, ptgs2, ptgs2a.	ECOTOX and http://www.uniprot.org/uniprot/Q8JH43			
P2SM	Prostaglandin I2 synthase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Prostaglandin I2 synthase. Also: ptgis.	ECOTOX and http://www.uniprot.org/uniprot/A9LLA5			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
PR1M	Prostaglandin reductase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Prostaglandin reductase 1. Also: 15-oxoprostaglandin 13-reductase, NADP-dependent leukotriene B4 12-hydroxydehydrogenase, Ltb4dh.	ECOTOX and http://www.uniprot.org/uniprot/Q9EQZ5			
PTKM	Protachykinin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Protachykinin. Also: Gamma-preprotachykinin.	ECOTOX and http://www.uniprot.org/uniprot/P25421			
PTMM	Protamine mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Protamine.	ECOTOX and http://www.uniprot.org/uniprot/Q91185			
PIKM	Protease inhibitor 11, Kazal mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Protease inhibitor 11, Kazal.	ECOTOX			
PTBM	Proteasome subunit beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Proteasome subunit beta. Also: Proteasome beta, 20S proteasome beta subunit Proteasome core protein PsmB, psmB.	ECOTOX and http://www.uniprot.org/uniprot/P28061			
PCKM	Protein C kinase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to the Protein C kinase.	ECOTOX and http://www.ncbi.nlm.nih.gov/nucest/CO729466	171021	CO729466	GenBank
CA9M	Protein CBR-CYP-34A9 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Protein CBR-CYP-34A9. Also: cyp-34a9, Cbr-cyp-34A9.	ECOTOX and http://www.uniprot.org/uniprot/A8WQ02			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
PG1M	Protein CBR-PGRN-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Protein CBR-PGRN-1. Also: pgrn-1, Cbr-pgrn-1.	ECOTOX and http://www.uniprot.org/uniprot/A8XM14			
CB1R	Protein CYP-35B1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Protein CYP-35B1. Also: cyp-35b1, cyp-35B1.	ECOTOX and http://www.uniprot.org/uniprot/O44650			
G38R	Protein GST-38 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Protein GST-38. Also: gst-38.	ECOTOX and http://www.uniprot.org/uniprot/O45451			
PKCM	Protein kinase C delta type mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Protein kinase C delta type. Also: prkcd, nPKC-delta, pkcd, EC 2.7.11.13.	ECOTOX and http://www.uniprot.org/uniprot/P09215	168602	JX470751	source unknown
L2GM	Protein lethal(2) giant larvae mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Protein lethal(2) giant larvae (l(2)gl) Also: p127, Dpse\l(2)gl.	ECOTOX and http://www.uniprot.org/uniprot/Q08470			
PPMR	Protein phosphatase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Protein phosphatase. Also: cdc25b, cdc25, cdc25A, sb:cb317, cell division cycle 25B.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=nm_001115095 and http://www.uniprot.org/uniprot/B5LY73	170362	NM_001115095	GenBank
PRDN	Protein to DNA ratio	The amount of protein as compared to the amount of DNA in a sample.	ECOTOX			
PRRN	Protein to RNA ratio	The ratio of Protein to RNA in a sample.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
W8AM	Protein Wnt-8a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Protein Wnt-8a. Also: wnt8a, wnt-8, wnt8.	ECOTOX and http://www.uniprot.org/uniprot/P51028	169192	JQ950331	source unknown
P9AR	Proteasome subunit beta 9a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Proteasome subunit beta 9a. Also: psmb9, imp2, psmb9.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/30665	170801		
PTRM	Pro-thyrotropin-releasing hormone mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Pro-thyrotropin-releasing hormone. Also: TRH, Pro-TRH, Prothyroliberin.	ECOTOX and http://www.uniprot.org/uniprot/Q5EDF9			
PA4M	Proton-coupled amino acid transporter 4-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Proton-coupled amino acid transporter 4-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=413117			
PSBM	psaB mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to psaB.	ECOTOX			
PSCM	psbC mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to psbC.	ECOTOX			
PNPM	Purine nucleoside phosphorylase-like protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Purine nucleoside phosphorylase-like protein.	ECOTOX and http://www.uniprot.org/uniprot/A0A061ILE8			
MT1R	Putative Cu-metallothionein (MTT1) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Putative Cu-metallothionein (MTT1).	ECOTOX and http://www.uniprot.org/uniprot/B3G3J6	172379	EU627174	

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
MT2M	Putative Cu-metallothionein (MTT2) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Putative Cu-metallothionein (MTT2).	ECOTOX and http://www.uniprot.org/uniprot/B3G3J7	172379	EU627175	
PKDM	Putative protein kinase C delta type homolog mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Putative protein kinase C delta type homolog. Also: Pkcdelta, PKC-delta.	ECOTOX and http://www.uniprot.org/uniprot/P83099	169813	JX470751	
UBCM	Putative ubiquitin-conjugating enzyme mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Putative ubiquitin-conjugating enzyme.	ECOTOX and http://www.uniprot.org/uniprot/Q6PPH5			
PUPR	Putative uncharacterized protein OJ1123_C08.7 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Putative uncharacterized protein OJ1123_C08.7. Also: oj1123_c08.7.	ECOTOX and http://www.uniprot.org/uniprot/Q5WMR3	170366		
RS1R	R-ras1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to the oncogene R-ras1.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/EU616727.1	170525		
RS3R	R-ras3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to the oncogene R-ras3.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/EU616728.1	170525		
RD1M	Ras association (RalGDS/AF-6) domain family 1mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ras association (RalGDS/AF-6) domain family 1. Also: Ras-association domain family member 1, rassf1.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=nm_001004550.1	166328	NM_001004550.1	GenBank

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
RASO	Ras Oncogene mutation	A gene that causes cancer in an animal. The gene specifies the structure of an enzyme that catalyzes events that can induce cancerous growth. Ras is a protein found in chromosomes and when mutated it is permanently switched on telling the cell to grow regardless of whether the receptors on the cell surface are activated or not.	McGraw-Hill,1994			
RBCM	rbcL mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to rbcL.	ECOTOX			
RO1R	Reactive oxygen species modulator 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Reactive oxygen species modulator 1. Also, romo1, zgc:73345	ECOTOX and http://zfin.org/ZDB-GENE-040426-1768	171802	HO056270	GenBank
RO1M	Red-sensitive opsin-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Red-sensitive opsin-1. Also: opn1lw1, Opsin-1 long-wave-sensitive 1, Opsin 1 (cone pigments) long-wave-sensitive 1, Opsin LWS-1, Red cone photoreceptor pigment 1, lws1, rdops, zfred.	ECOTOX, http://www.uniprot.org/uniprot/Q9W6A7 and http://www.ncbi.nlm.nih.gov/gene/?term=nm_131175	166633	NM_131175	GenBank
RLNR	Reelin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Reelin. Also: reln.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/260303	170801		
RX3R	Relaxin/insulin-like family peptide receptor 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Relaxin/insulin-like family peptide receptor 3. Also: rxfp3, zgc:194824, zgc:194855, rxfp3-1.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=NM_001128788 and http://zfin.org/ZDB-GENE-080723-67	169181	NM_001128788	GenBank

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
RBSR	Retinoblastoma mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to the tumor suppressor Retinoblastoma. Also: Rb.	ECOTOX	170525		
RAAM	Retinoic acid receptor alpha-A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Retinoic acid receptor alpha-A. Also: raraa, rara, zRAR, rara2a, zRAR-alpha, zRAR alpha, Retinoic acid receptor alpha a, Nuclear receptor subfamily 1 group B member 1-A, Retinoic acid receptor alpha, Retinoic acid receptor alpha-2.A, RAR-alpha-2.A, nr1b1a.	ECOTOX, http://www.uniprot.org/uniprot/Q90271 and http://www.ncbi.nlm.nih.gov/gene/?term=NM_131406	166633	NM_131406	GenBank
RRAM	Retinoic acid receptor RXR-gamma-A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Retinoic acid receptor RXR-gamma-A. Also: Nuclear receptor subfamily 2 group B member 3-A, Retinoic acid receptor RXR-alpha, Retinoid X receptor alpha, Retinoid X receptor gamma-A, rxrga, nr2b1, nr2b3a, rxra, rxrg.	ECOTOX and http://www.uniprot.org/uniprot/Q90416			
RXAM	Retinoid X Receptor alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Retinoid X Receptor alpha.	ECOTOX			
RXBM	Retinoid X Receptor beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Retinoid X Receptor beta.	ECOTOX			
RXGM	Retinoid X Receptor gamma mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Retinoid X Receptor gamma.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
RBPR	Retinol-binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to retinol-binding protein	ECOTOX			
R1AM	Retinol binding protein 1a, cellular mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Retinol binding protein 1a, cellular. Also: Rbp1a protein, rbp5, rbp1a.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=nm_199528 and http://www.uniprot.org/uniprot/Q6NYP2	166633	NM_199528	GenBank
RB4M	Retinol-binding protein 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Retinol-binding protein 4. Also: Plasma retinol-binding protein, RBP4.	ECOTOX and http://www.uniprot.org/uniprot/P18902	166633	NM_130920	GenBank
RDMR	Retinol dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Retinol dehydrogenase.	ECOTOX			
RD1R	Retinol dehydrogenase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Retinol dehydrogenase 1. Also: rdh1, RDHB.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=NM_198069	166633	NM_198069	GenBank
RD2M	Retinal dehydrogenase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Retinal dehydrogenase 2. Also: aldh1a2, raldh2, Aldehyde dehydrogenase 1 family member A2, Retinaldehyde-specific dehydrogenase type 2.	ECOTOX and http://www.uniprot.org/uniprot/Q63639	166633	AF339837	GenBank

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
RD8M	Retinol dehydrogenase 8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Retinol dehydrogenase 8. Also: rd8, NADP-retinol dehydrogenase, Photoreceptor outer segment all-trans retinol dehydrogenase, PRRDH.	ECOTOX and http://www.uniprot.org/uniprot/Q9N126			
136M	Ribosomal protein 136a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ribosomal protein 136a.	ECOTOX			
R11M	Ribosomal protein L11 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ribosomal protein L11. Also: rpL11.	ECOTOX and http://www.uniprot.org/uniprot/A2IA71			
R12M	Ribosomal protein L12 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ribosomal protein L12. Also: RibpL12.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/fj790233 and http://www.uniprot.org/uniprot/C1K2L6	120570	FJ790233	GenBank
R15M	Ribosomal protein L15 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ribosomal protein L15. Also: L15.	ECOTOX and http://www.uniprot.org/uniprot/F6GPK6			
R17M	Ribosomal protein L17 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ribosomal protein L17. Also: L17 and rpl7.	ECOTOX and http://zfin.org/ZDB-GENE-030131-8654	171970	NM001104870	Genbank
R23M	Ribosomal protein L23a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ribosomal protein L23a.	ECOTOX			
RS2M	Ribosomal Protein S2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ribosomal Protein S2.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
S12M	Ribosomal protein s12 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ribosomal protein s12.	ECOTOX	166557	AJ626437	GenBank
S15M	Ribosomal protein s15 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ribosomal protein s15.	ECOTOX			
R19M	Ribosomal protein S19 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ribosomal protein S19. Also: rps19.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/BC150459 and http://www.uniprot.org/uniprot/Q6PBW7	169101	BC150459	NCBI/UNIPROT
S27M	Ribosomal protein s27 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ribosomal protein s27.	ECOTOX	166557	AJ625324	GenBank
RRNA	Ribosomal RNA	A molecule in cells that forms part of the protein-synthesizing organelle known as a ribosome and that is exported to the cytoplasm to help translate the information in messenger RNA (mRNA) into protein.	http://www.britannica.com/science/ribosomal-RNA	156029		
RP3M	40S ribosomal protein S3a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 40S ribosomal protein S3a. Also: RpS3.	ECOTOX and http://www.uniprot.org/uniprot/B2ZSF2			
RP6M	40S ribosomal protein S6 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 40S ribosomal protein S6. Also: RpS6.	ECOTOX and http://www.uniprot.org/uniprot/I0CC08			
R13M	60S ribosomal protein L13 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 60S ribosomal protein L13. Also: rpL13.	ECOTOX and http://www.uniprot.org/uniprot/A2IA72			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
RCLM	Ribulose-bisphosphate carboxylase large subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ribulose-bisphosphate carboxylase large subunit (rbcL).	ECOTOX			
RNAC	RNA Concentration	Ammount of RNA in a sample	ECOTOX			
RHMR	RNA helicase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to RNA helicase.	ECOTOX and http://www.uniprot.org/uniprot/O57652			
RNAS	RNA Synthesis Rate	No definition available.				
RNDN	RNA to DNA Ratio	The ratio of RNA to DNA in a sample	ECOTOX			
RNPR	RNA to protein ratio	A ratio of RNA to protein.	ECOTOX			
RHOM	Rhodopsin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Rhodopsin. Also: RHO, RH1, zfo2, zfrho.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=nm_131084 and http://www.uniprot.org/uniprot/P02699			
RP8M	rpl8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to rpl8. Also: Ribosomal protein L8, rpl8, zgc:73105.	ECOTOX and http://www.uniprot.org/uniprot/Q6P0V6			
ELH3	rtERalphaL mRNA to histone H3 mRNA ratio	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ratio of rtERalphaL mRNA to histone H3 mRNA	ECOTOX			
ESH3	rtERalphaS mRNA to histone H3 mRNA ratio	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ratio of rtERalphaS mRNA to histone H3 mRNA	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
RR2M	Runt-related transcription factor 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Runt-related transcription factor 2. Also: Runx2, Acute myeloid leukemia 3 protein,Core-binding factor subunit alpha-1, CBF-alpha-1, Oncogene AML-3, Osteoblast-specific transcription factor 2, OSF-2, Polyomavirus enhancer-binding protein 2 alpha A subunit, PEA2-alpha A, PEBP2-alpha A, SL3-3 enhancer factor 1 alpha A subunit, SL3/AKV core-binding factor alpha A subunit, Aml3, Cbfa1, Osf2, Pebp2a.	ECOTOX and http://www.uniprot.org/uniprot/Q08775			
AMSR	S-adenosylmethionine synthetase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to S-adenosylmethionine synthetase mRNA	ECOTOX			
SA2M	Salmo salar vomeronasal receptor-like protein (SVRA2) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Salmo salar vomeronasal receptor-like protein (SVRA2). Also: SVRA2.	ECOTOX, http://getentry.ddbj.nig.ac.jp/getentry/ddbj/DQ375532?filetype=html, and http://www.uniprot.org/uniprot/Q1KY04			
SB1M	Salmo salar vomeronasal receptor-like protein (SVRB1) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Salmo salar vomeronasal receptor-like protein (SVRB1). Also: SVRB1 .	ECOTOX, http://getentry.ddbj.nig.ac.jp/getentry/ddbj/DQ375537?filetype=html and http://www.uniprot.org/uniprot/Q1KY00			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
SE1M	Sarcoplasmic/endoplasmic reticulum calcium ATPase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Sarcoplasmic/endoplasmic reticulum calcium ATPase 1. Also: Sarcoendoplasmic reticulum Ca ATPase, ATP2A1, SERCA1, SR Ca(2+)-ATPase 1, Calcium pump 1, Calcium-transporting ATPase sarcoplasmic reticulum type, fast twitch skeletal muscle isoform, Endoplasmic reticulum class 1/2 Ca(2+) ATPase, EC 3.6.3.8.	ECOTOX and http://www.uniprot.org/uniprot/P04191	169409	GU564437	GenBank
SBPM	Selenium-binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Selenium-binding protein.	ECOTOX and http://www.uniprot.org/uniprot/D2JPI4			
SLKM	Selenoprotein K mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Selenoprotein K. Also: selk.	ECOTOX and http://zfin.org/ZDB-GENE-040912-131	171300		
SP1M	Selenoprotein P, plasma, 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Selenoprotein P, plasma, 1. Also: sepp1, selp, au018766, and d15ucla1.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/20363	171290		
SLBM	Selenoprotein T, 1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Selenoprotein T, 1b. Also: selt1b, sept1b, and cb698.	ECOTOX and http://zfin.org/ZDB-GENE-030411-1	171300		
SW1M	Selenoprotein W, 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Selenoprotein W, 1. Also: cb694, sepw1, and fe37b06.	ECOTOX and http://zfin.org/ZDB-GENE-030410-5	171300		

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
SW2M	Selenoprotein W, 2a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Selenoprotein W, 2a. Also: sepw2a, and cb695.	ECOTOX and http://zfin.org/ZDB-GENE-030428-1	171300		
ST4R	Septin 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Septin 4. Also: SEPT4, H5, ARTS, MART, SEP4, CE5B3, PNUTL2, hucep-7, BRADEION, hCDCREL-2.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/5414	156369		
S14M	Serine protease 14 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Serine protease 14. Also: SP14.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=725154			
S22M	Serine protease 22	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Serine protease 22. Also: SP22.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=413645			
S40M	Serine protease 40 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Serine protease 40. Also: Prss40, Testicular serine protease 2, Tesp2, SP40.	ECOTOX and http://www.uniprot.org/uniprot/A6H6T1			
STKM	Serine/Threonine protein kinase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Serine/Threonine protein kinase.	ECOTOX			
SEIM	Serine-type endopeptidase inhibitor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Serine-type endopeptidase inhibitor.	ECOTOX			
STPM	Serotonin transporter protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Serotonin transporter protein.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
SRPM	Serpentine mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Serpentine. Also: serp.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=408365			
SP3R	Serpina3M mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Serine (or cysteine) peptidase inhibitor, clade A, member 3M, mRNA. Also: 3e46, spi2, MMCM7, Spi-2l, Spi2.4, AI195004, MMSPi2.4, Spi-2rs1, Spi2-rs1, alpha-1 antiproteinase, antitrypsin, serine protease inhibitor-2 related sequence 1, serpin A3M.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=NM_009253	170332	NM_009253	GenBank
SA4M	Serum amyloid A-4 protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Serum amyloid A-4 protein. Also: SAA4, Serum Amyloid A-5 protein, Amyloid A-5 protein, SAA5.	ECOTOX and http://www.uniprot.org/uniprot/P31532			
SEXE	Sex Expression Change	No definition available.				
SNKR	SH3 and multiple ankyrin repeat domains protein 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to SH3 and multiple ankyrin repeat domains protein 3. Also: shank3.	ECOTOX and www.ncbi.nlm.nih.gov/gene/793484	170801		
SFPM	Sfrs1 protein, partial mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Sfrs1 protein, partial.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/27503247	166650	27503247	GenBank
G1H3	sGnRH1 mRNA to histone H3 mRNA ratio	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ratio of sGnRH1 mRNA to histone H3 mRNA	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
G2H3	sGnRH2 mRNA to histone H3 mRNA ratio	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ratio of sGnRH2 mRNA to histone H3 mRNA	ECOTOX			
S1TM	Signal transducer and activator of transcription 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Signal transducer and activator of transcription 1. Also: Signal transducer and activator of transcription 1, STAT1.	ECOTOX and http://www.uniprot.org/uniprot/P42224	170604		
STTM	Signal transducer and activator of transcription 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Signal transducer and activator of transcription. Also: Signal transducer and activator of transcription 3, STAT3.	ECOTOX and http://www.uniprot.org/uniprot/Q6DVF3			
SC1M	similar to calmodulin 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to similar to calmodulin 1.	ECOTOX and http://www.itb.cnr.it/estree_sept2006/blast_output.php?ID=PP_LEa0028C11f			
SC2M	simliar to Cornifelin isoform 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to simliar to Cornifelin isoform 2. Also:LOC567858, Cornifelin isoform 2 Predicted.	ECOTOX and http://www.gene-profiles.org/gene/loc567858-danio-rerio-567858			
SFBM	similar to F-box only protein 21 isoform 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to similar to F-box only protein 21 isoform 2. Also:LOC567738, F-box only protein 21 isoform 2 Predicted.	ECOTOX http://www.gene-profiles.org/gene/loc567738-danio-rerio-567738			
SNGM	similar to Neurogranin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to similar to Neurogranin (LOC567663).	ECOTOX and http://www.gene-profiles.org/gene/loc567663-danio-rerio-567663			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
SR7M	similar to Ribosomal protein L7 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to similar to Ribosomal protein L7.	ECOTOX, http://www.ncbi.nlm.nih.gov/sites/entrez?cmd=Retrieve&db=protein&dopt=GenPept&list_uids=29841446 and http://www.ncbi.nlm.nih.gov/nuccore/AF401559			
SR8M	similar to Ribosomal protein S8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to similar to Ribosomal protein S8 (LOC100117715).	ECOTOX and http://www.ncbi.nlm.nih.gov/UniGene/clust.cgi?ORG=Nvi&CID=180			
SCEX	Sister chromatid exchange	The process whereby, during DNA replication, two sister chromatids break and rejoin with one another, physically exchanging regions of the parental strands in the duplicated chromosomes.	http://www.sciencedirect.com/science/article/pii/S0027510706003174			
S55M	SLC5A5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to SLC5A5. Also called: solute carrier family 5 (sodium iodide symporter), member 5, Solute carrier family 5 member 5.	ECOTOX			
SH2M	Slit homolog 2 protein-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Slit homolog 2 protein-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=725041			
SC3M	Sodium- and chloride-dependent GABA transporter 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Sodium- and chloride-dependent GABA transporter 3. Also: GAT-3, Solute carrier family 6 member 11, Slc6a11, Gabt3, Gat-3, Gat-b.	ECOTOX and http://www.uniprot.org/uniprot/P31647			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
NH2M	Sodium/hydrogen exchanger 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Sodium/hydrogen exchanger 2. Also: Na+/H+ exchanger 2, NHE2, Slc9a2, Na(+)/H(+) exchanger 2, Solute carrier family 9 member 2, H7.	ECOTOX and http://www.uniprot.org/uniprot/P48763			
NISM	Sodium Iodide symporter mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Sodium Iodide symporter (NIS).	ECOTOX			
SG2M	Solute carrier family 2, facilitated glucose transporter member 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Solute carrier family 2, facilitated glucose transporter member 2. Also: Glucose transporter type 2 liver, GLUT-2, Slc2a2, Glut-2, Glut2.	ECOTOX and http://www.uniprot.org/uniprot/P14246			
SG4M	Solute carrier family 2, facilitated glucose transporter member 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific toSolute carrier family 2, facilitated glucose transporter member 4. Also: Glucose transporter type 4 insulin-responsive, Glut-4, Glut4, Slc2a4.	ECOTOX and http://www.uniprot.org/uniprot/P19357			
S64M	Solute carrier family 6 (neurotransmitter transporter), member 4a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to solute carrier family 6 (neurotransmitter transporter), member 4a. Also: slc6a4a.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=slc6a4a			
S6BM	Solute carrier family 6 (neurotransmitter transporter), member 4b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Solute carrier family 6 (neurotransmitter transporter), member 4b. Also: slc6a4b.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/664770			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
SCFM	Solute carrier family 38, member 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Solute carrier family 38, member 4 . Also: slc38a4, slc38a4 protein, zgc:103694, zgc:113830.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=BC083465	170520	BC083465	GenBank
AIMR	Solute carrier family 45, member 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Solute carrier family 45, member 2. Also: aim1, slc45a2, im:7138762.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/558311	170801		
SLTM	Somatolactin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Somatolactin. Also: SL.	ECOTOX and http://www.uniprot.org/uniprot/O93262			
SS2M	Somatostatin-2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Somatostatin-2. Also: Somatostatin II, Somatostatin 2.	ECOTOX and http://www.uniprot.org/uniprot/Q9YGH4			
SHHM	Sonic hedgehog mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Sonic hedgehog protein. Also: SHH, HHG-1.	ECOTOX and http://www.uniprot.org/uniprot/Q62226	168257	JQ973865	Genbank
S17M	sox17alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to sox17alpha.	ECOTOX			
S2MR	sox2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to sox2.	ECOTOX			
S9BM	Sox9b protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Sox9b protein.	ECOTOX and http://www.uniprot.org/uniprot/Q6NXE1			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
SP1R	Sp1 transcription factor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Sp1 transcription factor. Also: sp1, fc18h09, wu:fc18h09, zgc:85950.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/nm_212662 and http://www.uniprot.org/uniprot/Q6NW60	170323	NM_212662	GenBank
SANM	Spectrin alpha chain, non-erythrocytic 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Spectrin alpha chain, non-erythrocytic 1. Also: Alpha-II spectrin, Fodrin alpha chain, Sptan1, Spna2, Spta2.	ECOTOX and http://www.uniprot.org/uniprot/P16546	166650	55663121	GenBank
SPGM	Spiggin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Spiggin.	ECOTOX and http://www.uniprot.org/uniprot/B1PN15			
SHR2	SpSHR2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to SpSHR2 (Orphan Steroid Hormone Receptor 2)	ECOTOX			
RP7M	60S ribosomal protein L7 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 60S ribosomal protein L7.	ECOTOX			
SX9M	SRY-related HMG box protein 9a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to SRY-related HMG box protein 9a (Sox9a).	ECOTOX and http://www.uniprot.org/uniprot/E3SC19			
ST1R	StAR-related lipid transfer domain mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to StAR-related lipid transfer domain. Also: START1.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/6036421	158275		
SH1M	Stathmin 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Stathmin 1.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/148231458	166650	148231458	GenBank

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
SARM	Sterile alpha and HEAT-Armadillo motifs mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Sterile alpha and HEAT-Armadillo motifs. Also: sarm and sarm1.	ECOTOX and http://www.uniprot.org/uniprot/Q6TQG1	172465		
S52M	Steroid 5 alpha reductase type 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Steroid 5 alpha reductase type 2 . Also: steroid-5-alpha-reductase, alpha polypeptide 2, 3-oxo-5 alpha-steroid delta 4-dehydrogenase alpha 2, srd5alpha2, and srd5a2.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=srd5alpha2	170601		
SAHM	Steroid 17-alpha-hydroxylase/17,20 lyase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Steroid 17-alpha-hydroxylase/17,20 lyase. Also: 17-alpha-hydroxyprogesterone aldolase, CYPXVII, Cytochrome P450 17A1, Cytochrome P450-C17, cyp17a1.	ECOTOX and http://www.uniprot.org/uniprot/P70085			
SRRN	Steroidogenic Acute Regulatory protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Steroidogenic Acute Regulatory protein. Also StAR mRNA	ECOTOX			
SDF1	Steroidogenic factor-1 expression	The orphan nuclear receptor that controls the expression of many of the enzymes associated with the steroidogenic metabolic pathway	ECOREF#94090			
SRBR	Sterol regulatory element binding protein 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to sterol regulatory element binding protein 1, SREBP1	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
SSTM	Steryl-sulfatase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Steryl-sulfatase. Also: Arylsulfatase C, Steroid sulfatase, Steryl-sulfate sulfohydrolase, sts, EC 3.1.6.2.	ECOTOX and http://www.uniprot.org/uniprot/P15589			
S3MR	Stromelysin-3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Stromelysin-3.	ECOTOX			
SYNM	Structural toxin protein RtxA mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Structural toxin protein RtxA. Also: sync_1217.	ECOTOX and http://www.uniprot.org/uniprot/Q0IAU6	167909		
SDMR	Succinate Dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Succinate Dehydrogenase.	ECOTOX and http://www.uniprot.org/uniprot/Q9Z7B7			
SDHM	Succinate dehydrogenase [ubiquinone] iron-sulfur subunit, mitochondrial mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Succinate dehydrogenase [ubiquinone] iron-sulfur subunit, mitochondrial. Also: sdhb.	ECOTOX, http://www.uniprot.org/uniprot/A5PL98, and http://www.ncbi.nlm.nih.gov/nuccore/148922925	172238	XM_685549 also NM_001098740	GenBank
SA1M	Sulfate anion transporter 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Sulfate anion transporter 1. Also: Solute carrier family 26 member 1, SLC26A1, SAT1.	ECOTOX and http://www.uniprot.org/uniprot/Q9H2B4			
S1CM	Sulfotransferase family 1, cytosolic sulfotransferase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Sulfotransferase family 1, cytosolic sulfotransferase 2. Also: SULT1st2, Cytosolic sulfotransferase 2,	ECOTOX, http://www.uniprot.org/uniprot/Q7ZUS4 and http://www.ncbi.nlm.nih.gov/gene/?term=sult1st2	169114	DT317390.1	GenBank

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
S2AM	Sulfotransferase family 2A, dehydroepiandrosterone (DHEA)-preferring, member 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to sulfotransferase family 2A, dehydroepiandrosterone (DHEA)-preferring, member 1. Also: SULT2A1, Bile salt sulfotransferase 1, Dehydroepiandrosterone sulfotransferase, Hydroxysteroid sulfotransferase, Std, Sth1, ST2A1, mSTa1.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/20859 and http://www.uniprot.org/uniprot/Q06520	169114	DT167241.1	GenBank
ST5M	SULT1 isoform 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to SULT1 isoform 5. Also: ST5, sult1st5.	ECOTOX and http://www.uniprot.org/uniprot/Q49IK6			
ST6M	SULT1 isoform 6 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to SULT1 isoform 6. Also: ST6, sult1st6.	ECOTOX and http://www.uniprot.org/uniprot/Q52UP7			
ST4M	SULT1 sulfotransferase isoform 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to SULT1 sulfotransferase isoform 4. Also:ST4, Sulfotransferase family 1, cytosolic sulfotransferase 4, sult1st4.	ECOTOX and http://www.uniprot.org/uniprot/Q6XZC1			
SODM	Superoxide dismutase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Superoxide dismutase. Also: SOD mRNA	ECOTOX			
SD2M	Superoxide dismutase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Superoxide dismutase 2.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
SD1M	Superoxide dismutase [Cu-Zn] mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Superoxide dismutase [Cu-Zn] Superoxide dismutase 1. Also: Superoxide dismutase 1, sod-1, copper zinc superoxide dismutase, copper-zinc superoxide dismutase.	ECOTOX and http://www.uniprot.org/uniprot/P34697		DQ286039	
SF1M	Superoxide dismutase [Fe] 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Superoxide dismutase [Fe] 1. Also: FSD1, Fe superoxide dismutase 1, Iron superoxide dismutase 1.	ECOTOX and http://www.uniprot.org/uniprot/P21276			
SM1M	Superoxide dismutase [Mn] 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Superoxide dismutase [Mn] 1. Also: Manganese Superoxide dismutase 1, MSD1, Maternal effect embryo arrest 33, MEE3.	ECOTOX and http://www.uniprot.org/uniprot/O81235			
SM2M	Superoxide dismutase [Mn] 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Superoxide dismutase [Mn] 2. Also: Manganese Superoxide dismutase 2, MSD2.	ECOTOX and http://www.uniprot.org/uniprot/Q9LYK8			
SM3M	Superoxide dismutase [Mn] 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Superoxide dismutase [Mn] 3. Also: Manganese Superoxide dismutase 3, MSD3.	ECOTOX and http://www.uniprot.org/uniprot/A8J3M8			
SC5R	Suppressor of cytokine signaling 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Suppressor of cytokine signaling 5. Also: socs5, socs5a, zgc:153506.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/768142	170801		

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
S2AR	Synapsin IIa mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Synapsin IIa. Also: Synapsin 2a, syn2a, zgc:92311, syn1, syn2.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=%22nm+001002597%22	170534	NM_001002597	GenBank
S25M	Synaptosomal-associated protein, 25kDa mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Synaptosomal-associated protein, 25kDa. Also: SNAP25b, Snap25-prov protein, snap25.	ECOTOX, http://www.ncbi.nlm.nih.gov/protein/148223071 and http://www.uniprot.org/uniprot/Q8AXM1			
TL1M	Talin 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Talin 1.	ECOTOX			
TORM	Target of rapamycin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Target of rapamycin. Also: TOR.	ECOTOX and http://www.uniprot.org/uniprot/Q9VK45	168602	FJ899680	GenBank
TABM	TATA-box-binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to TATA-box-binding protein. Also: TATA-box binding protein, TATA sequence-binding protein, TATA-binding factor, TATA-box factor,Transcription initiation factor TFIID TBP subunit.	ECOTOX and http://www.uniprot.org/uniprot/P20227			
TX2M	TAX2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to TAX2. Also: Tax 2, Tax-2.	ECOTOX and http://www.uniprot.org/uniprot/G5EEE2	166810		
TM1R	T-cell lymphoma invasion and metastasis 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to T-cell lymphoma invasion and metastasis 1. Also: tiam1, tiam1a.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/567621	170801		

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
T1EM	T-complex protein 1 subunit epsilon mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to T-complex protein 1 subunit epsilon. Also: Cct5, TCP-1-epsilon, CCT-epsilon, Chaperonin CCT5, chaperonin containing TCP1 subunit 5(epsilon).	ECOTOX and http://www.uniprot.org/uniprot/O04450	166650	148237440	GenBank
TRTM	Telomerase reverse transcriptase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Telomerase reverse transcriptase. Also: Telomerase catalytic subunit, Tert.	ECOTOX and http://www.uniprot.org/uniprot/O70372	166328	NM_001083866	GenBank
TMTM	Telomeric transcript mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Telomeric transcript.	ECOTOX			
TG1M	Teratocarcinoma-derived growth factor 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Teratocarcinoma-derived growth factor 1. Also: Cripto-1 growth factor, Epidermal growth factor-like cripto protein CR1, TDGF1, CRIPTO, Cripto-1.	ECOTOX and http://www.uniprot.org/uniprot/P13385			
TD3M	Testosterone 17-beta-dehydrogenase 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Testosterone 17-beta-dehydrogenase 3. Also: Hydroxysteroid (17-beta) dehydrogenase 3, 17-beta-hydroxysteroid dehydrogenase type 3, Testicular 17-beta-hydroxysteroid dehydrogenase, HSD17B3, Edh17b3, EC 1.1.1.64.	ECOTOX and http://www.uniprot.org/uniprot/P70385			

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
T16M	Tetraspanin-16 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tetraspanin-16. Also: Tetraspanin 16, TSPAN16, Tspan-16, Tetraspanin TM4-B, Transmembrane 4 superfamily member 16, TM4SF16.	ECOTOX and http://www.uniprot.org/uniprot/Q9UKR8			
TPXM	Thioredoxin peroxidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thioredoxin peroxidase. Also: tpx1, tpx-1, crisp2, tsa1.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/320091323	170801		
TR1R	Thioredoxin reductase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thioredoxin reductase 1. Also: txnrd1, trxr1, and cb682.	ECOTOX and http://zfin.org/ZDB-GENE-030327-2	171290	EG641174	GenBank
TX5R	Thioredoxin reductase 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thioredoxin reductase 5. Also: TRXR5.	ECOTOX	172755		
T17R	Thrombospondin, type I, domain containing 7B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thrombospondin, type I, domain containing 7B. Also: thsd7b, thsd7bb.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/100333732	170801		
TB4M	Thymosin beta-4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thymosin beta-4.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/148226106	166650	148226106	GenBank
TGMR	Thyroglobulin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thyroglobulin.	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
THRR	Thyroid hormone-inducible hepatic protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thyroid hormone-inducible hepatic protein. Also, Thrsp, Spot 14 protein, S14, SPOT14, Thyroid hormone responsive spot 14.	ECOTOX and http://www.uniprot.org/uniprot/Q62264	171802	HO056262, HO056263, HO056264	GenBank
THRA	Thyroid hormone receptor alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to thyroid hormone receptor alpha.	ECOTOX			
TAAM	Thyroid hormone receptor alpha-A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thyroid hormone receptor alpha-A. Also: Nuclear receptor subfamily 1 group A member 1-A, Thyroid hormone receptor alpha-1, thraa, nr1a1a, thra, thraa1, tra1.	ECOTOX and http://www.uniprot.org/uniprot/Q98867			
TRAB	Thyroid hormone receptor alpha mRNA to Thyroid hormone receptor beta mRNA ratio	Ratio of Thyroid hormone receptor alpha mRNA to Thyroid hormone receptor beta mRNA	ECOTOX			
TRBM	Thyroid Hormone Receptor beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to thyroid hormone receptor beta. Also: Nuclear receptor subfamily 1 group A member 2, Thyroid hormone receptor beta-1, thrb, nr1a2, trb.	ECOTOX and http://www.uniprot.org/uniprot/Q9PVE4			
TBTM	Thyroid hormone regulated basic transcription element-binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thyroid hormone regulated basic transcription element-binding protein (BTEB).	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
TPMR	Thyroid peroxidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thyroid peroxidase. Also: Iodide peroxidase, Iodinase, Iodotyrosine deiodase, Iodotyrosine deiodinase, Thyroperoxidase, TPO, EC 1.11.1.8.	ECOTOX, http://www.uniprot.org/uniprot/P07202 and http://enzyme.expasy.org/EC/1.11.1.8			
TSHM	Thyroid Stimulating Hormone mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thyroid Stimulating Hormone.	ECOTOX			
TAMR	Thyroid Stimulating Hormone alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to thyroid stimulating hormone alpha.	ECOTOX			
TBMR	Thyroid Stimulating Hormone beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to thyroid stimulating hormone beta. Also: tshba, tshb.	ECOTOX, http://ghr.nlm.nih.gov/gene/TSHB and http://www.uniprot.org/uniprot/Q801K4			
TTRM	Thyrotropin receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thyrotropin receptor. Also: TSHR, Thyroid-stimulating hormone receptor, TSH-R.	ECOTOX and http://www.uniprot.org/uniprot/P56495			
TR1M	Thyrotropin-releasing hormone receptor 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thyrotropin-releasing hormone receptor 1. Also: TRHR1.	ECOTOX and http://www.uniprot.org/uniprot/D2KVP3			
TRIM	TIR-domain containing adaptor inducing IFN-beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to TIR-domain containing adaptor inducing IFN-beta. Also: trif, and ticam1.	ECOTOX and http://www.uniprot.org/uniprot/B0L0T7	172465		

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
TIMM	Tissue inhibitor of metalloproteinases mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tissue inhibitor of metalloproteases. Also: TIMP.	ECOTOX and http://www.uniprot.org/uniprot/Q9VH14			
TTNM	Titan a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Titan a.	ECOTOX and http://www.uniprot.org/uniprot/A5X6X5			
TR6M	TNF receptor-associated factor 6 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to TNF receptor-associated factor 6. Also: traf6.	ECOTOX and http://www.uniprot.org/uniprot/Q6IWL4	172465		
TL3M	Toll-like receptor 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Toll-like receptor 3. Also: TLR3.	ECOTOX, http://zfin.org/ZDB-GENE-040219-7, and http://www.uniprot.org/uniprot/Q32PW5	172465		
TCMR	Transcription corepressor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transcription corepressor.	ECOTOX and http://www.ncbi.nlm.nih.gov/nucest/CO729465	171021	CO729465	GenBank
TP1M	Transcription factor AP-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transcription factor AP-1. Also: Jun, AH119, Activator protein 1, Proto-oncogene c-Jun, V-jun avian sarcoma virus 17 oncogene homolog, Jun A.	ECOTOX and http://www.uniprot.org/uniprot/P05627	166328	NM_199987.1	GenBank
TFCM	Transcription factor cep-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transcription factor cep-1. Also: C.elegans p53-like protein 1, cep-1.	ECOTOX and http://www.uniprot.org/uniprot/Q20646			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
TG4M	Transcription factor GATA-4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transcription factor GATA-4. Also: GATA-binding factor 4, Gata-4, Gata 4.	ECOTOX and http://www.uniprot.org/uniprot/Q08369			
TG1R	Transcription factor mafG1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transcription factor mafG1. Also: mafga, mafg1, V-maf musculoaponeurotic fibrosarcoma oncogene family protein g (Avian) 1.	ECOTOX and http://www.uniprot.org/uniprot/Q6I6N2	168602	JX470754	source unknown
TG2R	Transcription factor mafG2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transcription factor mafG2. Also: mafgb, magg2, V-maf musculoaponeurotic fibrosarcoma oncogene homolog g (Avian) 2.	ECOTOX and http://www.uniprot.org/uniprot/Q6NW89	168602	JX470755	source unknown
SO9M	Transcription factor SOX-9 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transcription factor SOX-9. Also: Sox9.	ECOTOX and http://www.uniprot.org/uniprot/Q04887			
TFNR	Transferrin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to transferrin	ECOTOX			
TB1M	Transforming growth factor beta-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transforming growth factor beta-1. Also: tgfb1, tgfb1a, ai39657, wu:fb13a07, xx:ai39657, transforming growth factor beta 1a.	ECOTOX, http://www.uniprot.org/uniprot/P01137 and http://zfin.org/ZDB-GENE-030618-1			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
TGBM	Transforming Growth Factor Beta-induced mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transforming Growth Factor Beta-induced. Also: Transforming Growth Factor Beta.	ECOTOX and http://www.uniprot.org/uniprot/D6NLA9	169409	GU564442	GenBank
TGMM	Transglutaminase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transglutaminase.	ECOTOX	166302		
TERM	Transitional endoplasmic reticulum ATPase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transitional endoplasmic reticulum ATPase. Also: TER ATPase, Vcp, 15S Mg(2+)-ATPase p97 subunit, Valosin-containing protein.	ECOTOX and http://www.uniprot.org/uniprot/P46462	166650	54020867	GenBank
TCTM	Translationally Controlled Tumor Protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Translationally Controlled Tumor Protein.	ECOTOX			
TSLE	Translocation Efficiency	No definition available.				
TSPM	Translocator protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Translocator protein. Also: Mitochondrial benzodiazepine receptor, PKBS, Peripheral-type benzodiazepine receptor. Also: PBR, Tspo, Bzrp, Mbr.	ECOTOX and http://www.uniprot.org/uniprot/P50637			
T72R	Transmembrane protein 72 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transmembrane protein 72. Also: tmem72, si:dkey-112k13.	ECOTOX and www.ncbi.nlm.nih.gov/gene/562321	170801		

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
TTRR	Transthyrethin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to transthyrethin	ECOTOX			
TSRM	Transthyretin (prealbumin, amyloidosis type I) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transthyretin (prealbumin, amyloidosis type I). Also: Transthyretin, Ttr protein.	ECOTOX and http://www.uniprot.org/uniprot/Q642J8			
TRHM	Trehalase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Trehalase. Also: alpha,alpha-Trehalase, a,a-Trehalase, alpha,alpha-Trehalase glucohydrolase, a,a-Trehalase glucohydrolase, Trehalase 1, AtTRE1, TRE1, EC 3.2.1.28.	ECOTOX and http://www.uniprot.org/uniprot/Q9SU50			
TBPM	Tributyltin binding protein 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tributyltin binding protein 1 (TBT-bp1).	ECOTOX			
TPIR	Triosephosphate isomerase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Triosephosphate isomerase. Also: TIM, TPI1, Triose-phosphate isomerase, Triose phosphoisomerase, Triosephosphate isomerase, Triosephosphate mutase, EC 5.3.1.1.	ECOTOX, http://enzyme.expasy.org/EC/5.3.1.1, http://www.uniprot.org/uniprot/P00940	166650	GI:148236351	GenBank
RDMM	tRNA dimethylallyltransferase, mitochondrial-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to tRNA dimethylallyltransferase, mitochondrial-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=724336			
TP1R	Trypsin 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Trypsin 1 mRNA	ECOTOX			

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TRYN	Trypsinogen mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Trypsinogen.	ECOTOX and http://www.uniprot.org/uniprot/Q7T1R8	156217	AY316360	GenBank
T5HM	Tryptophan 5-hydroxylase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tryptophan 5-hydroxylase. Also: Tryptophan 5-monooxygenase, tph, EC 1.14.16.4, Indoleacetic acid-5-hydroxylase, L-tryptophan hydroxylase, Tryptophan hydroxylase.	ECOTOX, http://enzyme.expasy.org/EC/1.14.16.4 and http://www.uniprot.org/uniprot/Q92142			
ATBM	Tubulin alpha chain mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tubulin alpha chain. Also: Alpha-tubulin.	ECOTOX and http://www.uniprot.org/uniprot/P41351			
TBAM	Tubulin alpha-1A chain mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tubulin alpha-1A chain. Also: Tuba1a, Tuba1, Alpha-tubulin 1, Alpha-tubulin isotype M-alpha-1, Tubulin alpha-1 chain.	ECOTOX and http://www.uniprot.org/uniprot/P68369	166650	GI:74220042	GenBank
TBBM	Tubulin alpha 1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tubulin alpha 1b. Also: tuba1b, cb944, fb22g06.	ECOTOX and http://zfin.org/ZDB-GENE-030822-1	170534	NM_194388	GenBank
TB8R	Tubulin, alpha 8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tubulin, alpha 8 . Also: tuba8.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/53857	171290	EX724202	GenBank
TB1R	Tubulin-beta-1-chain mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tubulin-beta-1-chain mRNA	ECOTOX			

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TB5M	Tubulin beta-5 chain mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tubulin beta-5 chain. Also: Tubb5.	ECOTOX and http://www.uniprot.org/uniprot/P99024	166650	14832784	GenBank
TNFM	Tumor necrosis factor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tumor necrosis factor. Also: Cachectin, TNF-alpha, Tumor necrosis factor ligand superfamily member 2, TNF-a, Tnf, Tnfa, Tnfsf2.	ECOTOX and http://www.uniprot.org/uniprot/P16599			
TNDM	Tumor Necrosis Factor Decoy Receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tumor Necrosis Factor Decoy Receptor. Also: TNF decoy receptor.	ECOTOX and http://www.uniprot.org/uniprot/D6NLB0	169409	GU564443	GenBank
T1AM	Tumor necrosis factor receptor superfamily member 1A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tumor necrosis factor receptor superfamily member 1A. Also: TNR1A.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/NM_001141773.1 and http://www.uniprot.org/uniprot/B5X3D9			
TRLM	Tryptophan--tRNA ligase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific toTryptophan--tRNA ligase. Also: Tryptophanyl-tRNA synthetase, L-tryptophan-tRNA(Trp) ligase (AMP-forming), TrpRS, Tryptophan translase, Tryptophanyl ribonucleic synthetase, Tryptophanyl-transfer ribonucleate synthetase, Tryptophanyl-transfer ribonucleic acid synthetase, Tryptophanyl-transfer ribonucleic synthetase, Tryptophanyl-transfer RNA synthetase, Tryptophanyl-tRNA synthase, Tryptophanyl-tRNA synthetase, EC 6.1.1.2.	ECOTOX, http://enzyme.expasy.org/EC/6.1.1.2 and http://www.uniprot.org/uniprot/P00954			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
1IDM	Type I iodothyronine deiodinase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Type I iodothyronine deiodinase. Also: Iodothyronine deiodinase, deiodinase iodothyronine type I, dio1, Deio1, cb685, zgc:92323.	ECOTOX, http://zfin.org/action/marker/view/ZDB-GENE-030328-41 and http://www.uniprot.org/uniprot/Q6DHG6			
GA2R	Type-II gonadotrophin alpha subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Type-II gonadotrophin alpha subunit.	ECOTOX			
GB2R	Type-II gonadotrophin beta subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Type-II gonadotrophin beta subunit.	ECOTOX			
2IDM	Type II iodothyronine deiodinase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Type II iodothyronine deiodinase. Also: T4 outer-ring deiodinase, T4ORD, outer ring iodothyronine deiodinase activity (T4 ORD activity), thyroxine 5'-deiodinase, 5DII, DIOII, Dio2, Type 2 DI, Type-II 5'-deiodinase, deiodinase iodothyronine type II, Deio2, EC 1.97.1.10. Rana larval keratin 1.	ECOTOX, http://www.brenda-enzymes.org/php/result_flat.php4?ecno=1.97.1.10, http://zfin.org/action/marker/view/ZDB-GENE-030327-4 and http://www.uniprot.org/uniprot/Q9Z1Y9			
3IDM	Type III iodothyronine deiodinase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Type III iodothyronine deiodinase. Also: 5DIII, DIOIII, Type 3 DI, Type-III 5'-deiodinase, Dio3, Thyroxine 5-deiodinase, Diiodothyronine 5'-deiodinase, Iodothyronine 5-deiodinase, Iodothyronine inner ring monodeiodinase, EC 1.97.1.11.	ECOTOX, http://www.uniprot.org/uniprot/Q91ZI8 and http://enzyme.expasy.org/EC/1.97.1.11			

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T3MM	Tyrosine 3-monooxygenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tyrosine 3-monooxygenase. Also: Tyrosine 3-hydroxylase, Tyrosine hydroxylase, TH, EC 1.14.16.2.	ECOTOX and http://www.uniprot.org/uniprot/A0A060X6Z0	169754	GE829062.1	
TTBM	Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, beta polypeptide a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, beta polypeptide a (ywhab1).	ECOTOX and https://www.qiagen.com/geneglobe/geneview.aspx?GeneID=362247&RootElementID=362247			
TPPM	Tyrosine-protein phosphatase non-receptor type mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tyrosine-protein phosphatase non-receptor type. Also: Protein-tyrosine-phosphatase, Phosphotyrosine phosphatase, PTPase, ptpn1, PTP1B, PTP 1B, EC 3.1.3.48.	ECOTOX, http://enzyme.expasy.org/EC/3.1.3.48 and http://www.uniprot.org/uniprot/Q9PT91			
UB1M	Ubinuclein-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ubinuclein-1. Also: HIRA-binding protein, Protein VT4, Ubiquitously expressed nuclear protein, UBN1.	ECOTOX and http://www.uniprot.org/uniprot/Q9NPG3			
U52R	Ubiquitin A-52 residue ribosomal protein fusion product 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ubiquitin A-52 residue ribosomal protein fusion product 1. Also: uba52.	ECOTOX and http://zfin.org/ZDB-GENE-051023-7	171290	EX735613	GenBank
UQBM	Ubiquitin B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ubiquitin B.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/42490818	166650	42490818	GenBank

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
UCHR	Ubiquitin carboxyl terminal hydrolase isozyme L5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ubiquitin carboxyl terminal hydrolase isozyme L5 mRNA	ECOTOX			
UCER	Ubiquitin-conjugating enzyme E2-17 kDa mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ubiquitin-conjugating enzyme E2-17 kDa mRNA	ECOTOX			
UB2R	Ubiquitin-conjugating enzyme E2Ib mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ubiquitin-conjugating enzyme E2Ib. Also: ubc9, ube2i, zubc9, ube2ib, sumo-conjugating enzyme UBC9-A.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=NM_131351	170323	NM_131351	GenBank
UQPM	Ubiquitin-like protein ISG15 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ubiquitin-like protein ISG15. Also: isg15, Interferon-induced 15 kDa protein, Interferon-induced 17 kDa protein, IP17, Ubiquitin cross-reactive protein, G1p2, Ucrp.	ECOTOX and http://www.uniprot.org/uniprot/Q64339			
UBIM	Ubiquitin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ubiquitin.	ECOTOX			
UP5M	Ubiquitin specific peptidase 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ubiquitin specific peptidase 5. Also: usp5.	ECOTOX and http://zfin.org/action/marker/view/ZDB-GENE-040426-2584			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
UH1M	Ubiquitinyl hydrolase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ubiquitinyl hydrolase 1 mRNA. Also: Ubiquitin carboxyl-terminal hydrolase isozyme L1, Ubiquitin C-terminal hydrolase, Ubiquitin carboxyl-terminal hydrolase, Ubiquitin thiolesterase, Neuron cytoplasmic protein 9.5, PGP 9.5, Ubiquitin thioesterase L1,UCH-L1, Uchl1, EC 3.4.19.12.	ECOTOX, http://enzyme.expasy.org/EC/3.4.19.12 and http://www.uniprot.org/uniprot/Q9R0P9			
UP2M	UCP2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to UCP2, also known as mitochondrial uncoupling protein 2.	ECOTOX			
UGRN	UDP-glucose dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to UDP-glucose dehydrogenase	ECOTOX			
UDMR	UDP-glucuronosyltransferase Messenger RNA	UDP-glucuronosyltransferase Messenger RNA. Also known as UGT1 mRNA, Uridine-diphosphate glucuronosyltransferase.	ECOTOX			
U15M	UDP-glucuronosyltransferase 1-5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to UDP-glucuronosyltransferase 1-5. Also:Ugt1A5, B5, UDP-glucuronosyltransferase 1A5.	ECOTOX and http://www.uniprot.org/uniprot/Q64638			
U2AM	UDP-glucuronosyltransferase 2A1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to UDP-glucuronosyltransferase 2A1. Also: Ugt2A1.	ECOTOX and http://www.uniprot.org/uniprot/Q80X89			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
U15R	UDP-glucuronosyltransferase 2B15 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to UDP-glucuronosyltransferase 2B15. Also: UGT2B15, UDP glucuronosyltransferase 2B15, UDP-glucuronosyltransferase 2B36, UDPGT 2B36, UDP glucuronosyltransferase 2 family, polypeptide B15.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/83808 and http://www.uniprot.org/uniprot/P36511	169114	DT183511.1	GenBank
U2BM	UDP-glucuronosyltransferase 2B17 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to UDP-glucuronosyltransferase 2B17. Also: UDP-glucuronyltransferase 2 family b5, 17-beta-hydroxysteroid-specific DPGT, RLUG38, Testosterone, dihydrotestosterone, and beta-estradiol-specific UDPGT, UDP-glucuronosyltransferase 2B5, UDPGT 2B5, UDPGT 2B17, UDPGTr-3, Ugt2b17, Ugt2b3, Ugt2b5, EC 2.4.1.17.	ECOTOX and http://www.uniprot.org/uniprot/P08542			
U1MR	UGT1a1 mRNA	UGT1A1 is the only isoform that preferentially binds the substrate bilirubin.	http:www.genes-4u.comgenesg4_024.htm			
U6MR	UGT1a6 mRNA	UGT1A1 is the only isoform that preferentially binds the substrate bilirubin - wild type mutation at position 6.	http:www.genes-4u.comgenesg4_024.htm			
U7MR	UGT1a7 mRNA	UGT1A1 is the only isoform that preferentially binds the substrate bilirubin - wild type mutation at position 7.	http:www.genes-4u.comgenesg4_024.htm			
UABM	UGT1ab mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to UGT1ab.	ECOTOX	165455	NM_213422	GenBank
USPM	Ultraspiracle mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ultraspiracle (usp). Also: Retinoid X receptor-like protein (RXR).	ECOTOX and http://www.uniprot.org/uniprot/A1XQQ1			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
URTM	Urea transporter mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Urea transporter.	ECOTOX			
U1BM	Uridine 5'-diphospho-glucuronosyltransferase 1B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Uridine 5'-diphospho-glucuronosyltransferase 1B, also known as UDP-glucuronosyltransferase 1B, UGT1B.	ECOTOX			
UIAP	Urotensin I mRNA to Acidic ribosomal phosphoprotein P0 mRNA ratio	Ratio of Urotensin I mRNA to Acidic ribosomal phosphoprotein P0 mRNA.	ECOTOX			
VP1M	Vanin-like protein 1-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vanin-like protein 1-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=100578995			
VSAM	Vasa mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vasa.	ECOTOX and http://www.uniprot.org/uniprot/Q5Q9A8			
VZ1M	Vascular endothelial zinc finger 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vascular endothelial zinc finger 1. Also: vezf1.	ECOTOX and http://www.uniprot.org/uniprot/J7FVW3	169192	JQ950330	source unknown
VG2M	Vesicular glutamate transporter 2-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vesicular glutamate transporter 2-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=412220			
VMA2	Vesicular monoamine transporter isoform 2 (VMAT2)	The vesicular monoamine transporter is a transport protein located within the presynaptic cell, one of two isoforms namely VMAT2	http://en.wikipedia.org/wiki/Vesicular_monoamine_transporter			

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VIGM	Vigilin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vigilin. Also: High density lipoprotein-binding protein, HDL-binding protein, Hdlbp.	ECOTOX and http://www.uniprot.org/uniprot/Q8VDJ3			
V12M	Vimentin-1/2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vimentin-1/2.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/148232220	166650	GI:148232220	GenBank
VM1M	Vitelline outer layer membrane protein 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vitelline membrane outer layer protein 1. Also: VMO 1.	ECOTOX and http://www.uniprot.org/uniprot/P41366			
VT4M	Vitellogenin 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vitellogenin 4. Also: vg4, si:rp71-23d18.3, wu:fb59b02, wu:fb59d07, wu:fb59e10, zgc:136286, zgc:136383, vtg4.	ECOTOX and http://zfin.org/ZDB-GENE-001201-3	170323		
VT5M	Vitellogenin 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vitellogenin 5. Also: vg5, si:rp71-23d18.5, wu:fi49a01, zgc:114012, vtg5.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/NM_001025189.2 and http://zfin.org/ZDB-GENE-001201-4	170323		
VTG7	Vitellogenin 7 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vitellogenin 7. Also: vtg7, si:dkey-4c23.1, wu:fb62f05.	ECOTOX and http://zfin.org/ZDB-GENE-001201-6	170801		
VGAM	Vitellogenin A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vitellogenin A. Also: VgA.	ECOTOX and http://www.uniprot.org/uniprot/I1TPY0			
VA1M	Vitellogenin Ao1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to vitellogenin Ao1.	ECOTOX			

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VGBM	Vitellogenin B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vitellogenin B.	ECOTOX			
VDNA	Vitellogenin cDNA	cDNA is DNA that is synthesized from a messenger RNA template, the single-stranded form is often used as a probe in physical mapping to locate the gene or can be cloned in the double stranded form. In this case specific to the protein vitellogenin.	http://cancerweb.ncl.ac.uk/omd/			
VGCM	Vitellogenin C mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vitellogenin C. Also: Vg-C.	ECOTOX and http://www.uniprot.org/uniprot/Q49MF2			
VAMR	Vitellogenin mRNA beta-actin mRNA ratio	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ratio of Vitellogenin to beta-actin.	ECOTOX			
VGH3	Vitellogenin mRNA to histone H3 mRNA ratio	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ratio of vitellogenin mRNA to histone H3 mRNA	ECOTOX			
VT1M	Vitellogenin 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vitellogenin-1. Also: vitellogenin isoform 1, Vitellogenin I, vtg1.	ECOTOX and http://www.uniprot.org/uniprot/Q90508			
VT2M	Vitellogenin 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vitellogenin 2 . Also: Vitellogenin-2 vitellogenin isoform 2, Major vitellogenin, vtg2, Vitellogenin II.	ECOTOX and http://www.uniprot.org/uniprot/P02845			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
VT3M	Vitellogenin 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vitellogenin 3 . Also: vitellogenin isoform 3, vtg3, Vitellogenin III.	ECOTOX and http://www.uniprot.org/uniprot/Q91025			
VMRN	Vitellogenin Messenger RNA	No definition available.				
VTPM	Vitellogenin precursor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to vitellogenin precursor	ECOTOX			
VGRM	Vitellogenin receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vitellogenin receptor. Also: vtgr.	ECOTOX and http://www.uniprot.org/uniprot/Q7ZTG7			
VGAR	V-maf avian musculoaponeurotic fibrosarcoma oncogene homolog Ga mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to V-maf avian musculoaponeurotic fibrosarcoma oncogene homolog Ga. Also: mafga, mafg1.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/?term=MafG1	169813	JX470754	
VGBR	V-maf avian musculoaponeurotic fibrosarcoma oncogene homolog Gb mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to V-maf avian musculoaponeurotic fibrosarcoma oncogene homolog Gb. Also: mafgb, mafg2.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/405877	169813	JX470755	
VMYM	v-myc Avian myelocytomatosis viral oncogene homolog a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to v-myc avian myelocytomatosis viral oncogene homolog a. Also: myca.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=nm_131412.1	166328	NM_131412.1	GenBank

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VAOR	V-rel avian reticuloendothelios is viral oncogene homolog A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to V-rel avian reticuloendotheliosis viral oncogene homolog A. Also: p65, nfkb3, rela, p65 transcription factor.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=ay163839 and http://www.uniprot.org/uniprot/Q6K197	170323	AY163839	GenBank
VADM	Voltage-dependent calcium channel subunit alpha-2/delta-3-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Voltage-dependent calcium channel subunit alpha-2/delta-3-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=551454			
VABM	V-type proton ATPase subunit B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Also: H+ ATPase v-type B subunit, V-ATPase 55 kDa subunit, Vacuolar proton pump subunit B, Vha55.	ECOTOX and http://www.uniprot.org/uniprot/P31409			
WP1M	Waprin-Phi1-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Waprin-Phi1-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=408864			
WTDN	Weight to DNA ratio	The weight of a sample as compared to the amount of DNA in a sample.	ECOTOX			
TS1R	Wilms' tumor suppressor 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Wilms' tumor suppressor 1 mRNA.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/EU867511 and http://www.uniprot.org/uniprot/E6Y5N8	156284	EU867511	GenBank
WATM	Worker-enriched antennal transcript mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Worker-enriched antennal transcript. Also: wat.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=406065			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
XTAM	Xenobiotic-transporting ATPase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Xenobiotic-transporting ATPase. Also: ATP phosphohydrolase (steroid-exporting), MDR protein, Multidrug-resistance protein, P-glycoprotein, permeability glycoprotein, PDR protein, Pleiotropic-drug-resistance protein, Steroid-transporting ATPase, ATP-binding cassette sub-family B member 1, MDR1 Protein, Multidrug Resistance Protein 1, cluster of differentiation 243, AaeL_AAEL010379,EC 3.6.6.44, previously EC 3.6.3.45.	ECOTOX, http://enzyme.expasy.org/EC/3.6.3.44, http://www.nlm.nih.gov/cgi/mesh/2011/MB_cgi?mode=&term=P-Glycoprotein, http://www.ncbi.nlm.nih.gov/gene?Db=gene&Cmd=ShowDetailView&TermToSearch=5243, http://www.ncbi.nlm.nih.gov/gene/5573277, http://www.genome.jp/dbget-bin/www_bget?ec:3.6.3.44,http://www.genome.jp/dbget-bin/www_bget?aag:AaeL_AAEL010379			
X81M	XK81A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to XK81A.	ECOTOX			
XLRL	X-linked recessive lethal	X-linked recessive lethal are genes which result in the premature death of the organism (homozygote). The gene on the X chromosome expresses itself only when there is no different gene present at that locus (spot on the chromosome). Also called sex-linked recessive lethal.	http://www.ncbi.nlm.nih.gov			
XPAR	XPA mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to XPA	ECOTOX			
XPCR	XPC mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to XPC	ECOTOX			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
XPDR	XPD mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to XPD	ECOTOX			
XPFR	XPF mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to XPF	ECOTOX			
XR5M	X-ray repair cross-complementing protein 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to X-ray repair cross-complementing protein 5 mRNA. Also: ATP-dependent DNA helicase 2 subunit 2, ATP-dependent DNA helicase II 80 kDa subunit, CTC box-binding factor 85 kDa subunit, CTC85, CTCBF, DNA repair protein XRCC5, Ku autoantigen protein p86 homolog, Ku80, Nuclear factor IV, Xrcc5, G22p2.	ECOTOX and http://www.uniprot.org/uniprot/P27641			
XR6M	X-ray repair cross-complementing protein 6 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to X-ray repair cross-complementing protein 6. Also: 5'-deoxyribose-5-phosphate lyase Ku70, 5'-dRP/AP lyase Ku70,ATP-dependent DNA helicase 2 subunit 1, ATP-dependent DNA helicase II 70 kDa subunit, CTC box-binding factor 75 kDa subunit, CTC75, CTCBF, DNA repair protein XRCC6, Ku autoantigen protein p70 homolog, Xrcc6, G22p1, Ku70.	ECOTOX and http://www.uniprot.org/uniprot/P23475			
XSLG	Xslug mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Xslug.	ECOTOX			
YE3M	Yellow-e3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Yellow-e3. Also: Y-e3.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=413894			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
ZH1M	Zebrafish hatching enzyme 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Zebrafish hatching enzyme 1. Also: ZHE1.	ECOTOX			
ZGCM	zgc:77235 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to zgc:77235. Also:hypothetical protein LOC336726, ribosomal protein L27a, 60S ribosomal protein L27a.	ECOTOX, http://www.uniprot.org/uniprot/Q6P2M0 and https://www.qiagen.com/geneglobe/qtprimerview.aspx?ID=QT02237746			
ZC2R	Zic family member 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Zic family member 2. Also: zic2, zic2a, cb851, zic2.1, fb26a03, wu:fb26a03.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/58077	170801		
ZFRM	Zinc finger, RING-type mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Zinc finger, RING-type.	ECOTOX			
Z47R	Zinc finger and BTB domain containing 47 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transmembrane protein 72. Also: zbtb47.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/100536838	170801		
ZNFR	Zinc finger protein 729 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Zinc finger protein 729. Also: znf729.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/100044381	170801		
ZP3M	Zona pellucida glycoprotein3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Zona pellucida glycoprotein3. Also: ZPC, ZP3.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=ZPc[sym]			
ZP1M	Zona pellucida protein 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Zona pellucida protein 1. Also: ZP1.	ECOTOX and http://www.uniprot.org/uniprot/Q910B7			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
ZP2M	Zona pellucida protein2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Zona pellucida protein2	ECOTOX			
ZPBM	Zona pellucida protein Bb mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Zona pellucida protein Bb.	ECOTOX and http://www.uniprot.org/uniprot/Q3ZE28			
ZB1M	Zona pellucida B.1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Zona pellucida B.1.	ECOTOX	164063	AE199616	GenBank
ZB2M	Zona pellucida B.2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Zona pellucida B.2.	ECOTOX	164063	AE199617	GenBank
ZB3M	Zona pellucida B.3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Zona pellucida B.3.	ECOTOX	164063	AE199618	GenBank
ZB4M	Zona pellucida B.4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Zona pellucida B.4,	ECOTOX	164063	AE199619	GenBank
ZB5M	Zona pellucida B.5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Zona pellucida B.5.	ECOTOX	164063	AE199620	GenBank
ZRMR	Zona radiata mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins.	ECOTOX			
ZPAM	ZPA domain containing protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ZPA domain containing protein. Also: Zona pellucida domain containing protein.	ECOTOX and http://www.uniprot.org/uniprot/Q9W7E4			

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Meas	**Measurement Name**	**Measurement Definition**	**Notes**	**ECOREF#**	**Accession#**	**Source**
ZC1M	ZPC1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ZPC1.	ECOTOX and http://www.uniprot.org/uniprot/Q8AYL0			
ZYGO	Zygotene	The second stage of prophase in meiosis, during which strands of homologous chromosomes lineup and become pairs.	Collins English Dictionary – Complete and Unabridged, 2003			

HIS	Histology Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
ACTO	Acanthosis	An increase in the thickness of the prickle cell layer of the epidermis. Synonym: hyperacanthosis.	The American Heritage Medical Dictionary, 2007
ASLT	Alpha Islets	One of a class of cells located in the adenohypophysis or in the pancreatic islets. Alpha cells in the pancreas produce glucagon, which raises the level of glucose in the blood.	Mosby's Medical Dictionary, 8th edition, 2009
ANAG	Anagen	The first phase of the hair cycle, during which synthesis of hair takes place.	Dorland's Medical Dictionary for Health Consumers, 2007
ANSK	Anisokaryosis	Inequality in the size of the nuclei of cells.	Dorland’s Medical Dictionary
ACAP	Arterial Cuff Atrophy	Arterial - pertaining to an artery or to the arteries. Cuff - A small bandlike structure encircling a part. Atrophy - a wasting away; a diminution in the size of a cell, tissue, or organ.	Dorland’s Medical Dictionary
ARTS	Arteriosclerosis	A degenerative arterial disease marked by hardening and thickening of the vessel walls.	
ASCT	Ascites	Accumulation of serous fluid in the spaces between tissues and organs in the cavity of the abdomen.	http://www.merriam-webster.com
ATRS	Atresia	The congenital absence or closure of a normal body orifice or tubular passage such as the anus, intestine, or external ear canal.	The American Heritage Medical Dictionary,2007
ATPH	Atrophy	A wasting away; a diminution in the size of a cell, tissue, organ, or part.	Dorland's Medical Dictionary for Health Consumers, 2007

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ALYS	Autolysis	The breakdown of all or part of a cell or tissue by self-produced enzymes—called also self-digestion	http://www.merriam-webster.com/medical/autolysis
BSLT	Beta Islets	The beta-cell is one of four major types of cells present in the islets of Langerhans, which are islands of cells distributed throughout the endocrine pancreas in most mammals	http://www.ncbi.nlm.nih.gov/pubmed/14687913
BLSS	Blue Sac Syndrome	Blue-sac syndrome is a fatal abnormality characterized by the gross edema of the yolk sac. The outward symptoms of blue-sac occur two weeks before hatching.	http://www.albion.edu/library/Isaac/IsaacSympBk%202002.pdf
BODS	Bodies	A mass of matter distinct from other masses.	Webster's
CATG	Catagen	The brief portion in the hair cycle in which growth (anagen) stops and resting (telogen) starts	Dorland's Medical Dictionary for Health Consumers, 2007
CTRT	Cataracts	A clouding of the lens of the eye or of its surrounding transparent membrane that obstructs the passage of light.	http://www.m-w.com/cgi-bin/dictionary
DISO	Cellular Disorganization	The process ofdestruction of any organic tissue; any profound change in the tissues of an organ orstructure which causes the loss of most or all of its proper characters	Dorland's Medical Dictionary for Health Consumers, 2007
CSTD	Cestodiasis	Tapeworm infestation, infestation with cestodes, a group of flattened and tape-like hermaphroditic worms that are intestinal parasites in humans and other animals, producing larvae that may invade body tissues.	http://www.britannica.com/EBchecked/topic/103879/cestodiasis
CLPG	Clumping Pigment Granules	No definition available**.**	
CLFL	Collapsed Follicles	Follicle - A sac or pouch-like depression or cavity.	Dorland's Medical Dictionary
CTHN	Colloid thinning	Thinning of the colloid layer	ECOTOX
CLLD	Colloids	A system in which finely divided particles, which are approximately 1 to 1,000 millimicrons in size, are dispersed within a continuous medium in a manner that prevents them from being filtered easily or settled rapidly.	American Heritage Dictionary of the English Language, 2011
CNGT	Congestion	The accumulation of excessive blood or tissue fluid in a vessel or organ.	American Heritage Dictionary of the English Language, 2011

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CORN	Cornification	The conversion of squamous epithelial cells into a keratinized horny material, such as hair, nails, or feathers.	American Heritage Dictionary of the English Language, 2011
CRYT	Crystals	Formations of small irregular solid material often composed of calcium, uric acid and phosphate.	http://cancerweb.ncl.ac.uk/omd/
CSTS	Cyst	A closed sac having a distinct membrane and developing abnormally in a body cavity or structure	http://www.merriam-webster.com/medical/cyst
CYTM	Cytomegaly	Enlargement of both the cytoplasm and nucleus while maintaining a normal N/C ratio.	www.csi-net.net/suzanne/page22.htm
CYTP	Cytoplasm	The organized complex of inorganic and organic substances external to the nuclear membrane of a cell and including the cytosol and membrane-bound organelles (as mitochondria or chloroplasts).	http://www.merriam-webster.com
CYIN	Cytoplasmic Inclusions	Describes foreign substances contained within a cell membrane. It pertains to nutrients, such as proteins, carbohydrates, and lipids, as well as pigment granules. Other inclusions may be secretory products stored within the cell body, and these can be expelled from the cell through exocytosis.	http://www.wisegeekhealth.com/what-are-cytoplasmic-inclusions.htm
CYVC	Cytoplasmic Vacuoles	Spaces or cavities within the cytoplasm.	ECOTOX
DBRS	Debris	An accumulation of fragments.	http://www.merriam-webster.com
DEGN	Degeneration	Deterioration of a tissue or an organ in which its function is diminished or its structure is impaired	http://www.merriam-webster.com/dictionary/degeneration
DLAT	Dilation	To grow wide; to enlarge or expand in bulk or extent	http://www.merriam-webster.com/dictionary/dilate
EDMA	Edema	Edema is a condition of abnormally large fluid volume in the circulatory system or in tissues between the body'scells (interstitial spaces).	Gale Encyclopedia of Medicine, 2008
ENCP	Encephalopathy	Degeneration of brain function, caused by any of various acquired disorders, including metabolic disease, organ failure, inflammation, and chronic infection. Also called cephalopathy, cerebropathy.	The American Heritage Medical Dictionary, 2007
ENDR	Endarteritis	Chronic inflammation of the inner layer of arteries.	Gale Encyclopedia of Medicine, 2008

HIS	Histology Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
EHYP	Erythroid Hyperplasia	An abnormal increase in the number of cells in an organ or a tissue with consequent enlargement in the erythroid	ECOTOX and The American Heritage Medical Dictionary, 2007
ESPH	Esophagitis	Inflammation of the esophagus	Dorland's Medical Dictionary for Health Consumers, 2007
XCPH	Exencephaly	A congenital defect in which the brain is completely exposed or protrudes through a defect in the cranial vault.	Saunders Comprehensive Veterinary Dictionary, 2007
EXPT	Exophthalmia	An abnormal condition characterized by a marked protrusion of the eyeballs (exophthalmos, exophthalmus), usually resulting from the increased volume of the orbital contents caused by a tumor; swelling associated with cerebral, intraocular, or intraorbital edema or hemorrhage; paralysis of or trauma to the extraocular muscles; or cavernous sinus thrombosis. It may also be caused by endocrine disorders such as hyperthyroidism and Graves' disease, varicose veins within the orbit, or injury to orbital bones.	Mosby's Medical Dictionary, 2009
EXCS	Extracellular space	Interstitial space between cells, occupied by interstitial fluid as well as amorphous and fibrous substances. For organisms with a cell wall, the extracellular space includes everything outside of the cell membrane including the periplasm and the cell wall.	http://www.ncbi.nlm.nih.gov/mesh?Db=mesh&term=Extracellular+Space
FBRS	Fibrosis	A condition marked by increase of interstitial fibrous tissue.	http://www.merriam-webster.com
FUSE	Fuse, fused	To become blended or joined by or as if by melting together.	http://www.merriam-webster.com
GRNM	Granuloma	A relatively small nodular inflammatory lesion containing grouped mononuclear phagocytes, caused by infectious and noninfectious agents.	http://www.ncbi.nlm.nih.gov
GLSN	Gross Lesions	A lesion plainly visible to the naked eye	Farlex Partner Medical Dictionary, 2012
HEMR	Hemorrhage	A copious discharge of blood from the blood vessels	http://www.merriam-webster.com/dictionary/hemorrhage
HRNA	Hernia	The protrusion of an organ or the fascia of an organ through the wall of the cavity that normally contains it	The American Heritage Medical Dictionary, 2007

HIS	Histology Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
GHIS	Histological Changes, General	Presence of physical damage or change to tissues or cells (for example, lesions, neoplasms); gross histological effects such as whole plant injury; disintegration of roots, stems or leaves; root fragmentation. For animals such effects include cell sloughing.	The specifics of the histology effect will be reported in Measurement Remarks.
HDPC	Hydropericardium	The noninflammatory accumulation of watery fluid in the pericardial cavity.	The American Heritage Medical Dictionary, 2007
HYDS	Hydropic Swelling	Cellular swelling due to accumulation of water	http://quizlet.com/9596054/patho-week-1-ch-4-5-flash-cards/
HYCR	Hyperchromicity	An increase in the absorption of ultraviolet light by polynucleotide solutions due to a loss of the ordered secondary structure.	McGraw-Hill Dictionary of Scientific & Technical Terms, 2003
HFLX	Hyperflexion	Flexion of a limb or part beyond the normal limit. Synonym: superflexion.	Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, Seventh Edition, 2003
HKTO	Hyperkeratosis	Hypertrophy of the corneous layer of the skin.	http://www.merriam-webster.com
HYPL	Hyperplasia	An abnormal increase in the number of normal cells in normal arrangement in an organ or tissue, which increases its volume	Dorland's Medical Dictionary for Health Consumers, 2007
HYPT	Hypertrophy	An enlargement or overgrowth of an organ or part due to increase in size of its constituent cells.	Dorland's Medical Dictionary for Health Consumers, 2007
HYCE	Hypocellularity	An abnormal decrease in the number of cells present, as in bone marrow.	Saunders Comprehensive Veterinary Dictionary, 2007
IHGT	Increased Height	Increase in height of an object such as cells or cellular components.	
IMVL	Increased Medullary Volume	Medullary - pertaining to the marrow or to any medulla. Medulla - The inmost part. A general term for the most interior portion of an organ or structure. Called also marrow.	Dorland's Medical Dictionary
IPHM	Increased Perivenous Homogeneity	Perivenous - around the vein.	Dorland's Medical Dictionary

HIS	Histology Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
IPDY	Increased Portal Density	Portal: Of or relating to a point of entrance to an organ, especially the transverse fissure of the liver, throughwhich the blood vessels enter	The American Heritage Medical Dictionary, 2007
ININ	Intranuclear inclusions	A gaseous, liquid, or solid foreign body enclosed within the nucleus of a cell.	http://www.merriam-webster.com/dictionary/inclusion and ECOTOX
LMLL	Lamellae, Lamella	A thin layer, plate, or membrane, esp any of the calcified layers of which bone is formed	http://www.collinsdictionary.com/dictionary/english/lamella
LESI	Lesions	Any visible, local abnormality of the tissues of the skin, such as a wound, sore, rash, or boil.	Gale Encyclopedia of Medicine, 2008
LPHD	Lymphoid depletion	The reduction of lymphocytes might be due to reduced production in the bone marrow, reduced proliferation in secondary lymphoid tissues, or due to increased loss of lymphocytes in the bone marrow or peripheral blood or secondary lymphoid tissues via necrosis or apoptosis.	http://vetmed.iastate.edu/research/labs/pcv2/pathogenesis/lymphoid-depletion
MELM	Melanomacrophages	The pigmented cells present in the hematopoietic organs. Besides melanin, hemosiderin and lipofuscin are also observed.	http://www.ncbi.nlm.nih.gov/pubmed/24482416
MAPH	Microphthalmia and anophthalmia	Microphthalmia is a disorder in which one or both eyes are abnormally small. Anophthalmia is the absence of one or both eyes. These rare disorders develop during pregnancy and can be associated with other birth defects.	https://www.nei.nih.gov/health/anoph
MALN	Misalign, misaligned	Not to be in or come into precise adjustment or correct relative position.	http://www.merriam-webster.com
MHYP	Myeloid Hyperplasia	Greater than normal number of nucleated cells of the myeloid lineage (a monocyte, granulocyte, or mast cell), found in blood or other tissue	http://www.informatics.jax.org/searches/Phat.cgi?id=MP:0010373
MYOP	Myopathy	Any of various abnormal conditions or diseases of the muscular tissues, especially one involving skeletal muscle.	The American Heritage Medical Dictionary, 2007
NCRO	Necrosis	The morphological changes indicative of cell death caused by progressive enzymatic degradation; it may affect groups of cells or part of a structure or an organ.	Dorland's Medical Dictionary for Health Consumers, 2007
NCRL	Necrotic Lesions	No definition available.	
NPHG	Nephrogenesis	Development or growth of the kidney.	http://www.merriam-webster.com/medical/nephrogenesis

HIS	Histology Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
NPHR	Nephrosis	Any kidney disease characterized by purely degenerative lesions of the renal tubules.	Dorland's Medical Dictionary for Health Consumers, 2007
NCVS	Nuclear Vesiculation	The presence or formation of vesicles in the nucleus	ECOTOX
PKTO	Parakeratosis	The persistence of the nuclei of keratinocytes as they rise into thestratum corneum of the epidermis	Dorland's Medical Dictionary for Health Consumers, 2007
PNCH	Parenchyma	The essential or functional elements of an organ, as distinguished from its stroma or framework	Dorland's Medical Dictionary for Health Consumers, 2007
CTYP	Percent Cell Type	No definition available**.**	
PRLF	Proliferation	The reproduction or multiplication of similar forms, especially of cells	Dorland's Medical Dictionary for Health Consumers, 2007
PRVN	Proventriculitis	Inflammation of the proventriculus of a bird usually due to nutritional deficiencies or to parasitism	http://www.merriam-webster.com/medical/proventriculitis
RCVL	Reduced Corticle Volume	Decrease in corticle volume.	ECOTOX
RFSZ	Reduced Follicle Size	Decrease in follicle size.	ECOTOX
RPCD	Reduced Periarteriolar Lymphocyte Sheath Cell Density	As an arteriole leaves a septum and enters the interior volume of the spleen it immediately acquires a continuous coating of lymphocytes. This "sleeve" of lymphocytes is the periarteriolar lymphocyte sheath, or PALS.	http://education.vetmed.vt.edu/Curriculum/VM8054/Labs/Lab13/Lab13.htm
SMLN	Severe misalignment	Not to be in or come into precise adjustment or correct relative position.	http://www.merriam-webster.com
SCNG	Sinus Congestion	Blockage of one or more of the four pairs of sinus passageways in the skull. Blockage may result from inflammation and swelling of the nasal tissues, obstruction by one of the small bones of the nose (deviated septum) or from secretion of mucus	http://www.healthwell.com/healthnotes/Concern/Sinus_Congestion.cfm
SHMT	Sinus Haematopoiesis	The formation of blood or blood cells in the living body - in the sinus	The American Heritage Medical Dictionary, 2007
SHYP	Sinus Hyperplasia	An abnormal increase in the number of normal cells in normal arrangement in an organ or tissue, which increases its volume – in the sinus	Dorland's Medical Dictionary for Health Consumers, 2007

HIS	Histology Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
SMMN	Slight to moderate misalignment	Not to be in or come into precise adjustment or correct relative position.	http://www.merriam-webster.com
SOSS	Surpernumerary ossification	Beyond the normal number of ossifications.	ECOTOX
SWEL	Swelling	A transient abnormal enlargement of a body part or area not caused by proliferation of cells.	Dorland's Medical Dictionary for Health Consumers, 2007
SNAP	Synapses	The point at which a nervous impulse passes from one neuron to another.	http://www.merriam-webster.com
TELG	Telogen	The quiescent or resting phase of the hair cycle, following catagen; the hair has become a club hair and does not grow further.	Dorland's Medical Dictionary for Health Consumers, 2007
TFLR	Tissue Damage Measured by Fluorescence under Dyes or in Uv Light	No definition available.	
USTR	Ultrastructural Changes	Changes in the sub-cellular structures	ECOTOX
VCLZ	Vacuolization	The process of forming vacuoles; the condition of being vacuolated.	Dorland's Medical Dictionary for Health Consumers, 2007

GRO Growth Group

DVP	Development Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
68CL	6-8 Cell stage	Cleavage stage embryos are typically at the 6-8 cell stage by day 3 of culture.	http://www.ivfpittsburgh.com/fertility-news-blog/

DVP	Development Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
ABNM	Abnormal	Effects which occur to the organism that has been directly exposed (compare to teratogenic effects). Effects included under this measurement include nonspecific physical malformations, deformities, defects, discoloration, anomalies, vegetative vigor, etc.	ECOTOX makes every effort to code the specific abnormalities (e.g. imposex, limb deformities , lesions, etc.), but when an author does not clearly state the specific type of abnormality or combines multiple types of abnormalities into one data point DVP ABNM is used.
AAFR	Age at first reproduction	The age when an organism starts to reproduce. A life table parameter	ECOTOX
ANGG	Angiogenesis	Angiogenesis is the formation and differentiation of blood vessels.	http://www.merriam-webster.com/dictionary
AOPT	Anophthalmia	Congenital absence of the eye or eyes. Also Anophthalmos	http://www.ncbi.nlm.nih.gov
BSCY	Blastocyst stage	An early metazoan embryo typically having the form of a hollow fluid-filled rounded cavity bounded by a single layer of cells	http://www.merriam-webster.com/dictionary/blastula
CCLV	Cell Cleavage	The act or state of splitting or dividing of a cell, particularly during the telophase of (animal) cell division.	http://www.biology-online.org/dictionary/Cleavage
CLFT	Cleft palate	Fairly common congenital disorder in which a fissure forms in the roof of the mouth. It may affect only the soft palate or extend through the hard palate, so that the nasal cavity opens into the mouth. The septum (dividing wall) between the nostrils is often absent.	http://www.merriam-webster.com/dictionary/cleft%20palate
COAT	Coat development	Development of primary coat.	ECOTOX
COLR	Color	No definition available.	

DVP	Development Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
CORK	Cryptorchidism	A developmental defect in which a testis or both testes failed to descend from high in the abdomen to the bottom of the scrotum. Testicular descent is essential to normal spermatogenesis which requires temperature lower than the body temperature. Cryptorchidism can be subclassified by the location of the maldescended testis	http://www.ncbi.nlm.nih.gov
DFRM	Deformation/ Malformations	A morphologic defect resulting from an intrinsically abnormal developmental process.	http://www.biology-online.org/dictionary/Malformations
GDVP	Development, General	Change in ability to grow to a more mature life stage and in time between separate life stages. Used when more than one measurement is coded.	
EARO	Ear opening	The development stage when the ears open	ECOTOX
EARP	Ear pinna detachment	The detachment of the ear pinna	ECOTOX
EMRG	Emergence	Change in the act or an instance of emerging, e.g. developing from the larval stage into the adult stage. Also penetration of the soil surface by a newly germinated plant	http://www.merriam-webster.com/dictionary/emergence
ENDD	Endoderm Differentiation	The differentiation of the innermost of the three primary germ layers of an embryo that is the source of the epithelium of the digestive tract and its derivatives and of the lower respiratory tract.	http://www.merriam-webster.com/medlineplus/Endoderm
EVFO	Envelope Formation	Toward the end of mitosis, neighboring chromosomes gather closely to form a compact cluster. This is important for reassembling the nuclear envelope around the entire chromosome mass but not individual chromosomes. This protection is especially important during the very early stages of development, when the embryonic cells are rich in ooplasm.	http://www.cell.com/abstract/S0092-8674(08)00129-3?switch=standard
EYOP	Eye opening	The development stage when the eyes open.	ECOTOX
FIRM	Firmness	Having a solid or compact structure that resists stress or pressure.	http://www.merriam-webster.com/dictionary/firmness
FLDG	Fledged/Female or /Brood	To rear until ready for flight or independent activity	http://www.merriam-webster.com/dictionary/fledge
FURR	Fur Development	Development of fur.	ECOTOX

DVP	Development Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
GSTL	Gastrulation	During embryonic development of most animals a complex and co-ordinated series of cellular movements occurs at the end of cleavage. The details of these movements, gastrulation, vary from species to species, but usually result in the formation of the three primary germ layers, ectoderm, mesoderm and endoderm.	http://www.biology-online.org/dictionary/Gastrulation
GRRT	Growth Rate	The rate, or speed, at which the number of organisms in a population increases. This can be calculated by dividing the change in the number of organisms from one point in time to another by the amount of time in the interval between the points of time. The phrase is most often used to describe growth of cells or microorganisms in laboratory cultures and usually expressed as the generation time.	http://www.biology-online.org/dictionary/Growth_rate
INCT	Incubation time	To maintain (as an embryo or a chemically active system) under conditions favorable for hatching, development, or reaction.	http://www.merriam-webster.com
LRCF	Loricae formation	A tubular, conical, or vaselike structure secreted by some protozoans (e.g., Stentor) and many rotifers. Many species incorporate sand grains and other particles into the lorica for reinforcement. The loose-fitting case, closed at one end, has a large opening at the anterior end through which part of the organism (or its appendages) may be extended. The lorica is of taxonomic importance among protozoologists.	http://www.britannica.com/EBchecked/topic/348199/lorica
MATR	Maturation	Having completed natural growth and development.	http://www.merriam-webster.com/dictionary/mature
MMPH	Metamorphosis	A major change in the form or structure of some animals or insects that happens as the animal or insect becomes an adult.	http://www.merriam-webster.com/dictionary/metamorphosis
MOPT	Microphthalmia	Congenital or developmental anomaly in which the eyeballs are abnormally small. Also Microphthalmos	http://www.ncbi.nlm.nih.gov
MOLT	Molting	To lose a covering of hair, feathers, etc., and replace it with new growth in the same place.	http://www.merriam-webster.com/dictionary/molt

DVP	Development Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
MRLA	Morula stage	The sphere or globular mass of cells (blastomeres), formed by the clevage of the ovum or egg in the first stages of its development; -- called also mulberry mass, segmentation sphere, and blastosphere.	http://www.lexic.us/definition-of/morula
NORM	Normal	Conforming to a type, standard, or regular pattern.	http://www.merriam-webster.com/dictionary/normal
FORM	Organ/Tissue Formation	The formation of a tissue or organ	ECOTOX
PHRV	Post Harvest Character Influenced	No definition available.	
PHRN	Post Harvest Character No Effect	No definition available.	
PUPA	Pupation	Completing the an intermediate usually quiescent stage of a metamorphic insect (as a bee, moth, or beetle) that occurs between the larva and the imago, is usually enclosed in a cocoon or protective covering, and undergoes internal changes by which larval structures are replaced by those typical of the imago. Also the change in percent pupation or pupation duration.	http://www.merriam-webster.com/dictionary/pupa and ECOTOX
RSPN	Resorption (Tail Resorption in Frogs)	To break down and assimilate the components	http://www.merriam-webster.com/dictionary/resorb
SXDP	Sexual Development	To acquire secondary sex characteristics and reach reproductive maturity	http://www.merriam-webster.com/dictionary/develop and ECOTOX
DVLP	Slowed, Retarded, Delayed or Non-development	A slowing or stopping of the time of development.	ECOTOX
STGE	Stage of development	A period or step in a progress, activity, or development; especially: one of the distinguishable periods of growth and development of a plant or animal.	http://www.merriam-webster.com
TERA	Teratogenesis	The origin or mode of production of a malformed foetus; the disturbed growth processes involved in the production of a malformed neonate. Use this code when exposure of adults results in quantifiable occurrence of abnormal offspring.	
TEMR	Time to First Emergence	No definition available.	

DVP	**Development Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
TFLW	Time to Flower	The time it takes a plant to flower or inflorescence. One of the major developmental phase changes that a plant makes during its life. Also: time to anthesis.	ECOTOX
THED	Time to heading	The time it takes for grain to reach maturity.	ECOTOX
TRRA	Transformation Ratio	(Weight of Roots + Sprouts/weight of Original Seed)	
WEAN	Weaned	To accustom (as a young child or animal) to take food otherwise than by nursing	http://www.merriam-webster.com/dictionary/wean
WGHT	Weight	The quality of being heavy; that property of bodies by which they tend toward the center of the earth; the effect of gravitative force, especially when expressed in certain units or standards, as pounds, grams, etc. It is proportional to the quantity of matter in the body.	http://www.biology-online.org/dictionary/Weight
YLKA	Yolk sac absorption, Yolk sac utilization	A bag-like ventral extension of the gut containing nutritive materials that first appears in the fish embryo and is later absorbed by the larva during the stage after hatching and before feeding.	filaman.uni-kiel.de/LarvalBase/Glossary

GRO	**Growth Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
<ABNM>	Abnormal	Effects which occur to the organism that has been directly exposed (compare to teratogenic effects). Effects included under this measurement include nonspecific physical malformations, deformities, defects, discoloration, anomalies, vegetative vigor, etc.	DO not code GRO ABNM. ABNM should be coded under MPH (when adult body structures are changing) or DVP (when embryo or juveniles are becoming abnormal throughout different lifestages)

GRO	Growth Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
AREA	Area	A particular extent of space or surface or one serving a special function.	http://www.merriam-webster.com/dictionary/area GRO (Growth) AREA is used for a change in area of an entire organism. (Use AREA MPH (Morphology) when measuring specific response sites.)
BMAS	Biomass	The amount of living matter in a unit area or volume of habitat. Includes harvest yield, fruit or seed yield, mass of population, standing crop, productivity.	http://www.merriam-webster.com/dictionary/biomass and ECOTOX
<BDBN>	Body Burden	No definition available.	This will need maintenance. If the measurement occurs with and endpoint than the measurement should change to EBCN.
CRCM	Circumference	The length of a line that goes around something or that makes a circle or other round shape; the outer edge of a shape or area; the perimeter of a circle; the external boundary or surface of a figure or object.	http://www.merriam-webster.com/dictionary/circumference
COND	Condition Index or Condition Factor	Fitness factor. Condition factor (K) is measured by K=wt/length^3 x 100.	Condition Factor ECOREF#61168
DNSY	Density	The quantity per unit volume, unit area, or unit length: as *a* **:** the mass of a substance per unit volume	http://www.merriam-webster.com/dictionary/density
DMTR	Diameter	The length of a straight line through the center of an object.	http://www.m-w.com/dictionary/diameter
DIST	Distance grown	No definition available.	
NNOD	Dry Mass/Plant Roots Not Nodulated	No definition available.	
DWGT	Dry Weight (Aquatic Only)	Measurable change in dry weight of test organism.	ECOTOX

GRO	Growth Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
EBCN	Effective Body Concentration	The body residue of a chemical that is associated with an effect.	
GREI	Growth Efficiency Index	As a measure of competition or as an aid in defining the relative importance of various stresses.	http://people.forestry.oregonstate.edu/richard-waring/sites/people.forestry.oregonstate.edu.richard-waring/files/publications/42.pdf
<GGRT>	Growth Rate Index	No definition available.	
GGRO	Growth, General	Unspecified or multiple growth measurements	ECOTOX
HGHT	Height	The distance from the bottom to the top of something standing upright	http://www.merriam-webster.com/dictionary/height (Used for measurement of an entire organism)
LGTH	Length	The longer or longest dimension of an object	http://www.merriam-webster.com/dictionary/length
LGWR	Length to weight ratio	The ratio of length to weight of an organism.	ECOTOX
RGNR	Limb/ Body Part Regeneration	Change in ability to regenerate a body part, byssus/byssal thread production.	ECOTOX
LINT	Lint	A fibrous coat of thick convoluted hairs borne by cotton seeds that yields the cotton staple.	http://www.merriam-webster.com
NGAN	Net gain	Total weight gain is the most commonly employed measurement of gestational weight gain. A variation on this method is net weight gain, in which the weight of the infantoffspring and placenta is subtracted from total weight gain.	http://ije.oxfordjournals.org/content/36/6/1275.full
NODE	Nodulated Plant Roots /# Nodules	No definition available.	
NLEF	Number of leaves	Number of leaves found on a plant.	
NROT	Number of roots	Number of roots	ECOTOX
PMTR	Perimeter	The outside edge of an area or surface	http://www.merriam-webster.com/dictionary/perimeter
RADI	Radius	A line segment extending from the center of a circle or sphere to the circumference or bounding surface.	http://www.merriam-webster.com/dictionary/radius

GRO	Growth Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
RLGR	Relative Growth Rate	A measurement of the productivity of a plant, defined as the increase in dry mass per unit of plant mass over a specified period of time.	http://www.encyclopedia.com/doc/1O6-relativegrowthrate.html
SIZE	Size	The physical magnitude, extent, or bulk : relative or proportionate dimensions	http://www.merriam-webster.com/dictionary/size
SPGR	Specific Growth Rate	Is the increase in cell mass per unit time, e.g., grams cells (g) per gram cells (g) per hour: (g*g-1*h-1). The specific growth rate is commonly given by the symbol, μ (mu), and the most common units are in reciprocal hours (h−1); however, it can also be expressed in reciprocal seconds (s−1) or minutes (min−1) or any other units of time.	http://en.wikipedia.org/wiki/Specific_growth_rate
STNT	Stunting	Stunt: A stop or hindrance in growth or development; arrested development; a plant or animal hindered from attaining its proper growth; a disease of plants, characterized by a dwarfing or stunting of the plant.	http://dictionary.reference.com/browse/stunted
THIK	Thickness	The smallest of three dimensions, length, width, and thickness	http://www.merriam-webster.com/dictionary/thickness
THRV	Time to harvest	Amount of time until a crop can be gathered	ECOTOX
VGOR	Vigor	Active healthy well-balanced growth especially of plants	http://www.merriam-webster.com/dictionary/vigor
VOLU	Volume	The amount of space occupied by a three-dimensional object as measured in cubic units (as quarts or liters) : cubic capacity	http://www.merriam-webster.com/dictionary/volume
WGHT	Weight	The quality of being heavy; that property of bodies by which they tend toward the center of the earth; the effect of gravitative force, especially when expressed in certain units or standards, as pounds, grams, etc. It is proportional to the quantity of matter in the body.	http://www.biology-online.org/dictionary/Weight
GAIN	Weight gain	Increase in body weight over existing weight.	http://www.oxforddictionaries.com/us/definition/english/weight-gain
WTLR	Weight to length ratio	The ratio of weight to length of an organism.	ECOTOX

GRO	Growth Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
WWGT	Wet Weight (Aquatic Only)	Measurable change in the wet weight of an organism.	ECOTOX
WDTH	Width	The distance from one side of something to the other side: a measurement of how wide something is.	http://www.merriam-webster.com/dictionary/width (Change in width of test organism)

MPH	Morphology Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
ABNM	Abnormal	An anomaly, deformity, malformation, impairment, dysfunction or deviation from the normal or from the typical.	http://www.biology-online.org/dictionary/Abnormality
ABST	Absence, absent, Missing	Not present. Agenesis. A tissue, organ, or bodily structure missing or failing to develop in an organism.	ECOTOX and http://www.merriam-webster.com/dictionary
ANGG	Angiogenesis	Angiogenesis is the formation and differentiation of blood vessels.	http://www.merriam-webster.com/dictionary
ABDS	Apex to Base Distance	No definitions available.	
AREA	Area	A spot or small marked space; the surface included within any given lines.	http://www.biology-online.org/dictionary/Area
BVSL	Blood vessels	Any of the vessels through which blood circulates in the body	http://www.merriam-webster.com/medlineplus/blood%20vessel
CAWT	Calcium weight	The ratio of calcium in the bone to the weight of the bone. A measure of bone density.	ECOTOX
COSC	Caudal Ossification Center	No definition available.	
SHPE	Shape	The form or outline of an object	http://www.merriam-webster.com/dictionary/shape

MPH	**Morphology Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
CRCM	Circumference	The length of a line that goes around something or that makes a circle or other round shape; the outer edge of a shape or area; the perimeter of a circle; the external boundary or surface of a figure or object.	http://www.merriam-webster.com/dictionary/circumference
DMTR	Diameter	The length of a straight line through the center of an object.	http://www.m-w.com/dictionary/diameter (Used when measuring an organ or response site)
NLRG	Enlargement	to make larger	http://www.merriam-webster.com/dictionary/enlarge
FSSR	Fissure	Any cleft or groove, normal or otherwise, especially a deep fold in the cerebral cortex which involves the entire thickness of the brain wall.	http://www.biology-online.org/dictionary/Fissure
GMPH	General Morphological Changes	Unspecified or multiple morphological measurement	ECOTOX
HGHT	Height	The distance from the bottom to the top of something standing upright	http://www.merriam-webster.com/dictionary/height
IMPS	Imposex, Intersex Conditions	Simultaneous presence of both male and female reproductive organs	http://epa.gov/endocrine/Pubs/ankley.pdf
IPOS	Inter-parietal Ossification	The formation of bone or of a bony substance, the conversion of fibrous tissue or of cartilage into bone or a bony substance between the parietal bones or cartilages.	http://cancerweb.ncl.ac.uk/omd/
LGTH	Length	The longer or longest dimension of an object	http://www.merriam-webster.com/dictionary/length
LFLV	Lens focal length variability	Measure of the sharpness of focus	ECOREF#57008
MOSC	Metacarpal Ossification Center	No definition available.	
NORM	Normal	Conforming to a type, standard, or regular pattern.	http://www.m-w.com/
RIBS	Number of ribs	Amount of rib bones present.	ECOTOX

MPH	**Morphology Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
OSSC	Ossification center	Ossification center: any point at which the process of ossification begins in a bone; in a long bone there is a primary center for the diaphysis and one secondary center for each epiphysis.	http://medical-dictionary.thefreedictionary.com/ossification+center
OSTD	Osteoid	Uncalcified bone matrix	http://medical.merriam-webster.com
POSC	Parietal Ossification	The formation of bone or of a bony substance, the conversion of fibrous tissue or of cartilage into bone or a bony substance located near the parietal bone	http://cancerweb.ncl.ac.uk/omd/
PULP	Pulp	The soft succulent portion of a fruit.	McGraw-Hill,1994
QNTY	Quantity	Quantity, number, count, or amount of an anatomical structure or tissue that can be quantified.	ECOTOX and http://wordnet.princeton.edu
RADI	Radius	A line segment extending from the center of a circle or sphere to the circumference or bounding surface.	http://www.merriam-webster.com/dictionary/radius
RATO	Ratio	The relationship in quantity, amount, or size between two or more things.	http://www.merriam-webster.com/dictionary/ratio
CTTK	Ratio of cortical thickness to diameter	The ratio of cortical thickness to the diameter.	ECOTOX
STBD	Seminiferous tubule diameter	The diameter of any of the coiled threadlike tubules that make up the bulk of the testis and are lined with a layer of epithelial cells from which the spermatozoa are produced.	
DEPO	Shell Deposition	Change in the ability to grow a shell.	
SSRB	Short supernumerary rib	A partial rib that exceed the expected number of ribs.	ECOTOX
SIZE	Size	The physical magnitude, extent, or bulk : relative or proportionate dimensions	http://www.merriam-webster.com/dictionary/size
SMIX	Somatic Index	Organ Weight in Relationship to Body Weight.	ECOTOX
SMTE	Somite	One of the longitudinal series of segments into which the body of many animals (as articulate animals and vertebrates) is divided	http://www.merriam-webster.com/medlineplus/somite
SOSC	Sternal Ossification Center	No definition available.	
STTO	Strength and Tone	No definition available.	
STRC	Structural Changes	No definition available.	

MPH	Morphology Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
SFRB	Supernumerary full rib	A full rib that exceed the expected number of ribs.	ECOTOX
SRIB	Supernumerary Ribs	Having more than the expected number of ribs.	ECOTOX
SVTE	Supernumerary vertebrae	Having more than the expected number of vertebrae.	ECOTOX
THIK	Thickness	The smallest of three dimensions, length, width, and thickness	http://www.merriam-webster.com/dictionary/thickness
TKWD	Thickness:width	Ratio of thickness to width.	ECOTOX
VOLU	Volume	The amount of space occupied by a three-dimensional object as measured in cubic units (as quarts or liters) : cubic capacity	http://www.merriam-webster.com/dictionary/volume
WEAR	Wearing	To cause to deteriorate by use. To impair or diminish by use or attrition. To consume or waste gradually.	http://www.merriam-webster.com
WGHT	Weight	The quality of being heavy; that property of bodies by which they tend toward the center of the earth; the effect of gravitative force, especially when expressed in certain units or standards, as pounds, grams, etc. It is proportional to the quantity of matter in the body.	http://www.biology-online.org/dictionary/Weight
WDTH	Width	The distance from one side of something to the other side: a measurement of how wide something is.	http://www.merriam-webster.com/dictionary/width

MOR Mortality or Survivorship Group

MOR	Mortality Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
BDAY	Bird days	This is a measure of survivorship. Bird days is equal to the number of birds alive on day X * X days.	ECOREF 36364
DTTM	Death with tumors	Mortalities that occurred with tumors.	ECOTOX
DLMT	Dominant lethal mutations	(1-live embryos per test female/live embryos per control female) X 100.	
EBCN	Effective Body Concentration	The body residue of a chemical that is associated with an effect.	

MOR	**Mortality Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
<HTCH>	Hatch	Change in percent hatch, time to hatch or number of eggs hatched.	
TKNO	Knockdown	The inability to fly or stand	www.icup.org.uk/reports%5CICUP897.pdf
LBCN	Lethal Body Concentration	Also Lethal Body Burden. The body residue of a chemical that is associated with mortality.	*Use this effect-measurement pair if the author reports an endpoint based on lethal body burden or lethal body concentration (internal chemical concentrations).*
LIFE	Life Expectancy	An expected time to live as calculated on the basis of statistical probabilities	The American Heritage Medical Dictionary, 2007
LFSP	Lifespan or longevity	The average or maximum length of time an organism, material, or object can be expected to survive or last	The American Heritage Medical Dictionary, 2007
MDTH	Mean Time of Death	No definition available.	
MORT	Mortality	Death Effect expressed as % death or % survival. A lethal effect may describe mortality (MORT) or an observed behavior that indicates mortality (e.g., shell valve closures for bivalves (VACL), immobilization (IMBL) for invertebrates, or detachment (DTCH) for sessile organisms). "MORT" differs from "ABND" in that an initial number of organisms is known for the mortality effect and results are expressed in terms of the initial number (e.g., percent survival). If the author defines criteria used to determine that the organism was dead, and then identifies the effect as a lethal effect, "MORT" will be coded in the EFFECT field. MORT may be coded as an effect with LC, EC, LD, NOEC, or LOEC endpoints. If authors report hatch data where the intitial life stage is eggs, code the hatch data as mortality with a measurement comment AS HATCH. If the initial life stage is not eggs or is a life-cycle study where hatch is measured on a future generation, code the hatch data as REP HTCH.	http://www.merriam-webster.com/dictionary/mortality

MOR	Mortality Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
GMOR	Mortality/Survival, General	Used when more than one measurement is coded.	ECOTOX
PSUR	Probability of Survival	Survival probability, g(x), describes the probability of survival from age x to age x+1, given thatan individual has already survived to age x. To calculate g(x), divide the survivorship schedule at age x+1:l(x+1) by the survivorship schedule at age	http://www.uvm.edu/rsenr/vtcfwru/spreadsheets/ecologyevolution/EE_Exercises/Exercise12/12%20Donovan%20pages%20311%20EE.pdf
SURV	Survival	To continue to live	http://www.merriam-webster.com/dictionary/survive
SVVS	Survivorship	The probability of surviving to a particular age; also : the number or proportion of survivors (as of an age group or population)	http://www.merriam-webster.com/dictionary/survivorship
TLET	Time to 100% Mortality	Time to complete mortality	ECOTOX
TDTH	Time to Death	Time until a death occurs	ECOTOX

PHY Physiological Group

IMM	Immunity Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
ABSC	Abscess	An enclosed collection of liquefied tissue, known as pus, somewhere in the body. It is the result of the body's defensive reaction to foreign material.	Gale Encyclopedia of Medicine. Copyright 2008
PARA	Amount or Percent Organisms Infested with Parasites	Number of organisms with parasites	ECOTOX
ABDT	Antibody Titres	Measure of the amount of antibody present, usually given in units per millilitre of serum.	http://www.pestmanagement.co.uk/lib/glossary/glossary_a.shtml
ASHG	Anti-sheep Red Blood Cell Hemaglutinin	No definition available.	
DHYP	Delayed Type Hypersensitivity	No definition available.	

IMM	Immunity Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
ENMR	Encapsulation or Melanization Response	Melanization is an immediate immune response in arthropods leading to the physical encapsulation of pathogens in a dense melanin coat.	http://journals.plos.org/plospathogens/article?id=10.1371/journal.ppat.1003029
ENCY	Endocytosis	A process of cellular ingestion by which the plasma membrane folds inward to bring substances into the cell.	The American Heritage Medical Dictionary, 2007
HEAL	Healing	To make sound or whole [heal a wound]	http://www.merriam-webster.com/dictionary/heal
HTPL	Heterophiles	A finely granular polymorphonuclear leukocyte represented by neutrophils in human, but characterized in other mammals by granules that have variable sizes and staining characteristics.	Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, 2003
HMRL	Humoral immunity	A form of immunity mediated by circulating antibodies (immunoglobulins IgA, IgB, and IgM), which coat the antigens and target them for destruction by polymorphonuclear neutrophils.	The American Heritage Medical Dictionary, 2007
GIMM	Immunity, General	Used when more than one measurement is coded.	
IGMG	Immunoglobin G	One of five distincit classes based on structure and antigenetic properties (IgG) is a protein of animal origin with known antibody activity, synthesized by lymphocytes and plasma cells and found in serum and in other body fluids and tissues	Dorland's Medical Dictionary for Health Consumers, 2007
IGMM	Immunoglobin M	One of five distincit classes based on structure and antigenetic properties (IgM) is a protein of animal origin with known antibody activity, synthesized by lymphocytes and plasma cells and found in serum and in other body fluids and tissues	Dorland's Medical Dictionary for Health Consumers, 2007
IGMT	Immunoglobulin	A protein of animal origin with known antibody activity, synthesized by lymphocytes and plasma cells and found in serum and in other body fluids and tissues; abbreviated Ig. There are five distinct classes based on structural and antigenic properties: IgA, IgD, IgE, IgG, and IgM	Dorland's Medical Dictionary for Health Consumers, 2007
IGMA	Immunoglobulin A	One of five distincit classes based on structure and antigenetic properties (IgA) is a protein of animal origin with known antibody activity, synthesized by lymphocytes and plasma cells and found in serum and in other body fluids and tissues	Dorland's Medical Dictionary for Health Consumers, 2007

IMM	Immunity Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
IGME	Immunoglobulin E	One of five distincit classes based on structure and antigenetic properties (IgM) is a protein of animal origin with known antibody activity, synthesized by lymphocytes and plasma cells and found in serum and in other body fluids and tissues	Dorland's Medical Dictionary for Health Consumers, 2007
IGMY	Immunoglobulin Y	One of five distincit classes based on structure and antigenetic properties (IgY) is a protein of animal origin with known antibody activity, synthesized by lymphocytes and plasma cells and found in serum and in other body fluids and tissues	Dorland's Medical Dictionary for Health Consumers, 2007
IFCT	Infected	Contaminated with a disease-producing substance or agent.	http://www.merriam-webster.com
INTS	Intussusception	A serious disorder in which part of the intestine slides into an adjacent part of the intestine. This "telescoping" often blocks food or fluid from passing through.	http://www.mayoclinic.org/diseases-conditions/intussusception/basics/definition/con-20026823
LKMA	Leukemia	Leukemia is a cancer of the early blood-forming cells. Most often, leukemia is a cancer of the white blood cells, but some leukemias start in other blood cell types.	http://www.cancer.org/cancer/leukemia
LYMP	Lymphocyte Activity	No definition available.	
LYPA	Lymphoma	Lymphoma is a cancer that starts in cells that are part of the body's immune system.	http://www.cancer.org/cancer/lymphoma/index
MCPG	Macrophage activity	Activity of any of the large, mononuclear, highly phagocytic cells derived from monocytes that occur in the walls of blood vessels (adventitial cells) and in loose connective tissue (histiocytes, phagocytic reticular cells). They are components of the reticuloendothelial system	Dorland's Medical Dictionary for Health Consumers, 2007
MPHG	Microphage Function, Activity	Activity of a small phagocyte; an actively motile neutrophil capable of phagocytosis.	Dorland's Medical Dictionary for Health Consumers, 2007
MYEL	Myelosis	A formation of a tumor of the spinal cord	Dorland's Medical Dictionary for Health Consumers, 2007
NKCA	Natural Killer Cell Activity	A type of lymphocyte (a white blood cell) and a component of innate immune system.	http://www.sciencedaily.com/terms/natural_killer_cell.htm
PRNF	Parasitic Infection	No definition available.	

IMM	Immunity Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
PHAG	Phagocytosis	The engulfing of microorganisms or other cells and foreign particles by phagocytes	Dorland's Medical Dictionary for Health Consumers, 2007
PFCR	Plaque forming cell response	Plaque forming cell - An antibody-producing cell detected in vitro by its ability to lyse antigen-sensitized erythrocytes in the presence of complement.	http://www.fleshandbones.com/immunology/roitt/glossary.cfm?letter=P
PNMA	Pneumonia	A disease of the lungs characterized especially by inflammation and consolidation of lung tissue followed by resolution and by fever, chills, cough, and difficulty in breathing and that is caused especially by infection	http://www.merriam-webster.com/dictionary/pneumonia
PRTU	Proteuria	The presence of an excess of serum proteins in the urine; called also albuminuria (also known as proteinuria).	Dorland’s Medical Dictionary
RBST	Respiratory Burst activity	Respiratory activity of cell measured as an immune response; production of extra- and intra-cellular radicals	ECOREF 80857
RSTT	Rosette Response, Rosette Forming Cell Concentration	No definition available.	
THYM	Thymocyte Activity	The activity of a lymphocyte within the thymus gland.	Dorland's Medical Dictionary for Health Consumers, 2007

INJ	Injury Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
ABSN	Abrasion	An injury caused by something that rubs or scrapes against the skin	http://www.merriam-webster.com/dictionary/abrasion
ADNM	Adenoma	A benign epithelial tumor in which the cells form recognizable glandular structures or in which the cells are clearly derived from glandular epithelium.	Dorland's Medical Dictionary for Health Consumers, 2007
AMLD	Amyloidosis	Amyloidosis is a progressive, incurable, metabolic disease characterized by abnormal deposits of protein in one or more organs or body systems.	Gale Encyclopedia of Medicine, 2008

INJ	Injury Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
AUTO	Autotomy	Constriction and/or loss of segments. The act of casting off a body part as a means of escape.	ECOREF 47717 http://cancerweb.ncl.ac.uk
BTMR	Benign tumor	A tumor that does not metastasize or invade and destroy adjacent normal tissue.	The American Heritage Medical Dictionary, 2007
CLRS	Chlorosis	A diseased condition in green plants marked by yellowing or blanching	http://www.merriam-webster.com/dictionary/chlorosis
CURV	Curvature	An abnormal curving (as of the spine); a curved surface of an organ	http://www.merriam-webster.com/dictionary/curvature
DAMG	Damage	Loss or harm caused by a mistake, wrong action, etc.	http://www.merriam-webster.com/dictionary/damage
DESI	Desiccation	To dry up	http://www.merriam-webster.com/dictionary/desiccate
HDCP	Hydrocephaly	An abnormal expansion of cavities (ventricles) within the brain that is caused by the accumulation of cerebrospinal fluid.	Gale Encyclopedia of Medicine, 2008
IFLM	Inflammation	A local response to cellular injury that is marked by capillary dilatation, leukocytic infiltration, redness, heat, and pain and that serves as a mechanism initiating the elimination of noxious agents and of damaged tissue	http://www.merriam-webster.com/dictionary/inflammation
GINJ	Injury, General	Used when more than one measurement is coded.	
MTMR	Malignant tumor	A tumor that invades surrounding tissues, is usually capable of producing metastases, may recur after attempted removal, and is likely to cause death unless adequately treated.	The American Heritage Medical Dictionary, 2007
MUTI	Mutigenesis	Any event that changes genetic structure; any alteration in the inherited nucleic acid sequence of the genotype of an organism	http://www.thefreedictionary.com/mutagenesis
OCTB	Occult blood	Blood that is present in amounts too small to be seen and can be detected only by chemical analysis or microscopic examination.	The American Heritage Medical Dictionary, 2007
WART	Papilloma, wart	A benign epithelial tumor projecting from the surrounding surface. Also called papillary tumor, villoma.	The American Heritage Medical Dictionary, 2007

INJ	**Injury Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
PLYP	Polyp	A usually nonmalignant growth of tissue protruding from the mucous lining of an organ such as the nose, bladder, or intestine, often causing obstruction.	The American Heritage Medical Dictionary, 2007
SYMP	Symptom Severity Index	No definition available.	
THMB	Thrombosis	Formation of a clot in the blood that either blocks, or partially blocks a blood vessel. The thrombus may lead to infarction, or death of tissue, due to a blocked blood supply.	Gale Encyclopedia of Medicine, 2008
TUMR	Tumor Induction	No definition available.	
ULCR	Ulcer	A local defect or excavation, of the surface of an organ or tissue, which is produced by the sloughing of inflammatory necrotic tissue.	Dorland's Medical Dictionary for Health Consumers, 2007
VASC	Vascular Disruption	No definition available.	

ITX	**Intoxication Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
ANOR	Anorexia	A loss of appetite especially when prolonged	http://www.merriam-webster.com/dictionary/anorexia
ATAX	Ataxia	An inability to coordinate voluntary muscular movements that is symptomatic of some central nervous system disorders and injuries and not due to muscle weakness —called also incoordination	http://www.merriam-webster.com/dictionary/ataxia
CONV	Convulsions	An abnormal violent and involuntary contraction or series of contractions of the muscles	http://www.merriam-webster.com/dictionary/convulsion
IMBL	Immobile	Incapable of moving or being moved	http://dictionary.reference.com/browse/immobile
INCO	Incoordination	lack of coordination; especially : ataxia	http://www.merriam-webster.com/dictionary/incoordination
GITX	Intoxication, General	Used when more than one measurement is coded.	

ITX	**Intoxication Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
MBLT	Mobility	Capability of movement, of being moved	http://www.merriam-webster.com/dictionary/mobile
PARL	Paralysis	A complete or partial loss of function especially when involving the motion or sensation in a part of the body	http://www.merriam-webster.com/dictionary/paralysis
TINT	Time to Signs of Intoxication	No definition available.	

PHY	**Physiological Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
2DOG	2-deoxy-D-glucose	Amount of L-2-deoxy-D-glucose taken in by an organism or an organism's tissues.	ECOTOX
5HTU	5-Hydroxytryptamine uptake	Amount of 5-hydroxytryptamine taken in by an organism or an organism's tissues. Also: Serotonin, 5-HT.	ECOTOX
AECG	Abnormal ECG	A test that records the electrical activity of the heart Abnormality in ECG report generally means that the electrical system of your heart is not working properly. Electrocardiogram (ECG / EKG).	http://www.nlm.nih.gov/medlineplus/ency/article/003868.htm
ABSC	Abscission	The natural separation of flowers, fruit, or leaves from plants at a special separation layer	http://www.merriam-webster.com/dictionary/abscission
AMER	Active Metabolic Rate	Metabolism per unit time especially as estimated by food consumption, energy released as heat, or oxygen used in metabolic processes during activity.	ECOTOX and http://www.merriam-webster.com/medical/metabolic%20rate
ADUP	Adenine uptake	Amount of Adenine taken in by an organism or an organism's tissues.	ECOTOX
AECH	Adenylate energy charges (AEC)	The Adenylate energy charge (AEC) accounts for the regulation of enzymatic activity by ATP, ADP and/or AMP.	digital.library.okstate.edu/oas/oas_pdf/v74/p31_36.pdf
ADPE	Adsorption Efficiency	No definition available.	
APCT	Aerobic Protein Catabolism	No definition available.	

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
AHIN	A-H Intervals	The time from the initial rapid deflection of the atrial wave to the initial rapid deflection of the His bundle (H) potential; it approximates the conduction time through the A-V node (normally 50-120 msec).	http://cancerweb.ncl.ac.uk/omd/
HLSS	Alopecia, Hair loss	The loss of hair, wool, or feathers	http://www.merriam-webster.com/dictionary/alopecia
ALEX	Aluminum excretion	Aluminum excreted by organism	ECOTOX
AAUP	Amino acid uptake	Amount of amino acids taken in by an organism or an organism's tissues.	ECOTOX
ALAE	Aminolevulinic acid excretion	Aminolevulinic acid excreted by organism	
AEXR	Ammonia Excretion	No definition available.	
AMQU	Ammonia Quotient (AQ)	Ammonia quotient is the ratio between ammonia excreted and oxygen consumed (mol/mol).	ECOTOX
NHUP	Ammonia uptake	The uptake of ammonia into an organism or tissue	ECOTOX
ANBC	Aniline Binding Capability	No definition available.	
ANUP	Aniline uptake	Amount of aniline taken in by an organism or an organism's tissues.	ECOTOX
ATFL	Aortic flow	The amount of blood flowing through the aorta.	ECOTOX
ASUP	Arsenic uptake	Amount of arsenic taken in by an organism or an organism's tissues.	ECOTOX
ASML	Assimilation Efficiency	The efficiency by which animals convert the food they ingest into energy for growth and reproduction.	http://www.britannica.com/EBchecked/topic/39344/assimilation-efficiency
AVCD	AtrioVentricular conduction delay	Delays in conduction below the bifurcation of Bundle of His cause bundle branch or fascicular blocks, while atrioventricular conduction is maintained, unless all three fascicles are simultaneously affected. The causes are both intrinsic and extrinsic. However, since the AV node and bundle of His provide a special connection of the atria to the ventricles, focal injury from heart attacks, infections, catheter trauma, is common.	
ADTH	Auditory Threshold	The audibility limit of discriminating sound intensity and pitch.	http://fred.hmc.psu.edu/ds/retrieve/fred/meshdescriptor/D001309

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
AXSS	Axis shift	Related to the mean electrical axis of an EKG. The mean electrical axis of the QRS complex is the average of the total depolarization of the ventricles in the frontal plane. There is a correlation between the mean electrical axis of the QRS complex and the electrical activity of the heart. Therefore, in pathologic hypertrophy of either ventricle (ie. when there is more muscle being depolarized), the axis tends to shift in the direction of the hypertrophied ventricle.	
BNDS	Bending strength	A measure of the load an object can bear if its ends are supported and a weight is attached to the middle, i.e. it is how many pounds of lateral force the object takes before it breaks. Yield strength is the amount of stress at which permanent deformation becomes measurable.	
BLUM	Bioluminescence	The emission of visible light by living organisms.	http://www.merriam-webster.com/dictionary/bioluminescence
BDFW	Blood flow	The flow or movement of blood in the cardiovascular system.	www.wikipedia.org/wiki
BLPR	Blood pressure	The pressure exerted by the circulating volume of blood on the walls of the arteries and veins and on the chambers of the heart. Blood pressure is regulated by the homeostatic mechanisms of the body by the volume of the blood, the lumen of the arteries and arterioles, and the force of cardiac contraction. In the aorta and large arteries of a healthy young adult, blood pressure is approximately 120 mm Hg during systole and 70 mm Hg during diastole.	Mosby's Medical Dictionary, 2009
BDVL	Blood Volume	The total quantity of blood in the body; the plasma volume added to the red cell volume.	Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, 2003
BTMP	Body Temperature	The level of heat natural to a living being	Dorland's Medical Dictionary for Health Consumers, 2007
BEXC	Boron Excretion	Boron excreted by organism	ECOTOX

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
BTFT	Butter fat	The natural fat of milk and chief constituent of butter consisting essentially of a mixture of glycerides (as those derived from butyric, capric, caproic, and caprylic acids).	http://www.merriam-webster.com
ATUP	C-14 Acetate uptake	The uptake of C-14 Acetate into a sample	ECOTOX
C14U	C-14 Uptake	Amount or process of Carbon-14 uptake by a cell.	ECOTOX
CDEX	Cadmium excretion	Cadmium excreted by organism	ECOTOX
CDUP	Cadmium Uptake	No definition available.	
CAAS	Calcium assimilation	Amount of calcium assimilated.	ECOTOX
CAEX	Calcium excretion	Calcium excreted by organism.	ECOTOX
CANU	Calcium not excreted	Calcium utilized/Calcium ingested * 100.	
CARE	Calcium retained	Calcium retained/Calcium ingested * 100.	
CARU	Calcium retention to utilization ratio	Ratio of Calcium retained (Utilized - Transferred to Egg) to Calcium utilized (ingest - excreted).	
CATR	Calcium transfer	Per cent of calcium transferred to the egg, Calcium in egg/Calcium utilized x 100.	
CATU	Calcium transfer to utilization ratio	Per cent of calcium transferred to the egg in relation to calcium utilized.	
CAUP	Calcium Uptake	No definition available.	
CLRC	Caloric content	The energy derived from food is described by its caloric content.	
CPCT	Capacitance	The property of an electric nonconductor that permits the storage of energy as a result of the separation of charge that occurs when opposite surfaces of the nonconductor are maintained at a difference of potential	http://www.merriam-webster.com
CASS	Carbon assimilation	Assimilation of carbon into an organism or tissue.	ECOTOX
CO2A	Carbon dioxide assimilation	Assimilation of carbon dioxide into an organism or tissue.	ECOTOX
CO2T	Carbon Dioxide Tension, Partial Pressure of Carbon Dioxide, PCO2	No definition available.	
CFIX	Carbon Fixation	The conversion process of inorganic carbon (carbon dioxide) to organic compounds by living organisms.	http://en.wikipedia.org/wiki/Carbon_cycle
CTSL	Carbon translocation	The transfer of carbon from one part of an organism to another.	ECOTOX
CDIN	Cardiac index	The heart output per unit of time over body surface, usually expressed in terms of liters per minute per square meter.	The American Heritage Medical Dictionary, 2007

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
CDOP	Cardiac output	The volume of blood pumped from the right or left ventricle in one minute. It is equal to the stroke volume multiplied by the heart rate.	The American Heritage Medical Dictionary, 2007
IRAX	Cell Migration Inhibition (Immune Response Activity)	Cell Migration Inhibition is cell-mediated immunity measurement of the in vitro inhibition of the migration or phagocytosis of antigen-stimulated leukocytes or macrophages. Specific cell migration assays have been developed to estimate levels of migration inhibitory factors, immune reactivity against tumor-associated antigens, and immunosuppressive effects of infectious microorganisms.	http://www.ncbi.nlm.nih.gov
CRSP	Cellular respiration	The process of metabolism in which cells obtain energy in the form of ATP by causing glucose and other food molecules to react with oxygen.	The American Heritage Dictionary of Student Science, 2014
CLCL	Chloride clearance	The rate at which chloride is removed from the body.	http://cancerweb.ncl.ac.uk/omd/
CLEX	Chloride excretion	Chloride excreted in the urine by an organism.	ECOTOX
CLFX	Chloride flux	Rate of movement of Chloride ions across membranes.	ECOTOX
CLUP	Chloride uptake	Amount of chloride taken in by an organism or an organism's tissues.	ECOTOX
CMRB	Cholinergic muscarinic receptor binding	Distinct from the nicotinic cholinergic receptor in having no intrinsic ion channel, the receptor is formed from one protein chain with 7 transmembrane regions. The receptors produce their effect via activation of GTP-binding proteins.	http://cancerweb.ncl.ac.uk/omd/
CREX	Chromium excretion	Chromium excreted in the urine by an organism.	ECOTOX
CRUP	Chromium uptake	Amount of chromium taken in by an organism or an organism's tissues.	ECOTOX
CLNC	Clearance	The rate at which a substance is removed from the organism.	ECOTOX
CTIM	Clotting Time	The time required for blood to coagulate; prolonged in haemophilia and in the presence of obstructive jaundice, some anemias and leukemias, and some of the infectious diseases. May be measured as partial thromboplastin time (PTT) or activated partial thromboplastin time (aPTT or APTT).	http://cancerweb.ncl.ac.uk/omd/ and http://en.wikipedia.org/wiki
CO2F	CO2 Fixation	A mean in which photosynthetic bacteria obtain carbon for biosynthesis. Most commonly utilizing the Calvin cycle to convert CO2 to organic carbon.	instruct1.cit.cornall.edu/courses/biomi290/CO2FIX.html
COEX	Cobalt excretion	Cobalt excreted by organism	ECOTOX

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
COUP	Cobalt uptake	Amount of cobalt taken in by an organism or an organism's tissues.	ECOTOX
CCCL	Coccolith formation	Any of several minute calcite plates that make up the external covering of certain haptophyte phytoplankton and in a fossilized state form chalk and limestone deposits	American Heritage Dictionary of the English Language, 2011
COLD	Cold Hardiness	Resistance to cold	ECOTOX
CMPS	Compression strength	the capacity of a material or structure to withstand loads tending to reduce size.	http://encyclopedia.thefreedictionary.com/Compression+strength
CNVY	Conductivity	The ability or power to conduct or transmit heat, electricity, or sound.	http://www.thefreedictionary.com/Conductivity
CRAT	Contraction rate	The rate at which a site contracts	ECOTOX
CUEX	Copper excretion	Copper excreted by organism	ECOTOX
CUUP	Copper Uptake	No definition available.	
CFLW	Coronary flow	The amount of blood flowing through the coronary artery.	
CSTT	Cost of Transport	The calories needed above baseline metabolism to move a given distance, per unit body mass.	http://en.wikipedia.org/wiki/Animal_locomotion
COGH	Cough	To expel air from the lungs suddenly with an explosive noise	http://www.merriam-webster.com/dictionary/cough
COCE	Coupling coefficient	The voltage change observed in a neuron when current is injected into another cell to which it is coupled by electrical synapses.	http://www.nature.com/cgi-taf/DynaPage.taf?file=/nrn/journal/v2/n6/abs/nrn0601_425a_r.html
CYSU	Cystine uptake	Amount of cystine taken in by an organism or an organism's tissues.	ECOTOX
CEBS	Cytosolic estrogen-binding sites	Measure of estrogen binding with sites within cytosol.	
DFIX	Dark Fixation	No definition provided	
QRSV	Decreased QRS voltage	QRS Complex = The deflections in an electrocardiographic tracing and represent ventricular activity of the heart.	
DRRH	Diarrhea	Abnormally frequent intestinal evacuations with more or less fluid stools.	http://www.merriam-webster.com

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
DSPS	Diastolic pressure	The lowest arterial blood pressure reached when the ventricles are relaxed.	American Heritage Dictionary of the English Language, 2011
DPUP	2,4-Dichlorophenol uptake	Amount of 2,4-Dichlorophenol taken in by an organism or an organism's tissues.	ECOTOX
DGST	Digestion	The process of making food absorbable by dissolving it and breaking it down into simpler chemical compounds that occurs in the living body chiefly through the action of enzymes secreted into the alimentary canal	http://www.merriam-webster.com/dictionary/digestion
DCRG	Discharge	A flowing or issuing out or something that is emitted.	http://www.merriam-webster.com
DPAU	Dopamine uptake	The uptake of dopamine into an organism or tissue.	ECOTOX
DORB	Dormancy Break	No definition available.	
DORI	Dormancy Induction	No definition available.	
EFFC	Efficiency	The ratio of the useful energy delivered by a dynamic system to the energy supplied to it.	http://www.m-w.com/
ECTG	Electrocorticogram	A record of the electrical activity of the brain obtained through electrodes in direct contact with the exposed cerebral cortex	http://en.wiktionary.org/wiki/electrocorticogram
EECG	Electroencephalogram	An electroencephalogram (EEG) is a test that detects electrical activity in your brain using small, flat metal discs (electrodes) attached to your scalp.	http://www.mayoclinic.org/tests-procedures/eeg/basics/definition/prc-20014093
ETSA	Electron Transfer System Activity	No definition available.	
ETRR	Electron Transport System activity to respiration ratio	The ratio of electron transport system activity to respiration measured in a sample.	ECOTOX
EOCL	Electro-oculography	Electrooculography (EOG/E.O.G.) is a technique for measuring the corneo-retinal standing potential that exists between the front and the back of the human eye.	http://en.wikipedia.org/wiki/Electrooculography
EPYR	Electrophysiological response	Pertaining to electrophysiology, the electrical results produced through physiological agencies, or by change of action in a living organism	http://www.thefreedictionary.com/electrophysiological

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
ERLD	Electroretinography light peak:dark trough ratio implicit time	The ratio of light peaks to dark troughs of the waves of the response of the test an in which an electrode is placed on the cornea of the eye to measure the electrical response of the rods and cones in the retina. It is useful in the evaluation of hereditary and acquired disorders of the retina. A normal test will show the appropriate pattern responses during moments of increased light intensity. Abnormal results can indicate arteriosclerosis of the retina, retinal detachment, temporal arteritis (with eye involvement) or vitamin A deficiency.	http://cancerweb.ncl.ac.uk/omd/
ERWV	Electroretinography wave	Electroretinography measures the electrical responses of various cell types in the retina, including the photoreceptors (rods and cones), inner retinal cells (bipolar and amacrine cells), and the ganglion cells	http://en.wikipedia.org/wiki/Electroretinography
ERWA	Electroretinography wave amplitude	The wave amplitude response of the test an in which an electrode is placed on the cornea of the eye to measure the electrical response of the rods and cones in the retina. It is useful in the evaluation of hereditary and acquired disorders of the retina. A normal test will show the appropriate pattern responses during moments of increased light intensity. Abnormal results can indicate arteriosclerosis of the retina, retinal detachment, temporal arteritis (with eye involvement) or vitamin A deficiency.	http://cancerweb.ncl.ac.uk/omd/
ERWI	Electroretinography wave implicit time	The wave implicit time response of the test an in which an electrode is placed on the cornea of the eye to measure the electrical response of the rods and cones in the retina. It is useful in the evaluation of hereditary and acquired disorders of the retina. A normal test will show the appropriate pattern responses during moments of increased light intensity. Abnormal results can indicate arteriosclerosis of the retina, retinal detachment, temporal arteritis (with eye involvement) or vitamin A deficiency.	http://cancerweb.ncl.ac.uk/omd/
ERWL	Electroretinography wave latent time	The wave latent time response of the test an in which an electrode is placed on the cornea of the eye to measure the electrical response of the rods and cones in the retina. It is useful in the evaluation of hereditary and acquired disorders of the retina. A normal test will show the appropriate pattern responses during moments of increased light intensity. Abnormal results can indicate arteriosclerosis of the retina, retinal detachment, temporal arteritis (with eye involvement) or vitamin A deficiency.	http://cancerweb.ncl.ac.uk/omd/

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
EMCN	Emaciation	To cause to lose flesh so as to become very thin; to waste away physically	http://www.merriam-webster.com/dictionary/emaciate
ENST	Encystment	To enclose or become enclosed in a cyst	http://www.merriam-webster.com/dictionary/encyst
EEUR	Endogenous Excreted Urea	No definition available.	
ECOT	Energetic Cost of Transport	The energy cost of transport quantifies the energy efficiency transporting an animal from one place to another.	https://en.wikipedia.org/wiki/Cost_of_transport
NRGA	Energy Assimilation	No definition available.	
ECPT	Energy charge potential	No definition available.	
NRGX	Energy excreted	No definition available.	
NRGI	Energy intake	No definition available.	
ESUP	Eosin uptake	Amount of eosin taken in by an organism or an organism's tissues.	ECOTOX
EYTH	Erythema	Redness of the skin caused by dilatation and congestion of the capillaries, often a sign of inflammation or infection.	American Heritage Dictionary of the English Language, Fifth Edition. Copyright 2011
ESGM	Estrogen metabolism	The metabolism of estrogen to its breakdown products.	ECOTOX
ECYC	Estrous cycle	The correlated phenomena of the endocrine and generative systems of a female mammal from the beginning of one period of estrus to the beginning of the next.	http://www.merriam-webster.com
EXCR	Excretion Rate	The process, act or function of discharging or ejecting waste product of metabolism, especially from the system of an organism. Including but not limited to urine.	http://www.biology-online.org/dictionary/Excretion
FABS	Factorial Aerobic Scope	Possible oxidative metabolism from rest to maximal exercise.	http://www.britannica.com/science/aerobic-scope
FEPP	Fecal production	No definition available.	
FVOL	Fluid volume	The amount of space occupied by a three-dimensional object as measured in cubic units.	http://www.m-w.com/
FDAR	Food absorption rate	The rate of uptake of substances from food into microorganisms, tissues, and organs.	http://www.ncbi.nlm.nih.gov and ECOTOX

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
FDCV	Food Conversion Efficiency	Ratio of body weight to food intake. Also known as Food efficiency ratio.	ECOTOX
GLFO	Galactocele formation	It is defined as a cystic enlargement of the mammary gland containing milk.	http://www.americanjournalofsurgery.com/article/0002-9610%2864%2990352-6/abstract
GSTF	Gas Transfer	No definition available.	
GFRT	Glomerular Filtration Rate	No definition available.	
GLGN	Glucogenesis	Is a metabolic pathway that results in the generation of glucose from non-carbohydrate carbon substrates such as pyruvate, lactate, glycerol, and glucogenic amino acids	http://en.wikipedia.org/wiki/Gluconeogenesis
GLUP	Glucose uptake	Amount of glucose taken in by an organism or an organism's tissues.	ECOTOX
GYCU	Glycerol uptake	Amount of glycerol taken in by an organism or an organism's tissues.	ECOTOX
GLYU	Glycine uptake	Amount of glycine taken in by an organism or an organism's tissues.	ECOTOX
GLSY	Glycogen synthesis	The rate at which glycogen is produced in an organism.	ECOTOX
GYEX	Glycolate excretion	The excretion of a salt or ester of glycolic acid.	http://cancerweb.ncl.ac.uk/omd/
GAEX	Glycolic acid excretion	Excretion of glycolic acid, which often serves as a basic component of the extracellular compounds of microalgae and is also the main substrate of photorespiration.	
GRAU	Granule/Grain Creation	No definition available.	
H3UP	H-3 Uptake	Amount of H-3 taken in by an organism or an organism's tissues.	ECOTOX
HTDP	Heart Double Product	Heart rate * cardiac output.	
HTRT	Heart Rate	The number of heartbeats per unit of time usually expressed as beats per minute.	American Heritage Dictionary of the English Language, 2011
HPRR	Heat production rate	No definition available.	
H3BD	Hemicholium-3 binding	A potent inhibitor of the high affinity uptake system for choline. It has less effect on the low affinity uptake system. Since choline is one of the components of acetylcholine, treatment with hemicholinium can deplete acetylcholine from cholinergic terminals.	http://cancerweb.ncl.ac.uk/omd/

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
HPSR	High pressure	Increase in pressure in an organ or tissue	ECOTOX
HYDR	Hydration	The act or process of combining or treating with water	http://www.merriam-webster.com/medical/hydration
HCFX	Hydrogen carbonate flux	Rate of movement of Hydrogen Carbonate ions across membranes	ECOTOX
HNPH	Hydronephrosis	Abnormal enlargement of a kidney, may occur secondary to acute ureteral obstruction (kidney stone) or chronic kidney disease.	http://cancerweb.ncl.ac.uk/omd/
HYPR	Hyperactivity	Displaying excessive physical activity sometimes associated with neurological or psychological causes	Random House Kernerman Webster's College Dictionary, 2010
HYTN	Hypertension	Elevated pressure or tension of a body fluid, as of the intraocular or cerebrospinal fluids.	American Heritage Dictionary of the English Language, 2011
INRE	Input resistance	The input resistance, is defined as the ratio between the strengths of the resultant voltage response and the current that is injected in a neuron.	http://mrb.niddk.nih.gov/hagai/publ/decpoi/DefsMeth.html
IVCD	Intraventricular conduction defects	Nonspecific intraventricular conduction defects are diagnosed when the QRS is modestly prolonged (< 120 msec) and the QRS pattern and axis are not typical of a hemiblock. The conduction delay is considered to occur beyond the Purkinje's myocardial gates and arises from slow cell-to-cell conduction. The phenomenon is common in patients with acute MI. No treatment is indicated.	
IUPT	Iodine Uptake	Amount of iodine taken in by an organism or an organism's tissues.	ECOTOX
<IOUP>	Ion Uptake	No definition available.	
FEEX	Iron excretion	Iron excreted by organism	ECOTOX
FEUP	Iron Uptake	No definition available.	
IRRI	Irritation	An inflammatory reaction of a bodily part; The elicitation of a response to a stimulus in a plant or animal organ or tissue, especially in a nerve or muscle.	American Heritage Dictionary of the English Language, 2011

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
JRAC	Junctional resistance (AC)	Measured by AC current. Measured junctional resistance is isolated from ground potential by seals and peripheral membrane resistances.	http://link.springer-ny.com/link/service/journals/00424/fpapers/esc/contents/02/00896/paper/s00424-002-0896-8ch100.
JRDC	Junctional resistance (DC)	Measured by DC current. Measured junctional resistance is isolated from ground potential by seals and peripheral membrane resistances.	http://link.springer-ny.com/link/service/journals/00424/fpapers/esc/contents/02/00896/paper/s00424-002-0896-8ch100.
TEAR	Lacrimation, Tearing	Shedding of tears.	ECOTOX
TIRD	Languid, tired, weak	Showing or having very little strength, energy, or activity	http://www.merriam-webster.com/dictionary/languid
PBEX	Lead excretion	Lead excreted by organism.	
PBUP	Lead Uptake	No definition available.	
LABS	Leucine absorption	The absorption of luecine into an organism	
LEUT	Leucine Transport	The directed movement of leucine, 2-amino-4-methylpentanoic acid, into, out of or within a cell, or between cells, by means of some agent such as a transporter or pore.	http://www.ebi.ac.uk/QuickGO/GTerm?id=go:0015820
LTSP	Leucine transport	The directed movement of leucine, 2-amino-4-methylpentanoic acid, into, out of or within a cell, or between cells, by means of some agent such as a transporter or pore.	http://www.ebi.ac.uk/QuickGO/GTerm?id=go:0015820
LPBS	Lipid biosynthesis	The building up of a chemical compound in the physiologic processes of a living organism, in this case lipids.	http:://cancerweb.ncl.ac.uk/omd/
LDGT	Lipid digestion	The conversion of lipid, in the stomach and intestines, into soluble and diffusible products, capable of being absorbed by the blood.	
LDMT	Lipid metabolism	Metabolism of lipid or fat by an organism	ECOTOX
LDPX	Lipid Peroxidation	Refers to the oxidative degradation of lipids. It is the process in which free radicals "steal" electrons from the lipids in cell membranes, resulting in cell damage.	http://en.wikipedia.org/wiki/Lipid_peroxidation
LTPT	Long-term potentiation	A prolonged increase in synaptic responses that can be induced in certain neural pathways by a brief tetanic stimulation.	ECOREF#75007

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
TSUP	L-Tyrosine uptake	Amount of L-Tyrosine taken in by an organism or an organism's tissues.	ECOREF #98664
MGEX	Magnesium Excretion	Magnesium excreted by organism	ECOTOX
MGUP	Magnesium Uptake	No definition available.	
MCCL	Malocclusion	Faulty contact between the upper and lower teeth when the jaw is closed.	American Heritage Dictionary of the English Language, 2011
MNEX	Manganese excretion	Manganese excreted by organism	ECOTOX
MNTL	Manganese translocation	The ability of an organism to move manganese from one location to another.	
MNUP	Manganese Uptake	No definition available.	
MBPT	Membrane Potential	The membrane potential is the voltage difference across a membrane. For cellular membranes they are computed by subtracting the voltage measured outside the membrane from the voltage measured inside the membrane. They result from differences of inside versus outside concentration of potassium, sodium, chloride, and other ions across cells' or organelles' membranes.	http://www.ncbi.nlm.nih.gov
HGUP	Mercury uptake	Amount of mercury taken in by an organism or an organism's tissues.	
NRGF	Metabolic efficiency	Energy intake based on body weight that is required to maintain current weight.	http://running.competitor.com/2014/04/features/metabolic-efficiency-who-needs-it_6167
NRGM	Metabolized energy	Metabolized energy equals gross food energy minus gross fecal and urinary energy.	http://www.healthyk9foods.com/index.php?page=understanding_foods&sub=metabolized_energy_%28me%29
MBCR	Metallothionein Binding Capacity Ratio	The ratio of toxicant to toxicant-binding capacity of metallothionein (MT) in tissues. The ratio of unbound metal to metal binding capacity of metallothionein within an organism.	
MCCN	Microorganism Cenosis	A group of organisms in a self-sufficient community naturally occupying a small area with a uniform environment throughout.	
MILK	Milk	A fluid secreted by the mammary glands of females for the nourishment of their young.	http://www.merriam-webster.com
MNER	Mineralization	Process of converting mineral or inorganic form.	http://www.merriam-webster.com

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
MIOS	Miosis	Constriction of the pupil of the eye, resulting from a normal response to an increase in light or caused by certain drugs or pathological conditions.	American Heritage Dictionary of the English Language, 2011
MOEX	Molybdenum excretion	Molybdenum excreted by organism	ECOTOX
MCUS	Mucus Production	No definition available.	
MYCO	Mycorrhizal Colonization	No definition available.	
NCOS	Na and Cl osmolality	The fractional contribution of Na+ and Cl- to osmolality (Na+ + Cl-/osmolality).	ECOREF 48368
NAST	Nastic Movements	Of or relating to a movement of a plant that is in response to an external stimulus but is in a direction independent of the direction of the stimulus, as in the diurnal movement of leaves.	American Heritage Dictionary of the English Language, 2011
NVAR	Nerve absolute refractory period	The absolute refractory period is the interval during which a second action potential absolutely cannot be initiated, no matter how large a stimulus is applied. In neurons, it is caused by the inactivation of the Na+ channels that originally opened to depolarize the membrane.	http://en.wikipedia.org/wiki/Refractory_period_%28physiology%29
NVCV	Nerve conduction velocity	It is the speed at which an electrochemical impulse propagates down a neural pathway	http://en.wikipedia.org/wiki/Nerve_conduction_velocity
NRXN	Nerve reaction	Amount of time or a response of a nerve to a stimulus.	
NVRR	Nerve relative refractory period	The period between the effective refractory period and the end of the refractory period; fibres then respond only to high intensity stimuli and the impulses conduct more slowly than normally.	http://cancerweb.ncl.ac.uk/omd/
NPRA	Net Photosynthetic Rate	No definition available.	
NPSC	Net photosynthesis rate to stomatal conductance	The ratio of net photosynthesis to stomatal conductance in a sample.	ECOTOX
NPTR	Net photosynthesis rate to transpiration rate	The ratio of net photosynthesis to transpiration rate in a sample.	ECOTOX
NRSP	Neuroresponse	No definition available.	
NRUP	Neutral Red Uptake	No definition available.	
NIEX	Nickel excretion	Nickel excreted by organism	ECOTOX
NIUP	Nickel Uptake	No definition available.	

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
NO3U	Nitrate Uptake (NO3-)	The ability of an organism to remove nitrate from a substrate and take nitrate into its body. Nitrate (NO3-) is a salt or ester of nitric acid	http://www.merriam-webster.com and ECOTOX
NO2U	Nitrite Uptake (NO2-)	The ability of an organism to remove nitrite from a substrate and take nitrite into its body. A salt of nitrous acid.	ECOTOX.and http://cancerweb.ncl.ac.uk/omd/
NASM	Nitrogen assimilation	Amount of nitrogen assimilated.	ECOTOX
NEXC	Nitrogen excretion	Nitrogen excreted by organism.	ECOTOX
NFIX	Nitrogen Fixation	Change in ability of plants to fix nitrogen.	ECOTOX
NTSL	Nitrogen translocation	The ability of an organism to move nitrogen from one location to another.	ECOTOX
NUPT	Nitrogen Uptake	No definition available.	
NMYC	Non-mycorrhizal colonization	No definition available.	
NUUP	Nutrient Uptake	The process of nutrient uptake by plants refers to the transfer of the nutrient ions across the soil root interfaces into the plant cell.	http://www.krishiworld.com/html/soil_fert i1.html
FATT	Obese	Having excessive body weight caused by the accumulation of fat; extremely fat.	American Heritage Dictionary of the English Language, 2011
OSMO	Osmolality	The concentration of a solution in terms of osmoles of solute per kilogram of solvent.	Dorland's Medical Dictionary for Health Consumers, 2007
OSML	Osmolarity	The concentration of an osmotic solution especially when measured in osmols or milliosmols per liter of solution.	http://www.merriam-webster.com/medical/osmolarity
OSFG	Osmotic fragility	A sensitivity to changes in osmotic pressure characteristic of red blood cells.	Mosby's Medical Dictionary, 2009
OSPT	Osmotic potential	A measure of the potential of water to move between regions of differing concentrations across a water-permeable membrane by using this formula: psi pi = − C R T, where psi pi is the osmotic potential, C is the concentration of solutes, R is the universal gas constant (i.e. 8.314472 J K−1 mol−1), and T is the absolute temperature.	http://www.biology-online.org/dictionary/Osmotic_Potential
OXRP	Oxidation-reduction potential	The standard potential of an atom or ion that undergoes oxidation at the anode or reduction at the cathode in an electrochemical cell as compared to the potential of a standard hydrogen electrode when it is undergoing the same process. Also called redox potential.	http://www.merriam-webster.com/medical/oxidation-reduction%20potential

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
ADPO	Oxidative Phosphorylation	The formation of ATP from the energy released by the oxidation of various substrates, especially the organic acids involved in the Krebs cycle.	The American Heritage Medical Dictionary, 2007
OCCP	Oxygen Carrying Capacity	No definition available.	
OXYG	Oxygen Consumption	Quantifiable change in oxygen uptake by the test organism.	for plants see PSYN (photosynthesis).
OXYT	Oxygen Tension, Partial Pressure of Oxygen Dioxide, Po2	No definition available.	
TO2F	Oxygen transfer factor [TO2]	The transfer factor is a measure of the relative ability of the respiratory surface to exchange gases, and is affected by changes in surface area available for exchange, as well as the diffusion distance between blood and water. Also referred to as diffusing capacity.	Randall, et al. The Exchange Of Oxygen And Carbon Dioxide Across The Gills Of Rainbow Trout. J. Exp. Biol. (1967), 6, 339-348
PAMP	P amplitude	The P wave represents atrial depolarization - the time necessary for an electrical impulse from the sinoatrial (SA) node to spread throughout the atrial musculature.	http://www.utoledo.edu/~xflores/ekgs-interpretation.htm
PERM	Permeability, tissue, membrane	The ability of a membrane or other material to permit a substance to pass through it.	
PPEX	Phosphate excretion	Phosphate excreted by organism.	ECOTOX
PPUP	Phosphate uptake	The ability of an organism to remove phosphate from a substrate and take phosphate into its body.	
PEXC	Phosphorus excretion	Phosphorus excreted by organism.	
PNUT	Phosphorus not excreted	Phosphorus utilized/Calcium ingested * 100.	
PRET	Phosphorus retained	Phosphorus retained/Calcium ingested * 100.	
PRUT	Phosphorus retention to utilization ratio	Ratio of Phosphorus retained (Utilized - Transferred to Egg) to Phosphorus utilized (ingested - excreted).	
PTRN	Phosphorus transfer	Per cent of phosphorus transferred to the egg, Phosphorus in egg/Phosphorus utilized x 100.	
PTUT	Phosphorus transfer to utilization ratio	Percent of phosphorus transferred to the egg in relation to phosphorus utilized.	
PUPT	Phosphorus Uptake	No definition available.	

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
PPPL	Photophosphorylation	The synthesis of ATP from ADP and phosphate that occurs in a plant using radiant energy absorbed during photosynthesis.	http://www.merriam-webster.com/dictionary/photophosphorylation
PSYN	Photosynthesis	A process by which plants, algae, and some bacteria containing chlorophyll synthesize organic compounds, chiefly carbohydrates, from atmospheric carbon dioxide and water, using light for energy and liberating oxygen in the process.	Mosby's Medical Dictionary, 2009
PSYI	Photosystem I (PSI) Electron Transport Activity	One of two reaction sequences of the light phase of photosynthesis in green plants that involves a pigment system which is excited by wavelengths shorter than 700 nanometers and which transfers this energy to energy carriers such as NADPH that are subsequently utilized in carbon dioxide fixation. Also: cyclic photophosphorylation.	McGraw-Hill Dictionary of Scientific and Technical Terms, 2003
PSII	Photosystem II (PSII) Electron Transport Activity	One of two reaction sequences of the light phase of photosynthesis in green plants which involves a pigment system excited by wavelengths shorter than 685 nanometers and which is directly involved in the splitting or photolysis of water. The Hill reaction is a property of photosystem II. Also: non-cyclic photophosphorylation	McGraw-Hill Dictionary of Scientific and Technical Terms, 2003,
GPHY	Physiology, General	Change in the organic processes or functions of a plant or an organism. Examples of effects in this category include caloric content, cough frequency, granule or concretion formation, heartbeat, membrane permeability, metabolic stress, osmoregulation, urine frequency, ventilatory rate. Used when more than one measurement is coded.	
PGPL	Pigment plug ejection	A disturbance of the digestive system where the ejection of pigment plugs from the rectum occurs	ECOREF#65576
PIGM	Pigmentation	Quantitative (ie., compared to the control) change in the pigment, e.g. melanization.	Does not include chlorophyll (see CLR). If pigment levels are reported code in BCM.
PBAL	Ponderal balance	Is equal to [(Urine + Feces - Drinking Water - Consumed Food + (Weight Change/Initial Weight)] * 100)	ECOREF 56796
KPCL	Potassium clearance	The rate at which potassium is removed from the body.	http://cancerweb.ncl.ac.uk/omd/
KEXC	Potassium excretion	Potassium excreted by organism	ECOTOX
KFLX	Potassium Flux	Rate of movement of potassium ions across membranes.	ECOTOX

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
KUPT	Potassium Uptake	No definition available.	
PRIN	PR Intervals	In the electrocardiogram, the time elapsing between the beginning of the P wave and the beginning of the next QRS complex; it corresponds to the a-c interval of the venous pulse and is normally 0.12-0.20 sec. Synonym(s): PQ interval.	Medical Dictionary for the Health Professions and Nursing, 2012
PSSR	Pressure	The act of pressing, or the condition of being pressed; compression; a squeezing; a crushing.	http://www.merriam-webster.com
PSRP	Pressure potential	A component of water potential, represented by the symbol psi rho. Also called Turgor potential. Pressure potentials may be negative, in which case they represent tensions. Tensions arise as a result of transpiration and are caused by resistance of the tissues to water flow. In extreme conditions very low (-150 bar) pressure potentials can develop. Pressure potential gradients are responsible for the upward movement of water in the xylem. Positive pressure potentials are termed hydrostatic pressures.	http://botanydictionary.org/pressure-potential.html
PAEX	Primary amine excretion	Excreation of an amine containing the amido group, or a derivative of ammonia in which only one atom of hydrogen has been replaced by a basic radical; -- distinguished from secondary & tertiary amines.	Merriam-Webster Medical Dictionary
PGSY	Prostaglandein synthesis	Any of a group of naturally occurring, chemically related fatty acids that stimulate contractility of the uterine and other smooth muscle and have the ability to lower blood pressure, regulate acid secretion of the stomach, regulate body temperature and platelet aggregation, and control inflammation and vascular permeability; they also affect the action of certain hormones. Nine primary types are labeled A through I, the degree of saturation of the side chain of each being designated by subscripts 1, 2, and 3. The types of prostaglandins are abbreviated PGE2, PGF2α, and so on.	Dorland's Medical Dictionary for Health Consumers, 2007
PDGT	Protein digestion	The conversion of protein, in the stomach and intestines, into soluble and diffusible products, capable of being absorbed by the blood.	ECOTOX and http://www.merriam-webster.com
PERA	Protein Efficiency Ratio	Weight gain in grams divided by protein intake in grams.	Medical Dictionary for the Health Professions and Nursing, 2012
PRSY	Protein Synthesis	No definition available.	
PTUC	Protein Utilization Coefficient	No definition available.	

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
PTIM	Prothrombin time	Is a blood test that measures how long it takes blood to clot., also known as coagulation time or clotting time.	http://www.webmd.com/a-to-z-guides/prothrombin-time
QAMP	Q amplitude	Depolarization of the septum. It is the first downward (negative) deflection before the R wave.	http://www.udel.edu/HESC/physLab/TotalReview.htm
QTIN	QT Interval	The portion of an electrocardiogram between the onset of the Q wave and the end of the T wave, representing the total time for ventricular depolarization and repolarization.	Saunders Comprehensive Veterinary Dictionary, 2007
RAMP	R amplitude	Depolarization of the apex. It is an upward (positive) deflection.	http://www.udel.edu/HESC/physLab/TotalReview.htm
FLUX	Flux	The rate of transfer of fluid, particles, or energy across a given surface. Also: Rate of movement of ions across membranes.	http://www.merriam-webster.com/dictionary/flux
BAAT	rBAT induced amino acid transfer	The transport of amino acids via the rBAT induced system involves an electrogenic exchange of neutral and dibasic amino acids. rBAT is a protein that is located in the brush border membranes of intestine and renal proximal tubule cells.	ECOREF 45834
RFLT	Reflectivity	The ratio of the energy of a wave reflected from a surface to the energy possessed by the wave striking the surface.	American Heritage Dictionary of the English Language, 2011
RBCD	Relative bradycardia	The term relative bradycardiais used to explain a heart rate that, while not technically below 60 beats per minute, is considered too slow for the individual's current medical condition	http://en.wikipedia.org/wiki/Bradycardia
RCRA	Renal Clearance Ratio	The renal clearance ratio or fractional excretion is a measure of the speed at which a constituent of urine passes through the kidneys	http://enc.tfode.com/Renal_clearance_ratio
RSNV	Resin volume	Resin volume, amount or yield. Resin is a hydrocarbon secretion of many plants, particularly coniferous trees, containing a complex mixture of different substances including organic acids, named the resin acids. Solidified resin is known as rosin. Resins when soft are known as oleoresins. Resin is not sap. Resin flow and production can increase after injury or infestation.	http://www.wikipedia.org/wiki
RESQ	Respiration Quotient	A dimensionless number used in calculations of basal metabolic rate (BMR) when estimated from carbon dioxide production.	http://en.wikipedia.org/wiki/Respiratory_quotient

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
RESP	Respiration, O2 Production, CO2 Production	No definition available.	
RSQU	Respiratory Quotient	A dimensionless number used in calculations of basal metabolic rate (BMR) when estimated from carbon dioxide production	http://en.wikipedia.org/wiki/Respiratory_quotient
RPRT	Respiratory Rate	Frequency of breathing, expressed as the number of breaths per minute	The American Heritage Medical Dictionary, 2007
SAMP	S amplitude	Depolarization of the ventricular wall. The S wave a downward (negative) deflection after an R wave.	http://www.udel.edu/HESC/physLab/TotalReview.htm
SLVN	Salivation	To have a flow of saliva especially in excess.	http://www.merriam-webster.com
SCGR	Scope for Growth	(SfG) is an integrative physiological indicator reflecting the net energy gain of an organism. It correlates well with growth and reproduction.	http://www.jstor.org/stable/2389847
SCTN	Secretion	Secretion is the discharge across the cell membrane, into the extracellular space or ducts, of endogenous substances resulting from the activity of intact cells of glands, tissues, or organs.	http://www.ncbi.nlm.nih.gov
SZRE	Seizure	A paroxysmal episode, caused by abnormal electrical conduction in the brain, resulting in the abrupt onset of transient neurologic symptoms such as involuntary muscle movements, sensory disturbances and altered consciousness. Also called convulsion.	The American Heritage Medical Dictionary, 2007
SEUP	Selenium Uptake	No definition available.	
SENE	Senescence	The process of growing old, especially the condition resulting from the transitions and accumulations of the deleterious aging processes.	Dorland's Medical Dictionary for Health Consumers, 2007
SENI	Senescence Induced/Accelerated	No definition available.	
SENR	Senescence Retarded	No definition available.	
SIDP	Siderophore production	Production of natural iron binding compounds that chelate ferric ions (which form insoluble colloidal hydroxides at neutral pH and are then inaccessible) and are then taken up together with the metal ion.	http://microbiology.ukzn.ac.za/Libraries/MICR_307/Microbial-Metal_Interraction.sflb.ashx/
AGUP	Silver uptake	The ability of an organism to remove silver from a substrate.	ECOTOX

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
NACL	Sodium clearance	The rate at which sodium is removed from the body.	http://cancerweb.ncl.ac.uk/omd/
NAEX	Sodium excretion	Sodium excreted by organism	
NAFX	Sodium flux	Rate of movement of sodium ions across membranes.	
NAUP	Sodium uptake	The ability of an organism to remove sodium from a substrate and take sodium into its body.	
SRLO	Spectral Reflectance/Shift to Longer Wavelengths	No definition available.	
SRSH	Spectral Reflectance/Shift to Shorter Wavelengths	No definition available.	
STCG	S-T changes	ST changes generally refer to an elevation or depression in the ST segment (see Normal Heart Beat) of the EKG complex.	http://equimedcorp.com/rhythms/topic/48/
STIN	ST interval	Time interval from the ending of the S-wave until the ending of the T-wave (in milliseconds).	http://bct.tn.utwente.nl/Definitions.htm
SMTR	Standard Metabolic Rate	An ectothermic animal's resting and fasting metabolism at a given body temperature.	http://www.cartage.org.lb/en/themes/Sciences/Zoology/AnimalPhysiology/Glossary/S/standardmetabolicrate.htm
STAS	Stasis	Stoppage of the normal flow of a body substance, as of blood through an artery or of intestinal contents through the bowels.	The American Heritage Medical Dictionary, 2007
STOM	Stomatal Aperture	Stomata are minute aperture structures on plants found typically on the outer leaf skin layer, also known as the epidermis. They consist of two specialized cells, called guard cells that surround a tiny pore called a stoma.	http://www.eoearth.org/view/article/156262
STOC	Stomatal Conductance	A plant property related to the ease with which water vapor escapes from plant leaves through small pores in the leaves known as stomata.	http://www.co2science.org/dictionary/define_s.htm
SMRE	Stomatal Resistance	The opposition to transport of quantities such as water vapor and carbon dioxide to or from the stomata (pores) on the leaves of plants.	http://glossary.ametsoc.org/wiki/Stomatal_resistance
STVL	Stroke volume	The amount of blood pumped by the left ventricle of the heart in one contraction.	http://www.medicinenet.com/script/main/art.asp?articlekey=7526
STWK	Stroke Work	The work done by the ventricle to eject a volume of blood into the aorta.	http://www.oucom.ohiou.edu/CVPhysiology/CF019.htm

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
SUUP	Sucrose uptake	The uptake of sucrose into an organism or tissue.	ECOTOX
SOXA	Sulfide oxidation activity	No definition available.	
SUPT	Sulfur uptake	The uptake of sulfur into an organism or tissue.	ECOTOX
SOXG	Superoxide Generation	The generation of any compound containing the highly reactive and extremely toxic oxygen radical O2−, a common intermediate in numerous biological oxidations.	Dorland's Medical Dictionary for Health Consumers, 2007
SWEL	Swelling	The enlargement of organs, skin, or other body parts. It is caused by a buildup of fluid in the tissues	http://www.nlm.nih.gov/medlineplus/ency/article/003103.htm
SBNF	Swim bladder inflation	The ability for inflation of the swim bladder, a gas-filled sac that is present in most fish and functions as a hydrostatic organ; it is located beneath the vertebral column primarily in the anterior abdomen and is connected with the esophagus in some species (for example, goldfish). Oxygen is transferred from a rich venous sinus into the swim bladder to increase buoyancy.	ECOTOX and Farlex Partner Medical Dictionary, 2012
SYPS	Systolic Pressure	The blood pressure measured during the period of ventricular contraction (systole). In blood pressure readings, it is the higher of the two measurements.	Mosby's Medical Dictionary, 2009
TAMP	T amplitude	The T wave represents the repolarization of the ventricles. On rare occasions, a U wave can be seen following the T wave.	http://www.utoledo.edu/~xflores/ekgs-interpretation.htm
T34C	T3/T4 Conversion rate	The turnover of T3 divided by the turnover of T4 times 100 is the conversion rate.	ECOREF 65157
TNST	Tensile Strength	Ratio of the maximum load a material can support without fracture when being stretched to the original area of a cross section of the material.	http://www.merriam-webster.com/dictionary/tensile%20strength
TEXT	Texture Change	No definition available.	
THTS	Thermal hysteresis	Thermal hysteresis, or Thermal hysteresis activity, is the difference between the melting point and freezing point in a fluid. The addition of AFPs at the solid ice and liquid water interface inhibits the thermodynamically favored growth of the ice crystal. Ice growth is kinetically inhibited by the antifreeae proteins (AFP) covering the water-accessible surfaces of ice.	http://en.wikipedia.org/wiki
THRG	Thermoregulation	Maintenance of a constant internal body temperature independent of the environmental temperature.	The American Heritage Medical Dictionary, 2007

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
TDUP	Thymidine uptake	Amount of Thymidine taken in by an organism or an organism's tissues.	ECOTOX
TYUP	Thymine uptake	The ability of an organism to remove thymine from a substrate and take thymine into its body.	ECOTOX
THBR	Thyroid Hormone Binding Ratio	Recommended nomenclature for T3 Uptake test. A ratio of the solid matrix uptake and the serum uptake.	http://www.abbottdiagnostics.com/glossary/glossary_t.htm
TEUR	Total Excreted Urea	No definition available.	
TEVG	trans-epithelial voltage gradient	Measured by an electro-olfactogram. Ions of opposite charge actively transported across the apical membrane barrier through the paracellular pathway in response to the transepithelial voltage gradient. The osmotic gradient created by the net transepithelial flow of ions thus provides the driving force for liquid movement across the airway epithelium.	http://jap.physiology.org/cgi/content/full/91/2/797
TRAN	Transpiration	The passage of watery vapor from a living body (as of a plant) through a membrane or pores	http://www.merriam-webster.com/dictionary/transpiration
TCO2	Transpiration Carbon Dioxide assimilation ratio	The ratio between transpiration and Carbon Dioxide (CO2) assimilation	ECOTOX
TTKG	Transtubular potassium gradient	The trans-tubular potassium gradient (TTKG) is an index reflecting the conservation of potassium in the cortical collecting ducts of the kidneys.	http://en.wikipedia.org/wiki
TRGE	Triglyceride excretion	Triglyceride excreted by organism	ECOTOX
URUP	Uranyl uptake	Amount of uranyl taken in by an organism or an organism's tissues.	ECOTOX
UDUP	Uridine uptake	The ability of an organism to remove uridine from a substrate and take uridine into its body.	ECOTOX
VCDT	Vascular conductance	Vascular conductance is the ease with which blood enters and flows through a vessel, the blood flow divided by the blood pressure.	The American Heritage Medical Dictionary, 2007 and ECOREF#100416
VSCR	Vascular resistance	Resistance to blood flow through blood vessels and especially arterioles, internal vessel diameter is inversely proportional to pulmonary and systemic vascular resistance	http://www.merriam-webster.com/medical/vascular%20resistance
VMRS	Vasomotor response	Relating to the nerves and muscles that cause blood vessels to constrict or dilate.	http://www.medicinenet.com/script/main/art.asp?articlekey=7979

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
VENT	Ventilation, Opercular Movements, Undulatory Movements	No definition available.	
VISC	Viscosity	The property of resistance to flow in a fluid or semifluid.	http://www.merriam-webster.com
WATB	Water balance	Water balance is water retained to water intake ratio	ECOREF 85555
WLSS	Water loss	A decrease in water in cells, organs tissues or bodies.	ECOTOX
PH2O	Water potential, plant	Plant water potential is a mid-day measurement of the water tension, water stress or water deficit in a plant utililizing a pressure chamber.	ECOTOX and http://en.wikipedia.org/wiki
WTUP	Water uptake	No definition available.	
WILT	Wilt	Dehydration of plants to the point where the leaves lose their turgor and hang limply. Can happen in living plants which later return to normal, or to cut plants before they are fed out. Thought to be a factor in increasing toxicity.	Saunders Comprehensive Veterinary Dictionary, 2007
XCPG	Xanthophyll cycle pigments	Measurement of pigments involved in the the xanthophyll cycle	ECOTOX
ZNEX	Zinc excretion	Zinc excreted by organism	ECOTOX
ZNUP	Zinc Uptake	The ability of an organism to take zinc into its body.	ECOTOX

POP Population Group

POP	Population Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
ABND	Abundance	Abundance is an ecological concept referring to the relative representation of a species in a particular ecosystem. It is usually measured as the large number of individuals found per sample Abundance can be measured as number of individuals of a taxon per unit area equivalent to density, frond number Use for coding efficacy of removal of lice from fish.	http://en.wikipedia.org/wiki/Abundance_%28ecology%29 and ECOTOX

POP	Population Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
APCY	Allophycocyanin	Allophycocyanin (APC) is a large protein (approximate molecular weight 80 kd) containing many fluors.	http://www.drmr.com/abcon/APC.html
BMAS	Biomass	The amount of living matter in a unit area or volume of habitat. Includes harvest yield, fruit or seed yield, mass of population, standing crop, productivity.	http://www.merriam-webster.com/dictionary/biomass and ECOTOX
CARC	Carotenoid Content	Any of a group of red or yellow pigments, including carotenes, found in plants and certain animal tissues	http://www.collinsdictionary.com/dictionary/english/carotenoid
CRCA	Carotenoids Chlorophyll A ratio	The ratio of carotenoids to chlorophyll a	ECOTOX
CHAB	Chlorophyll A:Chlorophyll B	The ratio of Chlorophyll A and Chlorophyll B found in a sample.	ECOTOX
CHLA	Chlorophyll A Concentration	A specific form of chlorophyll used in oxygenic photosynthesis. It absorbs most energy from wavelengths of violet-blue and orange-red light. It also reflects green/yellow light, and as such contributes to the observed green color of most plants. This photosynthetic pigment is essential for photosynthesis in eukaryotes, cyanobacteria and prochlorophytes because of its role as primary electron donor in the electron transport chain. Chlorophyll a also transfers resonance energy in the antenna complex, ending in the reaction center where specific chlorophylls P680 and P700 are located.	http://en.wikipedia.org/wiki/Chlorophyll_a
CHAP	Chlorophyll A to Phaeophytin A ratio	Ratio of Chlorophyll A to Phaeophytin A in a sample.	ECOTOX
CHLB	Chlorophyll B Concentration	Chlorophyll B: A yellow-green chlorophyll pigment which occurs only in plants and green algae. It functions as a light harvesting pigment that pass on the light excitation to chlorophyll a. It absorbs well at wavelength of 450-500 nm and 600-650 nm of the electromagnetic spectrum. Its molecular formula is C55H70O6N4Mg.	www.biology-online.org/dictionary/Chlorophyll_b
CHCT	Chlorophyll:Carotenoids	The ratio of chlorophyll to carotenoids in a sample	ECOTOX
CHLC	Chlorophyll C concentration	Chlorophyll C: A form of chlorophyll that occurs only in algae, specifically the diatoms, dinoflagellates and brown algae. Its role is to pass on the light excitation to chlorophyll a. Its molecular formula is C35H28O5N4Mg.	www.biology-online.org/dictionary/Chlorophyll_c

POP	Population Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
CHLO	Chlorophyll Content	Chlorophyll (also chlorophyl) is a green pigment found in cyanobacteria and the chloroplasts of algae and plants	http://en.wikipedia.org/wiki/Chlorophyll
RCLN	Colonization Rate	Change in ability to colonize an uninhibited substrate under toxicant stress.	
CNTL	Control	To reduce the incidence or severity of, especially of weeds or insects to innocuous levels.	http://ecocoverusa.com/wp-content/uploads/2011/12/R-D-Weed-Control-1.pdf
COVR	Cover, Canopy	Proportion of ground taken up by the vertical projection of all individuals of a single plant species, the amalgamated species sum of which provides the total canopy cover	ttp://thesciencedictionary.org/canopy-cover
DMTR	Diameter	The length of a straight line through the center of an object.	http://www.merriam-webster.com/dictionary/diameter
DVRS	Diversity, Evenness	Species diversity is a measure of the diversity within an ecological community that incorporates both species richness (the number of species in a community) and the evenness of species' abundances	http://www.eoearth.org/view/article/156211/
DRFT	Drift	To move slowly, especially as a result of outside forces, with no control over direction or Benthic organisms temporarily suspended in the water and carried downstream by the current.	http://dictionary.cambridge.org/dictionary/british/drift and http://www.ecologydictionary.org/DRIFT_ORGANISMS
DBMS	Dry Biomass	Biomass measured on a dry weight basis	ECOTOX
EBCN	Effective Body Concentration	The body residue of a chemical that is associated with an effect.	ECOTOX
GENT	Generation Time	The average time between two consecutive generations in the lineages of a population	http://en.wikipedia.org/wiki/Generation_time
INDX	Index to Population Size; Count, Number, Abundance	No definition available.	
IRIN	Intrinsic Rate of Increase	Intrinsic Rate of Increase (r): A measure of the rate of growth of a population. This is the instantaneous rate of change (per individual per time interval), assuming the population is in stable age distribution. It is equal to the natural log (ln) of the Finite Rate of Increase.	http://darkwing.uoregon.edu/~bsl/demography/glossary.html#Intrinsic
LAGT	Lagtime	No definition available.	

POP	Population Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
LCON	Length/duration of a chemical effectiveness	Represents the duration of time that a chemical retains its efficacy against a species or population. Usually reported as the first day after application that a species appears in the treated area.	ECOTOX
LCYC	Lifecycle	The series of stages through which a living thing passes from the beginning of its life until its death	http://www.merriam-webster.com/dictionary/life%20cycle
NGEN	Number of generations	Number of generations in a population.	
PPYT	Phaeophytin	A breakdown product of chlorophyll	www.dep.state.fl.us/labs/biology/microbio.htm
PSYN	Photosynthesis	The synthesis of organic compounds from carbon dioxide and water (with the release of oxygen) using light energy absorbed by chlorophyll. Change in productivity indicated by change in 14C or CO_2 uptake or oxygen production.	http://www.collinsdictionary.com/dictionary/english/photosynthesis
PSII	Photosystem II (PSII) Electron Transport Activity	One of two reaction sequences of the light phase of photosynthesis in green plants which involves a pigment system excited by wavelengths shorter than 685 nanometers and which is directly involved in the splitting or photolysis of water. The Hill reaction is a property of photosystem II. Also: non-cyclic photophosphorylation	McGraw-Hill Dictionary of Scientific and Technical Terms, 2003
PCBL	Phycobilin	Phycobilins are open chain tetrapyrroles that function as light harvesting chromophores in phycobiliproteins.	http://www.ncbi.nlm.nih.gov
PHYC	Phycocyanin	Blue pigment in algae.A blue photosynthetic pigment found in some bacteria and algae which absorbs light in the 618nm range.	www.biology-online.org/dictionary/Phycocyanin
PBRA	Population Biomass Turnover Ratio (Population/Biomass)	A measure that depends directly on growth and reproduction and indirectly on fertility through the rate of increase.	
PCCP	Population Carrying Capacity	The carrying capacity of a biological species in an environment is the maximum population size of the species that the environment can sustain indefinitely, given the food, habitat, water and other necessities available in the environment	http://en.wikipedia.org/wiki/Carrying_capacity
NCHG	Population Change (Change in N/Change in Time)	No definition available.	
GPOP	Population Changes, General	Used when more than one measurement is coded.	
DBLT	Population doubling time	The time (usually reported in years) that it takes a population to double it present size.	

POP	Population Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
PGRT	Population Growth Rate	A measure of population change in the absence of migration, comprising addition of newborns and subtraction of deaths; the result is known as the natural rate of increase of the population; it is the difference between the crude birth rate and the crude death rate.	Farlex Partner Medical Dictionary, 2012
PRAS	Prasinoxanthin	An algal pigment. (Note: If the measurement is on a single organism it is coded under BCM. If the measurement is on a group of organisms it is coded under POP.)	ECOTOX
PRPE	Predator/Prey Dynamics	An interaction between two organisms of unlike species in which one of them acts as predator that captures and feeds on the other organism that serves as the prey.	http://www.biology-online.org/dictionary/Predator-prey_relationship
RCPR	Recapture Ratio	A method commonly used in ecology to estimate an animal population's size. A portion of the population is captured, marked, and released. Later, another portion is captured and the number of marked individuals within the sample is counted. Since the number of marked individuals within the second sample should be proportional to the number of marked individuals in the whole population, an estimate of the total population size can be obtained by dividing the number of marked individuals by the proportion of marked individuals in the second sample.	http://en.wikipedia.org/wiki/Mark_and_recapture
STTL	Settling	No definition available.	
SEXR	Sex Ratio	The proportion of males to females in a given population, usually expressed as the number of males per 100 females at a specific stage in life, especially at conception, birth, and a given stage between birth and death.	The American Heritage Medical Dictionary, 2007
SZDS	Size distribution	Number of organisms at certain lengths or weights measured within a population.	
SPGR	Specific Growth Rate	Is the increase in cell mass per unit time, e.g., grams cells (g) per gram cells (g) per hour: (g*g-1*h-1). The specific growth rate is commonly given by the symbol, μ (mu), and the most common units are in reciprocal hours (h−1); however, it can also be expressed in reciprocal seconds (s−1) or minutes (min−1) or any other units of time.	http://en.wikipedia.org/wiki/Specific_growth_rate
SFCA	Surface Area	The sum of all the areas of all the shapes that cover the surface of the object.	http://www.math.com/tables/geometry/surfareas.htm
THCH	Thatch accumulation	No definition available.	
TRAP	Trappability	No definition available.	

POP	Population Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
VIDX	Viability index	Number of survivors on day 4/numbers of survivors on day 1.	
WGHT	Weight	The quality of being heavy; that property of bodies by which they tend toward the center of the earth; the effect of gravitative force, especially when expressed in certain units or standards, as pounds, grams, etc. It is proportional to the quantity of matter in the body.	http://www.biology-online.org/dictionary/Weight

REP Reproduction Group

REP	Reproductive Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
<ABNM>	Abnormal	Effects which occur to the organism that has been directly exposed (compare to teratogenic effects). Effects included under this measurement include nonspecific physical malformations, deformities, defects, discoloration, anomalies, vegetative vigor, etc.	DO not code REP ABNM. ABNM should be coded under MPH (when adult body structures are changing) or DVP (when embryo or juveniles are becoming abnormal throughout different lifestages)
ABRT	Abort	To bring forth stillborn, nonviable, or premature offspring	http://www.merriam-webster.com/dictionary/abort
ARFS	Accessory reproductive fluid	Accessory reproductive fluids are lymph-like fluid and/or foam produced during natural copulation. Examples are: Foam produced by the proctodeal glands in Japanese quail and milt, the seminal fluid of fish, mollusks, and other water dwelling animals which reproduce by spraying the fluid onto eggs.	Noboru Fujihara. "Accessory reproductive fluids and organs in male domestic birds". World's Poultry Science Journal (1992), 48:39-56 Cambridge University Press and Elizabeth Adkins-Regan. The Auk 116(1):184-193, 1999

REP	Reproductive Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
AFST	Atretic follicle stage	The stage of development of the follicles in the ovary marked by degenerative follicles with shrunken, irregular borders.	ECOREF 52243
BTCF	Beat/Cross frequency	A standard sperm motility measurement, the beats per second divided by the number of times the head crosses the mean head trajectory per second.	Proc. Natl. Acad. Sci. (1997) Vol. 94, pp. 6842-6846
<BMAS>	Biomass;	Includes Harvest Yield, Fruit or Seed Yield, Mass of Organism, Mass of Population.	DO not code REP BMAS. BMAS should be coded under GRO if measured for an individual organism or POP if measured for a group of organisms
BDEP	Bird day egg production	Number of eggs produced/number of birds alive * 100.	
BRED	Bred	To produce or cause to produce by mating; propagate	http://www.collinsdictionary.com/dictionary/english/breed#breed_1
CYNG	Care of Young, Nest Attentiveness	No definition available.	
CRCE	Circular cells	A standard sperm motility measurement, the number of spermatozoa swimming in circles.	Proc. Natl. Acad. Sci. (1997) Vol. 94, pp. 6842-6846
CLNE	Cloning efficiency	The ability of an organism to produce clones.	
CLUB	Clubbing (Hydra Reproduction)	No definition available.	
CLLT	Clutch length	Number of days in a row on which a hen lays an egg is referred to as the clutch length.	
CLPD	Clutch production	The time it takes to produce a clutch or the number of eggs in a clutch.	
NCLU	Corpus Lutea, Number of	No definition available.	
COUR	Courtship Behavior, Sexual behavior	No definition available.	
DSTR	Diestrus	A period of sexual inactivity between periods of oestrus in animals that have several oestrous cycles in one breeding season	http://www.collinsdictionary.com/dictionary/english/dioestrus#dioestrus_1
EREM	Early resorbed embryos	Embryos resorbed during the early part of the reproductive cycle.	

REP	**Reproductive Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
EBCN	Effective Body Concentration	The body residue of a chemical that is associated with an effect.	
EGPN	Eggs per Nest or clutch	A clutch of eggs is the total number of eggs laid in one nesting attempt	http://www.birds.cornell.edu/AllAboutBirds/studying/understanding/clutch/document_view
EPTT	Epididymal transit time	The duration of sperm transit through epididymis and vas deferens	ECOREF#74183
ETRS	Estrus	A regularly occurring period of sexual receptivity in most female mammals, except humans, during which ovulation occurs and copulation can take place; heat	http://www.collinsdictionary.com/dictionary/english/oestrus#oestrus_1
FCND	Fecundity	A measure of fertility, such as sperm count or egg count or the number of live offspring produced by an organism. The state of being fertile; capable of producing offspring.The quality of something that causes or assists healthy growth.The number of offspring produced by an organism in its lifetime.	http://www.biology-online.org/dictionary/Fecundity
FTCC	Fertile cocoons	No definition available**.**	
FERT	Fertile, Fertility	The quality or state of being fertile.The capacity to conceive or induce conception.	http://www.merriam-webster.com
FIDX	Fertility index	(Number fertile/Number cohabitated)*100.	
FERZ	Fertilization	The union of male and female gametes, during sexual reproduction, to form a zygote	http://www.collinsdictionary.com/dictionary/english/fertilization
FLOR	Floral Induction	The initiation of the production of flowers, possibly stimulated by florigen.	http://glossary.gardenweb.com/glossary/flower_induction.html
FRMS	Frames, Bees	Number of frames that bees are working	ECOTOX
FRUT	Fruit, fruiting	The usually edible reproductive body of a seed plant; especially one having a sweet pulp associated with the seed.	http://www.merriam-webster.com
OOCY	Fully Developed Oocytes	Oocytes that are fully developed	ECOTOX
GMET	Gamete production	The production of haploid germ cells, such as a spermatozoon or ovum, that fuses with another germ cell during fertilization. Includes spermatogenesis.	http://www.collinsdictionary.com/dictionary/english/gamete
GCCT	Germ cell count	Number of sperm or eggs in the gonad or sample.	ECOTOX

REP	Reproductive Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
GERM	Germination	To cause (seeds or spores) to sprout or (of seeds or spores) to sprout or form new tissue following increased metabolism	http://www.collinsdictionary.com/dictionary/english/germinate
GMEN	Germination Energy	GE = [(n1-n0)/t1 + (n2-n1)/t2 + (n3-n2)/t3 +.....(ni-ni-1)/ti] * 100/R =0/0 n1, n2, n3...ni = Cumulative germination counts on consecutive days t1, t2, t3...ti = numbers of days after beginning of test R = constant obtained by dividing 100 (which is a perfect germination percentage value for any species) by number of days on which first germination evaluations were made under international rules	
GIDX	Gestation Index	No definition available**.**	
GEST	Gestation Rate	The percentage of mated females that delivered at least one viable fetus	ECOREF 58044
GSTT	Gestation Time	The period in mammals from fertilization to birth.	ECOTOX
GFST	Graafian follicle stage	The stage of development of the follicles in the ovary marked by large follicles bordered by an amphophilic egg membranes with a central core of eosinophilic yolk proteins.	ECOREF 52243
HTCH	Hatch	To cause (eggs) to break and release the fully developed young or (of eggs) to break and release the young animal within. If the initial life stage is not eggs or is a life-cycle study where hatch is measured on a future generation, code the hatch data as REP HTCH. If authors report hatch data where the intitial life stage is eggs, code the hatch data as mortality (MOR MORT) with a measurement comment AS HATCH.	http://www.collinsdictionary.com/dictionary/english/hatch
HDEP	Hen-day egg production	Number of eggs produced / number of live hens x 100.	
HHEP	Hen-housed egg production	The cumulative number of eggs produced by the flock divided by the number of birds originally placed in the flock.	http://www.aphis.usda.gov/vs/ceah/cahm/Poultry/lay99de2.htm
INFT	Infertile	Being unable to produce offspring.	Mosby's Medical Dictionary, 2009
IFCC	Infertile cocoons	No definition available.	
INFL	Inflorescence	The arrangement of flowers on the axis or stem; the flowering part of a plant; a flower cluster; or flowers collectively.	Random House Kernerman Webster's College Dictionary, 2010

REP	Reproductive Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
LACG	Lactating	To secrete milk.	http://www.merriam-webster.com
LIDX	Lactation index	Percent of animals alive at the 4 days that survive the 21 day lactation period.	
LREM	Late resorbed embryos	Embryos resorbed during the late part of the reproductive cycle.	
LNRY	Linearity	A standard sperm motility measurement, the distance in straight line divided by actual distance traveled.	Proc. Natl. Acad. Sci. (1997) Vol. 94, pp. 6842-6846
LBIX	Live Birth Index	Number of live offspring/number of offspring delivered x 100	ECOREF#81595
MIDX	Mating index	Number of animals with seminal plugs or sperm/number of animals mated times 100.	www.ilo.org/public/english/protection/safework/ghs/ghsfinal/ghsc11.pdf
LHMX	Maximum amplitude of lateral head displacement	A standard sperm motility measurement, the maximal deviation of the head displacement from the mean head trajectory.	Proc. Natl. Acad. Sci. (1997) Vol. 94, pp. 6842-6846
LHMN	Mean amplitude of lateral head displacement	A standard sperm motility measurement, the average of all deviations of the head displacement from the mean head trajectory.	Proc. Natl. Acad. Sci. (1997) Vol. 94, pp. 6842-6846
MSPW	Mean spawns per female	The mean number of times a female has spawned.	
MSTR	Metestrus	The period in the oestrous cycle following oestrus, characterized by lack of sexual activity	http://www.collinsdictionary.com/dictionary/english/metoestrus#metoestrus_1
MOTL	Motility	Sperm motility.	ECOTOX
MONT	Mounting, Copulation, Intercourse, Mating	A reproductive behavior in which one animal climbs atop a second animal. Also copulation, intercourse, and mating.	ECOTOX
NSTI	Nest Initiation	The behavior of starting a place or structure in which birds, fishes, insects, reptiles, mice, etc, lay eggs or give birth to young.	Collins English Dictionary-Complete and Unabridged, 12th Edition 2014
NTSZ	Nest Size	No definition available.	
NANT	Nests Abandoned	No definition available.	

REP	**Reproductive Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
NRPR	Net Reproductive Rate	(Ro) Average number of offspring or seeds produced by an individual in a population during its lifetime. Figured by the life table equation: Ro=Sum lx mx , where lx =the probability of survival from birth to age x and mx = the average number of births per individual of age x.	www.muw.edu/~mharvill/studch10.rtf and Population Biology: The Evolution and Ecology of Populations, Chapter 12, P.W.Hedrick
0RSM	No resorbed embryos	No resorbed embryos.	ECOTOX
NMNT	Non-mount	A reproductive behavior which does not occur. This includes one animal climbing atop a second animal. Also copulation, intercourse, and mating.	ECOTOX
NREP	Non-reproducing organisms	Barren plants or organisms.	ECOTOX
NVIB	Non-viable	Not capable of living; especially: not capable of surviving outside the womb without artificial support.	http://www.merriam-webster.com
NPRG	Not pregnant	Not containing unborn young within the body.	ECOTOX
NSTS	Number of Active Nests, Number of Nests Produced	No definition available.	
NDAY	Number of Days Between Eggs Laid	No definition available.	
NEGI	Number of Eggs Incubated	No definition available.	
NOIM	Number of implantations	The number of embryos that attached to the maternal uterine wall.	http://www.merriam-webster.com
NINC	Number of Nests Incubated	No definition available.	
NOPN	Number of Organisms per Nest	No definition available.	
NFOL	Number of ovarian follicles	A cavity in the ovary containing a maturing ovum surrounded by its encasing cells.	American Heritage Dictionary of the English Language, 2011
NPOD	Number of Pods	No definition available.	
NSPN	Number Spawning	Number of organisms participating in spawning or attempting to spawn.	ECOTOX
OEGP	Onset of Egg Production	No definition available.	
OBRD	Open Brood	No definition available.	
OVRT	Ovulation Rate	No definition available.	

REP	Reproductive Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
BNDG	Pair Bonding Nesting Behavior	No definition available.	
PLBR	Pairs with Litter or Brood	No definition available.	
PRTH	Parthenocarpy	The development of fruit without fertilization or formation of seeds	http://www.collinsdictionary.com/dictionary/english/parthenocarpy
TMSC	Penile Tumescence	The state of the penis when the erectile tissue becomes filled or swollen (tumid) with blood and causes the penis to become rigid and elevated. Also: Erection,	http://www.ncbi.nlm.nih.gov
FRUH	Percent Fruit Harvested	No definition available**.**	
PIPD	Pipped	To break through the shell	http://www.inhs.uiuc.edu/chf/pub/virtualbird/glossary.html
PCNT	Placentation	(Botany) the way in which ovules are attached in the ovary; (Zoology) a.the way in which the placenta is attached in the uterus; the process of formation of the placenta	http://www.collinsdictionary.com/dictionary/english/placentation
PILS	Post-implantation loss	The loss of implanted embryos. This is calculated by determining the ratio of dead to total implants from the treated group compared to the ratio of dead to total implants from the control group.	
PRFM	Pregnant Females in a Population	No definition available.	
PREG	Pregnant, paris or gravid	Containing unborn young within the body, distended with or full of eggs.	
PRPL	Preimplantation loss	Loss of an embryo before uterine implantation.	http://www.merriam-webster.com
PFST	Primary follicle stage	The stage of development of the follicles in the ovary marked by large nucleus, abundant basophilic cytoplasm and no yolk vesicles.	ECOREF 52243
PSTR	Proestrus	The period in the oestrous cycle that immediately precedes oestrus	http://www.collinsdictionary.com/dictionary/english/prooestrus#prooestrus_1
PROG	Progeny	The young of an animal or plant Includes Counts, Numbers, Clutch, Litter or Brood Size, Progeny Produced Within a Specified Time Period, Numbers of Progeny per Parent Organism.	http://www.merriam-webster.com/dictionary/progeny

REP	Reproductive Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
PSPG	Pseudopregnancy	A condition resembling pregnancy that occurs in some mammals, marked by persistence of the corpus luteum and usually following infertile copulation.	American Heritage Dictionary of the English Language, 2011
RPLM	Repeat bloom	Repeat bloom, or bloom in the next year.	http://www.cahe.nmsu.edu/pubs/_h/h-321.html)
REPO	Reproducing organisms	Organisms that have produced offspring.	
GREP	Reproduction, General	Change in male and/or female reproductive ability; fertilization and fertilization rate; vegetation reproductive processes. Used when more than one measurement is coded.	
RBEH	Reproductive Behavior Changes	No definition available.	
RPRD	Reproductive Capacity	The relative capacity of a species to reproduce itself under optimum conditions	http://www.merriam-webster.com/dictionary/reproductive%20potential
RSUC	Reproductive Success (General)	No definition available.	
RSEM	Resorbed Embryos	No definition available.	
SBRD	Sealed Brood	Capped cells in a bee frame	ECOTOX
SFST	Secondary follicle stage	The stage of development of the follicles in the ovary marked by the presence of numerous eosinophilic yolk vesicles.	ECOREF 52243
SEED	Seed Number	No definition available.	
SDIX	Seed Index	Grams per 100 seeds.	definition from paper
SEPD	Seed or spore production	Production of seed or spore by vegetative process	ECOTOX
SSET	Seed Set (No. Seeds/No. Florets)	No definition available.	
SPNF	Spawning frequency	The number of times an organism spawns.	
SPCL	Sperm Cell Counts	No definition available.	
SPMC	Spermatocytes	A cell giving rise to sperm cells; especially: a cell that is derived from a spermatogonium and ultimately gives rise to four haploid spermatids.	http://www.merriam-webster.com
SPMG	Spermatogonia	A spermatogonium (plural: spermatogonia) a male germ cell that gives rise to a spermatocyte early in spermatogenesis.	Mosby's Medical Dictionary, 2009

REP	Reproductive Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
SPRD	Sporophyte Production	No definition available.	
PSTG	Stage of Pregnancy	No definition available.	
STRL	Sterility	Inability to produce offspring, i.e., either to conceive (female s.) or to induce conception (male s.)	Dorland's Medical Dictionary for Health Consumers, 2007
NSNT	Successful Nests	One in which at least one egg hatched. The presence of detached shell membranes is the best evidence that eggs hatched	http://www.npwrc.usgs.gov/resource/birds/nest/fate.htm
T50P	Time to 50% production	Number of days to achieve 50% egg production.	ECOTOX
TFPG	Time to first progeny	Number of days to produce first litter.	ECOTOX
TMNT	Time to mounting	Time it takes for a reproductive behavior to be exhibited. This includes one animal climbing atop a second animal. Also copulation, intercourse, and mating.	ECOTOX
TTPR	Time to peak reproduction	The time it take for adults to reach peak reproductive output.	ECOTOX
TPRG	Time to pregnancy/gravidity	Time from mating to first gravidity.	ECOTOX
TSPN	Time to Spawn	No definition available.	
<TPRD>	Total Production	No definition available.	
TUPR	Tuber production	Production of tubers	ECOTOX
USTS	Unknown estrus stage	Unknown/undetermined stage of the estrus cycle.	
NUNT	Unsuccessful Nests	No definition available.	
VAOP	Vaginal opening	A method used to determine puberty in a female organism. Also called vaginal patency.	http://www.epa.gov/scipoly/oscpendo/docs/edmvs/femalearrayprotocol0830ed02.pdf
VPLG	Vaginal/Copulatory plug	A gelatinous secretion used in the mating of some species. It is deposited by a male into a female genital tract, such as the vagina, and later hardens into a plug or glues the tract together.	http://en.wikipedia.org/wiki/Mating_plug
VEGR	Vegetative Reproduction	A form of asexual reproduction in plants, in which multicellular structures become detached from the parent plant and develop into new individuals that are genetically identical to the parent plant.	The American Heritage Science Dictionary, 2002

REP	**Reproductive Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
VCTY	Velocity	A standard measure of sperm motility, the total distance traveled divided by time.	Proc. Natl. Acad. Sci. (1997) Vol. 94, pp. 6842-6846
VIAB	Viable	Having reached a stage of development at which further development can occur independently of the mother Used for Offspring or Seed	http://www.collinsdictionary.com/dictionary/english/viable
VITG	Vitellogenesis	Producing or stimulating the formation of yolk	http://www.collinsdictionary.com/dictionary/english/vitellogenic

AEG	**Avian Egg Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
ALEG	Albumen Eggshell Quality (Haugh Units)	Haugh Units Scale objectively combines the thickness of the egg albumen and the weight of the egg to a single score that can be compared across all types of eggs.	http://www.sunnyqueen.com.au/03_quality/quality.htm
BSCP	Basal cap	A roughly circular mass of crystalline material that tips mammillae.	
BLSP	Blood spots	Also called meat spots. Occasionally found on an egg yolk. Contrary to popular opinion, these tiny spots do not indicate a fertilized egg. Rather, they are caused by the rupture of a blood vessel on the yolk surface during formation of the egg or by a similar accident in the wall of the oviduct. Less than 1% of all eggs produced have blood spots.	http://www.georgiaeggs.org/pages/bloodspots.html
CRAK	Cracking	To break or cause to break without complete separation of the parts	http://www.collinsdictionary.com/dictionary/english/crack
LSTE	Eggs lost	Eggs missing from the nest (could be due to parents eating eggs or removing eggs from the nest).	ECOTOX
ESIN	Eggshell Index	No definition available.	
FERT	Fertile, Fertility	The quality or state of being fertile. The capacity to conceive or induce conception.	http://www.merriam-webster.com Use this measurement when the fertility of avian eggs is studied.

AEG	**Avian Egg Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
GAEG	General Avian/Reptile Egg Effect	Change in avian or reptile egg effects. Used when more than one measurement is coded for a record.	ECOTOX
LGTH	Length	The longer or longest dimension of an object.	http://www.merriam-webster.com/dictionary/length (Use this measurement for the length of an avian egg is studied)
MMMC	Mammillary core	Structures composed of organic knobs which serve as crystallization sites on the outer surface of eggshell membranes.	
QUAL	Quality	No definition available.	
SHLL	Shell, Percent	No definition available.	
SIZE	Size	The physical magnitude, extent, or bulk**:** relative or proportionate dimensions.	http://www.merriam-webster.com/dictionary/size
SOFT	Softness	No definition available.	
SGRV	Specific gravity	A dimensionless unit defined as the ratio of the density of a substance to the density of water at a specified temperature. It is common to use the density of water at 4 C (39 F) as a reference since water at this point has its highest density.	http://www.engineeringtoolbox.com/density-specific-weight-gravity-d_290.html
STGH	Strength	The quality or state of being strong, power to resist force.	http://www.merriam-webster.com/dictionary/strength
THIK	Thickness	The distance between the top and bottom or front and back surfaces of something : a measurement of how thick something is	http://www.merriam-webster.com/dictionary/thickness
VIAB	Viable	Having reached a stage of development at which further development can occur independently of the mother Used for Offspring or Seed	http://www.collinsdictionary.com/dictionary/english/viable
VOLU	Volume	The amount of space occupied by a three-dimensional object as measured in cubic units (as quarts or liters) : cubic capacity	http://www.merriam-webster.com/dictionary/volume

AEG	**Avian Egg Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
WGHT	Weight	The quality of being heavy; that property of bodies by which they tend toward the center of the earth; the effect of gravitative force, especially when expressed in certain units or standards, as pounds, grams, etc. It is proportional to the quantity of matter in the body.	http://www.biology-online.org/dictionary/Weight
WDTH	Width	The distance from one side of something to the other side: a measurement of how wide something is.	http://www.merriam-webster.com/dictionary/width
YOLK	Yolk, Percent	No definition available.	

SYS Ecosystem Group

PRS	System Processes Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
BGCM	Biogeochemical	Changes in whole system biogeochemical processes, e.g. sulfate reduction, denitrification, methanogenesis, nitrification, ammonification, net N or P removal.	ECOTOX
CMIN	Carbon Mineralization	Soil respiration	http://soilquality.org/indicators/respiration.html
CO2P	CO_2 Evolution	Evolution of carbon dioxide	ECOTOX
CO2G	CO_2 Generation	Carbon dioxide generation in a soil/litter microcosm system.	
DCMP	Decomposition	To break down (organic matter) or (of organic matter) to be broken down physically and chemically by bacterial or fungal action; rot (chemistry) to break down or cause to break down into simpler chemical compounds	http://www.collinsdictionary.com/dictionary/english/decomposition
TROP	Efficiency of Trophic Transfer Between Different Levels in the Food Chain; Assimilation Efficiency	Change in efficiency of trophic transfers between different levels in the food chain, e.g. between primary producers and grazers.	
GPPR	Gross Primary Productivity/Respiration	Gross primary production (GPP) is the total energy (or nutrients) assimilated by an ecological unit (such as an organism, a population, or an entire community)	http://animals.about.com/od/g/g/grossproduction.htm
NMIN	Net Mineralization	Decomposition or oxidation of the chemical compounds in organic matter into plant-accessible forms.	http://en.wikipedia.org/wiki/Mineralization_(soil_science)
NITR	Nitrification	The chemical process in which a nitro group is added to an organic compound (or substituted for another group in an organic compound).The oxidation of ammonium compounds in dead organic material into nitrates and nitrites by soil bacteria (making nitrogen available to plants).The conversion of [[nitrogen from inorganic to organic by [[nitrate bacteria, which effectively recycles the substance so that it can be used again by plants via [[root uptake.	http://www.biology-online.org/dictionary/Nitrification
OUPT	Oxygen uptake	Oxygen uptake in a soil/litter microcosm system.	ECOTOX

PRS	**System Processes Effect**	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
PPRO	Primary Productivity	A measure of the rate at which new organic matter is developed through photosynthesis and chemosynthesis in producer organisms based on the oxygen released and carbon taken in; the transformation of chemical or solar energy to biomass	Dictionary.com's 21st Century Lexicon
SPRO	Secondary Productivity	The rate at which these consumers convert the chemical energy of their food into their own biomass is called secondary productivity. The efficiency at which energy is transferred from one trophic level to another is called ecological efficiency.	http://www.britannica.com/EBchecked/topic/531787/secondary-productivity
GPRS	System processes, General	Change in system process effects. Used when more than one measurement is coded for a record.	ECOTOX
SRES	System Respiration	Change in rate of oxygen uptake by entire ecosystem, as opposed to individual or groups of organisms.	ECOTOX

NOC No Group Code

NOC No Group Code Effect			
Measurement Code	**Measurement Name**	**Measurement Definition**	**Notes**
MULT	Multiple Effects Reported as One Result	Change in more than one effect when data were reported as one result; this code is used with reservation. The use must be verified through consultation with at least one other reviewer to ensure that the effects can not be reported individually.	
<NONE>	None		
NRNR	Endpoint Reported Without a Specific Effect	The author reported an endpoint, but not a specific effect.. This code is used with reservation. The use must be verified through consultation with at least one other reviewer to ensure that there are no effect reported.	
~XXX [This is an EFFECT code- NOT A MEASURENT CODE]	Delayed Effect	Currently an aquatic ONLY code. An effect (xxx) reported after the organisms are transferred to toxicant-free test chambers. A specific exception is clearance prior to tissue analysis; e.g., “after the exposure the organisms were placed in clean water for 10 hours to allow the organism to clear the stomach contents”. This type of clearance is distinguished from depuration and is not coded as a delayed effect (see also page 4.C-10). Refer to Section 4.C-5. Test Result Parameters in the guidelines for additional information regarding coding of delayed effects.	

Appendix T. Endpoint Codes and Definitions

ECOTOX ENDPOINTS		
DATABASE USAGE	**ENDPOINT**	**DEFINITION**
Terrestrial	**ATCN**	Asymptotic threshold concentration: The concentration of a chemical at which some percentage of a population of test organisms is in a state of approximate homeostasis for some prolonged period of time.
Terrestrial	**BAF**	Bioaccumulation factor: A value that is the "ratio of the concentration of a chemical in the organism to that in the medium (usually water). Bioaccumulation refers to both uptake of dissolved chemicals from water (bioconcentration) and uptake from ingested food and sediment residues." (Casarett et.al. 1986) For Terrestrial records, use BAF to reflect concentration/ accumulation in tissues regardless of whether the author addresses the ratio as BAF or BCF. The use of a BCF code in Terrestrial data will require prior approval.
Aquatic	**BCF**	Bioconcentration factor: A term describing the degree to which a chemical can be concentrated in the tissues of an organism in the *aquatic environment* as a result of exposure to waterborne chemical at steady state during uptake phase. The BCF is a value which is equal to the concentration of a chemical in one or more tissues of the exposed aquatic organism divided by the average exposure water concentration of a chemical in the test. (Rand 1995) Use BCF only when reported by author for water exposures ie., AQUIRE; if BCF reported for terrestrial organisms/plants code as BAF. BCFs of less than 1 (when converted to the standard unit of L/kg) and negative BCF values are suspect and should be looked at by the EPA data base coordinator. Reviewers will code the data and send the paper on to the EPA data base coordinator for review and approval. The BCFs less than 1 are coded as reported by the author and negative BCF values are coded as <1.
Aquatic	**BCFD**	Bioconcentration factor calculated using dry weight tissue concentration
Terrestrial Aquatic	**BMCxx**	**B**ench**M**ark **C**oncentration at xx% level of response above background. Benchmark Concentration is an exposure to a concentration of a substance associated with a specified low incidence of risk, generally in the range of 1% to 10% of a health effect; or the concentration associated with a specified measure or change of a biological effect. Note the benchmark concentration lower bound (BMCL) should be coded in the range/CI fields as the lowest value, since it is from the one-side 95% CI. For example 1.22 ug/l (benchmark concentration lower bound 10%=0.075 ug/l) is coded as 1.22 (0.075-NA) ug/l.

ECOTOX ENDPOINTS		
DATABASE USAGE	**ENDPOINT**	**DEFINITION**
Aquatic Terrestrial	**BMDxx**	**B**ench**M**ark **D**ose at xx% level of response above background. Benchmark Dose is an exposure due to a dose of a substance associated with a specified low incidence of risk, generally in the range of 1% to 10% of a health effect; or the dose associated with a specified measure or change of a biological effect. Note the benchmark dose lower bound (BMDL) should be coded in the range/CI fields as the lowest value, since it is from the one-side 95% CI. For example 1.22 mg/kg (benchmark concentration lower bound 10%=0.075 mg/kg diet) is coded as 1.22 (0.075-NA) mg/kg diet.
Aquatic Terrestrial	**BMRSxx**	**B**ench**M**ark **R**e**s**idue at xx% level of response above background. Benchmark Residue is the residue value in a specific tissue due to the exposure to a substance associated with a specified low incidence of risk, generally in the range of 1% to 10% of a health effect; or the residue associated with a specified measure or change of a biological effect. Note the benchmark residue lower bound should be coded in the range/CI fields as the lowest value, since it is from the one-side 95% CI. For example 1.22 mg/kg TI (benchmark concentration lower bound 10%=0.075 mg/kg TI) is coded as 1.22 (0.075-NA) mg/kg TI. The tissue that the residue is measured in is reported as a comment.
Aquatic Terrestrial	**ECxx**	**E**ffective **C**oncentration for xx% of tested organisms.
Aquatic	**EDxx**	Effective dose for xx% of tested organisms
Aquatic Terrestrial	**ERxx**	Tissue concentration of toxicant needed to cause xx% effect in the test population. (ECOREF#51644) The ERxx concentration should be coded into the Concentration field and not the BCF field.
Aquatic	**ETxx**	Effective time response to xx% of organisms. The time associated with the response is coded in the DURATION field.
Aquatic Terrestrial	**ICxx**	Inhibition concentration to xx% of organisms.
Aquatic Terrestrial	**IDxx**	Inhibition dose to xx% of organisms.
Aquatic Terrestrial	**LCxx**	Lethal concentration to xx% of test animals.
Aquatic Terrestrial	**LDxx**	Lethal dose to xx% of test animals
Aquatic	**LETC**	Lethal Threshold Concentration: Toxicity curve asymptotic concentration indicating an incipient LC50 value. Acute lethal action has essentially ceased.
Aquatic	**LOEC**	Lowest observable effect concentration
Terrestrial	**LOEL**	Lowest-observable-effect-level: lowest dose (concentration) producing effects that were significantly different (as reported by authors) from responses of controls (LOEAL/LOEC)

ECOTOX ENDPOINTS		
DATABASE USAGE	**ENDPOINT**	**DEFINITION**
Aquatic Terrestrial	**LOER**	Lowest Observed Effects Residue: The lowest residue concentration producing effects that were significantly different from responses of controls according to author's reported statistical test
Aquatic	**LRxx**	Lethal Residue Concentration. Tissue concentration of toxicant needed to cause xx% mortality in the test population. (ECOREF#20453) The LRxx concentration should be coded into the Concentration field and not the BCF field.
Aquatic Terrestrial	**LTxx**	Lethal time, median: time required for xx% of a population to die from a given dose; also reported as “STxx” - survival time for xx% of a population. The time associated with the response is coded in the DURATION field.
Aquatic Terrestrial	**MATC**	Maximum Acceptable Toxicant Concentration: Hypothetical threshold concentration that is the geometric mean between the NOEC and LOEC concentration. The term Chronic Value (ChV) is encoded as MATC. Refer to companion endpoint note under LOEC definition
Aquatic Terrestrial	**MATR**	Maximum Allowable Toxicant Residue: Hypothetical threshold residue concentration that is the geometric mean between the NOER and LOER values.
Aquatic	**NOEC**	No observable effect concentration
Terrestrial	**NOEL**	No-observable-effect-level: highest dose (concentration) producing effects not significantly different from responses of controls according to author's reported statistical test (NOEAL/NOEC)
Aquatic Terrestrial	**NOER**	No Observed Effects Residue: The highest residue concentration producing effects not significantly different from responses of controls according to author's reported statistical test
Aquatic Terrestrial	**NR**	Not reported
Aquatic Terrestrial	**NR-LETH**	100% mortality
Aquatic Terrestrial	**NR-ZERO**	0% mortality

NOTE:

- When coding endpoints with number values (e.g. LCxx) the format to be used for single digit numbers is: 0X (e.g. LC01, LC05).
- Minimum Inhibitory Concentration (MIC or Munimum Inhibition Concentration) are not coded but entered into the Other Effects data field.

Appendix U. Response Site Codes

CODE	Site Name	Site Definition/Notes
A		
AB	Aboveground Portion, Plant	The parts of a plant growing above ground. (ECOTOX)
ABD	Abdomen	The portion of the vertebrate body between the thorax and the pelvis or the cavity of this part of the body. The elongate region posterior to the thorax in arthropods. (McGraw-Hill Dictionary of Scientific & Technical Terms, 6E, 2003)
ABP	Abdominal process	Found in a parthenogenic female cladoceran. A long second abdominal process of the post abdomen that extends beyond the base of the anal setae (www.epa.gov/waterscience/wet/disk2/pdf/apxal-a3.pdf)
AD	Adipose Tissue	Connective tissue consisting mainly of fat (adipose) cells, specialized to synthesize and contain large globules of fat, within a structural network of fibres. Fatty tissue. (http://www.britannica.com/EBchecked/topic/5948/adipose-tissue)
ADC	Auditory center	The part of the brain (in a fold of the cerebral cortex of the temporal lobe on both sides of the brain) that receives impulses from the ear by way of the auditory nerve. (2003-2012 Princeton University, Farlex Inc)
AF	Amniotic Fluid	A substance that fills the amnion to protect the embryo from desiccation and shock. Also Chorioallantoic fluid
AG	Accessory Gland	A mass of glandular tissue separate from the main body of a gland. A gland associated with the male reproductive organs in insects.
AL	Albumen	Egg white
ALG	Albumen Gland	Organ opening into the hermaphroditic duct and secreting a viscous substance, which surrounds the fertilized ovum and contributes to the development of the egg.(http://visual.merriam-webster.com/animal-kingdom/mollusks/snail/anatomy-snail.php)
AM	Adductor Muscle	Any muscle that draws a part of the body toward the median axis.
AMG	Amygdala	Denoting the cerebellar tonsil, as well as the lymphatic tonsils (pharyngeal, palatine, lingual, laryngeal, and tubal).
ANG	Antennal Gland	(Green gland) An excretory organ in the cephalon of adult crustaceans

CODE	Site Name	Site Definition/Notes
ANT	Antenna (Antennae)	A movable, articulated organ of sensation, attached to the heads of insects and Crustacea. There are two in the former, and usually four in the latter. They are used as organs of touch, and in some species of Crustacea the cavity of the ear is situated near the basal joint. In insects, they are popularly called horns, and also feelers. The term in also applied to similar organs on the heads of other arthropods and of annelids. (http://cancerweb.ncl.ac.uk/omd/)
AO	Anogenital	Pertaining to the anus and external genitals.
AP	Appendages	Any subordinate or nonessential structure associated with a major body part. Any jointed, peripheral extension, especially limbs, or arthropod and vertebrate bodies.
AR	Adrenal Gland	An endrocrine organ located close to the kidneys of vertebrates and consisting of two morphologically distinct components, the cortex and medulla.
ART	Artery	A vascular tube that carries blood away from the heart.
AS	Air Sac	One of large, thin-walled structures associated with the tracheal system of some insects. In birds, any of the small vesicles that are connected with the respiratory system and located in bones and muscles to increase buoyancy.
AT	Alimentary Tract	Pertaining to the organs of digestion
ATA	Aorta	The largest artery in the body which has its origin at the heart. It gives off branches to the extremities, neck and major organs for the purpose of supplying oxygenated blood. (Gray's)
ATH	Abdomen and thorax	Sample consists of abdomen and thorax tissue.
ATM	Atrium	The chamber or either of the chambers of the heart that receives blood from the veins and forces it into the ventricle or ventricles (Webster's)
ATR	Anther	The part of a stamen that produces and contains pollen and is usually borne on a stalk. (http://www.merriam-webster.com/dictionary/anther)
AX	Axons	The process or nerve fiber of a neuron that carries the unidirectional nerve impulse away from the cell body.
B		
BA	Bark	
BB	Bulb	
BBL	Barbel	A barbel on a fish is a slender, whiskerlike tactile organ near the mouth. (http://en.wikipedia.org/wiki)
BC	Buccal mass	
BCT	Bract	A leaf-like structure, different from the foliage leaves and without an auxiliary bud, associated with an inflorescence or flower (Gray's)

CODE	Site Name	Site Definition/Notes
BD	Bud	An embryonic shoot containing the growing stem tip surrounded by young leaves or flowers or both and frequently enclosed by bud scales.
BDW	Body wall	Consists of the layers of tissue, including skin, connective tissue, and hypaxial muscle, which surround and contain the internal structures of the body
BG	Breeding (Nuptial) Gland	A nuptial pad (or thumb pad, nuptial ball, nuptial excrescence) is a secondary sex characteristic present on some mature male frogs and salamanders. This breeding gland is used primarily by males to grasp females during amplexus. (http://en.wikipedia.org/wiki)
BI	Bile	An alkaline fluid secreted by the liver and delivered to the duodenum to aid in the emulsification, digestion, and absorption of fats.
BDT	Bile duct	A duct that carries bile from the liver and gallbladder to the duodenum (first part of the small intestine). (http://cancerweb.ncl.ac.uk/omd/)
BIL	Bill	
BIT	Biliary tract	The biliary tract is a system of ducts that transports bile out of the liver into the small intestine (http://arbl.cvmbs.colostate.edu/hbooks/pathphys/digestion/liver/anatomy.html)
BK	Beak	A prominent terminal projection.
BL	Blood	A fluid connective tissue consisting of the plasma and cells that circulate in the blood vessels.
BLC	Blood cells	An erythrocyte (red blood cell) or leukocyte (white blood cell)
BM	Bone Marrow	A vascular modified connective tissue occurring in the long bones and certain flat bones of vertebrates.
BMC	Bone marrow cells	Cells found in the bone marrow
BMP	Bone marrow plasma	Plasma from the bone marrow.
BO	Bone	One of the parts constituting a vertebrate skeleton.
BOL	Bolls	A pod or capsule, as of cotton and flax.
BR	Brain	The portion of the vertebrate central nervous system enclosed in the skull.
BRN	Branches	
BRS	Brain stem	
BSG	Basal Ganglia	A region of the base of the brain that consists of three clusters of neurons (caudate nucleus, putamen, and globus pallidus) that are responsible for involuntary movements such as tremors, athetosis, and chorea. (http://www.medterms.com)
BT	Breast	

CODE	Site Name	Site Definition/Notes
BU	Bursa	A simple sac or cavity with smooth walls containing a clear, slightly sickly fluid and interposed between two moving surfaces of the body to reduce friction.
BF	bursa of Fabricius	a blind glandular sac that opens into the cloaca of birds and functions in B cell production (http://www2.merriam-webster.com/cgi-bin/mwmednlm)
BV	Blood Vessel	A tubular channel for blood transport.
BW	Bee's Wax	Yellow to grayish-brown solid wax obtained from bee honeycombs by boiling and straining.
BY	Byssus	
C		
CA	Cartilage	A specialized connective tissue which is bluish, translucent, and hard but yielding.
CAE	Caecum	The blind end of a cavity, duct, or tube, especially the sac at the beginning of the large intestine.
CAN	Canopy	The uppermost spreading branchy layer of a forest. Also: Crown
CAP	Cap, Mushroom	The convex, concave, or flattened spore-bearing structure of some basidiomycetes that is attached superiorly to the stem and typically is expanded with gills or pores on the underside -- called also pileus.
CB	Cob	1 : the axis on which the kernels of Indian corn are arranged. 2 : an ear of Indian corn .
CBC	Cerebral cortex	The outer portion of the brain, consisting of layers of nerve cells and the pathways that connect them. The cerebral cortex is the part of the brain in which thought processes take place. (http://cancerweb.ncl.ac.uk/omd/)
CBH	Cerebral hemisphere	The two halves of the cerebrum, the largest part of the brain.
CBM	Cerebrum	An enlarged anterior or upper part of the brain; especially : the expanded anterior portion of the brain that in higher mammals overlies the rest of the brain, consists of cerebral hemispheres and connecting structures, and is considered to be the seat of conscious mental processes
CC	Cocoon	A protective case formed by the larvae of many insects, in which they pass the pupa stage.
CCM	Cecum	the blind pouch at the beginning of the large intestine into which the ileum opens from one side and which is continuous with the colon (www.m-w.com)
CDB	Caudal Bone	
CDP	Caudal peduncle	The caudal peduncle is the narrow part of the fish's body to which the caudal or tail fin is attached. (http://en.wikipedia.org/wiki)

CODE	Site Name	Site Definition/Notes
CDV	Caudal vertebrae	The vertebrae that form the skeleton of the tail. (http://cancerweb.ncl.ac.uk/omd/)
CE	Coelomic fluid	
CEL	Cell	The microscopic functional and structural unit of all living organisms.
CG	Cloacal gland	A secretory gland in the cloaca of lower vertebrates, as birds, snakes or amphibians.
CGG	Coagulating gland	Also known as the dorsal prostate, responsible for formation of a copulatory vaginal plug - preventing backflow of deposited semen (http://www.uwyo.edu/wjm/repro/maleanat.htm)
CRG	Cerebral ganglion	
CH	Spinal Cord,	The cordlike posterior portion of the central nervous system contained within the spinal canal of the vertebral column of all vertebrates.
CHC	Chloragogen tissue	Chloragogen tissue are brown or greenish cells, located in the intestinal wall or heart of at least some annelids that function similarly to the liver in vertebrates. They store glycogen and neutralize toxins. (http://en.wikipedia.org/wiki)
CHO	Chorion	Protective membrane around the eggs of insects and fishes. Extraembryonic membrane surrounding the embryo of amniote vertebrates. The outer epithelial layer of the chorion is derived from the tropoblast. (http://cancerweb.ncl.ac.uk/omd/)
CHN	Choana	The Choana is the opening into the nasopharynx of the nasal cavity on either side. Synonym: isthmus pharyngonasalis, posterior naris, postnaris. (http://cancerweb.ncl.ac.uk)
CHP	Choroid plexus	Organ found within the ventricles of the brain and in the subarachnoid space around the brain and spinal cord that produces cerebrospinal fluid (http://www.ets.uidaho.edu/med532/choroid.htm)
CIL	Cilia	Relatively short, centriole-based, hairlike processes on certain anatomical cells and motile organisms.
CL	Claw	
CLC	Cloaca	The common chamber into which the intestinal and urogenital tracts discharge especially in monotreme mammals, birds, reptiles, amphibians, and elasmobranch fishes; also: acomparable chamber of an invertebrate. (http://www.merriam-webster.com/dictionary/cloaca)
CLM	Coelomocytes	A corpuscle, including amebocytes and eleocytes, in the coelom of certain animals, especially annelids.
CLN	Colon	The part of the large intestine that extends from the cecum to the rectum

CODE	Site Name	Site Definition/Notes
CLT	Clitoris, Clitoral gland	a small erectile organ at the anterior or ventral part of the vulva homologous to the penis. (Webster's)
CLU	Clitellum	Clittelum is a thickened glandular section of the body wall of some annelids that secretes a viscid sac in which the eggs are deposited. (http://www.merriam-webster.com)
CLV	Calvarium	the portion of the skull including the braincase and excluding the lower jaw and facial portion
CM	Crown to Rump	
CMB	Comb	a fleshy crest on the head of the domestic fowl and other gallinaceous birds. (Webster's)
CN	Cotyledon	The first leaf of the embryo of seed plants.
CNS	Central Nervous System	Pertaining to the brain, cranial nerves and spinal cord. It does NOT include muscles or peripheral nerves. In invertebrates, the central nervous system is composed of the segmental ganglia of the ventral nerve cord together with the fused ganglia or brain at the anterior end. Acronym: CNS (http://cancerweb.ncl.ac.uk)
CO	Collagen	A fibrous protein found in all multicellular animals, especially in connective tissue.
COL	Coleoptile	The first leaf of a monocotyledon seedling.
COR	Corm	A short, erect, fleshy underground stem, usually broader than high and covered with membrane scales.
COS	Corpuscles of Stannius	These are islands of eosinophilic granular cells located in paired organs on the ventral surface of the kidney. This organ secretes a protein called hypocalcin (teleocalcin) which acts with calcitonin to regulate calcium metabolism. (http://www.afip.org/vetpath/POLA/POLA96/fish.txt)
CP	Capat	
CPG	Cowper's Gland	Cowper's or Bulbourethral Glands are situated on each side of the prostate that secrete a fluid component of the seminal fluid into the urethra. (http://www.ncbi.nlm.nih.gov)
CPS	Carpus	The joint, or the region of the joint, between the hand and the arm. The wrist.
CPT	Chloroplast	The photosynthetic organelle of higher plants.
CR	Crop	1) A plant or animal grown for it commercial value. 2) A distensible saccular diverticulum near the lower end of the esophagus of birds which serves to hold and soften food before passage into the stomach.
CRB	Cerebellum	Part of the vertebrate hindbrain, concerned primarily with somatic motor function, the control of muscle tone and the maintenance of balance.
CRI	Cervical rib	A rib which arises from the seventh cervical vertebrae (above the normal first rib). Occurs in only about 0.5% of people. May cause nerve and artery problems. (Gray's)

CODE	Site Name	Site Definition/Notes
CRN	Cornea	The transparent structure forming the anterior part of the fibrous tunic of the eye.(http://cancerweb.ncl.ac.uk/omd/)
CRP	Carapace	A dorsolateral, chitinous case covering the cephalothorax of many arthropods.
CRR	Cerebellar region	
CS	Chromosome	Any of the complex, threadlike structures seen in animal and plant nuclei during kariokinesis which carry the linearly arranged genetic material.
CSF	Cerebrospinal fluid	a clear liquid which is very similar to the liquid portion of blood(plasma) and contains various salts and products such as sodium, calcium, bicarbonate, chloride, magnesium and glucose. The purpose of the CSF is as a medium for the transport of the chemicals to and from the brain, and also to provide buoyancy and protection for the brain.
CST	Cisternae	Membrane bounded saccules of the smooth and rough endoplasmic reticulum and Golgi apparatus.
CT	Cephalothorax	the body division comprising the united head and thorax of arachnids and higher crustaceans
CTE	Ctenidium	The comb or featherlike respiratory apparatus of certain mollusks or a row of spines on the head or thorax of some fleas (MHSD)
CU	Culture Cells	
CUT	Cuticle	A layer of more or less solid substance which covers the free surface of an epithelial cell.
CV	Caudal Vertebra	Any of the small bones of the vertebral column that support the tail in vertebrates.
CVV	Cervical vertebrae	The seven segments of the vertebral column located in the neck. Synonym: vertebrae cervicales (http://cancerweb.ncl.ac.uk/omd/)
CVM	Calvarium	One of the bones that makes up the vault of the skull (in humans these are the frontal, 2 parietals, occipital and 2 temporals). (Gray's)
CVX	Cervix	The narrow outer end of the uterus
CX	Caudex	The main axis of a plant, including stem and roots.
CY	Cytosol	The fluid portion of the cytoplasm, that is, the cytoplasm exclusive of organelles and membranes.
CYT	Cytoplasm	The organized complex of inorganic and organic substances external to the nuclear membrane of a cell and including the cytosol and membrane-bound organelles (as mitochondria or chloroplasts)
D		
DG	Digestive Gland	Any structure that secretes digestive enzymes.

CODE	Site Name	Site Definition/Notes
DGT	Digit	One of the terminal divisions of a limb appendage; a finger or toe. (http://cancerweb.ncl.ac.uk/omd/)
DI	Diaphragm	The thin muscle below the lungs and heart that separates the chest from the abdomen.(http://cancerweb.ncl.ac.uk/omd/)
DN	Diencephalon	In vertebrate CNS the most rostral part of the brainstem, consisting of the thalamus, hypothalamus, subthalamus and epithalamus. It is a key relay zone for transmitting information about sensation and movement and also contains (in the hypothalamus) important control mechanisms for homeostatic integration.
DO	Duodenum	
DT	Digestive Tract	The alimentary canal.
E		
EAL	Ear leaf (Corn)	
EAR	Ear	In animals, the organ of hearing; the external ear. (http://cancerweb.ncl.ac.uk/omd/) In plants, the common term used to describe the female inflorescence, or spike, in corn and other cereals with compact spikelets. (ECOTOX)
EC	Excreta	Excretion products; waste materials excreted by the body.
ED	Endometrium	The tissue lining the uterus, it is sloughed off during the woman's menstrual period, and afterward grows back and slowly gets thicker and thicker until the next period. (http://cancerweb.ncl.ac.uk/omd/)
EG	Egg	Ova
EF	Efferent ducts	Efferent ducts (or efferent ductules or ductuli efferentes) connect the rete testis with the initial section of the epididymis. (http://en.wikipedia.org/wiki)
EL	Elytrom	
EM	Embryo	1) In animals, those derivatives of the fertilized ovum that eventually become the offspring during their period of most rapid development. 2) In plants, the element of the seed that develops into a new individual.
EMS	Embryonic shoot cells	
EN	Entrails	
EO	Endothelium	A layer of epithelium that lines the heart, blood vessels (ENDOTHELIUM, VASCULAR), lymph vessels (ENDOTHELIUM, LYMPHATIC), and the serous cavities of the body.
EP	Endoplasmic Reticulum	A vacuolar system of the cytoplasm in differentiated cells that functions in protein synthesis and sequestration.

CODE	Site Name	Site Definition/Notes
EPD	Epididymis	A system of ductules emerging posteriorly from the testis that holds sperm during maturation and that forms a tangled mass before uniting into a single coiled duct which is continuous with the vas deferens
EPF	Extrapallial fluid	The fluid enclosed between the inner surface of the shell and mantle of a mollusc. (http://www.biolbull.org/content/143/3/506.full.pdf)
ER	Erythrocyte	A type of blood cell that contains a nucleus in all in the cytoplasm also known as red blood cell (RBC) or corpuscle.
ES	Esophagus	The tubular portion of the alimentary canal interposed between the pharynx and the stomach.
ET	Edible Tissue	
EU	Egg Cuticle	
EV	Exuviae	
EX	Exoskeleton	The external supportive covering of certain invertebrates, such as arthropods.
EY	Eye	
EYS	Eyestalk	One of the moveable peduncles bearing an eye at the tip in a decapod crustacean (Merriam-Webster)
EZ	Enzyme	Any of a group of catalytic proteins that are produced by living cells and that mediate and promote the chemical processes of life without themselves being altered or destroyed.
F		
F1	F1 Generation	The immediate offspring of a parent generation
FAC	Face	The part of the head in which the eyes, cheeks, nose, and mouth are situated. (Gray's)
FB	Frontal Bone	Of or pertaining to the forehead or the anterior part of the roof of the brain case; as, the frontal bones.
FBR	Forebrain	The anterior of the three primary divisions of the developing vertebrate brain or the corresponding part of the adult brain that includes especially the cerebral hemispheres, the thalamus, and the hypothalamus and that especially in higher vertebrates is the main control center for sensory and associative information processing, visceral functions, and voluntary motor functions -- called also prosencephalon. (Webster's)
FC	Feces	The waste material eliminated by the gastrointestinal tract.
FD	Frond	The leaf of a palm or fern.
FE	Feathers	

CODE	Site Name	Site Definition/Notes
FG	Foregut	The anterior part of the alimentary canal of a vertebrate embryo that develops into the pharynx, esophagus, stomach, and extreme anterior part of the intestine
FI	Fin	A paddle-shape appendage on fish and other aquatic animals that is used for propulsion, balance, and guidance.
FIB	Fibula	A long bone in the lower leg that is adjacent to the tibia. The fibula supports approximately 1/6th of the body weight and produces the lateral (outer) prominence of the ankle. (http://cancerweb.ncl.ac.uk/omd/)
FL	Fillet	A boneless slice of meat or fish.
FLB	Flower Bud	
FLW	Flower/ Inflorescence	
FM	Femur	The proximal bone of the hind or lower limb in vertebrates.
FMD	Femur diaphysis	The shaft of the femur. (Gray's)
FME	Femur ephiphisis	The part of a femur where bone growth occurs. (http://cancerweb.ncl.ac.uk/)
FMM	Femur metaphysis	A conical section of the femur between the epiphysis (area where growth occurs) and diaphysis (the shaft of the bone). (Gray's)
FO	Foot	
FOD	Fodder	
FOL	Foliage	The aggregate of leaves of one or more plants.(MW on-line)
FOR	Forage	A vegetable food for domestic animals.
FP	Fatpad	
FR	Fruit	A fully matured plant ovary with or without other floral or shoot parts united with it at maturity.
FRL	Forelimb	The fore limb of an animal; anything resembling an arm. (http://cancerweb.ncl.ac.uk/omd/)
FX	Frontal cortex	Cortex of the frontal lobe of the cerebral hemisphere, originally, the entire cortical expanse anterior to the central sulcus, including the agranular motor and premotor cortex (Brodmann's areas 4 and 6), the dysgranular cortex (area 8), and the granular frontal (prefrontal) cortex anterior to the latter, now more often refers to the granular frontal (prefrontal) cortex.
G		
GA	Granum (plural grana)	Stack of thylakoids in the chloroplast, containing the light harvesting system and the enzymes responsible for the light dependent reactions of photosynthesis. (http://cancerweb.ncl.ac.uk/omd/)

CODE	Site Name	Site Definition/Notes
GB	Gall Bladder	A hollow, muscular organ in vertebrates which receives dilute bile from the liver, concentrates it, and discharges it into the duodenum.
GF	Green forage	
GG	Green Gland	(antennal gland) An excretory organ in the cephalon of adult crustaceans
GI	Gills	The respiratory organ of water-breathing animals. (Also branchia)
GC	Gland Complex	
GL	Ganglion	A mass of nerve tissue containing nerve cells external to the brain or spinal cord.
GMT	Germ tube	
GNP	Genital papillae	Tactile or sensory organs located near genitalia as raised bumps or nipples on a tissue surface
GNT	Gnathopod	A gnathopodite or maxilliped which is any leglike appendage of a crustacean, when modified wholly, or in part, to serve as a jaw, especially. (http://cancerweb.ncl.ac.uk/omd/)
GO	Gonads	A primary sex gland; an ovary or a testis.
GOL	Golgi Apparatus	A cellular organelle that is part of the cytoplasmic membrane system; it is composed of regions of stacked cisternae and it functions in secretory processes.
GP	Gills+Palps	
GPD	Gonopodium	The pelvic fins of male fish that have been converted into genital organs. (http://www.exotictropicals.com/encyclo/information/aquarium_glossary.htm)
GR	Grain	
GS	Germinated seed	
GT	Gastrointestinal Tract	The stomach and intestine.
GU	Gut	The intestine. The embryonic, digestive tube.
GY	Gametophyte	A plant, or phase of a plant's life cycle, that bears gametes. (http://cancerweb.ncl.ac.uk/omd/)
GZ	Gizzard	The muscular portion of the stomach of most birds where food is ground with the aid of ingested pebbles.
H		
HA	Hair	A threadlike outgrowth of the epidermis of animals. Also: fur, wool
HYA	Hyalinocyte	A type of nongranular leukocyte (http://cancerweb.ncl.ac.uk/omd/).

CODE	Site Name	Site Definition/Notes
HAP	Haptonema	Filament extending between the paired flagella of certain unicellular algae (haptophytes). Supported by 6 or 7 microtubules (not in an axoneme like array) and apparently used for capturing prey in a manner analogous to the axopodia of heliozoa.
HAY	Hay	Hay
HB	Hindbrain	The posterior of the three principal divisions of the brain, including the epencephalon and metencephalon. Sometimes restricted to the epencephalon only.(http://cancerweb.ncl.ac.uk/omd/)
HC	Hypocotyl callus cells	
HD	Head	
HDG	Hindgut	The posterior part of the alimentary canal. (Webster's)
HDK	Head Kidney (Pronephros)	The definitive excretory organ of primitive fishes. In the embryos of higher vertebrates, a vestigial structure consisting of a series of tortuous tubules emptying into the cloaca by way of the primary nephric duct; in the human embryo, the pronephros is a very rudimentary and temporary structure, followed by the mesonephros and still later by the metanephros. (http://cancerweb.ncl.ac.uk/omd/)
HE	Heart	
HIP	Hippocampus	A curved elongated ridge that extends over the floor of the descending horn of each lateral ventricle of the brain and consists of gray matter covered on the ventricular surface with white matter. (Webster's)
HKG	Husk and grain	
HL	Hemolymph	The circulating fluid of the open circulatory systems of many invertebrates.
HLB	Hindlimb	Either of two extremities of four-footed non-primate land animals. It usually consists of a femur, tibia and fibula, tarsals, metatarsals, and toes. (http://cancerweb.ncl.ac.uk/omd/)
HM	Humerus	The proximal bone of the forelimb in vertebrates.
HMC	Hemocyte	A cellular element of blood, especially in invertebrates.
HMG	Hemoglobin	Four subunit globular oxygen carrying protein of the erythrocytes of vertebrates and some invertebrates. (http://cancerweb.ncl.ac.uk/omd/). Also spelled Haemoglobin.
HO	Honey	The sweet, viscous secretion composed principally of levulose and dextrose that is deposited in the honeycomb by the honeybee.
HOD	Hyoid	Of or pertaining to the bony or cartilaginous arch which supports the tongue (Gray's).

CODE	Site Name	Site Definition/Notes
HP	Hepatopancreas	A gland in crustaceans and certain other invertebrates that combines the digestive functions of the liver and pancreas of vertebrates.
HPG	Hypopharyngeal gland	Gland used in the production of brood food. (http://www.ncbka.org.uk/BeeAnatomy26204.htm)
HSK	Husk	The external covering or envelope of certain fruits or seeds; glume; hull; rind (http://cancerweb.ncl.ac.uk/omd/)
HTC	Heterocyst	Clear, thick-walled cell occurring at intervals along the filament of certain blue-green algae.
HTG	Hatching gland	A transversely oriented set of cells located deep to the enveloping layer on the pericardial membrane, especially during the pharyngula period because of the brightly refractile cytoplasmic granules containing hatching enzymes in the cells. (http://www.purethrottle.com/briancoad/Dictionary/H.html)
HY	Hypothalamus	The floor of the third brain ventricle; site of production of several substances that act on the adenohypophysis.
HYA	Hypha	Also known as Hyphae or Hyphal. One of the threads that make up the mycelium of a fungus, increase by apical growth, and are coenocytic or transversely septate. (Webster's)
HYD	Hypodermis	1. The outermost cell layer of the cortex of plants, aka exodremis. 2. The layer of cells that underlies and secretes the cuticle in arthropods and other invertebrates.
HYP	Hypocotyl	The portion of the embryonic plant axis below the cotyledon.
I		
IB	Interparietal Bone	Between the parietal bones or cartilages; as, the interparietal suture.
IE	Ileum	The last portion of the small intestine that communicates with the large intestine.
IL	Ilium	The dorsal, upper, and largest one of the three bones composing either lateral half of the pelvis.
IN	Intestinal Tract	
INC	Inclusions	The residual elements of the cytoplasm that are metabolic products of the cell e.g. pigment granules or crystals.
IR	Interrenal gland	
IT	Internode	The interval between two nodes, as on a stem or along a nerve fiber.
J		
JA	Jaw	Either of two bones forming the skeleton of the mouth of vertebrates. Also known as mandible.

CODE	Site Name	Site Definition/Notes
JE	Jejunum	The section of the small intestine that comprises the first two fifths beyond the duodenum and that is larger, thicker-walled, and more vascular and has more circular folds than the ileum. (Webster's)
JV	Juvenile	Physiologically immature or undeveloped lifestage.
K		
KI	Kidney	Either of a pair of organs involved with the elimination of water and waste products from the body of vertebrates.
KIL	Kidney, left	Either of a pair of organs involved with the elimination of water and waste products from the body of vertebrates.
KIR	Kidney, right	Either of a pair of organs involved with the elimination of water and waste products from the body of vertebrates.
KR	Kernal	A whole grain or seed of a cereal plant, such as corn or barley.
L		
LAL	Lateral line	A system of sensory organs in fishes and aquatic amphibians consisting of a series of cells on the head and along the sides of the body that detect pressure changes and vibrations, (Collins English Dictionary – Complete and Unabridged, HarperCollins Publishers, 2003, http://www.thefreedictionary.com/lateral+line+system)
LAM	Laminae	The expanded part of a foliage leaf
LC	Leaf chloroplast	A type of cell plastid occurring in the green parts of plants, containing chlorophyll pigments, and functioning in photosynthesis and protein synthesis.
LD	Lipid, Fat	One of a class of compounds which contain long-chain aliphatic hydrocarbons and their derivatives; includes waxes, fats, and derived compounds.
LE	Leaf /Needle	
LEI	Leaf Index	
LEN	Lens	
LEO	Leaf, Old	
LEU	Leukocytes	Also known as white blood cells. White corpuscles in the blood. They are spherical, colorless and nucleated masses involved with host defenses. (http://cancerweb.ncl.ac.uk/omd/)
LEY	Leaf, Young	
LG	Leg	
LGT	Ligament	Shiny, flexible bands of fibrous tissue connecting together articular extremities of bones or the hinge joint in bivalves. They are pliant, tough, and inextensile. (http://www.ncbi.nlm.nih.gov and ECOTOX)

CODE	Site Name	Site Definition/Notes
LI	Liver	A large vascular gland in the body of vertebrates consisting of a continuous parenchymal mass covered by a capsule; secretes bile, manufactures certain blood proteins and enzymes, and removes toxins from the systemic circulation.
LIG	Leiblein's Gland	Leiblein's Gland is a long, thin, brownish organ in gastropods which produces hydrolytic enzymes. (http://webs.lander.edu/rsfox/invertebrates/busycon.html)
LIM	Liver microsomes	In the hepatocyte, any of the vesicular fragments of endoplasmic reticulum formed after disruption and centrifugation of cells. (Gray's)
LIN	Large intestine	The more terminal division of the vertebrate intestine that is wider and shorter than the small intestine, typically divided into cecum, colon, and rectum, and concerned especially with the resorption of water and the formation of feces
LIP	Lip	Either of the two fleshy folds which surround the orifice of the mouth. (Websters Dictionary)
LIT	Litters	Offspring
LM	Limb	1) An extremity or appendage used for locomotion or prehension. 2) A large primary tree branch
LMP	Lymphocyte	White cell of the blood that are derived from stem cells of the lymphoid series. (http://cancerweb.ncl.ac.uk/omd/)
LMV	Lumbar vertebrae	The vertebrae, usually five in number, located in the lumbar region of the back. Synonym: vertebrae lumbales. (http://cancerweb.ncl.ac.uk/omd/)
LMW	Low Molecular Weight Biomolecules (e.g., amino acids).	Specifically: Amino acids, Organic acids and monosaccarides (ECOREF#89645)
LN	Lymph node	Small, bean-shaped organs located throughout the lymphatic system. The lymph nodes store special cells that can trap cancer cells or bacteria that are traveling through the body in lymph. Also called lymph glands.
LP	Labial Palps	1) Either of a pair of fleshy appendages on either side of the mouth of certain bivalve mollusks. 2) A jointed appendage attached to the labium of certain insects.
LU	Lungs	Either of the paired air-filled sacs which function as organs of respiration.
LV	Left ventricle	The muscular chamber of the heart which accepts blood from the left atrium and ejects it into the aorta to the systemic circulation. (http://www.graylab.ac.uk/cgi-bin/omd?left+ventricle)

CODE	Site Name	Site Definition/Notes
LYM	Lymph	A clear yellowish, slightly alkaline, coagulable fluid, containing white blood cells in a liquid resembling blood plasma, that is derived from the tissues of the body and conveyed to the bloodstream by the lymphatic vessels (http://dictionary.reference.com/browse/lymph)
LYS	Lysosome	A specialized cell organelle surrounded by a single membrane and containing a mixture of hydrolytic (digestive) enzymes.
M		
MA	Mantle	An enveloping layer, as the external body wall lining the shell of many invertebrates, or the external meristematic layers in a stem apex.
MB	Muscle+Bone	
MBR	Midbrain	The part of the brain above the pons and below the thalamus, it is the uppermost part of the brainstem, and is involved in basic, unconscious body function. (Gray's)
MC	Microsome	A fragment of the endoplasmic reticulum. A minute granule of protoplasm.
MDP	Madreporite	Madreporite is a perforated or porous body that is situated at the distal end of the stone canal in echinoderms (http://www.merriam-webster.com)
ME	Meristem (apical or axillary)	Meristem - Formative plant tissue composed of undifferentiated cells capable of dividing and giving rise to other meristemic cells as well as specialized cell types.
MES	Mesentery	The membranes, or one of the membranes (consisting of a fold of the peritoneum and enclosed tissues), which connect the intestines and their appendages with the dorsal wall of the abdominal cavity. The mesentery proper is connected with the jejunum and ileum, the other mesenteries being called mesoccum, mesocolon, mesorectum, etc. (http://cancerweb.ncl.ac.uk/omd/)
MI	Midgut and Midgut Gland	The middle portion of the digestive tube in vertebrate embryos.
MIT	Mitochondria	Minute cytoplasmic organelles in the form of spherical granules, short rods, or long filaments found in almost all living cells.
MK	Milk, lactating females	
ML	Melanophore	A eumelanin (a type of melanin) containing cell especially of fishes, amphibians, and reptiles. (www.merriam-webster.com/dictionary and en.wikipedia.org/wiki)
MM	Mammary Tissue	
MNS	Manus (carpus + forefoot)	The distal segment of the forelimb, including the carpus and forefoot or hand. (http://cancerweb.ncl.ac.uk/omd/)
MO	Mucous	A viscid fluid secreted by mucus glands

CODE	Site Name	Site Definition/Notes
MOB	Medulla oblongata	The lowest subdivision of the brainstem, immediately adjacent to the spinal cord. Houses important cardiac and respiratory regulatory centres.
MOM	Mother cells, pollen	
MPG	Macrophage	The relatively long-lived phagocytic cell of mammalian tissues that are derived from blood monocytes. (http://www.ncbi.nlm.nih.gov)
MPT	Malpighian tubule	Malpighian tubules, part of the excretory and osmoregulatory system, are slender tubes normally found in the posterior regions of arthropod alimentary canals. Each tubule consists of a single layer of cells that is closed off at the distal end with the proximal end joining the alimentary canal at the junction between the midgut and hindgut. (http://en.wikipedia.org/wiki)
MR	Membrane	A thin layer of tissue surrounding a part of the body, separating adjacent cavities, lining cavities, or connecting adjacent structures.
MRC	Motor cortex	Area of the frontal lobe concerned with primary motor control. It lies anterior to the central sulcus. (http://cancerweb.ncl.ac.uk/omd/)
MS	Mesenteric Lymph Node	
MSI	Mucosa of the Small Intestines	The mucous coat of the small intestine.
MSC	Mesencephalon	The middle segment of the brain; the midbrain.
MT	Multiple Tissue/ Organs	Aquatic code. Used when multiple sites are coded for one record. The individual sites are reported as a REMARK. This code will be changed to MUL at a later date.
MTC	Metacarpus	The part of the hand or forefoot that contains the metacarpals.
MTM	Mentum	The front median plate of the labium in insects (http://cancerweb.ncl.ac.uk/omd/)
MU	Muscle	A tissue composed of cells containing contractile fibers; three types are smooth, cardiac, and skeletal.
MUL	Multiple Sites	
MV	Microvilli	One of the filiform processes that form a brush border on the surfaces of certain specialized cells, such as intestinal epithelium.
MYC	Mycellium	Mass of interwoven filamentus hyphae that forms especially the vegetative portion of the thallus of a fungus.
MYM	Myometrium	Uterine smooth muscle.(http://cancerweb.ncl.ac.uk/omd/)
N		
NAC	Nucleus accumbens	The largest neuronal nucleus in the septal region of the diencephalon in the brain. (Gray's)

CODE	Site Name	Site Definition/Notes
NAL	Nail	A horny sheath protecting the upper end of each finger and toe of humans and most other primates. (http://www.merriam-webster.com/dictionary/nail)
NB	Nasal Bone	Either of two small elongated rectangular bones that together form the bridge of the nose.
NC	Nerve Cord	a hollow tube that runs beneath the dorsal surface of the animal above the notochord (the principle nerve cord in the invertebrates, by contrast, is almost always located near the ventral surface
ND	Nodule, root	A bulbous enlargement found on roots of legumes and certain other plants, whose formation is stimulated by symbiotic, nitrogen-fixing bacteria that colonize the roots.
NE	Nervous Tissue	The nerve cells and neuroglia of the nervous system.
NEM	Neuromasts	Neuromasts consist of hair cells, supporting cells and mantle cells with a gelatinous cupula overlying the apical surface of the sensory macula in fish. Neuromasts are classified as superficial, found across the body surface or canal, found along the lateral line. (David H. Evans; James B. Claiborne. 2005. The Physiology of Fishes. CRC Press)
NG	Nasal Gland	
NI	Nipple	The protuberance through which milk is drawn from the breast or mamma; the mammilla; a teat; a pap.
NK	Neck	A constricted portion, such as the part connecting the head and trunk of the body.
NL	Needle	A slender-pointed leaf, as of the firs and other evergreens.
NOC	Notochord	An axial mesodermal tissue found in embryonic stages of all chordates and protochordates, often regressing as maturity is approached. Typically a rod shaped mass of vacuolated cells. It lies immediately below the nerve cord and may provide mechanical strength to the embryo.(http://cancerweb.ncl.ac.uk/omd/)
NR	Not Reported	
NSE	Nose	The part of the face that bears the nostrils and covers the anterior part of the nasal cavity. (http://www.merriam-webster.com/dictionary/nose)
NT	Neural Tube	A tube of ectodermal tissue in an embryo that will give rise to the Central Nervous system, including the Spinal Cord and the Brain. Lumen within the neural tube is called neural canal which gives rise to the central canal of the spinal cord and the ventricles of the brain. (http://www.ncbi.nlm.nih.gov)
NU	Nuclei	

CODE	Site Name	Site Definition/Notes
NP	Nuptial pad	In Ranidae (frogs), one of the horny or thickened pads on each thumb of the male. They are especially prominent during the mating season, when they assist the male in grasping the female during the sexual embrace, in which the male extrudes sperm over the eggs as these are ejected by the female. (http://www.encyclopedia.com/doc/1O8-nuptialpad.html)
NTR	Nectar	A sweet liquid that is secreted by the nectaries of a plant and is the chief raw material of honey, (http://www.merriam-webster.com/dictionary/nectar)
NVL	Navel	A mark or depression in the middle of the abdomen; the umbilicus. (Gray's)
NY	Nymph	Any of various immature insects; especially: a larva of an insect with incomplete metamorphosis that differs from the adult especially in size and in its incompletely developed wings and genitalia.
O		
OC	Oocyte	An egg before the completion of maturation
OCL	Occipital lobe	The posterior lobe of each cerebral hemisphere, having the shape of a three-sided pyramid and containing the visual center of the brain. (The American Heritage Stedman's Medical Dictionary, 2004)
OD	Oviduct	A tube that serves to conduct ova from the ovary to the exterior or to an intermediate organ such as the utersu (Fallopian tube)
OF	Orifice	An opening, or aperture, (as a vent, mouth, or hole) through which something may pass (Webster's)
OG	Organ	A differentiated structure of an organism composed of various cells or tissues and adapted for a specific function.
OL	Olfactory	Pertaining to olfaction, or the sense of smell.
OPN	Optic Nerve	The 2nd cranial nerve. The optic nerve conveys visual information from the retina to the brain. The nerve carries the axons of the retinal ganglion cells which sort at the optic chiasm and continue via the optic tracts to the brain. The largest projection is to the lateral geniculate nuclei; other important targets include the superior colliculi and the suprachiasmatic nuclei. Though known as the second cranial nerve, it is considered part of the central nervous system. (http://www.ncbi.nlm.nih.gov/)
OPR	Operculum	
OR	Organelle	A specialized subcellular structure, such as mitochondrion, having a special function.
OS	Osphradium	in Littorina; an organ capable of sensing chemical changes in the environment

CODE	Site Name	Site Definition/Notes
OT	Opisthaptor	The posterior and usually complex adhesive organ of a monogenetic trematode. (http://medical.merriam-webster.com/medical)
OTO	Otoliths	A calcareous concretion on the end of a sensory hair cell in the vertebrate ear and in some invertebrates.
OTV	Otic vesicle	One of the paired sacs of invaginated ectoderm that develop into the membranous labyrinth of the internal ear. Also: acoustic vesicle, auditory vesicle. (Medical Dictionary Copyright, 2006 Lippincott Williams and Wilkins. http://www.medilexicon.com/medicaldictionary.php?t=98435)
OV	Ovaries	A glandular organ that produces hormones and give rise to ova in female vertebrates.
OVF	Ovarian follicle	An oocyte-containing structure in the cortex of the ovary. (http://www.ncbi.nlm.nih.gov)
OVP	Ovipositor	A specialized organ for depositing eggs. An ovipositor is a tubular structure at the end of the abdomen, found in many female insects and some fishes (http://www.merriam-webster.com and http://wordnetweb.princeton.edu)
OVT	Ovotestis	A hermaphroditic reproductive organ that produces both sperm and eggs, found in certain gastropods. (The American Heritage Dictionary of the English Language, Fourth Edition, 2000)
P		
PA	Palps	Any of various sensory, usually fleshy appendages near the oral aperture of certain invertebrates.
PAN	Panicle	A branched or compound raceme in which the secondary branches are often racemose as well.
PAT	Parathyroid gland	Two small paired endocrine glands in the region of the thyroid gland. They secrete parathyroid hormone and are concerned with the metabolism of calcium and phosphorus. (http://cancerweb.ncl.ac.uk/omd/)
PB	Pseudobranch	
PBD	Projectile body	A body projected through cell membranes.
PC	Pyloric ceca	1) One of the tubular pouches that open into the vertriculus of an insect. 2) One of the paired tubes having lateral glandular diverticula in each ray of a starfish. 3) One of the tubular pouches that open from the pyloric end of the stomach into the alimentary canal of most fishes.
PCL	Peduncle	A peduncle is a stalk bearing a flower or flower cluster or a fructification. (http://www.merriam-webster.com)

CODE	Site Name	Site Definition/Notes
PD	Pod	A leguminous fruit of the pea family (Fabaceae), including beans, lentils and peanuts. (http://cancerweb.ncl.ac.uk/omd/)
PDG	Pedal ganglion	The pedal ganglia are in the base of the foot of bivalves (http://www.britannica.com/ebc/article-35747)
PE	Penis	The male organ of copulation in vertebrates. Also known as phallus.
PEP	Pecten epipharyngis	
PES	Petiole and Stem	Both the a slender stem that supports the blade of a foliage leaf and the main trunk of a plant or a primary plant axis that develops buds and shoots instead of roots
PF	Pseudofeces	
PG	Prostate Gland	A gland in the male which surrounds the neck of the bladder and the urethra. The prostrate contributes to the seminal fluid.
PGL	Preening gland	A relatively large, compact bilobed secretory organ located at the base of the tail (uropygium) of most birds having a keeled sternum. Also known as oil gland or uropygial gland. (McGraw-Hill)
PHG	Pheromone gland	A gland that secretes a chemical stimulant/attractant that is released into the surrounding environment, either air or water.
PHL	Phalanges	The finger bones (http://cancerweb.ncl.ac.uk/omd/)
PHO	Phloem	A tissue in a vascular plant that functions primarily in transporting organic food materials (e.g. sucrose) from the photosynthetic organ (leaf) to all the parts of the plant. (http://www.biology-online.org/dictionary/Phloem)
PI	Pituitary Gland	(hypophysis) An epithelial body located at the base of the brain. Consists of two lobes. Secretes hormones.
PL	Plasma	The fluid portion of blood or lymph.
PLA	Platelet	A discoid cell (3m diameter) found in large numbers in blood, important for blood coagulation and for haemostasis by repairing breaches (small breaks) in the walls of blood vessels. (http://cancerweb.ncl.ac.uk/omd/)
PLC	Placenta	1) A vascular organ that unites the fetus to the wall of the uterus. 2) A plant surface bearing a sporangium.
PLL	Pellicle	The outer membrane of protozoans.

CODE	Site Name	Site Definition/Notes
PLN	Popiteal nodes	Two groups of nodes located in the popliteal fossa: the superficial popliteal lymph nodes, located around the termination of the small saphenous vein, that drain the skin of the back of the leg and lateral side of the foot; and the deep popliteal lymph nodes, located around the popliteal vessels, that drain the superficial group, the deep structures of the leg, and the knee joint. Also, Popiteal lymph node, nodi lymphatic popliteales
PLP	Pulp	The soft, succulent part of a fruit usually composed of mesocarp (MW)
PLT	Palate	The roof of the mouth. (http://cancerweb.ncl.ac.uk/omd/)
PLV	Pelvis	The pelvis is a basin shaped cavity bordered by the pelvic girdle and sacrum, containing and protecting the bladder, rectum and reproductive organs.(http://cancerweb.ncl.ac.uk/omd/)
PTL	Petal	One of the often brightly colored leaflike outer parts of a flower. (http://www.merriam-webster.com/dictionary/petal)
PLY	Polysaccharide	Polymers of (arbitrarily) more than about ten monosaccharide residues linked glycosidically in branched or unbranched chains. (http://cancerweb.ncl.ac.uk/omd/)
PM	Pons + Medulla	A rounded eminence off the ventral surface of the brainstem (pons) and the lowest subdivision of the brainstem, immediately adjacent to the spinal cord (medulla). (Gray's)
PNG	Pineal gland	A small, flat gland found within the brain which produces the hormones melatonin and serotonin.(http://cancerweb.ncl.ac.uk/omd/)
PSL	Pistil	A single carpel or group of fused carpels usually differentiated into an ovary, style, and stigma. (http://www.merriam-webster.com/dictionary/pistil)
PO	Pollen, pollen grain	
PPD	Parapodium	Plural - Parapodia. 1) Either of a pair of fleshy lateral processes borne by most segments of a polychaete worm. 2) a lateral expansion on each side of the foot usually forming a broad swimming organ in some gastropods (www.m-w.com)
PPG	Preputial gland	A small scent gland in the human male which secretes the smegma. Also known as Tyson's gland. (McGraw-Hill)
PR	Proventriculus	1) A sac anterior to the gizzard in earthworms. 2) The true stomach of a bird, usually separated from the gizzard by a constriction.

CODE	Site Name	Site Definition/Notes
PRC	Pericardium	A double membranous sac which envelops and protects the heart. The layer in contact with the heart is referred to as the visceral layer, the outer layer in contact with surrounding organs is the parietal pericardium. In between the two layers is the pericardial space. (http://cancerweb.ncl.ac.uk/omd/)
PRF	Particulate fraction	
PRG	Progeny	Offspring, descendants
PRO	Protein	Any of a group of complex organic compounds which contain carbon, hydrogen, oxygen, nitrogen and usually sulphur, the characteristic element being nitrogen and which are widely distributed in plants and animals. Proteins, the principal constituents of the protoplasm of all cells, are of high molecular weight and consist essentially of combinations of a amino acids in peptide linkages. (http://cancerweb.ncl.ac.uk/omd/)
PRT	Peritoneum	also peritoneum. The smooth serous membrane which lines the cavity of the abdomen, or the whole body cavity when there is no diaphragm, and, turning back, surrounds the viscera, forming a closed, or nearly closed sac (Grey on-line medical Dictionary)
PS	Pancreas	A composite gland in most vertebrates that produces and secretes digestive enzymes, as well as at least two hormones, insulin and glucagon.
PSG	Plastglobuli	Globules found in plastids, containing principally lipid, including plastoquinone. (http://cancerweb.ncl.ac.uk/omd/)
POS	Pod + Seed	
PT	Petioles	The stem which supports the blade of a leaf.
PTB	Parietal Bone	The side bone of the skull.
PTG	Parotid gland	A salivary gland situated in front of and below the ear. (Gray's)
PTU	Plant, Unspecified	
PU	Pollen tube	The tube produced by the wall of a pollen grain which enters the embryo sac and provides a passage through which the male nuclei reach the female nuclei.
PV	Perivitelline space	The space between the vitelline membrane and the zona pellucida, appearing in an ovum immediately following fertilization. (http://cancerweb.ncl.ac.uk/omd/)
PX	Pharynx	A chamber at the oral end of the vertebrate alimentary canal, leading to the esophagus.
PYR	Pyrenoid	A Small body found within some chloroplasts, that may contain protein. In green algae may be involved in starch synthesis.

CODE	Site Name	Site Definition/Notes
R		
RDL	Radiole	A radiole is a heavily ciliated feather-like tentacle found in highly organized clusters on the crowns of Canalipalpata. In a sea urchin: each of the large spines which articulate with the primary tubercles. In a fan worm or other tentaculate marine worm: each of the main branches or filaments in the branchial crown. (http://www.oxforddictionaries.com/definition/english/radiole)
RA	Radius	One of two bones which constitute the forearm. The largest portion of the radius is at the wrist joint where it articulates with the carpal bones of the hand. (http://cancerweb.ncl.ac.uk/omd/)
RAC	Rachis	Elongated axis of an inflorescence.
RAD	Radius, distal	One of two bones which constitute the forearm situated away from the point of attachment or origin. The largest portion of the radius is at the wrist joint where it articulates with the carpal bones of the hand. (http://cancerweb.ncl.ac.uk/omd/)
RB	Rib	One of the curved bones attached to the vertebral column and supporting the lateral walls of the thorax. (http://cancerweb.ncl.ac.uk/omd/)
RC	Rectum	The portion of the large intestine between the sigmoid flexure and the anus.
RD	Radicle	
RE	Retina	Light sensitive layer of the eye. (http://cancerweb.ncl.ac.uk/omd/)
RTE	rete testis	The network of channels formed at the termination of the straight seminiferous tubules in the mediastinum testis. Rete testis channels drain into the efferent ductules that pass into the caput epididymis. (http://www.ncbi.nlm.nih.gov)
RG	Rectal gland	In Sharks: rectal gland is a highly specialized organ whose only function is to pump salt
RNM	renal medulla	The centre portion of the kidney. (http://cancerweb.ncl.ac.uk/omd/)
RNC	renal cortex	The part of the kidney consisting of renal lobules in the outer zone beneath the capsule and also the lobules of the renal columns that are extensions inward between the pyramids; contains the renal corpuscles and the proximal and distal convoluted tubules. Synonym: cortex renis. (http://cancerweb.ncl.ac.uk/omd/)
RH	Rhizome	An underground horizontal stem, often thickened and tuber-shaped, and processing buds, nodes, and scale-like leaves.
RL	Root, Lateral	

CODE	Site Name	Site Definition/Notes
RLP	Root, Primary lateral	
RLS	Root, Secondary lateral	
RM	Retractor Muscle	A muscle that draws a limb or other body part toward the body.
RO	Root	The absorbing and anchoring organ of a vascular plant; it bears neither leaves nor flowers and is usually subterranean.
ROC	Root Cortex	
ROE	Root, epidermis	
ROI	Root, Inner cortex	
ROO	Root, Outer cortex	
ROS	Root, Stele	The arrangement of vascular bundles in roots
RP	Root, Primary	
RPP	Renal papilla	The apex of a renal pyramid that projects into a minor calyx; some 10 to 25 openings of papillary ducts occur on its tip, forming the area cribrosa. (Gray's)
RR	Residual, Remnant, Carcass	
RS	Root + Stem	
RT	Reproductive Tissue	
RTC	Root tip cells	
RTP	Root tips	Terminal end of a root.
RU	Radius-Ulna	
RV	Right Ventricle	The muscular chamber of the heart which accepts blood from the right atrium and pumps it through the pulmonary artery into the lungs.
RZ	Root + Rhizome	
S		
SA	Salt Gland	A compound tubular gland, located around the eyes and nasal passages in certain marine turtles, snakes, and birds, which copiously secretes a watery fluid containing a high percentage of salt.
SAP	Sap	The fluid part of a plant; specifically: a watery solution that circulates through
SB	Shell, Membrane	
SB2	Stem/Stalk, Lower Half	

CODE	Site Name	Site Definition/Notes
SC	Scale	1) A flat calcified or cornified platelike structure on the skin of most fishes and of some tetrapods. 2) The bract of a catkin.
SCH	Starch	Storage carbohydrate of plants.
SCM	Scrotum	The external pouch that in most mammals contains the testes. (Webster's)
SCP	Scapula	A large, flat, triangular bone that forms the posterior portion of the shoulder. It articulates with the clavicle (at the acromion process) and the humerus (at the glenoid). (http://cancerweb.ncl.ac.uk/omd/)
SCV	Sacral vertebrae	The segments of the vertebral column, usually five in number, that fuse to form the sacrum. Synonym: vertebrae sacrales. (http://cancerweb.ncl.ac.uk/omd/)
SD	Seed	A fertilized ovule containing an embryo which forms a new plant upon germination.
SDL	Seedling	A plant grown from a seed.
SDM	Subdermis	area below the skin
SE	Sensory Organs	
SEM	Semen	a viscid whitish fluid of the male reproductive tract consisting of spermatozoa suspended in secretions of accessory glands
SPL	Sepal	One of the specialized leaves that form the calyx of a flower. (http://www.merriam-webster.com/dictionary/sepal)
SG	Shell Gland	1) An organ that secretes the embryonic shell in many mollusks. 2) A specialized structure attached to the oviduct in certain animals that secretes the egg-shell material.
SH	Stomach	The tubular of saccular organ of the vertebrate digestive system located between the esophagus and the intestine and adapted for temporary food storage and for the preliminary stages of food breakdown.
SHF	Stomach or rumen fluid	Fluid found in the stomach or rumen
SI	Siphon	1) A tubular element in various algae. 2) A tubular structure for intake or output of water in bivalves and other mollusks. 3) The sucking-type of proboscis in many arthropods.
SIN	Small intestine	the part of the intestine that lies between the stomach and colon, consists of duodenum, jejunum, and ileum, secretes digestive enzymes, and is the chief site of the absorption of digested nutrients
SINM	Small intestine mucosa	A mucous membrane or tunica mucosa of the small intestine (Gray's)

CODE	Site Name	Site Definition/Notes
SINS	Small intestine serosa	One of the delicate membranes of connective tissue which line the internal cavities of the small intestine. (Grays)
SK	Skin, Epidermis	The external covering of the vertebrate body, consisting of two layers, the outer epidermis and the inner dermis.
SKL	Skull	The bones and cartilages of the vertebrate head which forms the cranium and the face.
SKM	Skeletal Muscle	the striated muscle of vertebrates that is under voluntary control (http://cancerweb.ncl.ac.uk/omd/)
SLL	Shell	The hard covering of an egg. A hard calcareous, outer covering on an animal body, as of bivalves and turtles. In plants see Husk and Pod. (http://cancerweb.ncl.ac.uk/omd/)
SLK	Silk	The silky styles on an ear of corn.
SLV	Stem to Leaves	
SM	Sperm	A mature male germ cell. (Spermatozoa)
SMT	Spermatheca	A sac in the female for receiving and storing sperm in fertilization; found in many invertebrates and certain vertebrates. (Seminal receptacle)
SCY	Spermatocyte	Cells of the male reproductive system that undergo two meiotic divisions to give haploid spermatids.(http://cancerweb.ncl.ac.uk/omd/)
SN	Skeleton	The hard framework of the animal body, especially the boney framework of the body of higher vertebrate animals.
SO	Shoot	The aerial portion of a plant, including stem, branches, and leaves. A new, immature growth on a plant.
SOT	Shoot tip	The tip of shoot
SP	Spleen	A blood-forming lymphoid organ of the circulatory system, present in most vertebrates. (McGraw-Hill)
SPB	Sphenoid bone	An irregularly shaped bone in front of the occipital in the base of the skull of the higher vertebrates. It is composed of several foetal bones which become united the adult. (Gray's)
SPC	Superior colliculus	Either member of the anterior and higher pair of corpora quadrigemina that together constitute a primitive center for vision—called also optic lobe, optic tectum (http://www.merriam-webster.com/medical/superior+colliculus)
SPI	Spine, Backbone	An articulated series of vertebrae forming the axial skeleton of the trunk and the tail. Spinal column, vertebral column
SPK	Spikelet	The compound inflorescence of a grass consisting of one or several bracteate spikes.

CODE	Site Name	Site Definition/Notes
SPR	Sporophyte	A multicellular sporophyte generation or phase is present in the life cycle of all land plants and in some green algae. Plants alternate between the haploid gametophyte and diploid sporophyte production. (www.wikipedia.org/wiki and ECOTOX)
SPS	Spines, protuberant structures	Various protuberant structures commonly termed spines. Examples: Cladoceran tail and head spines, neckteeth and helmets. (ECOTOX and www.wikipedia.org/wiki)
SPT	Spermatid	The haploid product of the second meiotic division in spermatogenesis. Differentiate into mature spermatozoa. (Gray's)
SR	Serum	The liquid portion that remains when blood clots spontaneously and the formed and clotting elements are removed by centrifugation; it differs from plasma by the absence of fibrinogen.
SRB	Strobilus (mega-, micro-, etc.)	1) Conelike structure made up of sporophyllus or spore-bearing leaves. 2) The cone membranes of the Pinophyta
SRC	Secretory Cell	A cell that secretes a fluid.
SS	Stem/Stalk	The organ of vascular plant that usually develops branches and bears leaves and flowers.
SSI	Serosa of the Small Intestines	Serous coat of the small intestine; the peritoneal covering of the external surface of the small intestine
SSC	Somatosensory center	Area of the brain that detects sensation relating to the body's superficial and deep parts
SSP	Stem plus Petioles	The stem and stock of the leaf that is attached to the stem.
ST	Soft Tissue	
STA	Setae	A slender, usually rigid bristle or hair. Also known as chaeta.
STB	Seminiferous tubules	Any of the tubercles of the testes which produce spermatozoa. (McGraw-Hill)
STE	Sternum or sternebrae	a compound ventral bone or cartilage of most vertebrates other than fishes that connects the ribs or the shoulder girdle or both and in humans consists of the manubrium, gladiolus, and xiphoid process -- called also breastbone (Webster's)
STG	Straw and grain	
STH	Straw and husk	
STL	Stolon	Horizontal branch from the base of a plant that produces new plants from buds at its tip or nodes.
STN	Stamen	The pollen-producing male organ of a flower that consists of an anther and a filament. (http://www.merriam-webster.com/dictionary/stamen)

CODE	Site Name	Site Definition/Notes
STM	Striatum	The corpus striatum, a part of the brain (Webster's Dictionary)
STO	Stoma	One of the minute openings in the epidermis of a plant organ (as a leaf) through which gaseous interchange takes place; also : the opening with its associated cellular structures. (http://www.merriam-webster.com/dictionary/stoma)
STR	Straw	
STV	Stover	Mature cured stalks of grain with the ears removed that are used as feed for livestock (MW online)]
SU	Stalk/Stem, Upper Half	
SV	Seminal Vesicle	A saclike, glandular diverticulum on each ductus deferens in male vertebrates; it is united with the excretory duct and serves for temporary storage of semen. Also: Sperm duct gland.
SVA	Saliva	A slightly alkaline secretion of water, mucin, protein, salts, and often a starch-splitting enzyme (as ptyalin) that is secreted into the mouth by salivary glands, lubricates ingested food, and often begins the breakdown of starches (http://www.m-w.com/dictionary/saliva)
SVG	Salivary gland	Any of the saliva-secreting exocrine glands of the oral cavity. (Gray's)
SWB	Swim Bladder	A gas-filled cavity found in the body cavities of most bony fishes; has various functions in different fishes, acting as a float, a lung, a hearing aid, and a sound producing organ.
SX	Submaxillary Gland	(Submandibular gland) A large seromucous or mixed salivary gland located below the mandible on each side of the jaw.
T		
TA	Tail	1) The caudal fin of a fish or aquatic mammal. 2) The usually slender appendage that arises immediately above the anus in many vertebrates and contains the caudal vertebrae.
TAK	Thylakoid	Membranous cisternae of the chloroplast, found as part of the grana and also as single cisternae interconnecting the grana. Contain the photosynthetic pigments, reaction centres and electron transport chain. Each thylakoid consists of a flattened sac of membrane enclosing a narrow intra thylakoid space. (http://cancerweb.ncl.ac.uk/omd/)
TB	Tibia	The larger of the two leg bones, articulating with the femur, fibula, and talus
TBC	Tubercules	A small knoblike prominence.
TCH	Trachea	The windpipe. A fibrocartilaginous tube lined with mucous membrane passing from the larynx to the bronchi. (http://cancerweb.ncl.ac.uk/omd/)

CODE	Site Name	Site Definition/Notes
TEL	Testicle, left	The testicle located on the left side of the body
TER	Testicle, right	The testicle located on the right side of the body
TCV	Thoracic vertebrae	The segments of the vertebral column, usually twelve, which articulate with ribs to form part of the thoracic cage. Synonym: vertebrae thoracicae. (http://cancerweb.ncl.ac.uk/omd/)
TD	Transudate	A fluid that passes through the pores or interstices of a membrane.
TE	Testes	The male reproductive glands in vertebrates; after sexual maturity, the source of sperm and hormones
TF	Tuber Flesh	Tuber = The enlarged end of a rhizome in which food accumulates, as is the potato.
TG	Thigh muscle	Thigh - The upper part of the leg, from the pelvis to the knee.
TH	Thorax	1) The chest; the cavity of the mammalian body between the neck and the diaphragm, containing the heart, lungs, and mediastinal structures. 2) The middle of three principal divisions of the body of certain classes of arthropods.
TI	Tissue	An aggregation of cells more or less similar morphologically and functionally.
TIL	Tillers	A shoot that develops from an axillary or adventitious bud at the base of a stem.
TK	Trunk	the main stem of a tree apart from limbs and roots or the human or animal body apart from the head and appendages
TKK	Trunk Kidney	The posterior trunk kidney is composed of numerous nephrons surrounded by interstitial lymphoid tissue. Right and left sides of the trunk kidney are fused and form a deep saddle which occupies the space between the two chambers of the gas bladder. (http://aquaticpath.umd.edu/fhm/renal.html)
TLE	Trifoliolate Leaf/Leaves	A leaf consisting of three leaflets.
TLI	Thalli	Thallus = A plant body that is not differentiated into special tissue systems or organs and may vary from a single cell to a complex, branching multicellular structure.
TLM	Thalamus	Either of two large ovoid masses, consisting chiefly of gray substance, situated one on each side of and forming part of the lateral wall of the third ventricle. (Grey's on-line dictionary)
TLN	Telencephalon	The anterior subdivision of the embryonic forebrain or the corresponding part of the adult forebrain that includes the cerebral hemispheres and associated structures. (Webster's)

CODE	Site Name	Site Definition/Notes
TLS	Talus	the human tarsal bone that bears the weight of the body and that together with the tibia and fibula forms the ankle joint (Webster's)
TM	Tarsus-Metatarsus	
TMR	Tumor	An abnormal mass of tissue that results from excessive cell division that is uncontrolled and progressive, also called a neoplasm. Tumours perform no useful body function. They may be either benign (not cancerous) or malignant.
TN	Tentacles	Any of various elongate, flexible processes with tactile, prehensile, and sometimes other functions, and which are borne on the head or about the mouth of many animals.
TO	Tongue	A muscular organ located on the floor of the mouth of most vertebrates which may serve various functions, such as taking and swallowing food or tasting or as a tactile organ or sometimes as a prehensile organ.
TOP	Tops (Plant)	
TOR	Torso	Portion of the body excluding the head and limbs; trunk
TP	Tuber Peeling	
TR	Tarsus	The instep of the foot consisting of the calcaneus, talus, cuboid, navicular, medial, intermediate, and lateral cuneiform bones.
TRD	Tear duct	also known as harderian, glandula lacrimalis, Lacrimal or lachrymal gland, a gland on the inner side of the orbit of many animals which have a third eyelid, or nictitating membrane. (http://cancerweb.ncl.ac.uk/omd/)
TS	Thymus	A lymphoid organ in the neck or upper thorax of all vertebrates; it is prominent in early life and is essential for normal development of the circulating pool of lymphocytes.
TSC	Thymus cortex	The outer layer of an organ or other body structure, as distinguished from the internal substance, in this case of the Thymus. (Grays)
TSL	Tassel	The terminal male inflorescence of some plants and especially corn.
TSM	Thymus medulla	The inner portion of an organ, in this case of the thymus. (Grays)
TT	Tibiotarsus	Pertaining to the tibia and the tarsus. Tibia - shin bone Tarsus - The seven bones constituting the articulation between the foot and the leg.
TTH	Tooth, teeth	One of the bony structures supported by the jaws in mammals and by other bones in the mouth and pharynx in lower vertebrates serving principally for prehension and mastication.

CODE	Site Name	Site Definition/Notes
TU	Tuber	Tuber = The enlarged end of a rhizome in which food accumulates, as is the potato.
TY	Thyroid	An endocrine gland found in all vertebrates that produces, stores, and secretes the thyroid hormones.
U		
UB	Urinary Bladder	A hollow organ which serves as a reservoir for urine.
UBG	Ultimobranchial gland	In biology, any of the small bodies in the pharynx that develop behind the fifth pair of gill pouches in the vertebrate embryo. In mammals the ultimobranchial tissue has become incorporated into the parafollicular cells of the thyroid gland. Ultimobranchial glands produce the hormone calcitonin, which reduces the amount of calcium in the blood.(http://www.britannica.com/eb/article-9001367/ultimobranchial-gland)
UG	Uropygial Gland	A relatively large, compact, bilobed, secretory organ located at the base of the tail of most birds having a keeled sternum. Also known as oil gland.
UL	Ulna	One of the bones that comprise the forearm. The largest aspect articulates with the humerus at the elbow joint and the smallest portion of the ulna articulates with the carpal bones in the wrist. (http://cancerweb.ncl.ac.uk/omd/)
ULE	Unifoliate (Primary) Leaf/Leaves	A single leaf.
UNT	Urinary tract	The organs of the body that produce and discharge urine. These include the kidneys, ureters, bladder, and urethra. (http://cancerweb.ncl.ac.uk/omd/)
UP	Urogenital papillae	Urogenital = pertaining to the urinary and genital apparatus. Papillae = A small nipple-like projection, elevation, or structure.
UR	Urine	The fluid excreted by the kidneys
UTH	Urethra	A tube that transports urine from the urinary bladder to the outside of the body in both the sexes. It also has a reproductive function in the male by providing a passage for sperm. (http://www.ncbi.nlm.nih.gov)
URT	Ureter	The tube passing from each kidney to the bladder for the conveyance of urine. Its average length is 25 to 30 centimeters. (Gray's)
UT	Uterus	The organ of gestation in mammals which receives and retains the fertilized ovum, holds the fetus during development, and becomes the principal agent of its explusion at term.
V		
VA	Vagina	The canal from the vulvar opening to the cervix uteri. (McGraw-Hill)

CODE	Site Name	Site Definition/Notes
VAS	Vasculature	Arterial, capillary, and venous systems of an organ or region. The cardiovascular and lymphatic system's collectively. Also: vascular system or circulatory system (http://cancerweb.ncl.ac.uk and http://www.ncbi.nlm.nih.gov)
VC	Visual center	Area of the brain that detects visual stimulus
CL	Vacuole	a small cavity or space in the tissue of an organism containing air or fluid (Webster's)
VD	Vas Deferens	The portion of the excretory duct system of the testis which runs from the epididymal duct to the ejaculatory duct.
VE	Vertebra	One of the bones that make up the spine in vertebrates.
VEN	Vein	Blood vessel that returns blood from the microvasculature to the heart, walls thinner and less elastic than those of artery.(http://cancerweb.ncl.ac.uk/omd)
VG	Vegetative portion	WO - SD or FR
VGL	Visceral Ganglion	Any of the various ganglia that are part of the autonomic nervous system and are located along the sympathetic trunks, on the peripheral plexuses, and within the walls of organs. Also called visceral ganglion. (/medical-dictionary.thefreedictionary.com/)
VI	Viscera	The organs within the cavities of the body of an organism
VL	Villi	villus = A fingerlike projection from the surface of a membrane.
VN	Vines	A plant whose stem requires support and which climbs by tendrils or twining or creeps along the ground; also : the stem of such a plant
VNT	Ventricle	A chamber of the heart which receives blood from a corresponding atrium and from which blood is forced into the arteries. (Webster's)
VSC	Vesicle	A closed membrane shell, derived from membranes by a physiological process.
VV	Valve	One shell of a double shelled mollusc such as a clam or oyster. (http://cancerweb.ncl.ac.uk/omd/)
W		
WD	Wolffian Duct	The Wolffian duct (also known as archinephric duct, Leydig's duct, mesonephric duct, or nephric duct) is a paired organ found in mammals including humans during embryogenesis. (http://en.wikipedia.org/wiki/Wolffian_duct)
WI	Wings	Any of the paired appendages serving organs of flight on many animals
WL	Wall, Body	
WM	White matter	Brain tissue composed of myelin-coated nerve cell fibers.

CODE	Site Name	Site Definition/Notes
WO	Whole Organism	
X		
XY	Xylem	A complex tissue in the vascular system of higher plants that consists of vessels, tracheids, or both usually together with wood fibers and parenchyma cells, functions chiefly in conduction of water and dissolved minerals but also in support and food storage, and typically constitutes the woody element (as of a plant stem). (http://www.merriam-webster.com/dictionary/xylem)
Y		
YO	Yolk	The yellow spherical mass of food material that makes up the central portion of the egg of a bird or reptile.
YS	Yolk sac	A membranous sac that is attached to an embryo and encloses food yolk, that is continuous in most forms through the yolk stalk with the intestinal cavity of the embryo, that being abundantly supplied with blood vessels is throughout embryonic life and in some forms later the chief organ of nutrition, and that in placental mammals is nearly vestigial and functions chiefly prior to the elaboration of the placenta. (Webster's)
Z		
ZP	Zona pellucida	Pellucid zone: a thick, transparent, noncellular layer or envelope of uniform thickness surrounding an oocyte; also called oolemma. Under a microscope it appears radially striated and is therefore also called zona radiata, zona striata or striated membrane

Appendix V. Common Keywords for Other Effects Text Field

age efcts
Alkalinity efcts
Bacteria
Biological Toxicant
BLM [endpoint] also reported
Conductivity efcts
Critical Level
Diet Study
Depuration
D.O. efcts
Effluent
Elimination
fate
Feeding efcts
Field Study
Food Chain Study
Genotoxicity threshold
Hardness efcts
Humic Acid
Hypoxia efcts
Ind Taxon Result
in vitro
Kinetics
Lethal Body Burden
log LC50
Market
Metabolism
metabolites
Microtox
Minimum Inhibitory Concentration (MIC or Munimum Inhibition Concentration)
Mixture
nutrient study
Oil
Org_C efcts
pH efcts
Pre-Exposure Study
QSAR
Radiolabel
Recovery
Residual Toxicity
Safe Conc (Safe Concentration)
Salinity efcts

Sediment
Sex efcts
Size efcts
Statistical analysis comparison
Strain efcts
Surgically altered
Temperature efcts
Toxicity Symptoms
Transport
Uptake
Vehicle efcts

Appendix W. Media Characteristic Units

Code	Definition
%	percent
% Sat	Percent saturation
C	Celsius
kDa	kilo Daltons
F	Fahrenheit
K	Kelvin
N	Normal
NR	Not reported
PSU	practical salinity units
cm	centimeters
cm3/L or cc/L	cubic centimeters per liter
dH	degrees hardness, may be used for various obsolete units: degrees general hardness, degrees German hardness, degrees American hardness, degrees Clark hardness, degrees French hardness, etc (http://en.wikipedia.org/wiki and ECOTOX) specific hardness to be noted in Remarks
dS/m	deciSiemens per meter
FS	French Hardness
ft	feet
g CaCO3	grams Calcium carbonate
g/dm3	grams per cubic decimeter
g/kg	grams per kilograms
g/L	grams per liter
g/L CaCO3	grams per liter Calcium Carbonate
g/m2	grams per square meter
g/m3 CaCO3	grams per cubic meter Calcium carbonate
g/3.5L	grams per 3.5 liters
HARD	Hard water
HCO3	Hydrogen carbonate
in	inches
m	meters
M	Molar
M NaCl	Molar Sodium Chloride
mho	A unit of conductance equal to the reciprocal of an ohm
mho/cm	mho per centimeter

Code	Definition
mM	millimolar
mM CaCO3	millimolar Calcium carbonate
mN	millinormal
mOhm	milliohms
mS	milli Siemens
mS/cm	milli Siemens per centimeter
mS/cm2	milli Siemens per square centimeter
mS/cm3	milli Siemens per cubic centimeter
mS/m	milli Siemens per meter
meq	milli equivalents
meq/L	milli equivalents per liter
meq/100 g	milli equivalents per 100 grams
mg/dm3	milligram per cubic decimeter
mg/dm3 CaCO3	milligrams per cubic decimeter Calcium carbonate
mg/g	milligrams per gram
mg/ml CaCO3	milligrams per milliliter CaCO3
mg/L	milligrams per liter
mg/L C	milligrams per liter Carbon
mg/L CO3	milligrams per liter carbonate
mg/L CaCO3	milligrams per liter Calcium carbonate
mg/L CaO	milligrams per liter Calcium Oxide
mg/L EDTA	milligrams per liter EDTA
mg/L FA	milligrams per liter fulvic acid
mg/L HA	milligrams per liter Humic acid
mg/L HCO3	milligrams per liter Hydrogen Carbonate
mg/L Mg	milligrams per liter Magnesium
mg/L MO	milligrams per liter Methyl Orange
mg/L phenolpthth	milligrams per liter phenolphthalein
mg/L, Ca	milligrams per liter, Calcium Hardness
mg/15 ml	milligrams per 15 milliliters
mg/ml	milligrams per milliliter
ml/L	milliliter per liter
ml HCl	milliliters HCl
ml N/10 HCl	milliliters nitrogen per 10 HCl
ml N/100 HCl	milliliter Nitrogen per 100 Hydrochloric acid
mm	millimeters

Code	Definition
mm Hg	millimeters Mercury
mmhos *	milli ohms
mmhos/cm *	milliohms per centimeter
mmol	millimoles
mmol/l	millimoles per liter
mmol/L CaCO3	millimoles per Liter Calcium Carbonate
mmol/L OH	millimoles per liter Hydroxide
mol/L	moles per liter
mOsm	milliosmoles
mV	millivolts
ohms	ohms
ohm/cm	ohms per centimeter
Ohm/cm2/mol	ohms per square centimeters per mole
ppb phenolphth	parts per billion phenolphthalein
ppm	parts per million
ppm CaCO3	parts per million CaCO3
ppm MO	parts per million Methyl Orange
ppmphenolphthalei	parts per million phenolphthalein
0/00	parts per thousand
ppt	parts per trillion
S	Siemens
S/cm	Siemens per centimeter
S/m	Siemens per meter
SAT	Saturated
SAT*	Saturated
SOFT	Soft water
ug/dm3	micrograms per cubic decimeter
ug/kg	micrograms per kilogram
ug/L	micrograms per liter
ug/L CaCO3	micrograms per liter Calcium carbonate
ug/ml	micrograms per milliliter
uS	micro Siemens
uS/cm	microSiemens per centimeter
uS/L	microSiemens per liter
uS/s	microSiemens per second
ueq/L	micro equivalents per liter

Code	Definition
uM	micromolar
uM/cm	micromolar per centimeter
Umhos *	micro ohms
umhos/cm *	micro ohms per centimeter
umhos/cm2 *	micro ohms per square centimeter
umhos/cm3	micro ohms per cubic centimeter
umhos/L	micromhos per liter
umhos/s	micromhos per second
umhos/um	micromhos per micrometer
umol/L	micromoles per liter
umol/kg	micromoles per kilogram
umol/L CaCO3	micromoles per liter Calcium Carbonate
umol/ml	micromoles per milliliter
usec	microsecond
uV	microvolts
V HARD	Very hard
V SOFT	Very soft

*** See ALP prior to assigning this code**

Appendix X. Sub-Habitat Codes and Common Descriptors

Code	Habitat	Definition	Descriptors
E	Estuarine	"deepwater tidal habitats... with sporadic access to open ocean...ocean water... is diluted by freshwater..."; Salinity range between 0.5-30ppt	BayMarsh, brackish, salt, tidal Estuary Swamp
L	Lacustrine	"permanently flooded lakes and reservoirs, intermittent lakes and tidal lakes with salinity <= 0.5ppt"; total area exceeds 8 ha (8 acres) and 2 m water depth.	Bay Cove Impoundment Lake
M	Marine	"open ocean overlying the continental shelf and it associated.... coastline; includes shallow coastal indentations or bays; salinity [typically] exceed 30 ppt"	Bay Gulf Open Ocean Reef Seaweed bed
P	Palustrine	"small, shallow, permanent or intermittent fresh water bodies"; total area <= 8 ha (20 acres) and <=2m water depth	Bog Fen Marsh Rice fields Swamp Wetland
R	Riverine	"a channel, an open conduit either naturally or artificially created which periodically or continuously contains moving water or which forms a connecting link between two bodies of standing water" salinity <= 0.5ppt	Creek River Stream Tidal River Tributary
D	Desert	Occur where rainfall is less than 50 cm/year.	Hot and Dry Semiarid Coastal Cold
F	Forest	Biological communities that are dominated by trees and other woody vegetation, Distinct forest types also occur within each of these broad groups.	Tropical (rainforest) Temperate Boreal forests (taiga)
G	Grasslands	Characterized as lands dominated by grasses rather than large shrubs or trees	Tropical (savannas) Temperate (prairie) Agriculture (monoculture)
T	Tundra	Extremely cold climate with low biotic diversity, simple vegetation structure, limitation of drainage (permafrost), short growing season.	Arctic (polar) Alpine (mountain)
NR	Not Reported		

Note: Aquatic habitats are based on the Cowardin Wetland Classification System developed for the U.S. Fish and Wildlife Service (Cowardin et al. 1979). The terrestrial habitats are based on “The World’s Biomes” at http://www.ucmp.berkeley.edu/glossary/gloss5/biome/index.html.

Appendix Y. Substrate Codes

Code	Definition
CL	Clay
GR	Gravel
M	Mineral
MX	Mixed substrate
MU	Mud
NR	Not Reported
O	Organic
SA	Sand
SI	Silt

Appendix Z. Depth Units

Code	Definition
NR	Not reported
cm	Centimeters
ft	Feet
in	Inches
m	Meters
mm	Millimeters

Appendix AA. Field Location Abbreviations

Code	Description
Aqu	Aquatic
Agric	Agricultural
Co	County
Cr	Creek
Dev	Development
Dis	District
E*	East
Env	Environmental
Exp	Experimental
Fish	Fisheries
Inst	Institute
Isl	Island
L	Lake
Lab	Laboratory
Natl	National
N*	North
NE*	Northeast
NW*	Northwest
MT	Mountain
R	River
Res	Research
Resvr	Reservoir
S*	South
SE*	Southeast
SW*	Southwest
St	Saint
Sta	Station
USFWS	United States Fish and Wildlife
Univ	University
W*	West

*Do not abbreviate directional information that is part of the proper name of a location (e.g. South L or Northwest Territory)

Appendix BB. Geographic Text

Code	Description
AF	AFGHANISTAN
AF01	Badakhshan
AF02	Badghis
AF03	Baghlan
AF30	Balkh
AF05	Bamian
AF06	Farah
AF07	Faryab
AF08	Ghazni
AF09	Ghowr
AF10	Helmand
AF11	Herat
AF31	Jowzjan
AF13	Kabol
AF23	Kandahar
AF13	Kapisa
AF15	Konar
AF24	Kondoz
AF16	Laghman
AF17	Lowgar
AF18	Nangarhar
AF19	Nimruz
AF20	Oruzgan
AF21	Paktia
AF22	Paktika
AF22	Parvan
AF32	Samangan
AF33	Sar-e Pol
AF26	Takhar
AF27	Vardak
AF28	Zabol
AL	ALBANIA
AL01	Berat
AL02	Dibre
AL03	Durres
AL04	Elbasan
AL05	Fier
AL06	Gjirokaster
AL07	Gramsh
AL08	Kolonje
AL09	Korce
AL10	Kruje
AL11	Kukes
AL12	Lezhe
AL13	Librazhd
AL14	Lushnje
AL15	Mat
AL16	Mirdite
AL17	Permet
AL18	Pogradec
AL19	Puke
AL20	Sarande
AL21	Shkoder
AL22	Skrapar
AL23	Tepelene
AL28	Tirane
AL26	Tropoje
AL27	Vlore
AG	ALGERIA
AG34	Adrar
AG35	Ain Defla
AG36	Ain Temouchent
AG01	Alger
AG37	Annaba
AG03	Batna
AQ38	Bechar
AG18	Bejaia
AG19	Biskra
AG20	Blida
AG39	Bordj Bou Arreridj
AG21	Bouira
AG40	Boumerdes
AG41	Chlef
AG04	Constantine
AG22	Djelfa
AG42	El Bayadh
AG43	El Oued
AG44	El Tarf
AG45	Ghardaia
AG23	Guelma
AG46	Illizi
AG24	Jijel
AG47	Khenchela
AG25	Laghouat
AG26	Mascara
AG06	Medea
AG48	Mila
AG07	Mostaganem
AG27	M'sila
AG49	Naama
AG09	Oran
AG50	Ouargla
AG29	Oum el Bouaghi
AG51	Relizane
AG10	Saida
AG12	Setif
AG30	Sidi Bel Abbes
AG31	Skikda
AG52	Souk Ahras
AG53	Tamanghasset
AG33	Tebessa
AG13	Tiaret
AG54	Tindouf
AG55	Tipaza
AG56	Tissemsilt
AG14	Tizi Ouzou
AG15	Tlemcen
AQ	AMERICAN SAMOA
AN	ANDORRA
AN01	Andorra
AN02	Canillo
AN03	Encamp
AN04	La Massana
AN05	Ordino
An06	Sant Julia de Loria

Code	Description
AO	ANGOLA
AO19	Bengo
AO01	Benguela
AO02	Bie
AO03	Cabinda
AO04	Cuando Cubango
AO05	Cuanza Norte
AO06	Cuanza Sul
AO07	Cunene
AO08	Huambo
AO09	Huila
AO20	Luanda
AO17	Lunda Norte
AO18	Lunda Sul
AO12	Malanje
AO14	Moxico
AO15	Uige
AO16	Zaire
AV	ANGUILLA
AY	ANTARCTICA
AC	ANTIGUA AND BARBUDA
AC01	Barbuda
AC03	Saint George
AC04	Saint John
AC05	Saint Mary
AC06	Saint Paul
AC07	Saint Peter
AC08	Saint Philip
*AR	ARGENTINA
AC01	Buenos Aires
AC02	Catamarca
AR03	Chaco
AR04	Chubut
AR05	Cordoba
AR06	Corrientes
AR07	Distrito Federal
AR08	Entre Rios
AR09	Formosa
AR10	Jujuy
AR11	La Pampa
AR12	La Rioja
AR13	Mendoza
AR14	Misiones
AR15	Neuquen
AR16	Rio Negro
AR17	Salta
AR18	San Juan
AR19	San Luis
AR20	Santa Cruz
AR21	Santa Fe
AR22	Santiago del Estero
AR23	Tierra del Fuego, Antartidae Islas del Atlantico Sur
AR24	Tucuman
AM	ARMENIA
AA	ARUBA
AT	ASHMORE AND CARTIER ISLANDS
* AS	AUSTRALIA
AS01	Australian Capital Territory
*AS02	New South Wales
AS03	Northern Territory
*AS04	Queensland
*AS05	South Australia
*AS06	Tasmania
*AS07	Victoria
AS08	Western Australia
*AU	AUSTRIA
AU01	Burgenland
AU02	Karnten
AU03	Niederosterreich
AU04	Oberosterreich
AU05	Salzburg
AU06	Steiermark
AU07	Tirol
AU08	Vorarlberg
AU09	Wien
AJ	AZERBAIJAN
BF	BAHAMAS, THE
BF24	Acklins and Crooked Islands
BF05	Bimini
BF06	Cat Island
BF10	Exuma
BF25	Freeport
BF26	Fresh Creek
BF27	Governor's Harbour
BF28	Green Turtle Cay
BF22	Harbour Island
BF29	High Rock
BG13	Inagua
BF30	Kemps Bay
BF15	Long Island
BF31	Marsh Harbour
BF16	Mayaguana
BF23	New Providence
BF32	Nichollstown and Berry Islands
BF18	Ragged Island
BF33	Rock Sound
BF34	Sandy Point
BF35	San Salvador and Rum Cay
*BA	BAHRAIN
BA01	Al Hadd
BA02	Al Manamah
BA08	Al Mintaqah al Gharbiyah
BA11	Al Mintaqah al Wusta
BA10	Al Mintaqah ash Shamaliyah
BA03	Al Muharraq
BA13	Ar Rifa` wa al Mintaqah al Janubiyah
BA05	Jidd Hafs
BA14	Madinat Hamad
BA12	Madinat `Isa
BA09	Mintaqat Juzur Hawar
BA06	Sitrah

Code	Description
FQ	BAKER ISLAND
*BG	BANGLADESH
BG22	Bagerhat
BG04	Bandarban
BG25	Barguna
BG01	Barisal
BG23	Bhola
BG24	Bogra
BG26	Brahmanbaria
BG27	Chandpur
BG28	Chapai Nawabganj
BG29	Chattagram
BG30	Chuadanga
BG05	Comilla
BG31	Cox's Bazar
BG32	Dhaka
BG33	Dinajpur
BG34	Faridpur
BG35	Feni
BG36	Gaibandha
BG37	Gazipur
BG38	Gopalganj
BG39	Habiganj
BG40	Jaipurhat
BG41	Jamalpur
BG42	Jessore
BG43	Jhalakati
BG44	Jhenaidah
BG45	Khagrachari
BG46	Khulna
BG47	Kishorganj
BG48	Kurigram
BG49	Kushtia
BG50	Laksmipur
BG51	Lalmonirhat
BG52	Madaripur
BG53	Magura
BG54	Manikganj
BG55	Meherpur
BG56	Moulavibazar
BG57	Munshiganj
BG12	Mymensingh
BG58	Naogaon
BG59	Narail
BG60	Narayanganj
BG61	Narsingdi
BG62	Nator
BG63	Netrakona
BG64	Nilphamari
BG13	Noakhali
BG65	Pabna
BG66	Panchagar
BG67	Parbattya Chattagram
BG15	Patuakhali
BG68	Pirojpur
BG69	Rajbari
BG70	Rajshahi
BG71	Rangpur
BG72	Satkhira
BG73	Shariyatpur
BG74	Sherpur
BG75	Sirajganj
BG76	Sunamganj
BG77	Sylhet
BG78	Tangail
BG79	Thakurgaon
BB	BARBADOS*
BB01	Christ Church
BB02	Saint Andrew
BB03	Saint George
BB04	Saint James
BB05	Saint John
BB06	Saint Joseph
BB07	Saint Lucy
BB08	Saint Michael
BB09	Saint Peter
BB10	Saint Philip
BB11	Saint Thomas
BS	BASSAS DA INDIA
BO	BELARUS
*BE	BELGIUM
BE01	Antwerpen
BE02	Brabant
BE03	Hainaut
BE04	Liege
BE05	Limburg
BE06	Luxembourg
BE07	Namur
BE08	Oost-Vlaanderen
BE09	West-Vlaanderen
*BH	BELIZE
*BH01	Belize (District)
BH02	Cayo
BH03	Corozal
BH04	Orange Walk
BH05	Stann Creek
BH06	Toledo
*BN	BENIN
BN01	Atakora
BN02	Atlantique
BN03	Borgou
BN04	Mono
BN05	Oueme
BN06	Zou
BD	BERMUDA
BD01	Devonshire
BD03	Hamilton
BD03	Hamilton
BD04	Paget
BD05	Pembroke
BD06	Saint George
*BD07	Saint George's
BD08	Sandys
BD09	Smiths
BD10	Southampton
BD11	Warwick
BT	BHUTAN
BT05	Bumthang
BT06	Chhukha

Code	Description
BT07	Chirang
BT08	Daga
BT09	Geylegphug
BT10	Ha
BT11	Lhuntshi
BT12	Mongar
BT13	Paro
BT14	Pemagatsel
BT15	Punakha
BT16	Samchi
BT17	Samdrup
BT18	Shemgang
BT19	Tashigang
BT20	Thimphu
BT21	Tongsa
BT22	Wangdi Phodrang
BL	BOLIVIA
BL01	Chuquisaca
BL02	Cochabamba
BL03	El Beni
BL04	La Paz
BL05	Oruro
BL06	Pando
BL07	Potosi
BL08	Santa Cruz
BL09	Tarija
*BK	BOSNIA AND HERZEGOVINA
* BC	BOTSWANA
BC01	Central
BC02	Chobe
BC03	Ghanzi
BC04	Kgalagadi
BC05	Kgatleng
BC06	Kweneng
BC07	Ngamiland
BC08	North-East
BC09	South-East
BC10	Southern

Code	Description
BV	BOUVET ISLAND
* BR	BRAZIL
BR01	Acre
BR02	Alagoas
BR03	Amapa
BR04	Amazonas
BR05	Bahia
BR06	Ceara
BR07	Distrito Federal
BR08	Espirito Santo
BR29	Goias
BR13	Maranhao
BR14	Mato Grosso
BR11	Mato Grosso do Sul
BR15	Minas Gerais
BR16	Para
BR17	Paraiba
BR18	Parana
BR30	Pernambuco
BR20	Piaui
BR21	Rio de Janeiro
BR22	Rio Grande do Norte
BR23	Rio Grande do Sul
BR24	Rondonia
BR25	Roraima
BR26	Santa Catarina
*BR27	Sao Paulo
BR28	Sergipe
BR31	Tocantins
IO	BRITISH INDIAN OCEAN TERRITORY
VI	BRITISH VIRGIN ISLANDS
*BX	BRUNEI
BX01	Belait
BX02	Brunei and Muara
BX03	Temburong
BX04	Tutong
BU	BULGARIA

Code	Description
BU29	Burgas
BU30	Grad Sofiya
BU31	Khaskovo
BU32	Lovech
BU33	Mikhaylovgrad
BU34	Plovdiv
BU35	Razgrad
BU36	Sofiya
BU37	Varna
* UV	BURKINA
UV15	Bam
UV16	Bazega
UV17	Bougouriba
UV18	Boulgou
UV19	Boulkiemde
UV20	Ganzourgou
UV21	Gnagna
UV22	Gourma
UV23	Houet
UV24	Kadiogo
UV25	Kenedougou
UV26	Komoe
UV27	Kossi
UV28	Kouritenga
UV29	Mouhoun
UV30	Namentenga
UV31	Naouri
UV32	Oubritenga
UV33	Oudalan
UV34	Passore
UV35	Poni
UV36	Sanguie
UV37	Sanmatenga
UV38	Seno
UV39	Sissili
UV40	Soum
UV41	Sourou
UV42	Tapoa
UV43	Yatenga
UV44	Zoundweogo
BM	BURMA

Code	Description
BM02	Chin State
BM03	Irrawaddy
BM04	Kachin State
BM05	Karan State
BM06	Kayah State
BM07	Magwe
BM08	Mandalay
BM13	Mon State
BM09	Pegu
BM01	Rakhine State
BM14	Rangoon
BM10	Sagaing
BM11	Shan State
BM12	Tenasserim
BY	BURUNDI
BY09	Bubanza
BY02	Bujumbura
BY10	Bururi
BY11	Cankuzo
BY12	Cibitoke
BY13	Gitega
BY14	Karuzi
BY15	Kayanza
BY16	Kirundo
BY17	Makamba
BY05	Muramvya
BY18	Muyinga
BY19	Ngozi
BY20	Rutana
BY21	Ruyigi
CB	CAMBODIA
CB01	Batdambang
CB02	Kampong Cham
CB03	Kampong Chhnang
CB04	Kampong Spoe
CB05	Kampong Thum
CB06	Kampot
CB07	Kandal
CB08	Kaoh Kong
CB09	Kracheh
CB10	Mondol Kiri
CB11	Phnum Penh
CB12	Pouthisat
CB13	Preah Vihear
CB14	Prey Veng
CB15	Rotanokiri
CB16	Siemreab-Otdar Meanchey
CB17	Stoeng Treng
CB18	Svay Rieng
CB19	Takev
* CM	CAMEROON
CM10	Adamaoua
CM11	Centre
CM04	Est
CM12	Extreme-Nord
CM05	Littoral
CM13	Nord
CM07	Nord-Ouest
CM08	Ouest
CM14	Sud
CM09	Sud-Ouest
* CA	CANADA
* CA01	Alberta
* CA02	British Columbia
* CA03	Manitoba
* CA04	New Brunswick
* CA05	Newfoundland
CA06	Northwest Territories
* CA07	Nova Scotia
* CA08	Ontario
* CA09	Prince Edward Island
* CA10	Quebec
* CA11	Saskatchewan
CA12	Yukon Territory
CV	CAPE VERDE
CV01	Boa Vista
CV02	Brava
CV03	Fogo
CV04	Maio
CV05	Paul
CV06	Praia
CV07	Ribeira Grande
CV08	Sal
CV09	Santa Catarina
CV10	Sao Nicolau
CV11	Sao Vicente
CV12	Tarrafal
CJ	CAYMAN ISLANDS
CJ01	Creek
CJ02	Eastern
CJ03	Midland
CJ04	South Town
CJ05	Spot Bay
CJ06	Stake Bay
CJ07	West End
CJ08	Western
CT	CENTRAL AFRICAN REPUBLIC
CT01	Bamingui-Bangoran
CT18	Bangui
CT02	Basse-Kotto
CT15	Gribingui
CT03	Haute-Kotto
CT04	Haute-Sangha
CT05	Haut-Mbomou
CT06	Kemo-Gribingui
CT07	Lobaye
CT08	Mbomou
CT09	Nana-Mambere
CT17	Ombella-Mpoko
CT11	Ouaka
CT12	Ouham
CT13	Ouham-Pende
CT16	Sangha
CT14	Vakaga
CD	CHAD
CD01	Batha
CD02	Biltine
CD03	Borkou-Ennedi-Tibesti
CD04	Chari-Baguirmi

Code	Description
CD05	Guera
CD06	Kanem
CD07	Lac
CD08	Logone Occidental
CD09	Logone Oriental
CD10	Mayo-Kebbi
CD11	Moyen-Chari
CD12	Ouaddai
CD13	Salamat
CD14	Tandjile

*CI CHILE

CI02	Aisen del General Carlos Ibanez del Campo
CI03	Antofagasta
CI04	Araucania
CI05	Atacama
CI06	Bio-Bio
CI07	Coquimbo
CI08	Libertador General Bernardo O'Higgins
CI09	Los Lagos
CI10	Magallanes y de la Antartica Chilena
CI11	Maule
CI12	Region Metropolitana
CI13	Tarapaca Valparaiso

* CH CHINA

CH01	Anhui
CH22	Beijing
CH07	Fujian
CH15	Gansu
CH30	Guangdong
CH16	Guangxi
CH18	Guizhou
*CH31	Hainan
CH10	Hebei
*CH08	Heilongjiang
CH09	Henan
CH12	Hubei
CH11	Hunan
*CH04	Jiangsu
CH03	Jiangxi
CH05	Jilin
CH19	Liaoning
CH20	Nei Mongol
CH21	Ningxia
CH06	Qinghai
CH26	Shaanxi
CH25	Shandong
CH23	Shanghai
CH24	Shanxi
CH27	Sichuan
CH28	Tianjin
CH13	Xinjiang
CH14	Xizang
CH29	Yunnan
CH02	Zhejiang

KT* CHRISTMAS ISLAND

IP CLIPPERTON ISLAND

CK COCOS (KEELING) ISLANDS

* CO COLOMBIA

CO01	Amazonas
CO02	Antioquia
CO03	Arauca
CO04	Atlantico
CO35	Bolivar
CO36	Boyaca
CO37	Caldas
CO08	Caqueta
CO32	Casanare
CO09	Cauca
CO10	Cesar
CO11	Choco
CO12	Cordoba
CO33	Cundinamarca
CO34	Distrito Especial
CO15	Guainia
CO14	Guaviare
CO16	Huila
CO17	La Guajira
CO38	Magdalena
CO19	Meta
CO20	Narino
CO21	Norte de Santander
CO22	Putumayo
CO23	Quindio
CO24	Risaralda
CO25	San Andres y Providencia
CO26	Santander
CO27	Sucre
CO28	Tolima
CO29	Valle del Cauca
CO30	Vaupes
CO31	CVichada

CN COMOROS

CN01	Anjouan
CN02	Grande Comore
CN03	Moheli

CF CONGO

CF01	Bouenza
CF12	Brazzaville
CF03	Cuvette
CF04	Kouilou
CF05	Lekoumou
CF06	Likouala
CF07	Niari
CF08	Plateaux
CF11	Pool
CF10	Sangha

CW COOK ISLANDS

CR CORAL SEA ISLANDS

*CS COSTA RICA

CS01	Alajuela
CS02	Cartago
CS03	Guanacaste
CS04	Heredia
CS06	Limon

Code	Description
CS07	Puntarenas
CS08	San Jose
*IV	COTE D'IVOIRE
IV01	Abengourou
IV35	Abidjan
IV04	Aboisso
IV05	Adzope
IV06	Agboville
IV36	Bangolo
IV37	Beoumi
IV07	Biankouma
IV38	Bondoukou
IV27	Bongouanou
*IV39	Bouafle
IV40	Bouake
IV11	Bouna
IV12	Boundiali
IV03	Dabakala
IV41	Daloa
IV14	Danane
IV42	Daoukro
IV43	Dimbokro
IV16	Divo
IV44	Duekoue
IV17	Ferkessedougou
IV18	Gagnoa
IV45	Grand-Lahou
IV46	Guiglo
IV28	Issia
IV20	Katiola
IV21	Korhogo
IV29	Lakota
IV47	Man
IV30	Mankono
IV48	Mbahiakro
IV23	Odienne
IV31	Oume
IV49	Sakassou
IV50	San Pedro
IV51	Sassandra
IV25	Seguela
IV52	Sinfra

Code	Description
IV32	Soubre
IV53	Tabou
IV54	Tanda
IV55	Tiassale
IV33	Tingrela
IV26	Touba
IV56	Toumodi
IV57	Vavoua
IV58	Yamoussoukro
IV34	Zuenoula
*HR	CROATIA
CU	CUBA
CU05	Camaguey
CU07	Ciego de Avila
CU08	Cienfuegos
CU02	Ciudad de la Habana
CU09	Granma
CU10	Guantanamo
CU12	Holguin
CU04	Isla de la Juventud
CU11	La Habana
CU13	Las Tunas
CU03	Matanzas
CU01	Pinar del Rio
CU14	Sancti Spiritus
CU15	Santiago de Cuba
CU16	Villa Clara
* CY	CYPRUS
CY01	Famagusta
CY02	Kyrenia
CY03	Larnaca
CY05	Limassol
CY04	Nicosia
CY06	Paphos
* EZ	CZECH REPUBLIC
* DA	DENMARK
DA01	Arhus
DA02	Bornholm

Code	Description
DA03	Frederiksborg
DA04	Fyn
DA05	Kobenhavn
DA07	Nordjylland
DA08	Ribe
DA09	Ringkobing
DA10	Roskilde
DA11	Sonderjylland
DA06	Staden Kobenhavn
DA12	Storstrom
DA13	Vejle
DA14	Vestsjalland
DA15	Viborg
DJ	DJIBOUTI
DJ01	`Ali Sabih
DJ02	Dikhil
DJ03	Djibouti
DJ04	Obock
DJ05	Tadjoura
DO	DOMINICA
DO02	Saint Andrew
DO03	Saint David
DO04	Saint George
DO05	Saint John
DO06	Saint Joseph
DO07	Saint Luke
DO08	Saint Mark
DO09	Saint Patrick
DO10	Saint Paul
DO11	Saint Peter
DR	DOMINICAN REPUBLIC
DR01	Azua
DR02	Baoruco
DR03	Barahona
DR04	Dajabon
DR05	Distrito Nacional
DR06	Duarte
DR11	Elias Pina
DR28	El Seibo
DR08	Espaillat

Code	Description
DR29	Hato Mayor
DR09	Independencia
DR10	La Altagracia
DR12	La Romana
DR30	La Vega
DR14	Maria Trinidad Sanchez
DR31	Monsenor Nouel
DR15	Monte Cristi
DR32	Monte Plata
DR16	Pedernales
DR17	Peravia
DR18	Puerto Plata
DR19	Salcedo
DR20	Samana
DR21	Sanchez Ramirez
DR33	San Cristobal
DR23	San Juan
DR24	San Pedro De Macoris
DR25	Santiago
DR26	Santiago Rodriguez
DR27	Valverde
EC	ECUADOR
EC02	Azuay
EC03	Bolivar
EC04	Canar
EC05	Carchi
EC06	Chimborazo
EC07	Cotopaxi
EC08	El Oro
EC09	Esmeraldas
EC01	Galapagos
EC10	Guayas
EC11	Imbabura
EC12	Loja
EC13	Los Rios
EC14	Manabi
EC15	Morona-Santiago
EC21	Napo
EC17	Pastaza
EC18	Pichincha
EC22	Sucumbios
EC19	Tungurahua
EC20	Zamora-Chinchipe
* EG	EGYPT
EG01	Ad Daqahliyah
EG02	Al Bahr al Ahmar
EG03	Al Buhayrah
EG04	Al Fayyum
EG05	Al Gharbiyah
EG06	Al Iskandariyah
EG07	Al Isma'iliyah
EG08	Al Jizah
EG09	Al Minufiyah
EG10	Al Minya
EG11	Al Qahirah
EG12	Al Qalyubiyah
EG13	Al Wadi al Jadid
EG14	Ash Sharqiyah
EG15	As Suways
EG16	Aswan
EG17	Asyut
EG18	Bani Suwayf
EG19	Bur Sa'id
EG20	Dumyat
EG26	Janub Sina'
EG21	Kafr ash Shaykh
EG22	Matruh
EG23	Qina
EG27	Shamal Sina'
EG24	Suhaj
ES	EL SALVADOR
ES01	Ahuachapan
ES02	Cabanas
ES03	Chalatenango
ES04	Cuscatlan
ES05	La Libertad
ES06	La Paz
ES07	La Union
ES08	Morazan
ES09	San Miguel
ES10	San Salvador
ES11	Santa Ana
ES12	San Vicente
ES13	Sonsonate
ES14	Usulutan
EK	EQUATORIAL GUINEA
EK03	Annobon
EK04	Bioko Norte
EK05	Bioko Sur
EK06	Centro Sur
EK07	Kie-Ntem
EK08	Litoral
EK09	Wele-Nzas
ER	ERITREA
EN	ESTONIA
EN01	Harjumaa
EN02	Hiiumaa
EN03	Ida-Virumaa
EN04	Jarvamaa
EN05	Jogevamaa
EN06	Kohtla-Jarve
EN07	Laanemaa
EN08	Laane-Virumaa
EN09	Narva
EN10	Parnu
EN11	Parnumaa
EN12	Polvamaa
EN13	Raplamaa
EN14	Saaremaa
EN15	Sillamae
EN16	Tallinn
EN17	Tartu
EN18	Tartumaa
EN19	Valgamaa
EN20	Viljandimaa
EN21	Vorumaa
*ET	ETHIOPIA
ET15	Adis Abeba
ET01	Arsi
ET17	Asosa
ET38	Bale
ET18	Borena

Code	Description
ET19	Debub Gonder
ET20	Debub Shewa
ET21	Debub Welo
ET22	Dire Dawa
ET23	Gambela
ET39	Gamo Gofa
ET40	Ilubabor
ET41	Kefa
ET24	Metekel
ET25	Mirab Gojam
ET26	Mirab Harerge
ET27	Mirab Shewa
ET28	Misrak Gojam
ET29	Misrak Harerge
ET30	Nazret
ET31	Ogaden
ET32	Omo
ET33	Semen Gonder
ET34	Semen Shewa
ET35	Semen Welo
ET42	Sidamo
ET37	Tigray
ET43	Welega
EU	EUROPA ISLAND
FK	FALKLAND ISLANDS (ISLAS MALVINAS)
FO	FAROE ISLANDS
FM	FEDERATED STATES OF MICRONESIA
FM03	Chuuk
FM01	Kosrae
FM02	Pohnpei
FM04	Yap
FJ	FIJI
FJ01	Central
FJ02	Eastern
FJ03	Northern
FJ04	Rotuma
FJ05	Western
* FI	FINLAND
FI01	Ahvenanmaa
FI02	Hame
FI03	Keski-Suomi
FI04	Kuopio
FI05	Kymi
FI06	Lappi
FI07	Mikkeli
FI08	Oulu
FI09	Pohjois-Karjala
FI10	Turku ja Pori
FI11	Uusimaa
FI12	Vaasa
* FR	FRANCE
FRC1	Alsace
FR97	Aquitaine
FR98	Auvergne
FR99	Basse-Normandie
FRA1	Bourgogne
FRA2	Bretagne
FRA3	Centre
FRA4	Champagne-Ardenne
FRA5	Corse
FRA6	Franche-Comte
FRA7	Haute-Normandie
FRA8	Ile-de-France
*FRA9	Languedoc-Roussillon
FRB1	Limousin
FRB2	Lorraine
FRB3	Midi-Pyrenees
FRB4	Nord-Pas-de-Calais
FRB5	Pays de la Loire
FRB6	Picardie
FRB7	Poitou-Charentes
FRB8	Provence-Alpes-Cote d'Azur
FRB9	Rhone-Alpes
FG	FRENCH GUIANA
FP	FRENCH POLYNESIA
FS	FRENCH SOUTHERN AND ANTARCTIC LANDS
GB	GABON
GB01	Estuaire
GB02	Haut-Ogooue
GB03	Moyen-Ogooue
GB04	Ngounie
GB05	Nyanga
GB06	Ogooue-Ivindo
GB07	Ogooue-Lolo
GB08	Ogooue-Maritime
GB09	Woleu-Ntem
GA	GAMBIA, THE
GA01	Banjul
GA02	Lower River
GA03	MacCarthy Island
GA07	North Bank
GA04	Upper River
GA05	Western
GZ	GAZA STRIP
GG	GEORGIA
* GM	GERMANY
GM01	Baden-Wurttemberg
GM02	Bayern
GM16	Berlin
GM11	Brandenburg
*GM03	Bremen
GM04	Hamburg
GM05	Hessen
GM12	Mecklenburg-Vorpommern
*GM06	Niedersachsen
GM07	Nordrhein-Westfalen
GM08	Rheinland-Pfalz
GM09	Saarland

Code	Description
GM13	Sachsen
GM14	Sachsen-Anhalt
GM10	Schleswig-Holstein
GM15	Thuringen
* GH	GHANA
GH02	Ashanti
GH03	Brong-Ahafo
GH04	Central
GH05	Eastern
GH01	Greater Accra
GH06	Northern
GH10	Upper East
GH11	Upper West
GH08	Volta
GH09	Western
GI	GIBRALTAR
GO	GLORIOSO ISLANDS
*GR	GREECE
GR31	Aitolia kai Akarnania
GR38	Akhaia
GR36	Argolis
GR41	Arkadhia
GR20	Arta
GR35	Attiki
GR47	Dhodhekanisos
GR04	Drama
GR30	Evritania
GR01	Evros
GR34	Evvoia
GR08	Florina
GR32	Fokis
GR29	Fthiotis
GR10	Grevena
GR39	Ilia
GR12	Imathia
GR17	Ioannina
GR45	Iraklion
GR23	Kardhitsa
GR09	Kastoria

Code	Description
GR14	Kavala
GR27	Kefallinia
GR25	Kerkira
GR15	Khalkidhiki
GR43	Khania
GR50	Khios
GR49	Kikladhes
GR06	Kilkis
GR37	Korinthia
GR11	Kozani
GR42	Lakonia
GR21	Larisa
GR46	Lasithi
GR51	Lesvos
GR26	Levkas
GR24	Magnisia
GR40	Messinia
GR07	Pella
GR16	Pieria
GR19	Preveza
GR44	Rethimni
GR02	Rodhopi
GR48	Samos
GR05	Serrai
GR18	Thesprotia
GR13	Thessaloniki
GR22	Trikala
GR33	Voiotia
GR03	Xanthi
GR28	Zakinthos
GL	GREENLAND
GL01	Nordgronland
GL02	Ostgronland
GL03	Vestgronland
GJ	GRENADA
GJ01	Saint Andrew
GJ02	Saint David
GJ03	Saint George
GJ04	Saint John
GJ05	Saint Mark
GJ06	Saint Patrick

Code	Description
GP	GUADELOUPE
*GQ	GUAM
*GT	GUATEMALA
GT01	Alta Verapaz
GT02	Baja Verapaz
GT03	Chimaltenango
GT04	Chiquimula
GT05	El Progreso
GT06	Escuintla
GT07	Guatemala
GT08	Huehuetenango
GT09	Izabal
GT10	Jalapa
GT11	Jutiapa
GT12	Peten
GT14	Quiche
GT13	Quetzaltenango
GT15	Retalhuleu
GT16	Sacatepequez
GT17	San Marcos
GT18	Santa Rosa
GT19	Solola
GT20	Suchitepequez
GT21	Totonicapan
GT22	Zacapa
GK	GUERNSEY
GV	GUINEA
GV01	Beyla
GV02	Boffa
GV03	Boke
GV04	Conakry
GV05	Dabola
GV06	Dalaba
GV07	Dinguiraye
GV08	Dubreka
GV09	Faranah
GV10	Forecariah
GV11	Fria

Code	Description
GV12	Gaoual
GV13	Gueckedou
GV14	Kankan
GV15	Kerouane
GV16	Kindia
GV17	Kissidougou
GV18	Koundara
GV19	Kouroussa
GV20	Labe
GV21	Macenta
GV22	Mali
GV23	Mamou
GV24	Nzerekore
GV25	Pita
GV26	Siguiri
GV27	Telimele
GV28	Tougue
GV29	Yomou
PU	GUINEA-BISSAU
PU01	Bafata
PU12	Biombo
PU11	Bissau
PU05	Bolama
PU06	Cacheu
PU10	Gabu
PU04	Oio
PU02	Quinara
PU07	Tombali
GY	GUYANA
GY10	Barima-Waini
GY11	Cuyuni-Mazaruni
GY12	Demerara-Mahaica
GY13	East Berbice-Corentyne
GY14	Essequibo Islands-West Demerara
GY15	Mahaica-Berbice
GY16	Pomeroon-Supenaam
GY17	Potaro-Siparuni
GY18	Upper Demerara-Berbice
GY19	Upper Takutu-Upper Essequibo

Code	Description
HA	HAITI
HA06	Artibonite
HA07	Centre
HA08	Grand' Anse
HA09	Nord
HA10	Nord-Est
HA03	Nord-Ouest
HA11	Ouest
HA12	Sud
HA13	Sud-Est
HM	HEARD ISLAND AND MCDONALD ISLANDS
*HO	HONDURAS
HO01	Atlantida
HO02	Choluteca
HO03	Colon
HO04	Comayagua
HO05	Copan
HO06	Cortes
HO07	El Paraiso
HO08	Francisco Morazan
HO09	Gracias a Dios
HO10	Intibuca
HO11	Islas de la Bahia
HO12	La Paz
HO13	Lempira
HO14	Ocotepeque
HO15	Olancho
HO16	Santa Barbara
HO17	Valle
HO18	Yoro
HK	HONG KONG
HQ	HOWLAND ISLAND
* HU	HUNGARY
HU01	Bacs-Kiskun
HU02	Baranya
HU03	Bekes
HU26	Bekescsaba

Code	Description
HU04	Borsod-Abauj-Zemplen
HU05	Budapest
HU06	Csongrad
HU07	Debrecen
HU27	Dunaujvaros
HU28	Eger
HU08	Fejer
HU25	Gyor
HU09	Gyor-Moson-Sopron
HU10	Hajdu-Bihar
HU11	Heves
HU29	Hodmezovasarhely
HU20	Jasz-Nagykun-Szolnok
HU30	Kaposvar
HU31	Kecskemet
HU12	Komarom-Esztergom
HU13	Miskolc
HU32	Nagykanizsa
HU14	Nograd
HU33	Nyiregyhaza
HU15	Pecs
HU16	Pest
HU17	Somogy
HU34	Sopron
HU18	Szabolcs-Szatmar-Bereg
HU19	Szeged
HU35	Szekesfehervar
HU36	Szolnok
HU37	Szombathely
HU38	Tatabanya
HU21	Tolna
HU22	Vas
HU23	Veszprem
HU39	Veszprem
HU24	Zala
HU40	Zalaegerszeg
IC	ICELAND
IC01	Akranes
IC02	Akureyri
IC03	Arnessysla
IC04	Austur-Bardastrandarsysla

Code	Description
IC05	Austur-Hunavatnssysla
IC06	Austur-Skaftafellssysla
IC07	Borgarfjardarsysla
IC08	Dalasysla
IC09	Eyjafjardarsysla
IC10	Gullbringusysla
IC11	Hafnarfjordur
IC12	Husavik
IC13	Isafjordur
IC14	Keflavik
IC15	Kjosarsysla
IC16	Kopavogur
IC17	Myrasysla
IC18	Neskaupstadur
IC19	Nordur-Isafjardarsysla
IC20	Nordur-Mulasysla
IC21	Nordur-Tingeyjarsysla
IC22	Olafsfjordur
IC23	Rangarvallasysla
IC24	Reykjavik
IC25	Saudarkrokur
IC26	Seydisfjordur
IC27	Siglufjordur
IC28	Skagafjardarsysla
IC29	Snafellsnes- og Hnappadalssysla
IC30	Strandasysla
IC31	Sudur-Mulasysla
IC32	Sudur-Tingeyjarsysla
IC33	Vestmannaeyjar
IC34	Vestur-Bardastrandarsysla
IC35	Vestur-Hunavatnssysla
IC36	Vestur-Isafjardarsysla
IC37	Vestur-Skaftafellssysla

* IN INDIA

Code	Description
IN01	Andaman and Nicobar Islands
*IN02	Andhra Pradesh
IN30	Arunachal Pradesh
*IN03	Assam
IN04	Bihar
IN05	Chandigarh
IN06	Dadra and Nagar Haveli
IN32	Daman and Diu
*IN07	Delhi
IN33	Goa
* IN09	Gujarat
*IN10	Haryana
IN11	Himachal Pradesh
IN12	Jammu and Kashmir
*IN19	Karnataka
IN13	Kerala
IN14	Lakshadweep
*IN15	Madhya Pradesh
*IN16	Maharashtra
IN17	Manipur
IN18	Meghalaya
IN31	Mizoram
IN20	Nagaland
IN21	Orissa
IN22	Pondicherry
*IN23	Punjab
*IN24	Rajasthan
IN29	Sikkim
IN25	Tamil Nadu
IN26	Tripura
*IN27	Uttar Pradesh
*IN28	West Bengal

* ID INDONESIA

Code	Description
ID01	Aceh
ID02	Bali
ID03	Bengkulu
ID09	Irian Jaya
ID04	Jakarta Raya
ID05	Jambi
*ID06	Jawa Barat
ID07	Jawa Tengah
ID08	Jawa Timur
ID11	Kalimantan Barat
ID12	Kalimantan Selatan
ID13	Kalimantan Tengah
ID14	Kalimantan Timur
ID15	Lampung
ID16	Maluku
ID17	Nusa Tenggara Barat
ID18	Nusa Tenggara Timur
ID19	Riau
ID20	Sulawesi Selatan
ID21	Sulawesi Tengah
ID22	Sulawesi Tenggara
ID23	Sulawesi Utara
ID24	Sumatera Barat
ID25	Sumatera Selatan
ID26	Sumatera Utara
ID27	Timor Timur
ID10	Yogyakarta

* IR IRAN

Code	Description
IR01	Azarbayjan-e Bakhtari
IR02	Azarbayjan-e Khavari
IR13	Bakhtaran
IR22	Bushehr
IR03	Chahar Mahall va Bakhtiari
IR28	Esfahan
IR07	Fars
IR08	Gilan
IR09	Hamadan
IR11	Hormozgan
IR10	Ilam
IR29	Kerman
IR30	Khorasan
IR15	Khuzestan
IR05	Kohkiluyeh va Buyer Ahmadi
IR16	Kordestan
IR23	Lorestan
IR24	Markazi
IR17	Mazandaran
IR25	Semnan
IR04	Sistan va Baluchestan
IR26	Tehran
IR31	Yazd
IR27	Zanjan

*IZ IRAQ

Code	Description
IZ01	Al Anbar

Code	Description
IZ02	Al Basrah
IZ03	Al Muthanna
IZ04	Al Qadisiyah
IZ17	An Najaf
IZ11	Arbil
IZ05	As Sulaymaniyah
IZ13	At Ta'mim
IZ06	Babil
IZ07	Baghdad
IZ08	Dahuk
IZ09	Dhi Qar
IZ10	Diyala
IZ12	Karbala'
IZ14	Maysan
IZ15	Ninawa
IZ18	Salah ad Din
IZ16	Wasit
*EI	IRELAND
EI01	Carlow
EI02	Cavan
EI03	Clare
EI04	Cork
EI06	Donegal
EI07	Dublin
EI10	Galway
EI11	Kerry
EI12	Kildare
EI13	Kilkenny
EI15	Laois
EI14	Leitrim
EI16	Limerick
EI18	Longford
EI19	Louth
EI20	Mayo
EI21	Meath
EI22	Monaghan
EI23	Offaly
EI24	Roscommon
EI25	Sligo
EI26	Tipperary
EI27	Waterford
EI29	Westmeath
EI30	Wexford
EI31	Wicklow
* IS	ISRAEL
IS01	HaDarom
IS02	HaMerkaz
IS03	HaZafon
IS04	Hefa
IS05	Tel Aviv
IS06	Yerushalayim
* IT	ITALY
IT01	Abruzzi
IT02	Basilicata
IT03	Calabria
IT04	Campania
IT05	Emilia-Romagna
IT06	Friuli-Venezia Giulia
IT07	Lazio
IT08	Liguria
IT09	Lombardia
IT10	Marche
IT11	Molise
IT12	Piemonte
IT13	Puglia
IT14	Sardegna
*IT15	Sicilia
IT16	Toscana
IT17	Trentino-Alto Adige
IT18	Umbria
IT19	Valle d'Aosta
IT20	Veneto
* JM	JAMAICA
JM01	Clarendon
JM02	Hanover
JM17	Kingston
JM04	Manchester
JM07	Portland
JM08	Saint Andrew
JM09	Saint Ann
JM10	Saint Catherine
JM11	Saint Elizabeth
JM12	Saint James
JM13	Saint Mary
JM14	Saint Thomas
JM15	Trelawny
JM16	Westmoreland
JN	JAN MAYEN
* JA	JAPAN
JA01	Aichi
JA02	Akita
JA03	Aomori
JA04	Chiba
JA05	Ehime
JA06	Fukui
JA07	Fukuoka
JA08	Fukushima
JA09	Gifu
JA10	Gumma
JA11	Hiroshima
JA12	Hokkaido
JA13	Hyogo
*JA14	Ibaraki
JA15	Ishikawa
JA16	Iwate
JA17	Kagawa
JA18	Kagoshima
JA19	Kanagawa
JA20	Kochi
JA21	Kumamoto
JA22	Kyoto
JA23	Mie
JA24	Miyagi
JA25	Miyazaki
JA26	Nagano
JA27	Nagasaki
JA28	Nara
JA29	Niigata
JA30	Oita
JA31	Okayama
JA47	Okinawa
JA32	Osaka
JA33	Saga
JA34	Saitama

Code	Description
JA35	Shiga
JA36	Shimane
JA37	Shizuoka
JA38	Tochigi
JA39	Tokushima
JA40	Tokyo
JA41	Tottori
JA42	Toyama
JA43	Wakayama
JA44	Yamagata
JA45	Yamaguchi
JA46	Yamanashi
DQ	JARVIS ISLAND
JE	JERSEY
JQ	JOHNSTON ATOLL
*JO	JORDAN
JO02	Al Balqa'
JO09	Al Karak
JO10	Al Mafraq
JO11	`Amman
JO12	At Tafilah
JO13	Az Zarqa
JO14	Irbid
JO07	Ma`an
JU	JUAN DE NOVA ISLAND
KZ	KAZAKHSTAN
*KE	KENYA
KE01	Central
KE02	Coast
KE03	Eastern
KE05	Nairobi Area
KE06	North-Eastern
KE07	Nyanza
KE08	Rift Valley
KE09	Western

Code	Description
KQ	KINGMAN REEF
KR	KIRIBATI
KR01	Gilbert Islands
KR02	Line Islands
KR03	Phoenix Islands
KN	KOREA, DEMOCRATIC PEOPLE'S REPUBLIC OF
KN01	Chagang-do
KN16	Hamgyong-bukto
KN03	Hamgyong-namdo
KN07	Hwanghae-bukto
KN06	Hwanghae-namdo
KN08	Kaesong-si
KN09	Kangwon-do
KN14	Namp'o-si
KN11	P'yongan-bukto
KN15	P'yongan-namdo
KN12	P'yongyang-si
KN13	Yanggang-do
* KS	KOREA, REPUBLIC OF
KS01	Cheju-do
KS03	Cholla-bukto
KS16	Cholla-namdo
KS05	Ch'ungch'ong-bukto
KS17	Ch'ungch'ong-namdo
KS12	Inch'on-jikhalsi
KS06	Kangwon-do
KS18	Kwangju-jikhalsi
KS13	Kyonggi-do
KS14	Kyongsang-bukto
KS08	Kyongsang-namdo
KS10	Pusan-jikhalsi
KS11	Soul-t'ukpyolsi
KS15	Taegu-jikhalsi
KS19	Taejon-jikhalsi
KU	KUWAIT
KU01	Al Ahmadi
KU02	Al Kuwayt

Code	Description
KU03	Hawalli
KG	KYRGYZSTAN
LA	LAOS
LA01	Attapu
*LA02	Champasak
LA03	Houaphan
*LA04	Khammouan
LA05	Louang Namtha
LA06	Louangphrabang
LA07	Oudomxai
LA08	Phongsali
LA09	Saravan
LA10	Savannakhet
LA11	Vientiane
LA13	Xaignabouri
LA14	Xiangkhoang
LG	LATVIA
LE	LEBANON
*LE04	Beirut
LE05	Mount Lebanon
LE06	South
LE07	Nabatieh
LE08	Beqaa
LE09	North
LE10	Aakkar
LE11	Baalbek-Hermel
LT	LESOTHO
LT10	Berea
LT11	Butha-Buthe
LT12	Leribe
LT13	Mafeteng
LT14	Maseru
LT15	Mohales Hoek
LT16	Mokhotlong

Code	Description
LT17	Qachas Nek
LT18	Quthing
LT19	Thaba-Tseka
LI	LIBERIA
LI01	Bong
LI03	Grand Bassa
LI04	Grand Cape Mount
LI02	Grand Jide
LI05	Lofa
LI06	Maryland
LI07	Monrovia
LI08	Montserrado
LI09	Nimba
LI10	Sino
LY	LIBYA
LY47	Ajdabiya
LY03	Al `Aziziyah
LY48	Al Fatih
LY49	Al Jabal al Akhdar
LY05	Al Jufrah
LY50	Al Khums
LY08	Al Kufrah
LY51	An Nuqat al Khams
LY13	Ash Shati'
LY52	Awbari
LY53	Az Zawiyah
LY54	Banghazi
LY55	Darnah
LY56	Ghadamis
LY57	Gharyan
LY58	Misratah
LY30	Murzuq
LY34	Sabha
LY59	Sawfajjin
LY60	Surt
LY61	Tarabulus
LY41	Tarhunah
LY42	Tubruq
LY62	Yafran
LY45	Zlitan

Code	Description
LS	LIECHTENSTEIN
LS01	Balzers
LS02	Eschen
LS03	Gamprin
LS04	Mauren
LS05	Planken
LS06	Ruggell
LS07	Schaan
LS08	Schellenberg
LS09	Triesen
LS10	Triesenberg
LS11	Vaduz
LH	LITHUANIA
LU	LUXEMBOURG
LU01	Diekirch
LU02	Grevenmacher
LU03	Luxembourg
MC	MACAU
MC01	Ilhas
MC02	Macau
MK	MACEDONIA
*MA	MADAGASCAR
MA05	Antananarivo
MA01	Antsiranana
MA02	Fianarantsoa
MA03	Mahajanga
MA04	Toamasina
MA06	Toliara
MI	MALAWI
MI24	Blantyre
MI02	Chikwawa
MI03	Chiradzulu
MI04	Chitipa
MI06	Dedza
MI07	Dowa
MI08	Karonga
MI09	Kasungu

Code	Description
MI11	Lilongwe
MI10	Machinga
MI12	Mangochi
MI13	Mchinji
MI14	Mulanje
MI25	Mwanza
MI15	Mzimba
MI17	Nkhata Bay
MI18	Nkhotakota
MI19	Nsanje
MI16	Ntcheu
MI20	Ntchisi
MI21	Rumphi
MI22	Salima
MI05	Thyolo
MI23	Zomba
* MY	MALAYSIA
MY01	Johor
MY02	Kedah
MY03	Kelantan
MY15	Labuan
MY04	Melaka
MY05	Negeri Sembilan
MY06	Pahang
MY07	Perak
MY08	Perlis
MY09	Pulau Pinang
MY16	Sabah
MY11	Sarawak
MY12	Selangor
MY13	Terengganu
MY14	Wilayah Persekutuan
MV	MALDIVES
MV02	Aliff
MV20	Baa
MV17	Daalu
MV14	Faafu
MV27	Gaafu Aliff
MV28	Gaafu Daalu
MV07	Haa Aliff

Code	Description
MV23	Haa Daalu
MV26	Kaafu
MV05	Laamu
MV03	Laviyani
MV12	Meemu
MV29	Naviyani
MV25	Noonu
MV13	Raa
MV01	Seenu
MV24	Shaviyani
MV08	Thaa
MV04	Waavu
ML	MALI
ML01	Bamako
ML02	Gao
ML03	Kayes
ML07	Koulikoro
ML04	Mopti
ML05	Segou
ML06	Sikasso
ML08	Tombouctou
MT	MALTA
*IM	MAN, ISLE OF
RM	MARSHALL ISLANDS
* MB	MARTINIQUE
MR	MAURITANIA
MR07	Adrar
MR03	Assaba
MR05	Brakna
MR08	Dakhlet Nouadhibou
MR04	Gorgol
MR10	Guidimaka
MR01	Hodh Ech Chargui
MR02	Hodh El Gharbi
MR12	Inchiri
MR09	Tagant
MR11	Tiris Zemmour
MR06	Trarza
MP	MAURITIUS
MP21	Agalega Islands
MP12	Black River
MP22	Cargados Carajos
MP13	Flacq
MP14	Grand Port
MP15	Moka
MP16	Pamplemousses
MP17	Plaines Wilhems
MP18	Port Louis
MP19	Riviere du Rempart
MP23	Rodrigues
MP20	Savanne
MF	MAYOTTE
* MX	MEXICO
MX01	Aguascalientes
MX02	Baja California
MX03	Baja California Sur
MX04	Campeche
*MX05	Chiapas
MX06	Chihuahua
MX07	Coahuila de Zaragoza
MX08	Colima
MX09	Distrito Federal
MX10	Durango
MX11	Guanajuato
MX12	Guerrero
MX13	Hidalgo
MX14	Jalisco
MX15	Mexico
MX16	Michoacan de Ocampo
MX17	Morelos
MX18	Nayarit
MX19	Nuevo Leon
MX20	Oaxaca
MX21	Puebla
MX22	Queretaro de Arteaga
MX23	Quintana Roo
*MX24	San Luis Potosi
MX25	Sinaloa
MX26	Sonora
MX27	Tabasco
*MX28	Tamaulipas
MX29	Tlaxcala
MX30	Veracruz-Llave
MX31	Yucatan
MX32	Zacatecas
MQ	MIDWAY ISLANDS
MD	MOLDOVA
MN	MONACO
MN01	La Condamine
MN02	Monaco
MN03	Monte-Carlo
*MG	MONGOLIA
MG01	Arhangay
MG02	Bayanhongor
MG03	Bayan-Olgiy
MG21	Bulgan
MG05	Darhan
MG06	Dornod
MG07	Dornogovi
MG08	Dundgovi
MG09	Dzavhan
MG22	Erdenet
MG10	Govi-Altay
MG11	Hentiy
MG12	Hovd
MG13	Hovsgol
MG14	Omnogovi
MG15	Ovorhangay
MG16	Selenge
MG17	Suhbaatar
MG18	Tov
MG20	Ulaanbaatar
MG19	Uvs
MW	MONTENEGRO

Code	Description
MH	MONTSERRAT
MH01	Saint Anthony
MH02	Saint Georges
MH03	Saint Peter
*MO	MOROCCO
MO01	Agadir
MO02	Al Hoceima
MO03	Azilal
MO05	Beni Mellal
MO04	Ben Slimane
MO06	Boulemane
MO07	Casablanca
MO08	Chaouen
MO09	El Jadida
MO10	El Kelaa des Srarhna
MO11	Er Rachidia
MO12	Essaouira
MO13	Fes
MO14	Figuig
MO33	Guelmim
MO34	Ifrane
MO15	Kenitra
MO16	Khemisset
MO17	Khenifra
MO18	Khouribga
MO35	Laayoune
MO41	Larache
MO19	Marrakech
MO20	Meknes
MO21	Nador
MO22	Ouarzazate
MO23	Oujda
MO24	Rabat-Sale
MO25	Safi
MO26	Settat
MO38	Sidi Kacem
MO27	Tanger
MO36	Tan-Tan
MO37	Taounate
MO39	Taroudannt
MO29	Tata
MO30	Taza
MO40	Tetouan
MO32	Tiznit
MZ	MOZAMBIQUE
MZ01	Cabo Delgado
MZ02	Gaza
MZ03	Inhambane
*MZ10	Manica
MZ04	Maputo
MZ06	Nampula
MZ07	Niassa
MZ05	Sofala
MZ08	Tete
MZ09	Zambezia
WA	NAMIBIA
WA01	Bethanien
WA03	Boesmanland
WA02	Caprivi Oos
WA22	Damaraland
WA04	Gobabis
WA05	Grootfontein
WA23	Hereroland Oos
WA24	Hereroland Wes
WA06	Kaokoland
WA20	Karasburg
WA07	Karibib
WA25	Kavango
WA08	Keetmanshoop
WA09	Luderitz
WA10	Maltahohe
WA26	Mariental
WA27	Namaland
WA11	Okahandja
WA12	Omaruru
WA13	Otjiwarongo
WA14	Outjo
WA15	Owambo
WA16	Rehoboth
WA17	Swakopmund
WA18	Tsumeb
WA21	Windhoek
NR00	NAURU
NR01	Aiwo
NR02	Anabar
NR03	Anetan
NR04	Anibare
NR05	Baiti
NR06	Boe
NR07	Buada
NR08	Denigomodu
NR09	Ewa
NR10	Ijuw
NR11	Meneng
NR12	Nibok
NR13	Uaboe
NR14	Yaren
BQ	NAVASSA ISLAND
NP	NEPAL
NP01	Bagmati
NP02	Bheri
NP03	Dhawalagiri
NP04	Gandaki
NP05	Janakpur
NP06	Karnali
NP07	Kosi
NP08	Lumbini
NP09	Mahakali
NP10	Mechi
NP11	Narayani
NP12	Rapti
NP13	Sagarmatha
NP14	Seti
* NL	NETHERLANDS
NL01	Drenthe
NL12	Dronten
NL02	Friesland
NL03	Gelderland
NL04	Groningen
NL14	Lelystad
NL05	Limburg
NL06	Noord-Brabant

Code	Description
NL07	Noord-Holland
NL08	Overijssel
NL09	Utrecht
NL10	Zeeland
NL13	Zuidelijke IJsselmeerpolders
NL11	Zuid-Holland
NT	NETHERLANDS ANTILLES
NC	NEW CALEDONIA
* NZ	NEW ZEALAND
NZ01	Akaroa
NZ03	Amuri
NZ04	Ashburton
NZ07	Bay of Islands
NZ08	Bruce
NZ09	Buller
NZ10	Chatham Islands
NZ11	Cheviot
NZ12	Clifton
NZ13	Clutha
NZ14	Cook
NZ16	Dannevirke
NZ17	Egmont
NZ18	Eketahuna
NZ19	Ellesmere
NZ20	Eltham
NZ21	Eyre
NZ22	Featherston
NZ24	Franklin
NZ26	Golden Bay
NZ27	Great Barrier Island
NZ28	Grey
NZ29	Hauraki Plains
NZ30	Hawera
NZ31	Hawke's Bay
NZ32	Heathcote
NZD9	Hikurangi
NZ33	Hobson
NZ34	Hokianga
NZ35	Horowhenua
NZD4	Hurunui
NZ36	Hutt
NZ37	Inangahua
NZ38	Inglewood
NZ39	Kaikoura
NZ40	Kairanga
NZ41	Kiwitea
NZ43	Lake
NZ45	Mackenzie
NZ46	Malvern
NZE1	Manaia
NZ47	Manawatu
NZ48	Mangonui
NZ49	Maniototo
NZ50	Marlborough
NZ51	Masterton
NZ52	Matamata
NZ53	Mount Herbert
NZ54	Ohinemuri
NZ55	Opotiki
NZ56	Oroua
NZ57	Otamatea
NZ58	Otorohanga
NZ59	Oxford
NZ60	Pahiatua
NZ61	Paparua
NZ63	Patea
NZ65	Piako
NZ66	Pohangina
NZ67	Raglan
NZ68	Rangiora
NZ69	Rangitikei
NZ70	Rodney
NZ71	Rotorua
NZE2	Runanga
NZE3	Saint Kilda
NZD5	Silverpeaks
NZ72	Southland
NZ73	Stewart Island
NZ74	Stratford
NZD6	Strathallan
NZ76	Taranaki
NZ77	Taumarunui
NZ78	Taupo
NZ79	Tauranga
NZE4	Thames-Coromandel
NZ81	Tuapeka
NZ82	Vincent
NZ83	Waiapu
NZD8	Waiheke
NZ84	Waihemo
NZ85	Waikato
NZ86	Waikohu
NZ88	Waimairi
NZ89	Waimarino
NZ90	Waimate
NZ91	Waimate West
NZ92	Waimea
NZ93	Waipa
NZ95	Waipawa
NZ96	Waipukurau
NZ97	Wairarapa South
NZ98	Wairewa
NZ99	Wairoa
NZA4	Waitaki
NZA6	Waitomo
NZA8	Waitotara
NZE6	Wallace
NZB2	Wanganui
NZE5	Waverley
NZB3	Westland
NZB4	Whakatane
NZA1	Whangarei
NZA2	Whangaroa
NZA3	Woodville
*NU	NICARAGUA
NU01	Boaco
NU02	Carazo
NU03	Chinandega
NU04	Chontales
NU05	Esteli
NU06	Granada
NU07	Jinotega
NU08	Leon

Code	Description
NU09	Madriz
NU10	Managua
NU11	Masaya
NU12	Matagalpa
NU13	Nueva Segovia
NU14	Rio San Juan
NU15	Rivas
NU16	Zelaya
*NG	NIGER
NG01	Agadez
NG02	Diffa
NG03	Dosso
NG04	Maradi
NG05	Niamey
NG06	Tahoua
NG07	Zinder
*NI	NIGERIA
NI34	Abia
NI11	Abuja Capital Territory
NI35	Adamawa
NI21	Akwa Ibom
NI25	Anambra
NI06	Bauchi
NI26	Benue
NI27	Borno
NI22	Cross River
NI36	Delta
NI37	Edo
NI38	Enugu
NI28	Imo
NI39	Jigawa
NI23	Kaduna
NI29	Kano
NI24	Katsina
NI40	Kebbi
NI41	Kogi
NI30	Kwara
NI05	Lagos
NI31	Niger
NI16	Ogun
NI17	Ondo
NI42	Osun
NI32	Oyo
NI19	Plateau
NI10	Rivers
NI33	Sokoto
NI43	Taraba
NI44	Yobe
NE	NIUE
NF	NORFOLK ISLAND
CQ	NORTHERN MARIANA ISLANDS
* NO	NORWAY
NO01	Akershus
NO02	Aust-Agder
NO04	Buskerud
NO05	Finnmark
NO06	Hedmark
NO07	Hordaland
NO08	More og Romsdal
NO09	Nordland
NO10	Nord-Trondelag
NO11	Oppland
NO12	Oslo
NO13	Ostfold
NO14	Rogaland
NO15	Sogn og Fjordane
NO16	Sor-Trondelag
NO17	Telemark
NO18	Troms
NO19	Vest-Agder
NO20	Vestfold
MU	OMAN
*PK	PAKISTAN
PK06	Azad Kashmir
PK02	Balochistan
PK01	Federally Administered Tribal Areas
PK08	Islamabad
PK07	Northern Areas
PK03	North-West Frontier
PK04	Punjab
PK05	Sindh
LQ	PALMYRA ATOLL
* PM	PANAMA
PM01	Bocas del Toro
PM02	Chiriqui
PM03	Cocle
PM04	Colon
PM05	Darien
PM06	Herrera
PM07	Los Santos
PM08	Panama
PM09	San Blas
PM10	Veraguas
*PP	PAPUA NEW GUINEA
PP01	Central
PP08	Chimbu
PP09	Eastern Highlands
PP10	East New Britain
PP11	East Sepik
PP19	Enga
PP02	Gulf
PP12	Madang
PP13	Manus
PP03	Milne Bay
PP14	Morobe
PP20	National Capital
PP15	New Ireland
PP04	Northern
PP07	North Solomons
PP18	Sandaun
PP05	Southern Highlands
PP06	Western
PP16	Western Highlands
PP17	West New Britain
PF	PARACEL ISLANDS

Code	Description
PA	PARAGUAY
PA18	Alto Paraguay
PA01	Alto Parana
PA02	Amambay
PA03	Boqueron
PA04	Caaguazu
PA05	Caazapa
PA19	Canindeyu
PA06	Central
PA20	Chaco
PA07	Concepcion
PA08	Cordillera
PA10	Guaira
PA11	Itapua
PA12	Misiones
PA13	Neembucu
PA21	Nueva Asuncion
PA15	Paraguari
PA16	Presidente Hayes
PA17	San Pedro
* PE	PERU
PE01	Amazonas
PE02	Ancash
PE03	Apurimac
PE04	Arequipa
PE05	Ayacucho
PE06	Cajamarca
PE07	Callao
PE08	Cusco
PE09	Huancavelica
PE10	Huanuco
PE11	Ica
PE12	Junin
PE13	La Libertad
PE14	Lambayeque
PE15	Lima
PE16	Loreto
PE17	Madre de Dios
PE18	Moquegua
PE19	Pasco
PE20	Piura
PE21	Puno
PE22	San Martin
PE23	Tacna
PE24	Tumbes
PE25	Ucayali
*RP	PHILIPPINES
RP01	Abra
RP02	Agusan del Norte
RP03	Agusan del Sur
RP04	Aklan
RP05	Albay
RPA1	Angeles
RP06	Antique
RPG8	Aurora
RPA2	Bacolod
RPA3	Bago
RPA4	Baguio
RPA5	Bais
RP22	Basilan
RPA6	Basilan City
RP07	Bataan
RP08	Batanes
RP09	Batangas
RPA7	Batangas City
RP10	Benguet
RP11	Bohol
RP12	Bukidnon
RP13	Bulacan
RPA8	Butuan
RPA9	Cabanatuan
RPB1	Cadiz
RP14	Cagayan
RPB2	Cagayan de Oro
RPB3	Calbayog
RPB4	Caloocan
RP15	Camarines Norte
RP16	Camarines Sur
RP17	Camiguin
RPB5	Canlaon
RP18	Capiz
RP19	Catanduanes
RP20	Cavite
RPB6	Cavite City
RP21	Cebu
RPB7	Cebu City
RPB8	Cotabato
RPB9	Dagupan
RPC1	Danao
RPC2	Dapitan
RP24	Davao
RPC3	Davao City
RP25	Davao del Sur
RP26	Davao Oriental
RPC4	Dipolog
RPC5	Dumaguete
RP23	Eastern Samar
RPC6	General Santos
RPC7	Gingoog
RP27	Ifugao
RPC8	Iligan
RP28	Ilocos Norte
RP29	Ilocos Sur
RP30	Iloilo
RPC9	Iloilo City
RPD1	Iriga
RP31	Isabela
RP32	Kalinga-Apayao
RPD2	La Carlota
*RP33	Laguna
RP34	Lanao del Norte
RP35	Lanao del Sur
RPD3	Laoag
RPD4	Lapu-Lapu
RP36	La Union
RPD5	Legaspi
*RP37	Leyte
RPD6	Lipa
RPD7	Lucena
RP56	Maguindanao
RPD8	Mandaue
RPD9	Manila
RPE1	Marawi
RP38	Marinduque
RP39	Masbate
RP40	Mindoro Occidental

Code	Description
RP41	Mindoro Oriental
RP42	Misamis Occidental
RP43	Misamis Oriental
RP44	Mountain
RPE2	Naga
RPH3	Negros Occidental
RP46	Negros Oriental
RP57	North Cotabato
RP67	Northern Samar
RP47	Nueva Ecija
RP48	Nueva Vizcaya
RPE3	Olongapo
RPE4	Ormoc
RPE5	Oroquieta
RPE6	Ozamis
RPE7	Pagadian
RP49	Palawan
RPE8	Palayan
RP50	Pampanga
RP51	Pangasinan
RPE9	Pasay
RPF1	Puerto Princesa
RPH2	Quezon
RPF2	Quezon City
RP68	Quirino
RP53	Rizal
RP54	Romblon
RPF3	Roxas
RP55	Samar
RPF4	San Carlos, Negros Occidental
RPF5	San Carlos, Pangasinan
RPF6	San Jose
RPF7	San Pablo
RPF8	Silay
RP69	Siquijor
RP58	Sorsogon
RP70	South Cotabato
RP59	Southern Leyte
RP71	Sultan Kudarat
RP60	Sulu
RPF9	Surigao
RP61	Surigao del Norte
RP62	Surigao del Sur
RPG1	Tacloban
RPG2	Tagaytay
RPG3	Tagbilaran
RPG4	Tangub
RP63	Tarlac
RP72	Tawitawi
RPG5	Toledo
RPG6	Trece Martires
RP64	Zambales
RPG7	Zamboanga
RP65	Zamboanga del Norte
RP66	Zamboanga del Su
r	
PC	PITCAIRN ISLANDS
* PL	POLAND
PL23	Biala Podlaska
PL24	Bialystok
*PL25	Bielsko
PL26	Bydgoszcz
PL27	Chelm
PL28	Ciechanow
PL29	Czestochowa
PL30	Elblag
PL31	Gdansk
PL32	Gorzow
PL33	Jelenia Gora
PL34	Kalisz
*PL35	Katowice
PL36	Kielce
PL37	Konin
PL38	Koszalin
PL39	Krakow
PL40	Krosno
PL41	Legnica
PL42	Leszno
PL43	Lodz
PL44	Lomza
PL45	Lublin
PL46	Nowy Sacz
PL47	Olsztyn
PL48	Opole
PL49	Ostroleka
PL50	Pila
PL51	Piotrkow
PL52	Plock
PL53	Poznan
PL54	Przemysl
PL55	Radom
PL56	Rzeszow
PL57	Siedlce
PL58	Sieradz
PL59	Skierniewice
PL60	Slupsk
PL61	Suwalki
PL62	Szczecin
PL63	Tarnobrzeg
PL64	Tarnow
PL65	Torun
PL66	Walbrzych
PL67	Warszawa
PL68	Wloclawek
PL69	Wroclaw
PL70	Zamosc
PL71	Zielona Gora
*PO	PORTUGAL
PO02	Aveiro
PO23	Azores
PO03	Beja
PO04	Braga
PO05	Braganca
PO06	Castelo Branco
PO07	Coimbra
PO08	Evora
PO09	Faro
PO11	Guarda
PO13	Leiria
PO14	Lisboa
PO10	Madeira
PO16	Portalegre
PO17	Porto
PO18	Santarem
PO19	Setubal
PO20	Viana do Castelo

Code	Description
PO21	Vila Real
PO22	Viseu
*RQ	PUERTO RICO
QA	QATAR
RE	REUNION
*RO	ROMANIA
RO01	Alba
RO02	Arad
RO03	Arges
RO04	Bacau
RO05	Bihor
RO06	Bistrita-Nasaud
RO07	Botosani
RO08	Braila
*RO09	Brasov
RO10	Bucuresti
RO11	Buzau
RO41	Calarasi
RO12	Caras-Severin
RO13	Cluj
RO14	Constanta
RO15	Covasna
RO16	Dimbovita
RO17	Dolj
RO18	Galati
RO19	Gorj
RO42	Giurgiu
RO20	Harghita
RO21	Hunedoara
RO22	Ialomita
RO23	Iasi
RO25	Maramures
RO26	Mehedinti
RO27	Mures
RO28	Neamt
RO29	Olt
RO30	Prahova
RO31	Salaj
RO32	Satu Mare

Code	Description
RO33	Sibiu
RO34	Suceava
RO35	Teleorman
RO36	Timis
RO37	Tulcea
RO38	Vaslui
RO39	Vilcea
RO40	Vrancea
* RS	RUSSIA
*RW	RWANDA
RW01	Butare
RW02	Byumba
RW03	Cyangugu
RW04	Gikongoro
RW05	Gisenyi
RW06	Gitarama
RW07	Kibungo
RW08	Kibuye
RW09	Kigali
RW10	Ruhengeri
SC	ST. KITTS AND NEVIS
SC01	Christ Church Nichola Town
SC02	Saint Anne Sandy Point
SC03	Saint George Basseterre
SC04	Saint George Gingerland
SC05	Saint James Windward
SC06	Saint John Capisterre
SC07	Saint John Figtree
SC08	Saint Mary Cayon
SC09	Saint Paul Capisterre
SC10	Saint Paul Charlestown
SC11	Saint Peter Basseterre
SC12	Saint Thomas Lowland
SC13	Saint Thomas Middle Island
SC15	Trinity Palmetto Point
SH	ST. HELENA
SH01	Ascension

Code	Description
SH02	Saint Helena
SH03	Tristan da Cunha
*ST	ST. LUCIA
ST01	Anse-la-Raye
ST03	Castries
ST04	Choiseul
ST02	Dauphin
ST05	Dennery
ST06	Gros-Islet
ST07	Laborie
ST08	Micoud
ST11	Praslin
ST09	Soufriere
ST10	Vieux-Fort
SB	ST. PIERRE AND MIQUELON
VC	ST. VINCENT AND THE GRENADINES
VC01	Charlotte
VC06	Grenadines
VC02	Saint Andrew
VC03	Saint David
VC04	Saint George
VC05	Saint Patrick
SM	SAN MARINO
SM01	Acquaviva
SM06	Borgo Maggiore
SM02	Chiesanuova
SM03	Domagnano
SM04	Faetano
SM05	Fiorentino
SM08	Monte Giardino
SM07	San Marino
SM09	Serravalle
TP	SAO TOME AND PRINCIPE
TP01	Principe
TP02	Sao Tome

Code	Description
SA	SAUDI ARABIA
SA02	Al Bahah
SA15	Al Hudud ash Shamaliyah
SA03	Al Jawf
SA05	Al Madinah
SA08	Al Qasim
SA09	Al Qurayyat
SA10	Ar Riyad
SA06	Ash Sharqiyah
SA11	`Asir
SA13	Ha'il
SA17	Jizan
SA14	Makkah
SA16	Najran
SA19	Tabuk
*SG	SENEGAL
SG01	Dakar
SG03	Diourbel
SG09	Fatick
SG10	Kaolack
SG11	Kolda
SG08	Louga
SG04	Saint-Louis
SG05	Tambacounda
SG07	Thies
SG12	Ziguinchor
*SR	SERBIA
SE	SEYCHELLES
SE01	Anse aux Pins
SE02	Anse Boileau
SE03	Anse Etoile
SE04	Anse Louis
SE05	Anse Royale
SE06	Baie Lazare
SE07	Baie Sainte Anne
SE08	Beau Vallon
SE09	Bel Air
SE10	Bel Ombre
SE11	Cascade
SE12	Glacis
SE13	Grand' Anse (Mahe)
SE14	Grand' Anse (Praslin)
SE15	La Digue
SE16	La Riviere Anglaise
SE17	Mont Buxton
SE18	Mont Fleuri
SE19	Plaisance
SE20	Pointe La Rue
SE21	Port Glaud
SE22	Saint Louis
SE23	Takamaka
SL	SIERRA LEONE
SL01	Eastern
SL02	Northern
SL03	Southern
SL04	Western Area
SN	SINGAPORE
* LO	SLOVAKIA
* SI	SLOVENIA
BP	SOLOMON ISLANDS
BP05	Central
BP06	Guadalcanal
BP07	Isabel
BP08	Makira
BP03	Malaita
BP09	Temotu
BP04	Western
*SO	SOMALIA
SO01	Bakool
SO02	Banaadir
SO03	Bari
SO04	Bay
SO05	Galguduud
SO06	Gedo
SO07	Hiiraan
SO08	Jubbada Dhexe
SO09	Jubbada Hoose
SO10	Mudug
SO11	Nugaal
SO12	Sanaag
SO13	Shabeellaha Dhexe
SO14	Shabeellaha Hoose
SO15	Togdheer
SO16	Woqooyi Galbeed
*SF	SOUTH AFRICA
SF01	Cape Province
SF02	Natal
SF03	Orange Free State
SF04	Transvaal
SX	SOUTH GEORGIA AND THE SOUTH SANDWICH ISLANDS
* SP	SPAIN
SP51	Andalucia
SP52	Aragon
SP34	Asturias
SP53	Canarias
SP39	Cantabria
SP54	Castilla-La Mancha
SP55	Castilla y Leon
SP56	Cataluna
SP57	Extremadura
*SP58	Galicia
SP07	Islas Baleares
SP27	La Rioja
SP29	Madrid
SP31	Murcia
SP32	Navarra
SP59	Pais Vasco
SP60	Valenciana
PG	SPRATLY ISLANDS
*CE	SRI LANKA
CE01	Amparai
CE02	Anuradhapura

Code	Description
CE03	Badulla
CE04	Batticaloa
CE23	Colombo
CE06	Galle
CE24	Gampaha
CE07	Hambantota
CE25	Jaffna
CE09	Kalutara
CE10	Kandy
CE11	Kegalla
CE12	Kurunegala
CE26	Mannar
CE14	Matale
CE15	Matara
CE16	Moneragala
CE27	Mullaittivu
CE17	Nuwara Eliya
CE18	Polonnaruwa
CE19	Puttalam
CE20	Ratnapura
CE21	Trincomalee
CE28	Vavuniya
*SU	SUDAN
SU26	A`ali an Nil
SU28	Al Istiwa'iyah
SU29	Al Khartum
SU27	Al Wusta
SU30	Ash Shamaliyah
SU31	Ash Sharqiyah
SU32	Bahr al Ghazal
SU33	Darfur
SU34	Kurdufan
NS	SURINAME
NS10	Brokopondo
NS11	Commewijne
NS12	Coronie
NS13	Marowijne
NS14	Nickerie
NS15	Para
NS16	Paramaribo
NS17	Saramacca
NS18	Sipaliwini
NS19	Wanica
SV	SVALBARD
WZ	SWAZILAND
WZ01	Hhohho
WZ02	Lubombo
WZ03	Manzini
WZ05	Praslin
WZ04	Shiselweni
* SW	SWEDEN
SW01	Alvsborgs Lan
SW02	Blekinge Lan
SW03	Gavleborgs Lan
SW04	Goteborgs och Bohus Lan
SW05	Gotlands Lan
SW06	Hallands Lan
SW07	Jamtlands Lan
SW08	Jonkopings Lan
SW09	Kalmar Lan
SW10	Kopparbergs Lan
SW11	Kristianstads Lan
SW12	Kronobergs Lan
SW13	Malmohus Lan
SW14	Norrbottens Lan
SW15	Orebro Lan
SW16	Ostergotlands Lan
SW17	Skaraborgs Lan
SW18	Sodermanlands Lan
SW26	Stockholms Lan
SW21	Uppsala Lan
SW22	Varmlands Lan
SW23	Vasterbottens Lan
SW24	Vasternorrlands Lan
SW25	Vastmanlands Lan
* SZ	SWITZERLAND
SZ01	Aargau
SZ02	Ausser-Rhoden
SZ03	Basel-Landschaft
SZ04	Basel-Stadt
SZ05	Bern
SZ06	Fribourg
SZ07	Geneve
SZ08	Glarus
SZ09	Graubunden
SZ10	Inner-Rhoden
SZ26	Jura
SZ11	Luzern
SZ12	Neuchatel
SZ13	Nidwalden
SZ14	Obwalden
SZ15	Sankt Gallen
SZ16	Schaffhausen
SZ17	Schwyz
SZ18	Solothurn
SZ19	Thurgau
SZ20	Ticino
SZ21	Uri
SZ22	Valais
SZ23	Vaud
SZ24	Zug
*SZ25	Zurich
*SY	SYRIA
SY01	Al Hasakah
SY02	Al Ladhiqiyah
SY03	Al Qunaytirah
SY04	Ar Raqqah
SY05	As Suwayda'
SY06	Dar`a
SY07	Dayr az Zawr
SY13	Dimashq
SY09	Halab
SY10	Hamah
SY11	Hims
SY12	Idlib
SY08	Rif Dimashq
SY14	Tartus
TI	TAJIKISTAN
*TZ	TANZANIA

Code	Description
TZ01	Arusha
TZ23	Dar es Salaam
TZ03	Dodoma
TZ04	Iringa
TZ05	Kigoma
TZ06	Kilimanjaro
TZ07	Lindi
TZ08	Mara
TZ09	Mbeya
TZ10	Morogoro
TZ11	Mtwara
TZ12	Mwanza
TZ13	Pemba North
TZ20	Pemba South
TZ02	Pwani
TZ24	Rukwa
TZ14	Ruvuma
TZ15	Shinyanga
TZ16	Singida
TZ17	Tabora
*TZ18	Tanga
TZ21	Zanzibar Central/South
TZ22	Zanzibar North
TZ25	Zanzibar Urban/West
TZ19	Ziwa Magharibi
*TH	THAILAND
TH35	Ang Thong
TH28	Buriram
TH44	Chachoengsao
TH32	Chai Nat
TH26	Chaiyaphum
TH48	Chanthaburi
TH02	Chiang Mai
TH03	Chiang Rai
TH46	Chon Buri
*TH58	Chumphon
TH23	Kalasin
TH11	Kamphaeng Phet
TH50	Kanchanaburi
TH22	Khon Kaen
TH63	Krabi
TH40	Krung Thep

Code	Description
TH06	Lampang
TH05	Lamphun
TH18	Loei
TH34	Lop Buri
TH01	Mae Hong Son
TH24	Maha Sarakham
TH43	Nakhon Nayok
TH53	Nakhon Pathom
TH21	Nakhon Phanom
TH27	Nakhon Ratchasima
TH16	Nakhon Sawan
TH64	Nakhon Si Thammarat
TH04	Nan
TH31	Narathiwat
TH17	Nong Khai
TH38	Nonthaburi
TH39	Pathum Thani
TH69	Pattani
TH61	Phangnga
TH66	Phatthalung
TH41	Phayao
TH14	Phetchabun
TH56	Phetchaburi
TH13	Phichit
TH12	Phitsanulok
TH36	Phra Nakhon Si Ayutthaya
TH07	Phrae
TH62	Phuket
TH45	Prachin Buri
TH57	Prachuap Khiri Khan
TH59	Ranong
TH52	Ratchaburi
TH47	Rayong
TH25	Roi Et
*TH20	Sakon Nakhon
TH42	Samut Prakan
TH55	Samut Sakhon
TH54	Samut Songkhram
TH37	Saraburi
TH67	Satun
TH33	Sing Buri
TH30	Sisaket

Code	Description
TH68	Songkhla
TH09	Sukhothai
TH51	Suphan Buri
TH60	Surat Thani
TH29	Surin
TH08	Tak
TH65	Trang
TH49	Trat
TH71	Ubon Ratchathani
TH19	Udon Thani
TH15	Uthai Thani
TH10	Uttaradit
TH70	Yala
TH72	Yasothon
*TO	TOGO
TO01	Amlame
TO02	Aneho
TO03	Atakpame
TO15	Badou
TO04	Bafilo
TO05	Bassar
TO06	Dapaong
TO07	Kante
TO08	Klouto
TO14	Kpagouda
TO09	Lama-Kara
TO10	Lome
TO11	Mango
TO12	Niamtougou
TO13	Notse
TO16	Sotouboua
TO17	Tabligbo
TO19	Tchamba
TO20	Tchaoudjo
TO18	Tsevie
TO21	Vogan
TL	TOKELAU
TN	TONGA
TN01	Ha`apai
TN02	Tongatapu

Code	Description
TN03	Vava`u
*TD	TRINIDAD AND TOBAGO
TD01	Arima
TD02	Caroni
TD03	Mayaro
TD04	Nariva
TD05	Port-of-Spain
TD06	Saint Andrew
TD07	Saint David
TD08	Saint George
TD09	Saint Patrick
TD10	San Fernando
TD11	Tobago
TD12	Victoria
TE	TROMELIN ISLAND
PS	TRUST TERRITORY OF THE PACIFIC ISLANDS (PALAU)
*TS	TUNISIA
TS14	Al Kaf
TS15	Al Mahdiyah
TS16	Al Munastir
TS02	Al Qasrayn
TS03	Al Qayrawan
TS26	Aryanah
TS17	Bajah
TS18	Banzart
TS27	Bin `Arus
TS06	Jundubah
TS28	Madanin
TS19	Nabul
TS29	Qabis
TS10	Qafsah
TS31	Qibili
TS32	Safaqis
TS33	Sidi Bu Zayd
TS22	Silyanah
TS23	Susah
TS34	Tatawin
TS35	Tawzar
TS36	Tunis
TS37	Zaghwan
*TU	TURKEY
TU01	Adana
TU02	Adiyaman
TU03	Afyon
TU04	Agri
TU75	Aksaray
TU05	Amasya
TU68	Ankara
TU07	Antalya
TU08	Artvin
TU09	Aydin
TU10	Balikesir
TU76	Batman
TU77	Bayburt
TU11	Bilecik
TU12	Bingol
TU13	Bitlis
TU14	Bolu
TU15	Burdur
TU16	Bursa
TU17	Canakkale
TU18	Cankiri
TU19	Corum
TU20	Denizli
TU21	Diyarbakir
TU22	Edirne
TU23	Elazig
TU24	Erzincan
TU25	Erzurum
TU26	Eskisehir
TU27	Gaziantep
TU28	Giresun
TU69	Gumushane
TU70	Hakkari
TU31	Hatay
TU32	Icel
TU33	Isparta
TU34	Istanbul
TU35	Izmir
TU46	Kahraman Maras
TU78	Karaman
TU36	Kars
TU37	Kastamonu
TU38	Kayseri
TU79	Kirikkale
TU39	Kirklareli
TU40	Kirsehir
TU41	Kocaeli
TU71	Konya
TU43	Kutahya
TU44	Malatya
TU45	Manisa
TU72	Mardin
TU48	Mugla
TU49	Mus
TU50	Nevsehir
TU73	Nigde
TU52	Ordu
TU53	Rize
TU54	Sakarya
TU55	Samsun
TU74	Siirt
TU57	Sinop
TU80	Sirnak
TU58	Sivas
TU59	Tekirdag
TU60	Tokat
TU61	Trabzon
TU62	Tunceli
TU63	Urfa
TU64	Usak
TU65	Van
TU66	Yozgat
TU67	Zonguldak
TX	TURKMENISTAN
TK	TURKS AND CAICOS ISLANDS
TV	TUVALU
*UG	UGANDA

Code	Description
UG05	Busoga
UG18	Central
UG20	Eastern
UG08	Karamoja
UG21	Nile
UG22	North Buganda
UG23	Northern
UG12	South Buganda
UG24	Southern
UG25	Western
* UP	UKRAINE
UP01	Cherkas'ka Oblast'
UP02	Chernihivs'ka Oblast'
UP03	Chernivets'ka Oblast'
UP04	Dnipropetrovs'ka Oblast'
UP05	Donets'ka Oblast'
UP06	Ivano-Frankivs'ka Oblast'
UP07	Kharkivs'ka Oblast'
UP08	Khersons'ka Oblast'
UP09	Khmel'nyts'ka Oblast'
UP10	Kirovohrads'ka Oblast'
UP11	Krym, Respublika
UP12	Kyyiv, Misto
UP13	Kyyivs'ka Oblast'
UP14	Luhans'ka Oblast'
UP15	L'vivs'ka Oblast'
UP16	Mykolayivs'ka Oblast'
UP17	Odes'ka Oblast'
UP18	Poltavs'ka Oblast'
UP19	Rivnens'ka Oblast'
UP20	Sevastopol', Misto
UP21	Sums'ka Oblast'
UP22	Ternopil's'ka Oblast'
UP23	Vinnyts'ka Oblast'
UP24	Volyns'ka Oblast'
UP25	Zakarpats'ka Oblast'
UP26	Zaporiz'ka Oblast'
UP27	Zhytomyrs'ka Oblast'
TC	UNITED ARAB EMIRATES
TC01	Abu Zaby
TC02	`Ajman
TC04	Al Fujayrah
TC06	Ash Shariqah
TC03	Dubayy
TC05	Ra's al Khaymah
TC07	Umm al Qaywayn
* UK	UNITED KINGDOM
UK01	Avon
UK02	Bedford
*UK03	Berkshire
UK04	Buckingham
UK05	Cambridge
UK06	Cheshire
UK07	Cleveland
*UK08	Cornwall
UK09	Cumbria
UK10	Derby
UK11	Devon
UK12	Dorset
UK13	Durham
UK14	East Sussex
UK15	Essex
UK16	Gloucester
UK17	Greater London
UK18	Greater Manchester
*UK19	Hampshire
UK20	Hereford and Worcester
UK21	Hertford
UK22	Humberside
UK23	Isle of Wight
*UK24	Kent
UK25	Lancashire
UK26	Leicester
UK27	Lincoln
UK28	Merseyside
*UK29	Norfolk
UK31	Northampton
UK32	Northumberland
*UK30	North Yorkshire
UK33	Nottingham
*UK34	Oxford
UK35	Shropshire
*UK36	Somerset
UK37	South Yorkshire
UK38	Stafford
*UK39	Suffolk
UK40	Surrey
UK41	Tyne and Wear
UK42	Warwick
UK43	West Midlands
UK44	West Sussex
UK45	West Yorkshire
UK46	Wiltshire
UK52	Antrim
UK53	Ards
UK54	Armagh
UK55	Ballymena
UK56	Ballymoney
UK57	Banbridge
UK58	Belfast
UK59	Carrickfergus
UK60	Castlereagh
UK61	Coleraine
UK62	Cookstown
UK63	Craigavon
UK64	Down
UK65	Dungannon
UK66	Fermanagh
UK67	Larne
UK68	Limavady
UK69	Lisburn
UK70	Londonderry
UK71	Magherafelt
UK72	Moyle
UK73	Newry and Mourne
UK74	Newtownabbey
UK75	North Down
UK76	Omagh
UK77	Strabane
UK78	Borders
UK79	Central
UK80	Dumfries and Galloway
UK81	Fife
UK82	Grampian
UK83	Highland
UK84	Lothian

Code	Description
*UK85	Orkney
UK86	Shetland
UK87	Strathclyde
UK88	Tayside
UK89	Western Isles
UK90	Clwyd
UK91	Dyfed
UK92	Gwent
UK93	Gwynedd
UK94	Mid Glamorgan
UK95	Powys
UK96	South Glamorgan
UK97	West Glamorgan
* US	UNITED STATES
* US01	Alabama
* US02	Alaska
* US04	Arizona
* US05	Arkansas
* US06	California
* US08	Colorado
* US09	Connecticut
* US10	Delaware
* US11	District of Columbia
* US12	Florida
* US13	Georgia
* US15	Hawaii
* US16	Idaho
* US17	Illinois
* US18	Indiana
* US19	Iowa
* US20	Kansas
* US21	Kentucky
* US22	Louisiana
* US23	Maine
* US24	Maryland
* US25	Massachusetts
* US26	Michigan
* US27	Minnesota
* US28	Mississippi
* US29	Missouri
* US30	Montana
* US31	Nebraska

Code	Description
* US32	Nevada
* US33	New Hampshire
* US34	New Jersey
* US35	New Mexico
* US36	New York
* US37	North Carolina
* US38	North Dakota
* US39	Ohio
* US40	Oklahoma
* US41	Oregon
* US42	Pennsylvania
* US44	Rhode Island
* US45	South Carolina
* US46	South Dakota
* US47	Tennessee
* US48	Texas
* US49	Utah
* US50	Vermont
* US51	Virginia
* US53	Washington
* US54	West Virginia
* US55	Wisconsin
* US56	Wyoming
*UY	URUGUAY
UY01	Artigas
UY02	Canelones
UY03	Cerro Largo
UY04	Colonia
UY05	Durazno
UY06	Flores
UY07	Florida
UY08	Lavalleja
UY09	Maldonado
UY10	Montevideo
UY11	Paysandu
UY12	Rio Negro
UY13	Rivera
UY14	Rocha
UY15	Salto
UY16	San Jose
UY17	Soriano
UY18	Tacuarembo

Code	Description
UY19	Treinta y Tres
UZ	UZBEKISTAN
NH	VANUATU
NH05	Ambrym
NH06	Aoba/Maewo
NH07	Banks/Torres
NH08	Efate
NH09	Epi
NH10	Malakula
NH11	Paama
NH12	Pentecote
NH13	Santo/Malo
NH14	Shepherd
NH15	Tafea
VT	VATICAN CITY
VE	VENEZUELA
VE01	Amazonas
VE02	Anzoategui
VE03	Apure
VE04	Aragua
VE05	Barinas
VE06	Bolivar
VE07	Carabobo
VE08	Cojedes
VE09	Delta Amacuro
VE24	Dependencias Federales
VE10	Distrito Federal
VE11	Falcon
VE12	Guarico
VE13	Lara
VE14	Merida
VE15	Miranda
VE16	Monagas
VE17	Nueva Esparta
VE18	Portuguesa
VE19	Sucre
VE20	Tachira
VE21	Trujillo
VE22	Yaracuy

Code	Description
VE23	Zulia
VM	VIETNAM
VM43	An Giang
VM53	Ba Ria-Vung Tau
VM02	Bac Thai
VM03	Ben Tre
VM54	Binh Dinh
VM55	Binh Thuan
*VM56	Can Tho
VM05	Cao Bang
VM44	Dac Lac
VM45	Dong Nai
VM46	Dong Thap
VM57	Gia Lai
VM11	Ha Bac
VM58	Ha Giang
VM51	Ha Noi
VM59	Ha Tay
VM60	Ha Tinh
VM12	Hai Hung
VM13	Hai Phong
VM52	Ho Chi Minh
VM61	Hoa Binh
VM62	Khanh Hoa
VM47	Kien Giang
VM63	Kon Tum
VM22	Lai Chau
VM23	Lam Dong
VM39	Lang Son
VM64	Lao Cai
VM24	Long An
VM48	Minh Hai
VM65	Nam Ha
VM66	Nghe An
VM67	Ninh Binh
VM68	Ninh Thuan
VM69	Phu Yen
VM70	Quang Binh
VM29	Quang Nam-Da Nang
VM71	Quang Ngai
VM30	Quang Ninh
VM72	Quang Tri
VM73	Soc Trang
VM49	Song Be
VM32	Son La
VM33	Tay Ninh
VM35	Thai Binh
VM34	Thanh Hoa
VM74	Thua Thien
VM37	Tien Giang
VM75	Tra Vinh
VM76	Tuyen Quang
VM77	Vinh Long
VM50	Vinh Phu
VM78	Yen Bai
* VQ	VIRGIN ISLANDS
WQ	WAKE ISLAND
WF	WALLIS AND FUTUNA
WE	WEST BANK
WI	WESTERN SAHARA
WS	WESTERN SAMOA
WS01	A`ana
WS02	Aiga-i-le-Tai
WS03	Atua
WS04	Fa`asaleleaga
WS05	Gaga`emauga
WS07	Gagaifomauga
WS08	Palauli
WS09	Satupa`itea
WS10	Tuamasaga
WS06	Va`a-o-Fonoti
WS11	Vaisigano
YM	YEMEN
YM01	Abyan
YM02	`Adan
YM07	Al Bayda'
YM08	Al Hudaydah
YM09	Al Jawf
YM03	Al Mahrah
YM10	Al Mahwit
YM11	Dhamar
YM04	Hadramawt
YM12	Hajjah
YM13	Ibb
YM06	Lahij
YM14	Ma'rib
YM05	Shabwah
YM15	Sa`dah
YM16	San`a'
YM17	Ta`izz
CG	ZAIRE
CG01	Bandundu
CG08	Bas-Zaire
CG02	Equateur
CG09	Haut-Zaire
CG03	Kasai-Occidental
CG04	Kasai-Oriental
CG06	Kinshasa
CG07	Kivu
CG05	Shaba
G1ZA	ZAMBIA
ZA02	Central
ZA08	Copperbelt
ZA03	Eastern
ZA04	Luapula
ZA09	Lusaka
ZA05	Northern
ZA06	North-Western
ZA07	Southern
ZA01	Western
*ZI	ZIMBABWE
ZI01	Manicaland
ZI03	Mashonaland Central
ZI04	Mashonaland East
ZI05	Mashonaland West
ZI06	Matabeleland North
ZI07	Matabeleland South
ZI02	Midlands
ZI08	Masvingo

Code	Description	Code	Description	Code	Description
		TW01	Fu-chien	TW03	T'ai-pei
*TW	TAIWAN	TW02	Kao-hsiung	TW04	T'ai-wan

*=designation that the code is in the ECOTOX valid code file. Codes are added as needed.

Appendix CC. Aquatic Field Name Codes

Field Name	Remark Abbreviation
Grade	GRADE
Purity	PURITY
Formulation	FO
Characteristics	CHAR
Radiolabel	RADIO
Carrier or Solvent	CARRIER
Solvent Grade	SOLVGRADE
Solvent Purity	SOLVPURITY
Solvent Formulation	SOLVFO
Solvent Characteristics	SOLVCHAR
Media	FW,SW
Location	LAB,FIELD
Organism Source	SOURCE
Organism Char	LIFESTG
Gender	SEX
Control	CONTR
Test Number	TESTID
Test Method	TMETH
Study Type	STYPE
Number of Doses	DNUM
Concentrations at each dose and Unit	DOSES
Intake Rate & Unit	INTAKE
Steady State	STST
Response Site	SITE
Effect	In EE Remark
Trend	TREND
Endpt	In EE Remark
Companion Endpoint	COMPEP
Measurement	MSMT
Effect Percent	EFCT%
Signif	SIGNIF
Level	LEVEL

Field Name	Remark Abbreviation
Concentration	CONC
BCF	BCF
Observed Time	OTIME
Exposure Type	TYPE
Exposure Time & Unit	ETIME
Method Conc	CONC
Temperature	TEMP
Hardness	HARD
Alkalinity	ALK
Dissolved Oxygen	DO
Humic acid & Units	HMA
Sodium & Units	NA
Chlorine & Units	CL
Potassium & Units	POT
Magnesium & Units	MG
Sulfate and Units	SO4
Sulfur and Units	SULF
pH	PH
Salinity	SALIN
Conductivity	COND
Organic C	ORG C
Dissolved Inorganic Carbon & Units	DIC
% Lipid	LD
Initial Weight	WTINT
Weight at time of result	WTAT
Dry or Wet Weight %	DW
Habitat Descr	HAB
Substrate Info	SUBSTR
Water Depth	DEPTH
Location	LOC
Sta/Pro/Country	NONE
Latitude	LAT
Longitude	LONG

Field Name	Remark Abbreviation
AP Type	AP TY
AP Frequency	AP FREQ
AP Rate	AP RATE
Half Life	HALF
AP Season	AP SEAS
AP Date	AP DATE

Appendix DD. Terretox Field Name Codes

I. Quality Assurance Parameters

Field Name	Coding Sheet Abbreviation	Remarks Abbreviation
Reference Number	REF #, AUTHOR, YEAR	none
Total Tests	TOTAL TESTS	none
Reviewer/Date	REVIEWER, DATE	none
QA Date/Initials	QA DATE, INITIALS	none
TestNumber	TEST ID	none

II. Test Chemical Parameters

Field Name	Coding Sheet Abbreviation	Remarks Abbreviations
Chemical Name, Type	TEST, POSITIVE CONTROL, CARRIER	none, PC CARRIER
Grade	GRADE	GRADE
Purity	PURITY	none
Formulation	FORMULATION	FO
Comments	CHARACTERSTICS	CHAR
Radiolabel	RADIOLAB	RADIO
CAS number	CAS #	none

III. Test Information

Field Name	Coding Sheet Abbreviation	Remarks Abbreviations
Species Number/Latin Name	SPECIES #/LATIN NAME	none
Organism Source	ORG SOURCE	SOURCE
Lifestage/Age	LIFESTG/AGE	LIFESTG/ AGE
Organism Characteristics	ORG CHAR	OCHAR
Test Location	TEST LOCATION	LOC
Exposure Type	EXPO TYPE	TYPE
Control	CONTROL TYPE	CONTR
Number of Doses	DOSE NUM	DNUM
Application Frequency	APPL FREQUENCY	AP FREQ
Application Date	AP DATE	
Application Season	AP SEAS	
Application Rate	AP RATE	
Exposure Duration	EXPOSURE DURATION	ETIME

Field Name	Coding Sheet Abbreviation	Remarks Abbreviations
Study Duration	STUDY DURATION	STIME
Study Type	STYPE	
Test Method	TMETH	
Trend	TREND	
Media Type	MEDIA TYPE	MEDIA
Soil Type	SOIL TYPE	SOIL
Soil Texture	SOIL TEXTURE	TEXTURE
Temperature	TEMP	
Media pH	MEDIA PH	pH
Media Organic Matter	MEDIA ORGANIC MATTER	OM
Media Moisture	MEDIA MOISTURE	MOIST
Media CEC	MEDIA CEC	CEC
Soil Concentration Measured/ Concentration measured on Dry or Wet Basis	SOIL CONC MEASURED DRY-WET WEIGHT	none
Remarks	REMARKS	none
Experimental Design	---	EDES
Habitat	HAB	
Location	LOC	
Habitat Code	HABCODE	
Geographic Code	GEO	
Latitude	LAT	
Longitude	LONG	
Effect Percent	EFCT%	
Other Effects	none	OEF

IV. Exposure Information

Field Name	Coding Sheet Abbreviation	Remarks Abbreviation
Dose Number	DOSE NO	none
Dose ID	DOSE ID	none
Sample Number	N	none
Gender	SEX	SEX
Concentrations at each dose and Unit	DOSES	
Exposure Dose and Unit	DOSE/UNIT	DOSE/ DUNIT
Concentration Type	CONCTYPE	
Intake Rate and Unit	INTAKE	

Field Name	Coding Sheet Abbreviation	Remarks Abbreviation
Ion	ION	ION
Chemical Analysis Method	METHOD	ANALYSIS
Steady State	STST	
Remark Number	RN	none
Remarks	REMARKS	none

V. Results Information

Field Name	Coding Sheet Abbreviation	Remarks Abbreviation
Dose Number/ID	DOSE NO/ID	none
Sample Number and Unit	N/UNIT	SAMPN/ NUNIT
Observation Time	O	OTIME
Effect	EFFECT	EFCT
Effect Measurement	MEASMENT	MSMT
Endpoint/Assigned	ENDPT/ASG	ENDPT
Result Set	R	none
Companion Endpoint	COMPEP	
Statistical Significance	SIG/NSIG	SIGNIF
Level	LEVEL	none
Paper/Reviewer Assigned Data	P R	none
Response Site	RESP SITE	RSITE
Observed Response Value/ Unit	OBSERV RESPONSE VALUE/UNIT	RVALUE RUNIT
Initial Weight	WTINT	
Weight at time of result	WTAT	
Dry or Wet Weight	DW %	DW
Percent Lipid	%LIPID	LD
Remark Number	RN	none
Remarks	REMARKS	none

Appendix EE. Organic Matter Type and Units

Organic Matter Types

Code	Definition
ASH	Ash Free Dry Mass
C	Carbon
C:N	Carbon to Nitrogen Ratio
CPON	Carbon Particulate Organic Matter
Cox	Oxidized Carbon
DOC	Dissolved Organic Carbon
HUM	Humus
LOI	Loss On Ignition
N	Nitrogen
NR	Not Reported
OC	Organic Carbon
OM	Organic Matter
POC	Particulate Organic Carbon
POM	Particulate Organic Matter
TOC	Total Organic Carbon
peat	Peat

Organic Matter Units

Code	Definition
%	percent
NR	not reported
cmol/kg	centimoles per kilogram
g	grams
g/100g	grams per 100 grams
g/kg	grams per kilogram
g/m2	grams per square meter
LOW	Low
mg/g soil	milligrams per gram soil
mg/100g soil	milligrams per 100 grams of soil
mg/kg soil	milligrams per kilogram soil
mM	millimolar
MOD	Moderate
ug/L	micrograms per liter

Code	Definition
uM	microMolar
umol/g LIT	micromoles per gram litter
umol/L	micromoles per liter

Appendix FF. Cation Exchange Capacity Units

Dose	Definition
NR	not reported
cmol+/100 g	centimoles +ions per 100 grams soil
cmol/kg	centimoles per kilogram soil
cmol+/kg	centimoles + ions per kilogram soil
cmol P+/kg	centimoles P+ per kilogram soil
g/dm3	grams per cubic decimeter
me/100g	milliequivalents per 100 grams s
meq	milliequivalents
meq A/100 g	milliequivalents NH4 per 100 g
meq mg/g	milliequivalent milligrams per g
meq/g	milliequivalents per gram
meq/100g	milliequivalents per 100 grams s
meq/100ml	milliequivalents per 100 milliliters
meq/kg	milliequivalents per kilogram
mmol/dm3	millimoles per cubic decimeter
mmol/100g	millimoles per 100 grams soil
mmol/kg	millimoles per kilogram soil
mmol K+/kg	millimoles K+ per kilogram soil
mol/kg	moles per kilogram soil
mval/100g	millivalue per 100 grams (mval=ppm*(ion charge)/(atomic weight)

Appendix GG. ECOTOX Study Type Codes

Code	Name	Definition
ACUTE	Acute	Having a sudden onset, lasting a short time. Of a stimulus, severe enough to induce a response rapidly. Can be used to define either the exposure or the response to an exposure (effect). For clarity, the length of the exposure (short, medium, or long) and the nature of the effect end point (lethal or nonlethal) should be specified. The duration of an acute aquatic toxicity test is generally 4d or less and mortality is the response measured. (ECOTOX)
ACTELS	Acute Early Life Stage	These tests include continuous exposure of the early life stages which have a sudden onset of a response, lasting a short time. Of a stimulus, severe enough to induce a response rapidly. (ECOTOX)
CHRELS	Chronic Early Life Stage	These tests include continuous exposure of the early life stages which involve a stimulus that is lingering or continues for a long time; often signifies periods from several weeks to years, depending of the reproductive life cycle of the organism. (ECOTOX)
CHRONIC	Chronic	Involving a stimulus that is lingering or continues for a long time; often signifies periods from several weeks to years, depending of the reproductive life cycle of the aquatic species. Can be used to define either the exposure or the response to an exposure (effect). For clarity the length of the exposure and the nature of the effect end point should be specified. Chronic exposure typically induces a biological response of relatively slow progress and long continuance. The chronic aquatic toxicity test is used to study the effects of continuous, long-term exposure to a chemical or other potentially toxic material on organisms. (ECOTOX)
ELS	Early Life Stage	These tests include continuous exposure of the early life stages (e.g., egg, embryo, larva, fry) of aquatic organisms to various concentrations of chemical for 1-2 months, depending on the species. (Rand and Petrocelli, 1985)
FLC	Full Life Cycle	A chronic (or full chronic) study in which all the significant life stages of an organism are exposed to a test material. Generally, a life cycle is from birth until the organism reproduces (Rand and Petrocelli, 1985)
PLC	Partial Life Cycle	The test organism is exposed to toxicant through part of the life cycle which includes life stages observed to be especially sensitive to chemical exposure (Rand and Petrocelli, 1985)
GEN	Generational	A study that encompasses multiple generations of the test organism (e.g. P, F1,F2) either exposed to a toxicant during different generations or exposure to one generation and results measured in subsequent generations.(ECOTOX)

Code	Name	Definition
SBACUTE	Subacute	Intermediate between acute and chronic, not quite being one or the other (http://www.amershamhealth.com/public/glossary/s.shtml). Adverse effects occurring as a result of repeated daily dosing of a chemical, or exposure to the chemical, for part of an organism's lifespan (usually not exceeding 10%). With experimental animals, the period of exposure may range from a few days to 6 months.(http://www.bio.hw.ac.uk/edintox/glossall.htm)
SBCHRON	Subchronic	Intermediate between acute and chronic toxicities; subchronic toxicity studies involve repeated daily exposures of animals to a chemical for part (not exceeding 10%) of a lifespan. In rodents, this period extends up to 90 days of exposure. (www.uoguelph.ca/GTI/urbanpst/glossn_z.htm) Of intermediate duration, usually used to describe studies or periods of exposure lasting between 5 and 90 days (www.afrpa.hq.af.mil/kelly/Terms/sterms.html)

Appendix HH. ECOTOX Test Method Codes

Code	Name	Citation
ABNT	Brazilian National Standards Organization	Includes: ABNT 2012. Aquatic ecotoxicology-Chronic toxicity of short duration-Test method urchin. ABNT/CEE-106 Analises Ecotoxicologicas. http://www.abnt.org.br/ ABNT-Associacao Brasileira de Normas Tecnicas
AFNOR	French Association for Standardization	Various Information available on line at: www.afnor.fr
AFNORISO	AFNOR and ISO methods	Used French Association for Standardization (AFNOR) and International Standard Organization (ISO) methods when testing
AFNOROECD	AFNOR and OECD methods	Used French Association for Standardization (AFNOR) and Organization for Economic Cooperation and Development (OECD) methods when testing
ASISOEEP	ASTM, ISO, OECD, and USEPA methods)	Used ASTM, ISO, OECD and USEPA methods when testing.
ASTM	American Society for Testing and Materials	Specific names of test methods include: FETAX American Society for Testing and Materials (ASTM). (Various years) . American Society for Testing and Materials. Annual Book of ASTM Standards. American Society for Testing and Materials, Philadelphia, PA. Information available on line at: http://www.astm.org
ASTMOECD	ASTM and OECD methods	Used both ASTM and OECD methods when testing.
CCME	Canadian Council of Ministers of the Environment	Various Information available on line at: http://www.ccme.ca/
CEN	European Committee for Standardization	Various Information available on line at: http://www.cen.eu/cen/pages/default.aspx
CETESB	Technology Centre for Environment Conservation	Government agency in Brazil - http://www.cetesb.sp.gov.br
ECAN	Environment Canada	Various publications. Includes Environment Canada (1990). Biological Test Methods: Acute Lethality Test Using Daphnia spp. EPS 1/RM/11. Ottawa, ON. Information available on line at: http://www.mb.ec.gc.ca/
EEC	European Economic Community	EEC.(1984) In 84/449/EEC: Commission Directive of 25 April 1984 adapting to technical progress for the sixth time council Directive 67/548/EEC on the approximation of the laws, regulations and administrative provisions relating to the classification packing and labeling of dangerous substances. Official Journal of the European Communities L251, 27, p:155-159
EPAASTM	USEPA and ASTM methods	Used both U.S.EPA and ASTM methods when testing

Code	Name	Citation
EPAECCE	USEPA, ECAN, and CETESB methods	Used U.S.EPA, Environment Canada and Technology Centre for Environment Conservation (CETESB - government agency in Brazil - http://www.cetesb.sp.gov.br) methods when testing
EPAOECD	USEPA and OECD methods	Used both United States Environmental Protection Agency (USEPA) and Organization for Economic Cooperation and Development (OECD) methods
EPASTD	USEPA and STDMETH methods	Used both Standard Methods and U.S.EPA methods when testing
EPPO	European and Mediterranean Plant Protection Organization	Various Information available on line at: http://archives.eppo.int/index.htm
FAO	Food and Agriculture Organization of the United Nations	Various publications. Includes FAO (1977) Manual Methods in Aquatic Environment Research, Part-4 Bases for Selective Biological Tests to Evaluate Marine Pollution. PAO Fisheries Technical Paper 164. Information available on line at: http://www.fao.org/
GLP	Good Laboratory Practices	published by the U.S. Department of Health, education and Welfare, Food and Drug Administration (1978) and the U.S.EPA (1980) Information available on line at: http://www.accessdata.fda.gov/scripts/cdrh/cfdocs
GLPUK	Department of Health's United Kingdom Compliance Programme good laboratory practice	Various Information available on line at: http://www.mhra.gov.uk
IOBC	International Organisation for Biological Control of noxious animals and plants	Various publications. Includes: IOBC standard sequential testing methods for Pesticides and beneficial organisms, http://www.iobc-wprs.org/expert_groups/wg_PBOs_publics_list_1988-99.pdf. Information on line at: http://www.iobc-wprs.org/
IRAC	Insecticide Resistance Action Committee	Includes: IRAC Susceptibility Test Method 007. Method suitable for leaf-eating Lepidoptera and Coleoptera on cotton, vegetable and field crops. Information available at: http://www.irac-online.org/methods/leaf-eating-lepidoptera-coleoptera-larvae/
IRSA	Water Research Institute	The Water Research Institute, (IRSA-CNR) Quaderni dell'Istituto di Ricerca sulle Qcque,Consiglio Nazionale delle Ricerche- Roma, Italy Various Information available on line at: www.irsa.cnr.it
ISEPOE	ISO, USEPA, and OECD methods	Used International Standard Organization (ISO) (www.iso.org) , United States Environmental Protection Agency and Organization for Economic Cooperation methods when testing

Code	Name	Citation
ISO	International Standard Organisation	Used International Standard Organisation (ISO). Also known as International Organization for Standardization. Various Information available on line at: http://www.iso.org/iso/home.htm
ISOOECD	ISO and OECD methods	Used International Standard Organization (ISO) and Organization for Economic Cooperation and Development (OECD) methods when testing
ISOOECDCCME	ISO, OECD, and CCME methods	Used International Standard Organization (ISO), Organization for Economic Cooperation and Development (OECD) and Canadian Council of Ministers of the Environment (CCME) methods when testing
ISTA	International Seed Testing Association	Various Information available on line at: http://www.seedtest.org/en/home.html
MFE	New Zealand Minister for the Environment	https://www.mfe.govt.nz
OECD	Organization for Economic Cooperation and Development	Most Recent: OECD (2002). OECD Chemical Testing Guidelines - Health Effects. Organization for Economic Co-operation and Development. Information available on line at http://www.oecd.org/
OECDMFE	OECD and MFE methods	Used both Organization for Economic Cooperation and Development (OECD) and New Zealand Minister for the Environment (MFE) (https://www.mfe.govt.nz/) methods when testing
OEEPAS	OECD, USEPA and ASTM methods	Used OECD, U.S.EPA and ASTM methods when testing
OPPTS	Office of Prevention, Pesticides and Toxic Substances Harmonized Test Guidelines	Most Recent: United States Environmental Protection Agency (USEPA). 2002. Office of Prevention , Pesticides, and Toxic Substances Harmonized Test Guidelines. Series 870 Health Effects Test. Information available on line at: http://www.epa.gov/oppts/pubs/frs/home/guidelin.htm
SS	Swedish Standard	Various information available on line at: http://www.sis.se/en/environment-health-protection-safety/water-quality/sewage-water/ss-28106
STDMETH	Standard Methods for the Examination of Water and Wastewater	Published jointly by: American Public Health Association, American Water Works Association and Water Pollution Control Federation (APHA,AWWA,WPCF). Various years Information available on line at: http://www.standardmethods.org/
STDASTUS	STDMETH, ASTM, and USEPA methods	Used Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials, and United States Environmental Protection Agency methods when testing.
STDASTM	STDMETH and ASTM methods	Used both Standard Methods and ASTM methods when testing
STDOECD	STDMETH and OECD methods	Used both Standard Methods and OECD methods when testing

Code	Name	Citation
STOEGL	STDMETH, OECD, and GLP methods	Used Standard Methods, Organization for Economic Cooperation and Good Laboratory Practice methods when testing
TEPA	Taiwan Environmental Protection Agency	Various Information available on line at: http://www.epa.gov.tw/en/
TEPAOECD	TEPA and OECD methods	Used both TEPA and OECD methods when testing.
UNEP	United Nations Environment Programme	Various publications. Includes: UNEP/FAO/IAEA (1989). Estimation of the Acute Lethal Toxicity of Pollutants to Marine Fish and Invertebrates. Reference Methods for Marine Pollution Studies, No.43. United Nations Environment Programme, Nairobi. Information available on line at: http://www.unep.ch/regionalseas/pubs/rsrm.htm
USEPA	United States Environmental Protection Agency	Various Information available on line at: http://www.epa.gov/
WHO	World Health Organization	Various publications. Includes: WHO. 1963. Criteria and meaning of tests for determining susceptibility or resistance of insects to insecticides. Technical Rep. Ser. N 265: 135-138. Information available on line at: http://www.who.int/en/