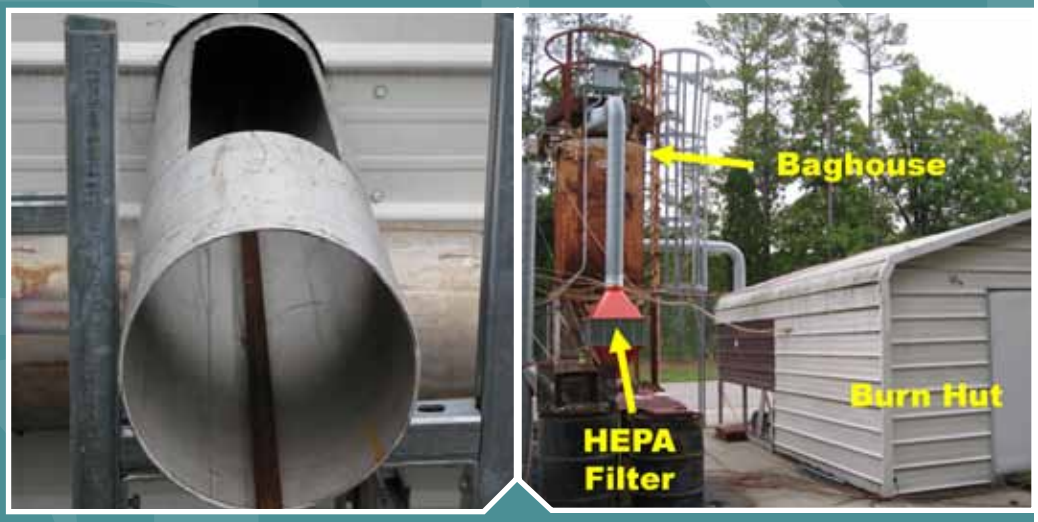
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Environmental Protection
Agency

Combustion of Contaminated Animal Carcasses in a Pilot-scale Air Curtain Burner



Office of Research and Development
National Homeland Security Research Center

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August 2013

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U.S. Environmental Protection Agency
Office of Research and Development
National Homeland Security Research Center
Decontamination and Consequence Management Division
Research Triangle Park, NC 27711

EPA/600/R-13/109
August 2013

NOTICE

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EXECUTIVE SUMMARY

Tests were run on a pilot-scale Air Curtain Burner (ACB) burning a combination of wood and poultry carcasses inoculated with *Geobacillus stearothermophilus* as a surrogate for pathogenic Foreign Animal Disease (FAD) organisms. The tests were run to evaluate emissions of potential pathogens (using spores of a nonpathogenic bacterium as a surrogate) as a function of degrading system combustion efficiency due to overcharging of poultry carcasses. The objective of the tests was to evaluate whether pathogens might be released from an ACB system as air emissions or in ash of the ACB as the functions of the ACB began to degrade due to operational issues, or whether effective pathogen destruction still occurred in spite of potentially increased air emissions from the ACB due to operational issues. If environmental performance degrades prior to a reduction in pathogen destruction, operational adjustments and corrective actions could possibly be made quickly enough, potentially based on easily observable increases in visible emissions without increasing the risk of pathogen release.

The tests occurred in a pilot-scale ACB located inside the Burn Hut of the EPA's Open Burning Test Facility located in Research Triangle Park, NC. Bioaerosol samples were taken in the exhaust duct from the Burn Hut; ash samples were collected from the materials deposited on the floor of the Burn Hut, together with the bone fragments and ash that remained behind in the ACB after the tests. Wipe samples were taken after each test to assess whether spores were deposited on the walls of the Burn Hut. Two test conditions were used, one with a wood:poultry mass feed ratio of approximately 2:1, representing normal operation and one with a wood:poultry mass feed ratio of approximately 0.66:1, representing an operational regime with higher poultry input rates than recommended operating procedures would suggest.

No viable spores (measured as colony forming units, CFU) were found in the bioaerosol samples taken from the exhaust duct from the Burn Hut. Some CFU were found associated with the larger ash particles that left the ACB and fell to the floor of the burn chamber in close proximity to the ACB. No viable spores were found in the residual ash left behind in the ACB after the tests, although CFU were detected in the bone fragments in one test. No CFU were found on wipe samples of the walls of the burn chamber after each test.

Within the limitations of the experimental apparatus and associated detection limits, it does not appear that measurable quantities of viable spores were released into the air from combustion of the inoculated poultry even at poultry feed rates that resulted in pollutant emissions at least a factor of five higher than the baseline ACB emissions while burning wood only.

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ACRONYMS AND ABBREVIATIONS

ACB	Air Curtain Burner
APPCD	Air Pollution Prevention and Control Division
ATCC	American Type Culture Collection
BD	Becton Dickinson
BH	Baghouse
BL	Biocontaminant Laboratory
CEM	Continuous Emission Monitor
CFU	Colony Forming Unit(s)
CO	Carbon monoxide
CO_2	Carbon dioxide
DAS	Data Acquisition System
DI	Deionized
EF	Emission Factor
EPA	U.S. Environmental Protection Agency
FAD	Foreign Animal Disease
FMD	Foot and Mouth Disease
GC	Gas Chromatograph(y)
Gs	*Geobacillus stearothermophilus*
HASP	Health and Safety Plan
THC	Hydrocarbons
HEPA	High Efficiency Particulate Air
HHV	Higher Heating Value
HRGC/LRMS	High Resolution Gas Chromatography/Low Resolution Mass Spectrometry
ID	Induced Draft
mg/dscm	Milligram(s) per dry standard cubic meter
mL	Milliliter(s)
L	Liter(s)
lb	Pounds
MOP	Miscellaneous Operating Procedure
MS	Mass Spectrometer(try)
ng	Nanogram(s)

NHSRC	National Homeland Security Research Center
NDIR	Non-dispersive Infrared
NMOC	Non-methane Organic Compound
O_2	Oxygen
OBTF	Open Burn Test Facility
ORD	Office of Research and Development
PAH	Polycyclic Aromatic Hydrocarbon
PBS	Phosphate Buffered Saline
PBST	Phosphate Buffered Saline with 0.05% Tween® 20
PM	Particulate Matter
PPE	Personal Protective Equipment
psi	Pounds per square inch
rpm	Revolutions per minute
QAPP	Quality Assurance Project Plan
s	Second(s)
SCFM	Standard cubic foot/feet per minute
TC	Thermocouple
THC	Total Hydrocarbons
TSA	Tryptic Soy Agar
TSB	Tryptic Soy Broth
USDA	U.S. Department of Agriculture
VOC	Volatile Organic Compound
W/m•°C	Thermal conductivity in Watts per meter per degree Celsius
w.c.	Water column

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1.0 INTRODUCTION

1.1 PURPOSE OF THE STUDY

In the event of a Foreign Animal Disease (FAD) outbreak, the U.S. Environmental Protection Agency (EPA) is designated, under Homeland Security Presidential Directive 9 [1], to be a support Agency to support U.S. Department of Agriculture's (USDA's) efforts to respond to an FAD event. The USDA response will likely include decontamination of agricultural sites, depopulation of affected (or potentially exposed) livestock, and disposal of the resulting animal carcasses. For highly contagious FAD agents such as Foot and Mouth Disease (FMD) virus, on-farm disposal may be preferred so that additional contagion is minimized.

One potential transportable technology for on-farm treatment of contaminated animal carcasses is Air Curtain Burners (ACBs). ACBs can be mobilized to where they are needed as a potential means of reducing the waste volume while minimizing potentially harmful environmental impacts. Operated as an above ground installation, or in some instances, installed over a pit with the top of the unit at ground level, ACBs are mobile incinerators that utilize the general concept of a high-volume sheet of air being blown at a slight downward angle across the top of, and into, the combustion vessel. The air serves a dual purpose: 1) combustion is enhanced (when compared to open burning) by providing a steady supply of forced excess air with turbulent mixing resulting in higher temperatures and more thorough consumption of the solid organic material used as fuel; and 2) the injection of the air at a slightly incident angle forms a "curtain" that creates a recirculation zone which serves to encourage burnout of unburned materials. ACBs have been deployed on numerous occasions for the reduction of vegetative waste and in some cases for destruction of animal carcasses [2]. A detailed analysis of available literature on ACB emissions can be found in Miller and Lemieux [3]. Typically, when processing animal carcasses, a mass ratio of fuel to carcasses ranges between 1:1 and 2:1 [2]. An ACB processing 50 tons per day of animal carcasses would therefore require between 50 and 100 tons of wood per day. The large fuel requirement is one of the logistical difficulties in processing animal carcasses in an ACB.

The purpose of this project was to test, on the pilot scale, operational issues (e.g., air emissions, pathogen destruction, feed rates) related to processing large amounts of animal carcasses in an ACB.

This pilot-scale test is not intended to conclude that this technology is suitable for operational use in an outbreak of a pathogenic FAD. While the results may support its use, an operational use of this technology for an FAD outbreak may require air permit applications and approval from appropriate state and local regulatory agencies. The permit application process may result in monitoring, reporting, operational restrictions, and controls of both air emissions and ash disposal. In addition, the Clean Air Act also provides for public participation in the permitting process. These considerations suggest the need for up-front planning for this technology to be fully utilized in an FAD outbreak.

1.2 FACILITY USED FOR THE TESTS

The facility used for these tests was a pilot-scale ACB system located in the EPA's Air Pollution Prevention and Control Division's (APPCD's) Open Burn Test Facility (OBTF) [4]. Figure 1 shows a diagram of the OBTF with the ACB installed inside the Burn Hut along with thermocouple positions.

There are a number of devices on the OBTF that would not normally be found on an ACB, including a baghouse, High Efficiency Particulate Air (HEPA) filter, and Induced Draft (ID) fan. These devices exist on the OBTF to prevent the release of potential hazardous air pollutants

from experimental operations.

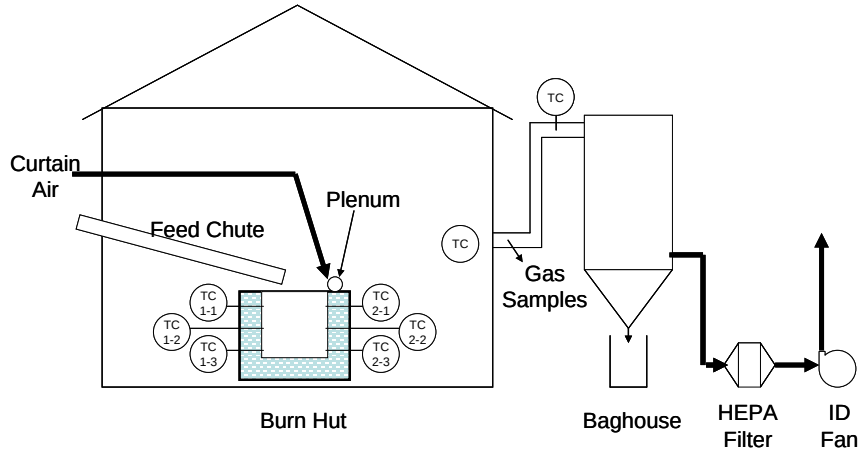


Figure 1. Pilot-Scale Air Curtain Burner Test System Flow Schematic

A series of tests was conducted with the pilot-scale ACB. The tests used wood as the primary fuel for the ACB. Animal carcasses in the form of single individually packaged Cornish game hens were periodically fed to the unit. Various samples, both of a continuous and batch nature, were acquired.

1.3 PROJECT OBJECTIVES

The two primary objectives for this study were:

- Determine the maximum feed rate of animal carcasses into the ACB using a constant feed rate of wood fuel before emissions of products of incomplete combustion (e.g., carbon monoxide, volatile organics, semivolatile organics) begin to increase significantly above the baseline levels found when combusting wood with no animal carcasses; and
- Determine the maximum feed rate of animal carcasses into the ACB using a constant feed rate of wood fuel before significant quantities of microorganisms contained in the animal carcasses survive the incineration process.

The critical measurement parameters were:

- Mass of wood fed;
- Mass of poultry fed;
- Test time;
- Amount of inoculum in poultry, in terms of colony forming units (CFU);
- Residual viable spores in poultry carcasses and air emissions after combustion;
- Emission rate for CO_2/CO (necessary for estimation of combustion rate and combustion efficiency, also for comparison with full-scale field test results to verify validity of pilot-scale simulation);
- Emission rate for filterable particulate matter (PM) (comparison with full-scale test results to verify validity of pilot-scale simulation);
- Emission rate for polycyclic aromatic hydrocarbons (PAHs) as well as volatile organic compounds (VOCs) (comparison with full-scale test results to verify validity of pilot-scale simulation);

- Burn Hut exhaust flow rate and moisture content (necessary for calculation of total mass emission rates of all measured species); and
- ACB bed temperatures measured at six different locations.

2.0 EXPERIMENTAL APPROACH

2.1 GENERAL APPROACH AND TEST CONDITIONS

The tests were conducted in a pilot-scale ACB burning a fixed quantity of wood and using dead Cornish game hens (complete with feathers and all internal organs) as a surrogate for animal carcasses containing residual FAD pathogens. Some tests were conducted with poultry in uninoculated form and some tests were conducted with inoculated poultry. The inoculum was 1 milliliter (mL) of *Geobacillus stearothermophilus* (*Gs*) spores at a concentration of 1E4 colony forming units (CFU)/mL. *Gs* is a thermally resistant spore, and using *Gs* for these tests would thus be a very conservative surrogate for an FAD virus.

Cut lumber was used as the combustible fuel component of the feed material. The testing was designed to collect and characterize the emissions from burning these materials and to evaluate/establish ACB operational parameters that would yield acceptably low emissions.

The testing was divided into two Phases:

- Phase 1: operation of the ACB on uninoculated poultry to identify the effect of poultry feed rate on operational conditions and emissions as measured by continuous measurement methods and occasional extractive sampling methods (e.g., carbon monoxide, VOCs, PAHs); and
- Phase 2: operation of the ACB on inoculated poultry under selected operating conditions identified during Phase 1 to examine survival of residual microorganisms under the conditions that resulted in elevated emissions.

Replicate test runs were performed to generate and collect sufficient numbers of samples to produce statistically significant data. Combustion performance was evaluated by continuous emission monitor (CEM) measurements of the ACB exhaust gas concentrations and by fuel bed temperatures as measured by thermocouples. Combustion gas- and solid-phase samples included the feed materials, the combustion residue ash, the particulate matter, VOCs, and PAHs in the exhaust gases from the ACB, as collected with probes located in the Burn Hut exhaust duct. Samples for residual spores were collected from the gas phase as well as from the residual ash in the ACB and the Burn Hut walls and floor. The Burn Hut's baghouse captured the exhaust particulates, including any residual spores. The baghouse particulate catch was not used as samples.

Due to the small size of the pilot-scale ACB relative to a full-scale ACB, it was important to use as homogeneous feed material as possible to assure that the differences between measurements from these controlled experiments would be due to the test parameters and not random fluctuations due to feed heterogeneities.

2.1.1 Combustible Fuel Component

Although a full-scale ACB processes raw timber and land clearing debris (e.g., logs, stumps), due to the small size of the pilot-scale ACB and the need for relatively homogenous solid fuel for experimental purposes, unprocessed biomass was not used. For these experiments the combustible fuel was comprised of wood in the form of standard 2-inch x 2-inch pine lumber purchased at a home improvement store. Previous tests showed that the lumber could be ignited easily, and its combustion could be sustained without difficulty. The "two x two" dimensional pieces of lumber have a true cross-sectional dimension of 1.5-inch x 1.5-inch and they were cut to nominally 12-inch lengths to facilitate feeding into the ACB. A few pieces were cut shorter than 12 inches to allow the assembly of wood loads that weighed in at the target charge weight (in the range of 4.25 pounds (lb) ± 0.1 lb).

2.1.2 Dead Livestock Component

The dead livestock component of the feed was Cornish game hens, complete with feathers, heads, and internal organs (nominal weight per bird = 2-3 lb). The dead birds were fed into the ACB at periodic intervals as per the test matrix.

The birds arrived from the supplier dead, frozen, and packaged individually in plastic bags (polypropylene polymer, Hefty Slide-Rite Bag, Model S-10837). The birds were maintained in a freezer at 20 °F until required for testing, at which point they were moved to a refrigerator (~40 °F) for 3-4 days to thaw. The thawed birds were weighed and placed into a plastic container (U.S. Plastics Corporation, Model #85122) as secondary containment. Birds requiring inoculation were transported to the EPA's Biocontaminant Laboratory (BL), also located in Research Triangle Park, NC, in the plastic containers and inoculated by injecting 1.0 mL of inoculum (1E6 spores in 10 mL Phosphate Buffered Saline (PBS), which translated to 1E4 CFU/mL) of *Geobacillus stearothermophilus* (American Type Culture Collection (ATCC) # 12980) through the plastic bag into the bird using a syringe and needle (Becton Dickinson (BD) Precision Guide). The plastic bag containing the inoculated birds was returned to the plastic container and placed into the refrigerator (40 °F) until needed for testing. The mass of the plastic bags was small relative to the mass of the birds and should have added only negligibly to the pollutants.

2.1.3 Feed Charge

Feed charges consisting of the target weight of wood and the poultry were pre-weighed prior to each of the tests. Based on the assumption that a 4-hour run period would be needed for each test and that the ACB would be fed at 10-minute intervals, 24 pre-weighed wood charges were required for each test. Assuming that poultry would be introduced for three hours with each wood charge, 18 dead birds were nominally required for each run. However, an objective of the tests was to identify how rapidly the birds could be fed to the ACB without resulting in increased emissions of products of incomplete combustion. In general, handling of the dead birds by the test operators was kept to a minimum, and protective gloves were used when handling the birds.

2.1.4 Process

As presented earlier, Figure 1 shows a schematic diagram of the pilot-scale ACB and Burn Hut arrangement. Combustion of the feed took place in the ACB inside the Burn Hut with the combustion air being supplied via a blower into the ACB plenum. Movement of exhaust gases was driven by an induced draft fan which drew air into the Burn Hut, through the exhaust ducts, the baghouse and a HEPA filter. These devices are not normally found on full-scale ACBs, but are components of the OBTF that serve to control operation inside the Burn Hut, to prevent potential hazardous air pollutants from being emitted, and to provide operator safety. Operation of the induced draft and the forced draft blowers was adjusted to maintain the Burn Hut static pressure slightly lower than atmospheric pressure to prevent fugitive leaks of the Burn Hut combustion gases.

2.1.5 Pilot-Scale ACB Description

The pilot-scale ACB is a rectangular, refractory-lined open-top steel box, with an outside dimension of 32 inches x 23 inches and 18-5/8 inches tall. Three ports designed for thermocouple insertion are located on the opposing 32-inch long sides, at 3-5/8, 8-1/8 and 12-5-/8 inches below the top opening surface. The steel shell is lined with a 4 inch thick layer of refractory [Harbison Walker KS-4, thermal conductivity 0.9 Watts/meter – degree Celsius (W/m-°C)] on the four sides and the bottom. The refractory is secured to the steel shell with refractory anchors (Harbison Walker VS-30-304) welded to the steel shell in a square pattern, 6 inches

apart for the vertical walls and 9 inches apart for the bottom wall.

The dimensions of the ACB combustion chamber are 24 inches x 15 inches and 14 -3/8 inches deep. Photographs of the ACB installed inside the Burn Hut are shown in Figure 2.

These dimensions represent approximately a 1:10 scale model with respect to length and width and a 1:600 scale model with respect to volume when compared to a full-scale ACB, such as the Air Burners Model S-327 (firebox dimensions 27 feet 2 inches x 8 feet 5 inches x 8 feet 1 inch) [5].

As an integral part of the ACB combustion chamber, a stainless steel tray was placed inside the ACB combustion chamber. The purpose of this tray was to facilitate easy ash sample retrieval. At the conclusion of a test, the entire tray, with its ash content, could be lifted out of the ACB chamber. A matching steel lid was placed on top of the tray to prevent sample loss during the time before the ash sample was transferred into the proper sample containers.

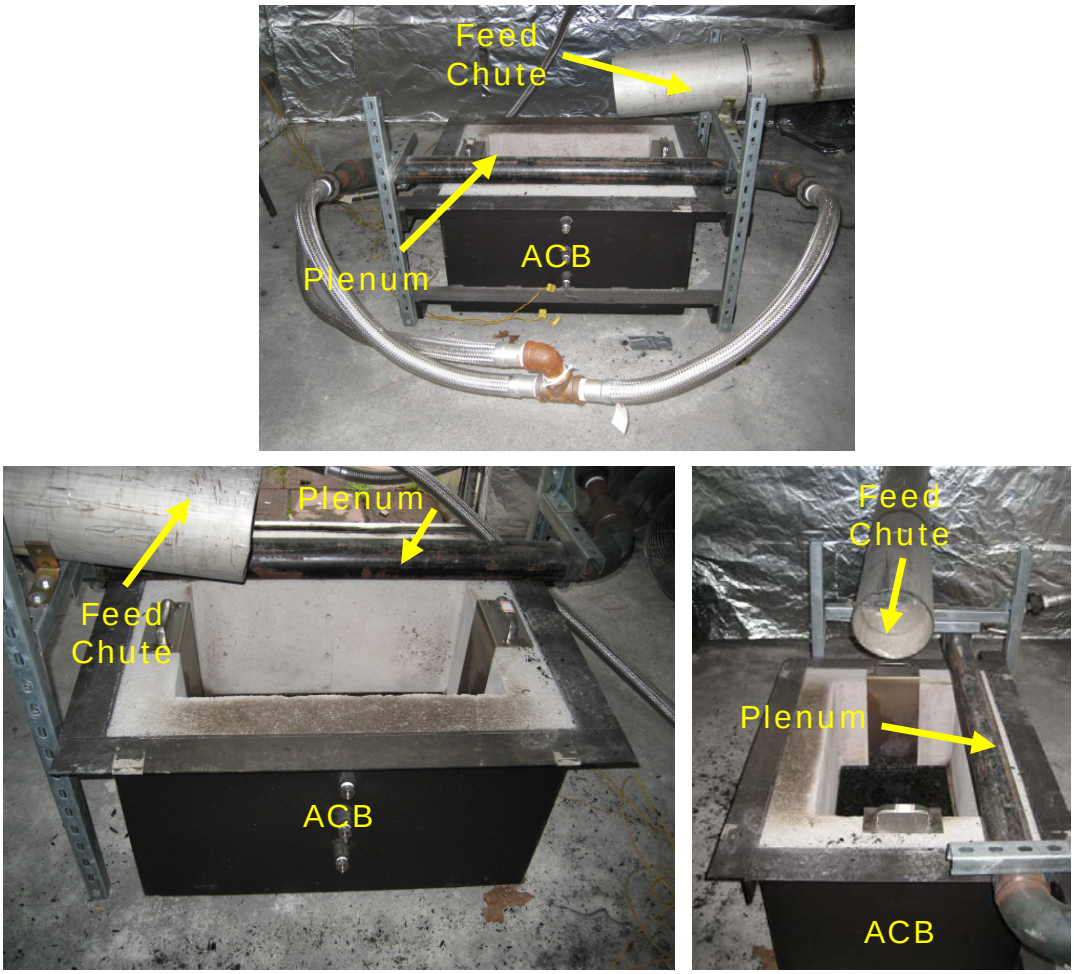


Figure 2. ACB Installed inside the Burn Hut

2.1.6 Burn Hut, Baghouse and HEPA Filter

Figure 3 shows the Burn Hut, exhaust duct work, the baghouse, and the High Efficiency Particulate Air (HEPA) filter. The Burn Hut is 10 ft x 12 ft x 7 ft tall at the side, with a sloped roof. The highest point of the roof is approximately 8-1/2 ft. During previous testing, the temperature of the ACB exhaust gas inside the Burn Hut reached a maximum of approximately 230 °F, which is below the maximum service temperature of the Burn Hut, and with the cooling

of the exhaust duct, results in baghouse and HEPA filter inlet temperatures below their maximum temperature ratings. The inside walls of the Burn Hut were lined with heavy-duty aluminum foil, the function of which is to facilitate easy cleaning and decontamination of the walls.

The baghouse unit, an integral part of the OBTF, is a Model 72RT-21 manufactured by MAC Equipment (Sabetha, Kansas, USA).

The HEPA filter (AstrolCel I Model 905-000-348, American Air Filter, Louisville, Kentucky, USA) has dimensions of 24 inches x 24 inches x 11 ½ inches. The HEPA filter is rated for a maximum service temperature of 200 °F and has an efficiency of 99.99% for 0.3 µm particles.

The Burn Hut is operated at a slightly negative pressure (approximately 0.25 inches of water [w.c.]) so that all gases and aerosols generated inside the Burn Hut leave through the exhaust duct and pass through the baghouse. This slight negative pressure prevents the escape of pollutants from inside the Burn Hut without allowing significant quantities of ambient air to infiltrate into the Burn Hut and dilute the gaseous emissions.



Figure 3. Burn Hut, Baghouse, and HEPA Filter

2.1.7 Feed Chute

The gas temperatures inside the Burn Hut during a test can exceed 200 °F. The gas can also be laden with fly ash and potentially live spores (even though the spores used in this testing are nonpathogenic). It is therefore not advisable for the ACB fuel loading operation to require a test operator to enter the Burn Hut for safety reasons. In addition, opening and closing the Burn Hut access door will introduce disturbances to the temperature and gas flow conditions inside the Burn Hut and will create poorly characterized ACB operating conditions.

A round opening was therefore created on one side wall of the Burn Hut to allow a stainless steel pipe to be installed and function as a feed chute (see Figure 4). With the feed ram retracted, a simulated feed charge can be placed into the receiver opening of the chute. The feed ram is then manually pushed in to deliver the charge into the ACB.



Figure 4. Fuel Feed Ram and Chute

2.1.8 Air Curtain Nozzle Assembly, Air Supply, and Controls

The key feature of the ACB is the “air curtain”, which is formed by injecting a controlled and known flow rate of air across the opening of the ACB chamber at an angle that would create the intended flow field inside the chamber to promote efficient combustion.

The air curtain for the pilot-scale ACB is created by introducing the air via a bank of 107 drilled round openings, 0.116 inches in diameter, into the side of a steel pipe (schedule 160) with a 3-inch thick-wall.

The curtain air is supplied by a high pressure blower installed just outside the Burn Hut. The air flow rate is measured by a rotameter and can be adjusted by a flow control valve (see Figure 5).



Figure 5. Curtain Air Supply Blower, Control Valve and Flow Meter

2.2 SAMPLING

The sampling strategy focused on using continuous measurement methods (fixed combustion gases, temperatures) to establish sets of operating conditions where more detailed sampling, using extractive sampling methods, was performed.

2.2.1 Sampling/Monitoring Points

Six sampling locations were used for these experiments:

- ACB firebox;
- ACB bottom ash residue;
- Burn Hut inside floor (sweepings);
- Burn Hut inside wall (wipe samples);
- Burn Hut exhaust duct gas-phase sample port; and
- Baghouse inlet gas-phase sample port.

2.2.2 Frequency of Sampling/Monitoring Events

Table 1 lists the types of samples that were acquired and frequency of those sampling events. Note that "continuous" refers to samples being acquired automatically at the scanning frequency of the data acquisition system, nominally at 10 second intervals. Also note that the bottom ash sample was generated as a single sample.

Table 1. Types/Numbers of Samples and Frequency of Sampling Events

Type of Run	Burn Hut Exhaust O_2, CO, CO_2, THC	ACB Bed Temp	Burn Hut Exhaust Flows	PM	Burn Hut Exhaust PAH	Burn Hut Exhaust VOC	Burn Hut Exhaust Spores	ACB Bottom Ash Spores	Burn Hut Wall Wipe Spores	Burn Hut Floor Sweepings Spores
Sample Location	**Burn Hut Exhaust Duct**	**ACB Firebox**	**Burn Hut Exhaust Duct**	**Burn Hut Exhaust Duct**	**Burn Hut Exhaust Duct**	**Burn Hut Exhaust Duct**	**Burn Hut Exhaust Duct**	**ACB Bottom Ash Residue**	**Burn Hut Inside Wall**	**Burn Hut Inside Floor**
Sample Duration	Continuous	Continuous	Continuous	~60 min.	~ 60 min	~60 min	~60 min	N/A	N/A	N/A
Scoping	X	X	X							
Blank Sample Collection	X	X	X	1	1	1	1	1	1	1
Phase 1 Range Sampling	X	X	X							
Phase 1 Targeted Sampling	X	X	X	1	1	1				
Phase 2 Sampling	X	X	X				8	8	8	8

N/A – Not Applicable.
THC – Total Hydrocarbons
PAH – Polynuclear Aromatic Hydrocarbons
x – Samples taken continuously over entire duration of test

2.3 APPROACH FOR EVALUATING PROJECT OBJECTIVES

2.3.1 Scoping Tests

The overall project objectives were evaluated as follows. Phase 1 experiments varied the number of birds fed into the ACB per unit time. The scoping tests provided an initial determination of likely poultry feeding scenarios. One bird every 10 minutes along with 25 lb/hr of wood was decided upon as the baseline test conditions (this represents a wood:poultry mass feed ratio of 2:1, which is the highest recommended wood:poultry feed rate for ACB field operations [2].

2.3.2 Phase 1 Range Scoping Tests

Once an appropriate scenario for feeding varying amounts of poultry was identified, a series of tests was performed to examine continuously measured variables as a function of bird feeding rate. Table 2 shows the test conditions for the Phase 1 Range Scoping Tests. The test conditions began with no bird feed, and then feeding of 1 bird every 10 minutes was initiated. After a minimum of four feed events occurred at a given feed rate, the interval between feed events was reduced, and the process was repeated. When the feed interval between birds was reduced below 4 min, visible quenching of the ACB combustion process was observed (i.e., the flames began to be extinguished), along with significant formation of black smoke.

Table 2. Test Matrix for Phase 1 Range Scoping Tests

Wood Feed Rate (lb/hr)	Interval Between Poultry Feed Events (min)
25	N/A
25	10
25	8
25	6
25	4
25	2

N/A – Not Applicable

2.3.3 Phase 1 Targeted Tests

Based on the results from the Phase 1 Range Scoping Tests, a set of operating conditions was identified when the emissions from the ACB appeared to be detrimentally impacted. The lower threshold feed interval for poultry was established at 4 min, with the upper threshold feed interval established at 10 min. Tests were operated with isokinetic extractive sampling procedures at these two conditions. The isokinetic extractive sampling tests were one hour in length, the same as the scoping tests.

2.3.4 Phase 2 Tests

A series of tests was then conducted under the same poultry feed rate conditions identified in Phase 1 but with inoculated poultry. For these tests, no isokinetic extractive chemical pollutant sampling was performed, but aerosol sampling for gas-phase spores as well as wipe sampling and floor sweeping sampling was performed.

3.0 EXPERIMENTAL PROCEDURES

3.1 METHOD TO ESTABLISH STEADY-STATE CONDITIONS

Based on previous testing, the nominal fuel input rates were set with wood at 25 lb/hr. Each test ran on wood for approximately ½ hour prior to poultry being fed. After the tests, the poultry feed was stopped, and wood continued to be fed for a period of 1 hour prior to cessation of fuel feed. The additional 1-hour operation with only wood fed was designed to provide an hour of additional combustion time with no poultry feed to allow for complete combustion of all poultry material.

The ACB combustion air flow rate was set at approximately 40 standard cubic feet per minute (scfm) and was supplied by a pressure blower placed outside the Burn Hut. The temperature of the air was not controlled and was only a few degrees higher than the ambient temperature as a result of the blower and the heat absorbed across the piping from the hot gas inside the Burn Hut (approximately 200 °F).

3.2 SITE PREPARATION

3.2.1 Burn Hut Preparation and Post-Test Cleanup

Prevention of cross contamination of test samples between tests with the spores was necessary. Minimizing the opportunity for fugitive release of spore particles during and after the tests was also important. Therefore, prior to testing with spores, the inside of the Burn Hut was cleaned according to the following procedures. The same procedures were also followed after all testing was completed.

- Don Personal Protective Equipment (PPE) per the approved Health and Safety Plan (HASP);
- Remove loose particulate materials from all internal surfaces using a vacuum cleaner (Omega Vac, Atrix International, Burnsville, Minnesota, USA) designed for removal and capture of toxic dust). A new vacuum filter and a clean inlet hose were used for each cleanup event to reduce the opportunity of sample cross-contamination;
- Collect vacuum cleaner catch into a labeled sterile plastic bag for archive and analysis;
- Decontaminate the inside surfaces of the Burn Hut and exhaust duct – The primary risks of cross contamination arise from residual spores present in the Burn Hut and Burn Hut Exhaust Duct after one test that may remain at the start of the next test. Because of this possibility of cross-contamination, the Burn Hut and Burn Hut Exhaust Duct were decontaminated using Spor-Klenz® (STERIS, Mentor, OH) after each test with inoculated birds. Spor-Klenz® is a hard surface antimicrobial solution that was used to eliminate all remaining spores in the Burn Hut and associated equipment;
- Obtain wipe samples from the Burn Hut to be analyzed for CFU by the BL;
- Decontaminate the stainless steel tray of the ACB with Spor-Klenz® prior to use in the ACB; and
- Reline the walls with new aluminum foil after all testing has been completed.

3.2.2 Measurement Systems Startup

Commence operation of the CEMs and data logging functions with the data acquisition system.

3.2.3 ACB Startup

The ACB operation begins with the lighting of a charge of wood, weighing approximately 4.25 lb,

in the ACB. A commercially available charcoal lighter fluid was used as fire starting accelerant because the lighter fluid does not leave a solid residue. A small amount of lighter fluid, estimated at no more than 50 mL, was used. Note: PAH/VOC sampling, if performed that day, was not initiated until at least 45 minutes after startup to allow for complete combustion of the lighter fluid.

The ACB air flow was started when the wood flame was sufficiently well established, as evident by the flame not being extinguished by the curtain air. Wood feeding commenced per the set schedule. Four feed cycles were performed initially to establish steady combustion conditions (see Section 5.2.1.1 for the range of temperatures in the ACB at what was considered steady conditions). The air curtain flow rate was adjusted to correspond to the combustion conditions and was eventually increased to the set point level of 40-41 scfm.

Steady combustion conditions were considered to have been reached when the bed temperatures measured over three charge cycles were unchanged, as determined by the observation of a cyclic temperature trace where local minimum and maximum temperatures in each cycle were within 50 °F of each other. The 20-minute running averages of the measured ACB bed temperatures were calculated to serve as indicators to evaluate whether steady-state combustion conditions had been reached. Moreover, the ACB process is recognized to be semi-batch and the measured temperatures during the burn cycle for each charge do not follow exactly duplicable patterns. The determination is therefore recognized to be intrinsically subjective to a degree.

3.2.4 Poultry Feeding

Upon establishing stable combustion, feeding of wood and poultry loads commenced. Feeding of wood/poultry loads at set intervals (tentatively 10-min) continued for the duration of the test, which was approximately 3 hours.

Sampling for PAH with Method 0010 and PM (Method 5) in the Burn Hut exhaust gas lasted nominally 60 minutes, depending on the particulate loading in the sampled gas. Aerosol sampling for spores required a minimum of 60 minutes.

In any event, test duration was typically not shorter than three hours due to the need to generate samples (gas and ash) after reasonably steady-state conditions had been established. Trial tests showed that up to an hour was required to establish steady ACB operation conditions.

3.2.5 Post Poultry-Feed Sustained Burn

After the last charge of the wood/poultry load, ACB operation continued for one hour during which fuel loads consisting of wood only were charged at the set intervals. This operation period ensured that the last poultry charged was treated at the target temperature for the specified treatment time. This operation period also reflects typical field operation of ACBs, where feed of contaminated material is ceased for a period of time prior to cessation of solid fuel feed. The curtain air flow rate remained at the set-point level.

3.2.6 Post-Fuel Feed Burnout

Upon completion of the Post Poultry-Feed Sustained Burn period, the air curtain air was turned off completely. The residual combustible materials inside the ACB were allowed to burn out naturally without the forced convective air currents. The reason for not having the air curtain air flowing was to minimize the possibility for the exposed fluffy ash material to become airborne and be blown out of the ACB.

3.3 SAMPLE COLLECTION, TRANSPORT, AND STORAGE

Table 3 lists the samples, sampling and analytical methods, and performance criteria for critical measurements. All laboratory analytical instrument calibrations were performed in accordance with the published methods.

3.3.1 Wood

Randomly selected sections of the 2 x 2 pine lumber were collected and saved as the wood feed sample.

3.3.2 Poultry

Analysis of the Cornish game hens for inoculum recovery was originally intended. Samples of the Cornish game hens were ground up in a blender (Waring Laboratories, Torrington, CT, Lab Blender Model CB15) in the BL. This process proved to be very difficult due to the material getting hot in the blender due to the energy input from the grinding process. The results for recovery of inoculum from the meat matrix are therefore not available.

3.3.3 ACB Residual Ash

Each of the combustion tests lasted approximately four hours. As described earlier, the ash residues that remained in the ACB resided inside the rectangular stainless steel tray. The entire ash residue remaining in the tray was collected and saved as the ash sample from the test. The ash was examined and, if reasonably intact pieces of the poultry were present, those pieces were manually separated from the bulk ash for separate analysis.

3.3.4 Burn Hut Wall Wipe Samples

Wipe samples were collected on the Burn Hut walls and inside the exhaust duct prior to and after completion of each spore test and after the decontamination of the Burn Hut interior surfaces was completed. The purpose of these samples was to detect residual spore contamination in the Burn Hut before and between the spore tests.

All samples were shipped with the appropriate chain of custody information. Analytical laboratories observed the method-specified hold times. Table 4 lists the specified sample containers, handling and preservation, laboratories, and the respective sampling run and hold times for the various samples.

Table 3. Performance Criteria for Critical Measurements

Measurement Parameter	Sampling Method(s)	Sub-Parameter	Analysis Method	Acceptance Criteria (%Bias/Recovery)	Completeness
Burn Hut Exhaust Velocity Traverses	EPA Method 1A	N/A	N/A	N/A	100%
Burn Hut Exhaust Volumetric Flow Rate	EPA Method 2C (to be performed in conjunction with M5 and M0010)	Pitot tube leak check Gas temperature	Manometer K-Type Thermocouple	± 10% of actual value ± 3 °F	100%
Burn Hut Exhaust Moisture Content	EPA Method 4 (to be performed in conjunction with M5 and M0010)	Post-test meter calibration check Balance calibration check	Standard Meter Comparison Gravimetric S-Class weights	± 5 % of pre-calibration ± 0.5g	100% 100%
Burn Hut Exhaust CO_2/O_2	EPA Method 3A	Calibration error Sampling system bias Zero and calibration drift	Instrumental Calibration Gases	± 2% ± 5% ± 3%	90% of Test Periods
Burn Hut Exhaust CO	EPA Method 10	Calibration error Sampling system bias Zero and calibration drift	Instrumental Calibration Gases	± 2% ± 5% ± 3%	90% of Test Periods
Burn Hut Exhaust VOCs	Modified EPA Method 0040	N/A	EPA Method 0040	N/A	50% (minimum 1 or 2 per test condition) Precision criteria ± 20%
Burn Hut Exhaust PAHs	EPA Method 0010	N/A	EPA Method 8270D	70 to 130% Recovery	50% (minimum 1 or 2 per test condition) Precision criteria are ±20% using duplicates
Burn Hut Exhaust Total Filterable Particulate	EPA Method 5	Post-test meter calibration check Balance calibration check	Standard Meter Comparison Gravimetric S-Class weights	± 0.5% of pre-calibration ± 0.1 g	50% (minimum 1 or 2 per test condition) 100%
Burn Hut Exhaust Spores	Aerosol collection by AGI Impinger	N/A	Dilution - culture	Data collected only from plates with 30-300 CFU ± 10% (for those plates counted twice)	100% for first enumeration, then 25% of plates with 30 – 300 CFU will be counted by a second technician
Floor Sweeping Spores	HEPA vacuum sample	N/A	Extraction / dilution-culture	Data collected only from plates with 30-300 CFU ± 10% (for those plates counted twice)	100% for first enumeration, then 25% of plates with 30 – 300 CFU will be counted by a second technician
Wall Wipe Spores	2x2" non-cotton wipe sample	N/A	Extraction / dilution-culture	Data collected only from plates with 30-300 CFU ± 10% (for those plates counted twice)	100% for first enumeration, then 25% of plates with 30 – 300 CFU will be counted by a second technician
Ash Spores	Bulk sample	N/A	Extraction / dilution-culture	Data collected only from plates with 30-300 CFU ± 10% (for those plates counted twice)	100% for first enumeration, then 25% of plates with 30 – 300 CFU will be counted by a second technician
ACB Bed Temperature	N/A	Calibration error	K-type thermocouple	± 5 ºC	85%

N/A – Not Applicable

Table 4. Sample Storage, Handling and Hold Times

Sample Type	Method Sampling/ Analysis	Sampling Time (min)/ Volume/ Weight	Sample Container	Special Handling/ Preservation	Analytical Laboratory	Maximum Hold Time
Wood Ultimate, Proximate, HHV	Grab Sample	12 in long piece of 2 x 2 wood	Glass Bottle	Archive	Galbraith Laboratories	Unlimited
Burn Hut Wall Aluminum Foil Liner Spores (between runs)	Wipe Sample	2 sq ft of foil	50 mL sterile conical tube	4 ºC	Biocontaminant Laboratory	7 days
Burn Hut Exhaust Filterable PM	Method 5	60 min	Glass Petri dish Clear or amber glass bottle	None	Resolution Analytics	None specified
Burn Hut Exhaust PAHs	Method 0010 HRGC/LRMS	180 min ~3000 L	Clear or amber glass/ Teflon-lined caps; XAD cartridges	Samples (excluding particulate filter) stored at 4 °C	Enthalpy Analytical	Extracted within 14 days of receipt; Analyzed within 40 days of extraction
Burn Hut Exhaust VOCs	M0040	~30 min	Tedlar® bags	None	Enthalpy Analytical	30 days
Burn Hut Exhaust Gas Spores	Aerosol collection by AGI Impinger	Approximately 10-30 min (per Method 427) 150-450 L	50 mL conical	4 ºC	Biocontaminant Laboratory	7 days
ACB Ash Spores	HEPA Sock Vacuum (see Section 5.3.5	15 min	Sterile bag	4 ºC	Biocontaminant Laboratory	7 days
Burn Hut Wall Wipe Spores (after testing was complete)	Wipe	1 sq ft of wall	50 mL conical	4 ºC	Biocontaminant Laboratory	7 days
Raw Poultry	Grab Sample	1 Bird	Plastic Bag	4 ºC	Biocontaminant Laboratory	7 days

HHV – Higher Heating Value

4.0 TESTING AND MEASUREMENT PROTOCOLS

4.1 SAMPLING METHODS

4.1.1 Continuous Emission Monitors

Continuous instrumental methods employed CEMs to measure concentrations of carbon dioxide (CO_2), oxygen (O_2), carbon monoxide (CO), and total hydrocarbons (THC). These instruments were operated in accordance with EPA Methods 3A [6] (CO_2/O_2), (CO) [7], and 25A (THC) [8] as prescribed in 40 CFR Part 60, Appendix A. CEM testing began prior to test material being fed into the ACB and continued through the burnout period for approximately two hours after the last material was fed.

Burn Hut exhaust gas samples routed to the CEMs (except the THC monitor) were conditioned to remove water vapor and particulate matter, which are interfering constituents. The sample gas going to the THC monitor was heated and maintained at 250-300 ºF and filtered with glass fiber filters. The THC monitor requires the sample to be hot and condensate-free to operate properly, as some components of THC can be removed by condensation of water.

Components of the sampling system in contact with the sample gas were constructed of Type 316 stainless steel or Teflon to minimize the possibility of surface chemical reactions, which can affect the accuracy of the measurements. The CO_2/O_2, THC, and CO sample collection and conditioning system consisted of a heated probe and a particulate filter, followed by a moisture-removal trap and an out-of-stack secondary particulate filter. A sample pump (such as Thomas Model 2107CA 18-TFE, Thomas Division-Sheboygan, Sheboygan, Wisconsin, USA) transported the effluent sample through a distribution manifold to the analyzers. The configuration of the sampling system allowed the calibration gases to be injected either directly into the analyzers or through the complete sample collection and conditioning system.

The concentration signal outputs from the CEMs were connected to a computer-based data acquisition system (DAS). The DAS used a portable computer and an analog-to-digital converter. For the purposes of these tests, the data were logged at 6-sec intervals without time averaging data. The functioning of the DAS was checked by verifying that the indicated signal levels are in agreement with calibrated instruments such as digital voltmeters, thermocouple (TC) readouts, etc. These checks were performed by the U.S. EPA Metrology Laboratory (located in RTP, NC).

All pre-test and post-test calibration procedures were performed as outlined in the specific EPA methods. The operating principles of the analyzers are described in the following subsections.

4.1.1.1 Burn Hut Exhaust Gas CO_2/O_2 (EPA Method 3A)

Carbon dioxide and oxygen concentrations were determined by EPA Method 3A - Determination of Oxygen and Carbon Dioxide Concentrations in Emissions from Stationary Sources (Instrumental Analyzer Procedure), as described in 40 CFR Part 60, Appendix A [6]. In Method 3A, a continuous gas sample is extracted from the stack and conveyed to instrumental analyzers for the determination of oxygen and carbon dioxide concentration. Results were used in the calculation of sampling duct gas molecular weight.

4.1.1.2 Burn Hut Exhaust Gas CO (EPA Method 10)

Carbon monoxide emissions were determined by EPA Method 10 - Determination of Carbon Monoxide Emissions from Stationary Sources, as described in 40 CFR Part 60, Appendix A [7]. In Method 10, a continuous gas sample is extracted from the sampling duct and conveyed to an instrumental analyzer (non-dispersive infrared [NDIR] or equivalent) for the determination of carbon monoxide concentration. Flow data from concurrent EPA Methods 1A and 2C were

used to calculate carbon monoxide mass emission rates.

4.1.2.3 Burn Hut Exhaust Gas THC (EPA Method 25A)

EPA Method 25A - Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer [8] is applicable over a wide range of total hydrocarbon (THC) concentrations, from percent levels to low ppm levels. The method does not differentiate the species that constitute total hydrocarbons, (i.e., methane and nonmethane organic compounds (NMOCs) are measured together and reported as one concentration as equivalent propane). Method 25 is specifically designed to measure NMOCs. However, it is not suitable for measuring concentrations that are less than 50 ppm and was not used for these tests.

In Method 25A, a gas sample is extracted from the source through a heated sample line, if necessary, and a glass fiber filter; the gas sample is then introduced into a flame ionization analyzer. Results were reported as volume concentration equivalents (ppm by volume) of the calibration gas (propane) or as carbon equivalents. The mass emission rate was calculated by the incorporation of results from EPA Methods 1A and 2C volumetric flow data along with moisture and molecular weights determined by EPA Methods 3A and 4.

4.1.2 Burn Hut Exhaust Gas Volumetric Flow Rate (EPA Methods 1A and 2C)

Flue gas volumetric flow rates were determined by EPA Method 1A - Sample and Velocity Traverses for Stationary Sources with Small Stacks or Ducts and EPA Method 2C – Determination of Stack Gas Velocity and Volumetric Flow Rate in Small Stacks and Ducts (Standard Pitot Tube), as described in 40 CFR Part 60, Appendix A [9, 10]. The measurement location in the effluent stream was selected to minimize angular and cyclonic flow. For these tests, the measurement location was 5 ft downstream of the Burn Hut exhaust duct inlet to satisfy minimum downstream diameter requirements necessary for isokinetic sampling conditions.

Using Method 1A, the duct cross section was divided into an appropriate number of equal areas and the probe was marked to signify the velocity traverse points. Due to the potential for flow disturbance in small stacks, the sample extraction and flow measurement were performed apart from one another. Sampling ports for extractive samples were located eight equivalent diameters upstream of the velocity sampling ports to allow for the re-establishment of flow stability. Using Method 2C, a traverse for velocity head and sampling duct gas temperature was performed using a standard pitot tube and thermocouple probe to minimize flow disturbance. Sampling duct gas volumetric flow rate was calculated by use of the resultant data, the sampling duct gas density, and duct cross sectional area. Measurements were performed in conjunction with each test run for filterable/condensable particulate. Flow data, together with pollutant concentration data from concurrent methods, was used to calculate pollutant mass emission rates.

4.1.3 Burn Hut Exhaust Gas Molecular Weight and Moisture (EPA Methods 3a and 4)

Sampling duct gas molecular weight and diluent concentration was performed by EPA Method 3A - Determination of Oxygen and Carbon Dioxide Concentrations in Emissions from Stationary Sources (Instrumental Analyzer Procedure) and EPA Method 4 - Determination of Moisture Content in Stack Gases, as described in 40 CFR Part 60, Appendix A [6, 11]. In Method 3A, a gas sample is extracted continuously from the sampling duct and conveyed to instrumental analyzers for the determination of O_2 and CO_2 concentrations. Diluent gas concentration and molecular weight were calculated from these results. In Method 4, a gas sample is extracted from the source with moisture removed and determined gravimetrically and/or volumetrically. Method 4 samples were taken as a part of the EPA Method 5 and M0010 samples.

4.1.4 Burn Hut Exhaust Gas Filterable Particulate Matter (EPA Method 5)

Filterable particulate matter sampling was performed according to EPA Method 5 - Determination of Particulate Emissions from Stationary Sources, as described in 40 CFR Part 60, Appendix A [12]. An exhaust gas sample was withdrawn from the sampling duct isokinetically through a heated probe and pre-weighed, heated, glass fiber filter into an impinger/condenser train. The filtered, dried gas was measured with a calibrated dry gas meter, and the particulate matter captured in the probe and filter was desiccated and weighed.

4.1.5 Burn Hut Exhaust Gas Viable Spores

Bioaerosol sampling during Phase 2 tests was performed using sterile SKC Biosamplers (SKC Inc., Eighty Four, Pennsylvania, USA) containing 20 mL of sterile ViaTrap oil (SKC ViaTrap Oil, catalog number 225-9599, Eighty Four, PA, USA). The Biosampler was installed downstream of a water-cooled probe located after the Burn Hut exit duct dilution damper and was operated at 15 pounds per square inch (psi) (monitored with an in-line pressure gauge), resulting in an isokinetic flow rate. The Biosampler vacuum was provided by a vacuum pump that maintained a pressure drop of 15 in. Hg, resulting in a constant 12.5 liters (L)/min flow rate. System exhaust gas samples were withdrawn from the sampling duct directly into the Biosampler using an EPA Method 5 sampling train. Due to the water-cooled probe, temperatures of the gases entering the Biosamplers were well below the temperatures at which spores would be killed due to thermal effects [13, 14].

4.1.6 Burn Hut Exhaust Gas PAHs (EPA Method 0010)

PAHs from Phase 1 tests were collected by the use of EPA Method 0010 – Modified Method 5 Sampling Train as described in 40 CFR Part 60, Appendix A [15]. A metered flue gas sample was isokinetically withdrawn from the sampling duct through a heated probe and Teflon-coated glass fiber filter onto a condenser/XAD-2 packed resin trap for collection of semivolatile compounds., The filtered dried gas was measured with a calibrated dry gas meter. The XAD resin trap was extracted, and the extract was split and analyzed for a variety of compounds by high resolution gas chromatography/ high resolution mass spectrometry (HRGC/LRMS, EPA Method 8270D [16]). Emission rates were calculated from these results and the results of concurrent flue gas flow rate measurements using EPA Methods 1A and 2C.

4.1.7 Burn Hut Exhaust Gas VOCs (Modified EPA Method 0040)

VOCs from Phase 1 tests were collected by an adapted version of EPA Method 0040 – Sampling of Principal Organic Hazardous Constituents from Combustion Sources Using Tedlar® Bags [17]. In Method 0040, a representative sample was drawn from a source through a heated sample probe and filter. The sample then passed through a heated three-way valve into a condenser where the moisture and condensable components were removed from the gas stream and collected in a glass trap. The gas sample was then collected in a Tedlar® bag. VOC mass emission rates were calculated from the resultant constituent VOC concentrations and the results of flue gas volumetric flow rate measurements using concurrent EPA Methods 1A and 2C. Between 20 and 30 L of sample gases was collected.

4.1.8 ACB Bed Temperature

Temperature in the ACB bed area was determined using six K-type thermocouples (Omega, Stamford, Connecticut, USA), inserted through the refractory lining (see Figure 1). These thermocouples served to provide wall temperatures during the burn cycle.

4.1.9 Wood and Poultry Feed Rate

As discussed in Section 3.1, batches of the feed materials were weighed prior to the tests. The

wood feed materials prepared for a test were weighed ahead of each test, and the weight was recorded for future use. The birds were weighed and the corresponding feed time was recorded manually in the test log book. These time and weight records formed the basis of feed rate determination.

4.2 ANALYTICAL METHODS

4.2.1 Particulate Matter Loading

Filterable particulate matter analyses were performed according to EPA Method 5 - Determination of Particulate Emissions from Stationary Sources, as described in 40 CFR Part 60, Appendix A [12]. Analysis of all particulate samples was performed by Resolution Analytics (Resolution Analytics, Inc., of Sanford, NC).

4.2.2 Viable Spores, as CFUs, in Burn Hut Exhaust Gas

Following Phase 2 sample collection, the Biosamplers were allowed to cool, and then aliquots of ViaTrap oil were ten-fold serially diluted and spread-plated onto tryptic soy agar (TSA). Dilution and plating procedures are described in BL MOP 6535A [18, 19]. Additional samples were analyzed qualitatively (growth/no growth) by attempted culture of collected samples. These procedures were based on BL MOP 6566 [18, 19]. For these qualitative samples, 1 mL of ViaTrap oil was aseptically transferred from each Biosampler into a sterile vial containing 10 mL of tryptic soy casein broth (vials prepared according to procedures outlined in BL MOP 6556 [18, 19], except final volume was 10 mL and the sterile tryptic soy broth (TSB) was purchased rather than prepared in-house) and vortexed for 30 seconds. Negative control samples consisted of TSB controls and TSB + sterile ViaTrap. Positive controls were comprised of 100 µL of the spore solution used during each test spiked into TSB. All samples and controls were prepared in triplicate and vortexed for 30 seconds after preparation. The culturing technique followed that of BL MOP 6566 [18, 19], except that biological indicators were replaced by 1.0 mL of ViaTrap collected from each sampler. Samples were incubated at 55 °C. Plated samples were incubated for 24 hours and culture tubes were incubated for seven days, as described in the above-referenced MOPs [18, 19]. CFU were enumerated on TSA plates following incubation to quantitatively determine recovery based upon equations in BL MOP 6535A [18, 19]. Plates with between 30 and 300 CFU were considered to be within the quantitation range [20]. Qualitative tubes were assessed after seven days of incubation for growth (turbid growth media) or no growth (lucid growth media).

4.2.3 Polynuclear Aromatic Hydrocarbons (PAHs) By Method 0010

Samples collected during Phase 1 tests using Method 0010 were analyzed for PAHs by Enthalpy Analytical according to EPA/SW846 Method 8270D Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS) [16].

The sample contained a filter, an XAD cartridge, rinses of methylene chloride/methanol and toluene/acetone (acetone optional) as well as aqueous impinger contents. The methylene chloride/methanol rinse was extracted with pH 2 water/hydrochloric acid. The water was then re-extracted twice with methylene chloride. The three methylene chloride extracts were combined and used in the extraction of the remaining components. The XAD and filter were Soxhlet-extracted with methylene chloride after spiking with internal standards as required pre-extraction. The methylene chloride from the rinse was used in this extraction and was poured through the Soxhlet thimble to catch any particulate that was in the rinse. The methylene chloride from this extraction was collected and concentrated to final volume. After the methylene chloride extraction, a second extraction with toluene was done. The toluene rinses were added to the thimble at this stage. A Dean-Stark apparatus (Prism Research Glass, RTP, NC, USA) was used to collect the acetone/ methylene chloride and water that were still in the

sample. The toluene extract was concentrated to final volume. The impinger solution was acidified to pH 2 and extracted with methylene chloride. This extract was concentrated to final volume.

The PAH analysis was performed on a portion of the methylene chloride extract. Table 5 shows the target PAH compounds. The reporting limits were 4 nanograms (ng)/train.

Table 5. Target PAHs

Naphthalene	Acenaphthylene
Acenaphthene	Fluorene
Phenanthrene	Anthracene
Fluoranthene	Pyrene
Chrysene	Benzo(a)anthracene
Benzo(b)fluoranthene	Benzo(k)fluoranthene
Benzo(a)pyrene	Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene	Benzo(q,h,i)perylene

4.2.4 VOCs by Method 0040

Analysis of VOCs collected during Phase 1 tests was performed by RTP Laboratories using EPA Method TO-15, Determination of Volatile Organic Compounds (VOCs) in Air Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS) as seen in the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition [21]. Target compounds are shown in Table 6. The method detection limits for these target compounds as reported by RTP Laboratories are 1 ppmv. The report provided by RTP Laboratories was insufficient due to lack of QC and calibration data. These analytical data were therefore not used (see Section 6.3). Subsequent analysis of VOCs was performed by Enthalpy Analytical, Inc., using EPA Method TO-15. Depending on the concentration of the constituent in the sample, Enthalpy Analytical also used a method detection limit of 1 ppmv.

Table 6. Target VOCs

Benzene	Benzyl chloride	Bromomethane
Carbon tetrachloride	Chlorobenzene	Chloroethane
Chloroform	Chloromethane	1,2-Dibromoethane (EDB)
1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene
Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane
cis-1,2-Dichloroethene	1,1-Dichloroethene	1,2-Dichloropropane
cis-1,3-Dichloropropene	trans-1,3-Dichloropropene	1,2-Dichloro-1,1,2,2-tetrafluoroethane
Ethylbenzene	Hexachlorobutadiene	Methylene chloride
Styrene	1,1,2,2-Tetrachloroethane	Tetrachloroethylene
Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane
1,1,2-Trichloroethane	Trichloroethene	Trichlorofluoromethane
1,1,2-Trichloro-1,2,2-trifluoroethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene
Vinyl chloride	*m*-Xylene & *p*-Xylene	*o*-Xylene

4.2.5 Viable Spores, as CFUs, in Ash

Bulk ash samples were collected at the end of each experiment in Phase 2. During collection, ash was segregated into fine ash (expected to be of wood origin) and bulk ash (expected to be of bird origin). Samples were stored in sterile bags or bottles at 4 ºC until analysis. For analysis, between 0.5 and 25 g of ash was weighed and added to a 50 mL sterile vial containing 10 mL of sterile PBS amended with Tween® 20 (BL MOP 6562 [18, 19]). The sample was sonicated for 45 min to dislodge and suspend any viable spores from the ash. The sample was then continuously vortexed for two minutes to further dislodge any viable spores. Each vial was briefly re-vortexed immediately before any solution was withdrawn for analysis. The solution was subjected to a four-stage serial dilution following BL MOP 6535A [18, 19]. The resulting samples were plated in triplicate. The subsamples were spread onto solid growth media using BL MOP 6555 [18, 19]. Plates were incubated at 35 °C ± 2 °C for 18-24 hours. CFU were counted using BL MOP 6535A [18, 19]. In addition to the analysis in BL MOP 6535A [18, 19], two additional analysis procedures were used for samples resulting in less than 30 CFU/sample in the zero tube (undiluted sample, e.g., wipe or vacuum sock in the extraction buffer). First, 1 mL of the extract was filter plated in accordance with BL MOP 6565 [18, 19]. The remainder of the sample was then filter plated in accordance with BL MOP 6565 [18, 19]. For each partition (fine ash and bulk ash) the number of viable spores was reported as CFU/g of ash.

Wipe samples were prepared according to BL MOP 6568 [18, 19] and analyzed according to BL MOP 6567 [18, 19].

Vacuum samples were analyzed according to the following procedural steps:

1. The analyst donned a fresh pair of gloves. Gloves were changed between each of the samples and after direct contact with a sample to reduce contamination.
2. Sterile 3 oz. specimen cups were pre-labeled per the sample log corresponding to the batch of samples being processed.
3. The 3 oz. specimen cup sample containers were then loaded with 20 mL of Phosphate Buffered Saline with 0.05% Tween® 20 (PBST).
4. Both sterile sample bags were opened without removing the inner bag from outer bag. The HEPA sock assembly was moved to the opening of the bag using the bag.

5. The HEPA sock assembly was removed from the bag by handling only the cardboard portions.
6. The nonsterile blue portion of the HEPA sock assembly was flipped from the larger cardboard ring to the smaller ring.
7. The larger cardboard ring was removed, exposing the HEPA sock
8. The HEPA sock was wetted by holding the upper blue portion of the HEPA sock (around the smaller cardboard ring) and dipping the lower 1inch of the HEPA sock into the PBST. The HEPA sock was allowed to soak up the PBST for a few seconds.
9. After the soaking, the HEPA sock was lifted up just above the opening of the specimen bottle. A 1-inch vertical slit was cut up the center from the bottom of the sock using sterile scissors. A new pair of scissors was used for each sample.
10. The HEPA sock was then cut horizontally from side to side, approximately 1 inch from the bottom allowing the two pieces to fall into the specimen bottle. The HEPA sock was cut only where the sock had been wetted (dip, wet, look, cut).
11. Steps 6 – 8 were repeated until the entire white portion of the HEPA sock had been cut.
12. The upper top blue portion of the HEPA sock was then discarded.
13. After use, scissors were autoclaved using a one-hour gravity destruction cycle in preparation for use with the next sample batch.
14. Gloves were changed between samples.
15. Steps 4 – 12 were repeated for each sample in the batch.
16. All samples (up to sixty samples at a time) were loaded into the sample cup holder of the orbital shaker incubator (Barnstead Lab-line, model number 3626, Melrose Park, IL, USA).
17. The samples were agitated in the shaker incubator at 300 revolutions per minute (rpm) for 30 minutes with the heat off.
18. The samples were then removed from the shaker incubator and taken to the BioSafety Cabinet (NuAire models NU-430-600 series 29, NU-S121-636-L series SP, and NU-S121-636-R series SP, Plymouth, MN, USA) for dilution plating as described in MOP 6535A [18, 19]. Plates with between 30 and 300 CFU were considered to be within the quantitation range [20]. Qualitative tubes were assessed after seven days incubation for growth (turbid growth media) or no growth (lucid growth media).

4.2.6 Positive and Negative Controls for Spore Samples

Positive controls of spiked ash demonstrated the ability to recover viable spores from that medium. Spiked Cornish game hens were also analyzed but analytical difficulties made it impossible to recover spores from the spiked poultry. The process of macerating the poultry samples resulted in significant heating of the sample (bordering on cooking), so an unbiased positive control of inoculated poultry was unable to be acquired. This lack of analytical data for the spiked Cornish game hens would have impacted data quality only if there had been spores measured in the combustion blank samples or found on the Burn Hut walls prior to feeding inoculated poultry.

To control for sterility and background (negative controls), unspiked Cornish game hens, wipes, vacuum socks, ViaTrap oil, and extraction media were analyzed in the same manner as test samples.

At the end of the main body of the testing, three additional positive control tests were performed:

- Spraying 2E6 CFU of *Gs* spores directly into the duct; no flame: A test where the spore inoculum was sprayed into the Burn Hut exit duct, with no combustion occurring in the ACB; an SKC Biosampler sample and a Via-Cell cassette (Zefon International, Ocala, Florida, USA) were acquired;

- Spraying 2E6 CFU of *Gs* spores directly into the Burn Hut; no flame: A test where the spore inoculum was sprayed into the Burn Hut with no combustion occurring in the ACB; an SKC Biosampler sample and a Via-Cell cassette were acquired;
- Spraying 2E6 CFU of *Gs* spores directly into the duct with flame: A test where the spore inoculum was sprayed into the Burn Hut exit duct with wood combustion occurring in the ACB; an SKC Biosampler sample and a Via-Cell cassette were acquired.

5.0 RESULTS

This section summarizes the results from the tests. Further details can be found in the Appendices, including isokinetic sampling sheets (Appendix A), external laboratory reports from PM, VOC, and PAH sampling (Appendix B), Biolaboratory data reports (Appendix C), and calibration reports from the U.S. EPA Metrology Laboratory (Appendix D). The plots of the continuous monitoring data from the gas monitors and thermocouples are included in the body of the report in their entirety because understanding of the operation of ACBs sometimes requires an examination of the transient nature of the tests, which is best visualized from the CEM and thermocouple traces.

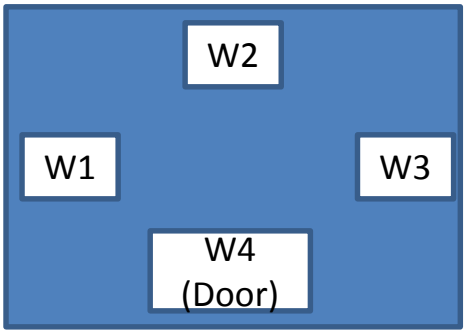
The flow rate in the Burn Hut exhaust duct was approximately 1200 scfm, with a linear velocity of approximately 69 ft/second (s). The exhaust duct temperature varied between 150 and 200 °F for most tests.

5.1 PROGRESSION OF TESTS

Table 7 lists the dates and test activities on those dates as well as the samples that were acquired on that date. Note that the test date may not necessarily match up with the date code in the sample ID, because the BL may have initiated their analysis on a subsequent day from the combustion test.

Table 7. Test Activities

Test Date	Activity	Samples Acquired	Notes
11/17/10	Trial Poultry Burn	CEMs Thermocouples Ash Carcasses Floor Sweepings	Shaking down CEMs; needed to replace the THC analyzer and high-range CO analyzer Operating Biosampler with chilled water, noted oil becoming more viscous during test, also noted particulate being collected in oil from sampling, determined to operate Biosampler with ambient H_2O in condenser Fed birds in following patterns every 10 min: Birds on top of wood bundle Wood bundle, then bird fed Bird fed, then wood bundle Wood fed, bird, then wood
11/30/10	Burned wood only to determine correct nozzle size for Biosampler train	Thermocouples	Duct damper fully open, T's in sampling duct ~160°F after T in ACB had equilibrated Velocity traverse at sampling point yielded ΔP=1.2 Value used for determining nozzle size
1/20/11	First Extraction Test; 1 bird/10 minutes with wood bundle	CEMs Thermocouples M5 M8270D M TO-15/0040 012011 Wipe W1 012011 Wipe W2 012011 Fly Ash 1 012011 Fly Ash 2 012011 ACB Ash 012011 ACB CC	M5 train malfunctioned during first 27 min, but problems corrected M5 train was operated additional 20 min after other trains with birds continuing to be fed Noted T's inside hut had increased to 240 °F and T=190 °F at sample point Fed wood bundles only for additional hour

Test Date	Activity	Samples Acquired	Notes
2/2/11	Variation Test; feeding birds at varied time intervals to determine max threshold with wood every 10 min.	CEMs Thermocouples	Started feeding birds at 10 min intervals then moved to 8 min. Continued to decrease interval to 6 min, then 4 min, then 2 min. Fed birds every 2 min for 12 min. Noticed decrease in burn rate, changed to every 6 min Established threshold as one bird/4-6 min
2/9/11	Aborted Run		Problems encountered with T's in hut and duct too high Determined that HEPA filter had experienced too high T in last test and BH bags were coated with soot Ordered new bags and HEPA filter and replaced
2/16/11	Extraction Test #2; maximum threshold 1 bird/4 min, wood bundle/10 min	CEMs Thermocouples M5 M8270D M TO-15/0040. 021711 ACB Ash 021711 ACB CC 021711 Fly Ash 1 021711 Fly Ash 2 021711 Wipe W1 021711 Wipe W3	Noted continued build-up of bird and wood by end of test Layer of unburned wood and bird on bottom of ACB Appears air from plenum cannot reach bottom to fuel increased combustion rate
2/22/11	Decontamination of Burn Hut	022211 Wipe W1 022211 Wipe W2 022211 Wipe W3	Decontaminated Burn Hut with Spore-Klenz®  Diagram of Burn Hut Wipe Sample Locations
2/23/11	Bio Sampler Test # 1; wood and bird/10 min	CEMs Thermocouples 2-ACB-BS-01 Oil 2-ACB-BS-01 Rinse 022411 ACB Ash 022411 ACB CC 022411 Fly Ash 1 022411 Fly Ash 2 022411 Wipe W1 022411 Wipe W3 022411 Wipe Blank	N/A

Test Date	Activity	Samples Acquired	Notes
2/24/11	Decontamination of Burn Hut	022511 Wipe W2 022511 Wipe W4 022511 Wipe Blank	Replaced bags in Baghouse Replaced aluminum foil on walls Replaced HEPA filter
2/28/11	Bio Sampler Test # 2; wood and bird/10 min	CEMs Thermocouples 2-ACB-BS-02 Oil 2-ACB-BS-02 Rinse 030111 ACB Ash 030111 ACB CC 030111 Fly ash 1 030111 Fly ash 2 030111 Wipe W1 030111 Wipe W3 030111 Wipe Blank.	Problems with HEPA filter; pieces of filter noted in fan exhaust
3/1/11	Decontamination of Burn Hut	030211 Wipe W2 030211 Wipe W4 030211 Wipe Blank	Decontaminated Burn Hut with Spore-Klenz®
3/2/11	Bio Sampler Test # 3; wood and bird/10 min	CEMs Thermocouples 2-ACB-BS-03Oil 2-ACB-BS-03 Rinse 030311 ACB Ash 030311 ACB CC 030311 Fly ash 1 030311 Fly ash 2 030311 Wipe W1 030311 Wipe W3 030311 Wipe Blank	N/A
3/4/11	Decontamination of Burn Hut	030411 Wipe W2 030411 Wipe W4 030411 Wipe Blank	Decontaminated Burn Hut with Spore-Klenz®
3/8/11	Bio Sampler Test # 4; wood and bird/10 min	CEMs Thermocouples 2-ACB-BS-04 Oil 2-ACB-BS-04 Rinse 030911 ACB Ash 030911 ACB CC 030911 Fly ash 1 030911 Fly ash 2 030911 Wipe W1 030911 Wipe W3 030911 Wipe Blank	

Test Date	Activity	Samples Acquired	Notes
3/10/11	Decontamination of Burn Hut	031011 Wipe W2 031011 Wipe W4 031011 Wipe Blank	Decontaminated Burn Hut with Spore-Klenz®
3/10/11	Bio Sampler Test # 5; wood/10 min, bird/4 min	CEMs Thermocouples 2-ACB-BS-05 Oil 2-ACB-BS-05 Rinse 031111 ACB Ash 031111 ACB CC 031111 Fly ash 1 031111 Fly ash 2 031111 Wipe W1 031111 Wipe W3 031111 Wipe Blank	Noted slight build-up of birds in ACB during test
3/14/11	Decontamination of Burn Hut	031411 Wipe W2 031411 Wipe W4 031411 Wipe Blank	Decontaminated Burn Hut with Spore-Klenz®
3/14/11	Bio Sampler Test # 6; wood/10 min, bird/4 min	CEMs Thermocouples 2-ACB-BS-06 Oil 2-ACB-BS-06 Rinse 031511 ACB Ash 031511 ACB CC 031511 Fly ash 1 031511 Fly ash 2 031511 Wipe W1 031511 Wipe W3 031511 Wipe Blank	Observed more particulate in bio impinger during test Grease also in impinger
3/16/11	Decontamination of Burn Hut	031611 Wipe W2 031611 Wipe W4 031611 Wipe Blank	Decontaminated Burn Hut with Spore-Klenz®
3/16/11	Bio Sampler Test # 7; wood/10 min, bird/4 min	CEMs Thermocouples 2-ACB-BS-07 Oil 2-ACB-BS-07 Rinse 031711 ACB ash 031711 ACB CC 031711 Fly ash 1 031711 Fly ash 2 031711 Wipe W1 031711 Wipe W3 031711 Wipe Blank	

Test Date	Activity	Samples Acquired	Notes
3/18/11	Decontamination of Burn Hut	031811 Wipe W2 031811 Wipe W4 031811 Wipe Blank	Decontaminated Burn Hut with Spore-Klenz®
3/21/11	Bio Sampler Test # 8; wood/10 min, bird/4 min	CEMs Thermocouples 2-ACB-BS-08 Oil 2-ACB-BS-08 Rinse 032211 ACB Ash 032211 ACB CC 032211 Fly ash 1 032211 Fly ash 2 032211 Wipe W1 032211 Wipe W3 032211 Wipe Blank	
3/23/11	Decontamination of Burn Hut	032311 Wipe W2 032311 Wipe W4 032311 Wipe Blank	Decontaminated Burn Hut with Spore-Klenz®
11/21/11	Bio Positive Control Test # 1	BS-1 Oil BS-1 Rinsate 112111 Wipe W1 112111 Wipe W2 112111 Wipe W3 112111 Wipe W4 112111 Wipe Blank	No fire in ACB Inject 2E6 CFU of *Gs* spores into hut with nebulizer at inlet duct (to hut) All fans operating Collected sample with ViaCell® cassette in outlet duct and SKC Biosampler (normal location) Cassette sampled at 15 L/min vacuum Noted depletion of liquid in nebulizer by end of test
11/22/11	Bio Positive Control Test # 2	BS-2 Oil BS-2 Rinsate 112211 Wipe W1 112211 Wipe W2 112211 Wipe W3 112211 Wipe W4 112211 Wipe Blank	No fire in ACB Inject 2E6 CFU of *Gs* spores with nebulizer placed within 2 feet of entrance to outlet duct All fans operating Collected sample with ViaCell® cassette in outlet duct and SKC Biosampler (normal location)
11/29/11	Bio Positive Control Test # 3	BS-3 Oil BS-3 Rinsate 112911 Wipe W1 112911 Wipe W2 112911 Wipe W3 112911 Wipe W4 112911 Wipe Blank	Fire in ACB and with birds not inoculated. Wood and bird/10 min Inject 2E6 CFU of *Gs* spores with nebulizer placed within 2 feet of entrance to outlet duct Nebulizer air-line popped off during test; stopped test momentarily and replaced air-line; decreased pressure on nebulizer to 30 psi vs. 50 psi Collected sample with ViaCell® cassette in outlet duct and SKC Biosampler (normal location) ViaCell® cassette inlet was wrapped with ice pack to cool gas before entering cassette

N/A – Not Applicable

5.2 CONTINUOUS EMISSION MONITORING AND THERMOCOUPLE DATA

5.2.1 Real-Time CEM and Thermocouple Traces

5.2.1.1 Shakedown Test with Poultry (11-17-2010)

Figures 6 through 9 show the CEM results from the shakedown test feeding both wood and poultry at a rate of one bird every ten minutes. Temperatures stabilized to a cyclic pattern that coincided with the feeding of the wood and birds. Maximum temperatures in the ACB were approximately 1000 °C, with approximately a 400 °C range between maximum and minimum temperatures when the measurements over the entire interior space of the ACB were examined. This temperature range is not unexpected, given that ambient air is being forced into the ACB at a downward angle – the temperatures on the side opposite the air input plenum are typically lower than those on the plenum side. CO and THC increased significantly upon initiation of the poultry feed and slowly returned to their previous levels during wood-only combustion once poultry feed ceased. Also note that the CO analyzer reached its maximum concentration at several points within the run, resulting in a flat trace at that maximum value. A second CO analyzer that had a higher range was added to the CEM system after this run. The results from the higher range CO analyzer were used for all subsequent reporting.

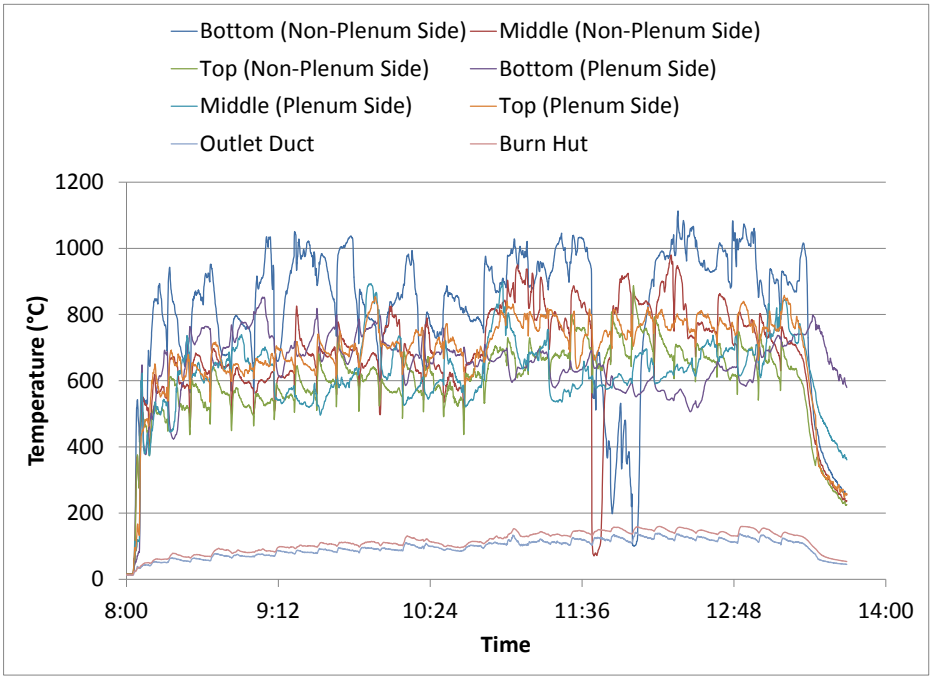


Figure 6. Temperatures from Trial Poultry Burn (11-17-2010)

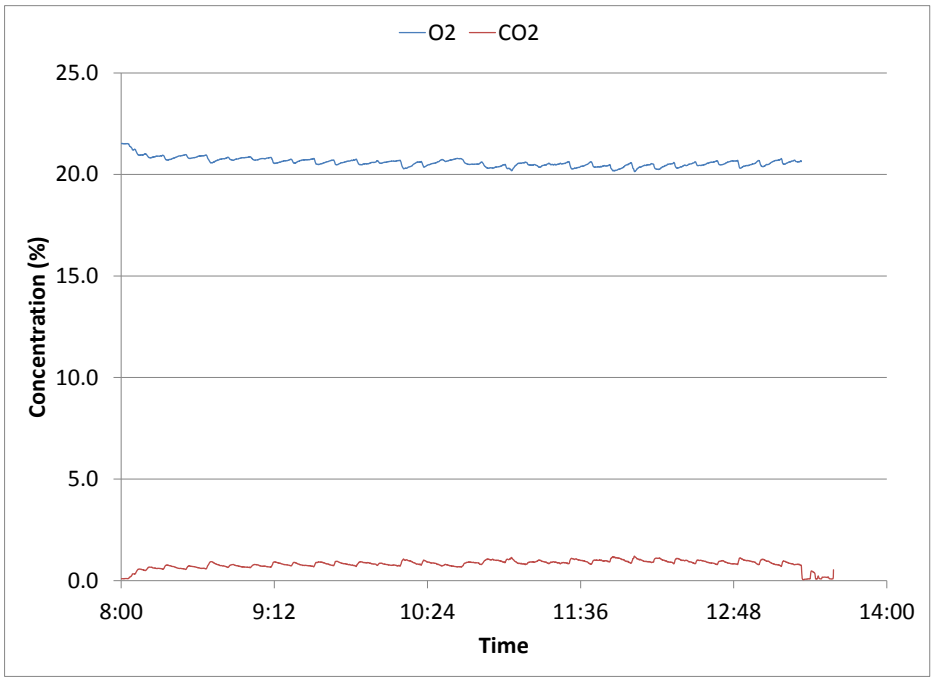


Figure 7. O_2 and CO_2 from Trial Poultry Burn (11-17-2010)

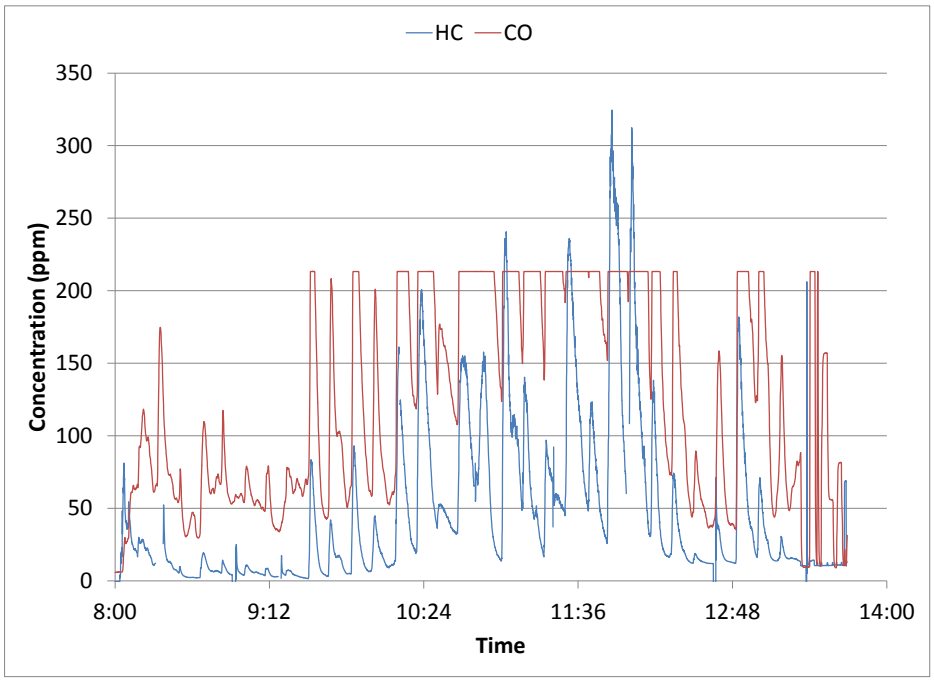


Figure 8. THC and CO from Trial Poultry Burn (11-17-2010)

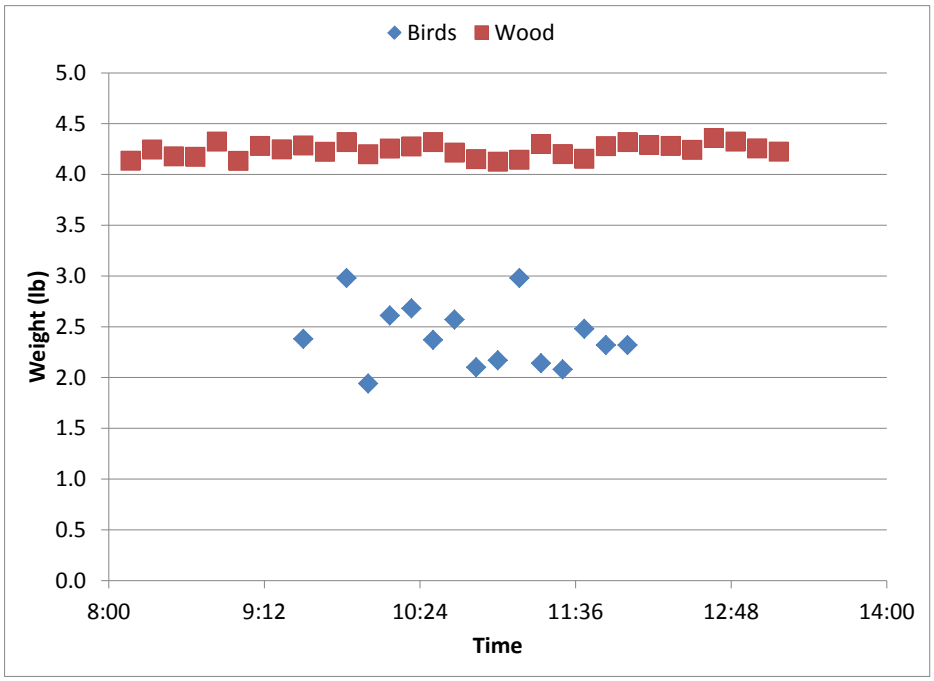


Figure 9. Fuel Feed from Trial Poultry Burn (11-17-2010)

5.2.1.2 Test with Detailed Pollutant Measurements under Baseline Conditions

Figures 10 through 13 show the CEM, temperature, and feed rate traces during the test where wood and poultry were burned under the baseline conditions (25 lb/hr of wood and 10 min feed intervals for the birds). Note the cyclic nature of the traces (particularly CO) corresponding to feed events.

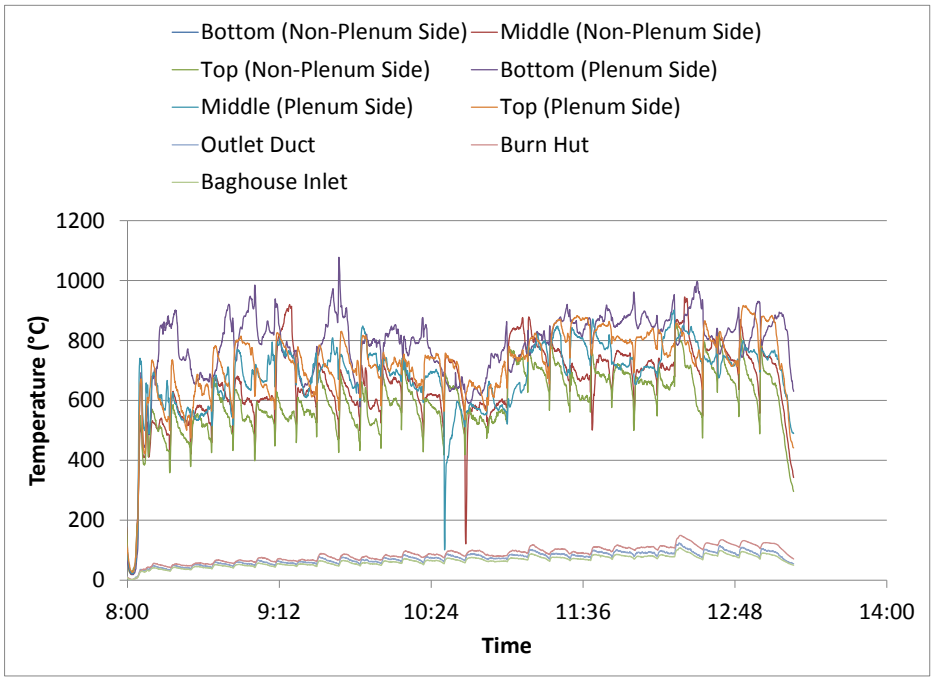


Figure 10. Temperatures from Baseline Pollutant Test (1-20-11)

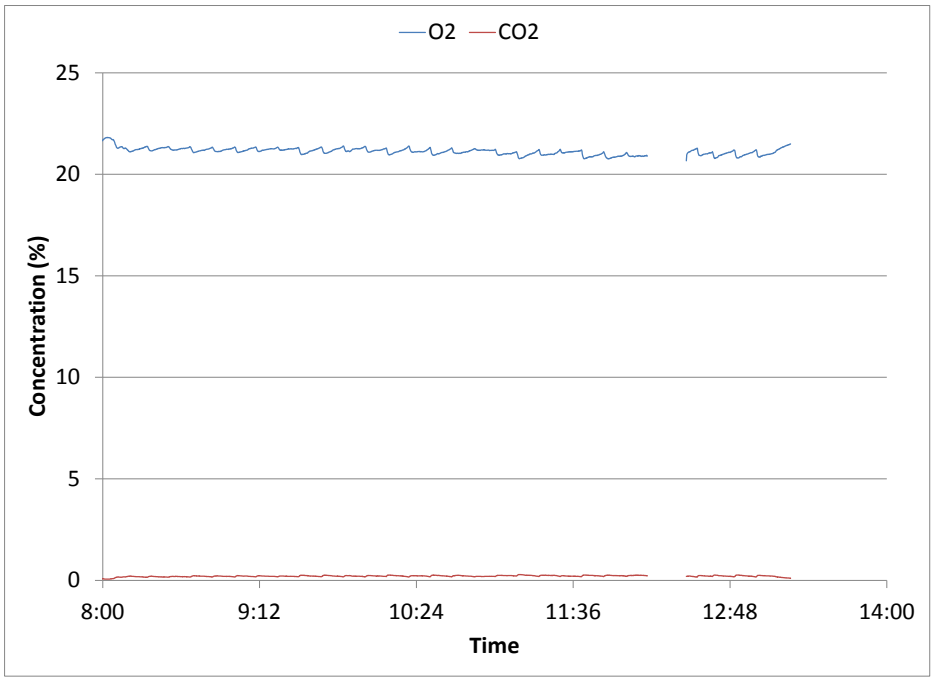


Figure 11. O_2 and CO_2 from Baseline Pollutant Test (1-20-11)

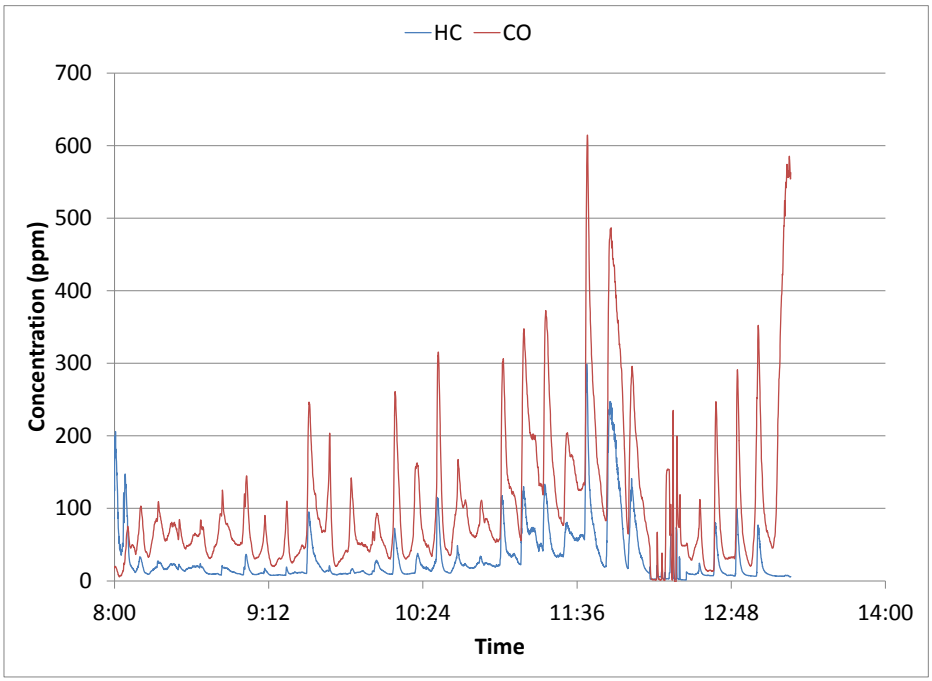


Figure 12. THC and CO from Baseline Pollutant Test (1-20-11)

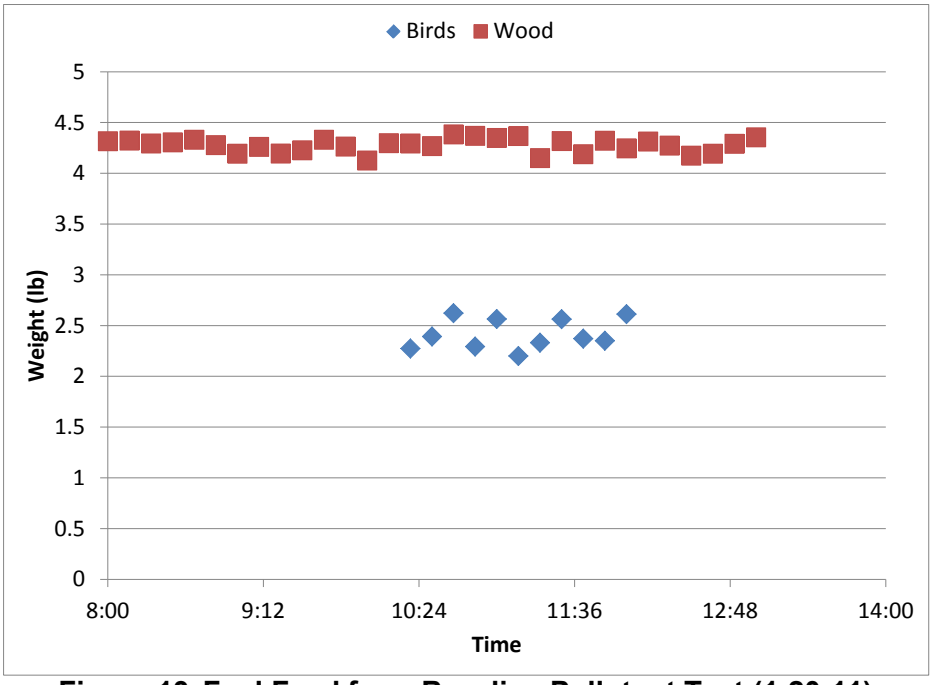


Figure 13. Fuel Feed from Baseline Pollutant Test (1-20-11)

5.2.1.3 Tests Varying Amount of Poultry Feed to ACB

Figures 14 through 17 show the CEM, temperature, and feed rate results during the tests where the feed interval for the poultry carcasses was reduced from 10 minutes to 8, 6, 4, and 2 minutes. Note from the temperature traces in Figure 14 the destabilization of operation that occurs after approximately 12:00, which was the time when the poultry feed rate was at a maximum (one bird every two minutes). At that point, several thermocouples exhibited rapid drops in reported temperatures, and other thermocouples showed cyclic fluctuations much greater than they showed at lower poultry feed rates. Also note the significant increase in CO and THC that occurs at this same time. These conditions represent ACB operating conditions when it would be expected that the operator would observe obvious visual clues that the combustion effectiveness was deteriorating due to overfeeding of bird carcasses, and quenching may even be occurring. Therefore it appears that for this particular pilot-scale ACB, feeding these materials at a feed interval of four minutes per bird appears to be the highest poultry feed rate at which stable operation can still be maintained (i.e., ACB operation was not quenched). The baseline case represented a wood:poultry mass feed ratio of approximately 2:1; the high poultry feed rate case represented a wood:poultry mass feed ratio of approximately 0.66:1, which was considerably outside the range of recommended mass feed ratio of fuel to poultry for normal ACB operation.

A four min poultry feed interval was therefore selected for the second test condition.

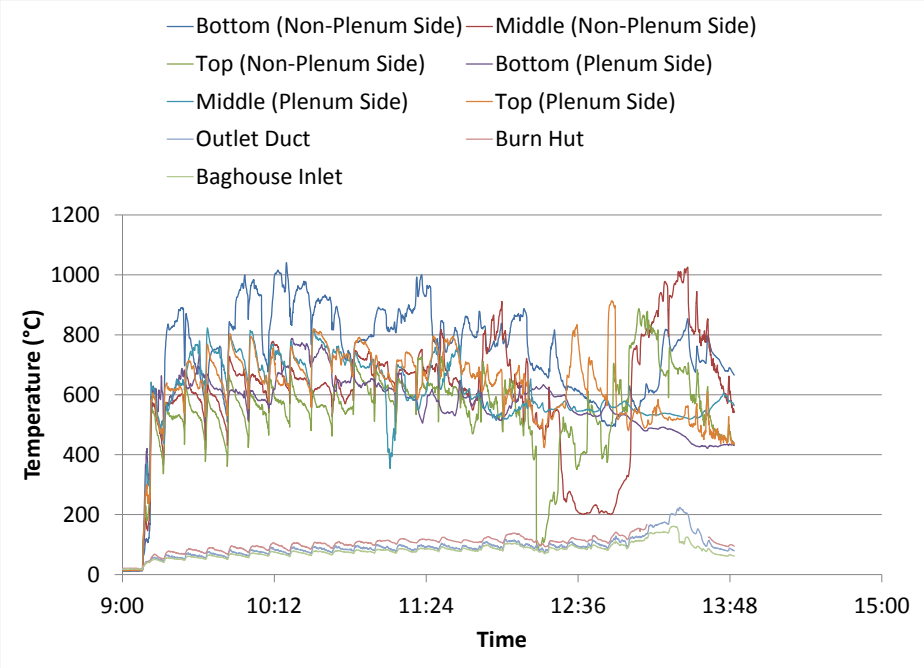


Figure 14. Temperatures from Test Varying Poultry Feed (2-2-11)

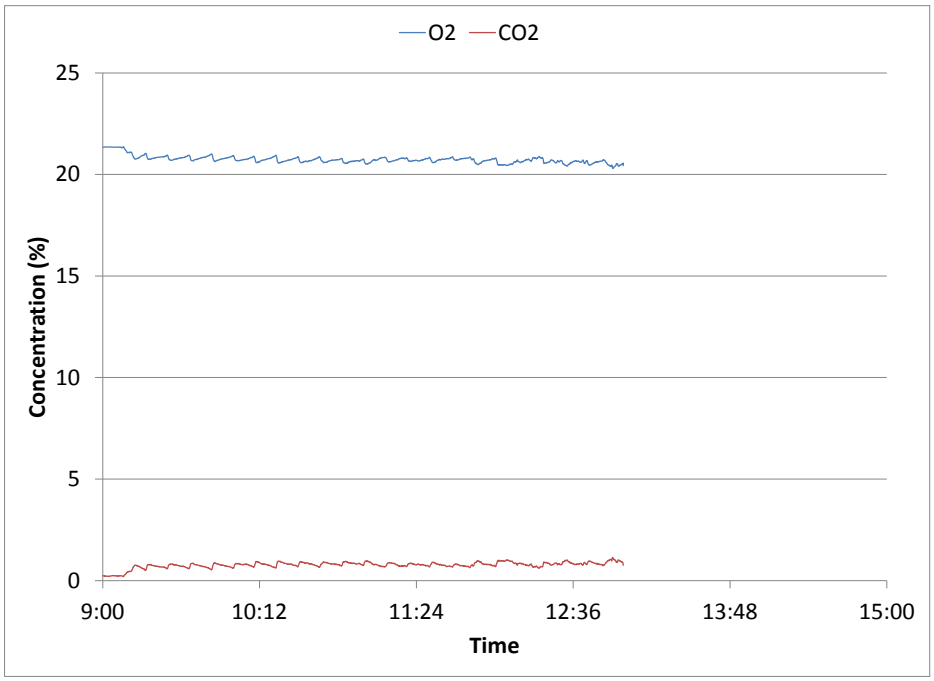


Figure 15. O_2 and CO_2 from Test Varying Poultry Feed (2-2-11)

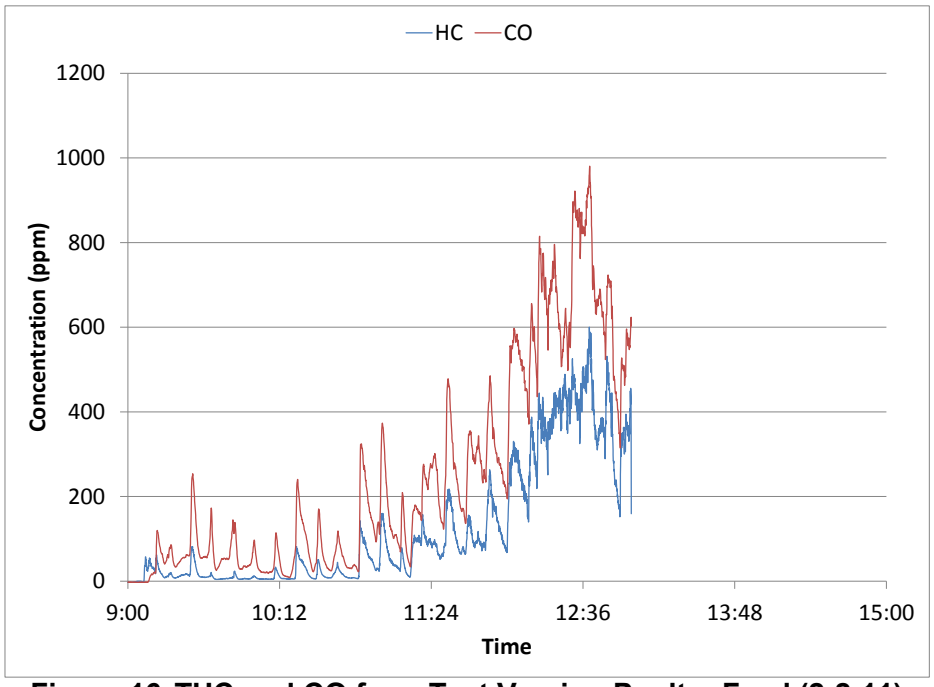


Figure 16. THC and CO from Test Varying Poultry Feed (2-2-11)

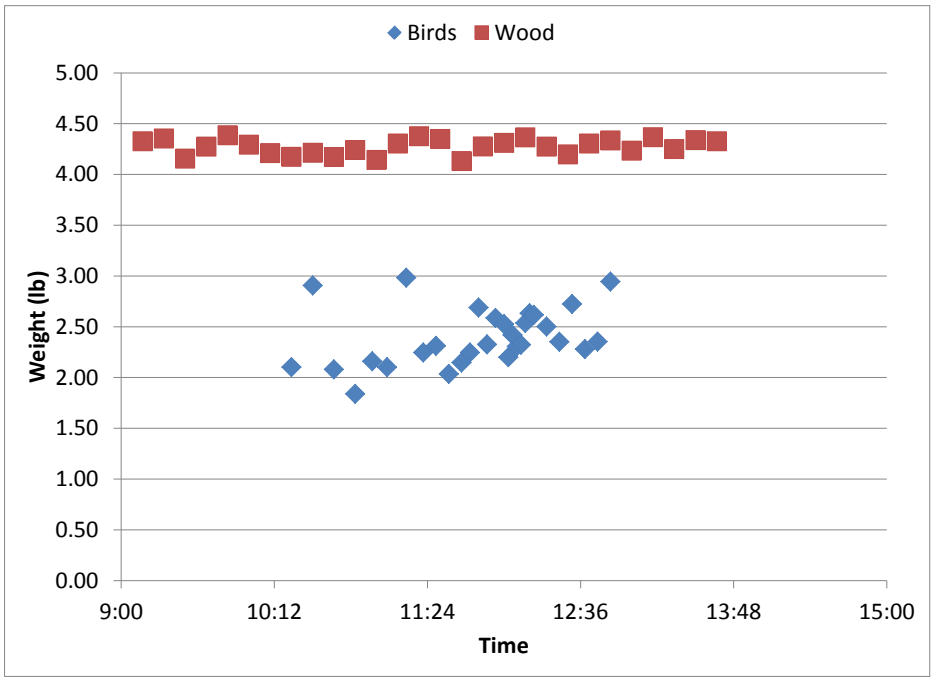


Figure 17. Fuel Feed from Test Varying Poultry Feed (2-2-11)

5.2.1.4 Test with Detailed Pollutant Measurements under Maximum Poultry Feed Rate Conditions

Figures 18 through 21 show the CEM, temperature, and feed rate traces for the tests where particulate matter (PM), VOCs, and PAHs were measured under the maximum poultry feed rate conditions. Note that even with backing off the feed rate from two minutes per bird to four minutes per bird, there was a slight amount of instability in the ACB operation as the amount of partially and mostly combusted birds in the ACB began to fill the combustion chamber, affecting the fluid mechanics of the combustion air delivery. This effect may be more significant for the small-scale ACB tested than larger industrial-scale ACBs used in field, although the poultry to fuel mass ratio tested is within the bounds of those found in actual practice. Both the effects of increasing poultry feed rate on fluid mechanics of combustion air supply and on amount of heat available for supporting poultry combustion may affect scaling up the pilot-scale results for practical applications in the field.

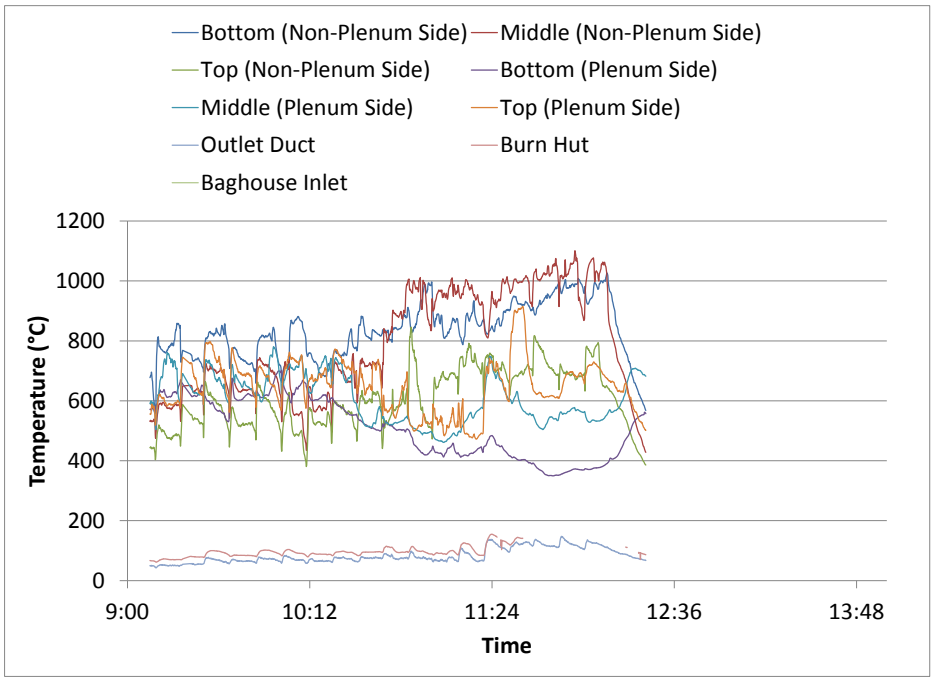


Figure 18. Temperatures from Test at Maximum Poultry Feed Rate (2-16-11)

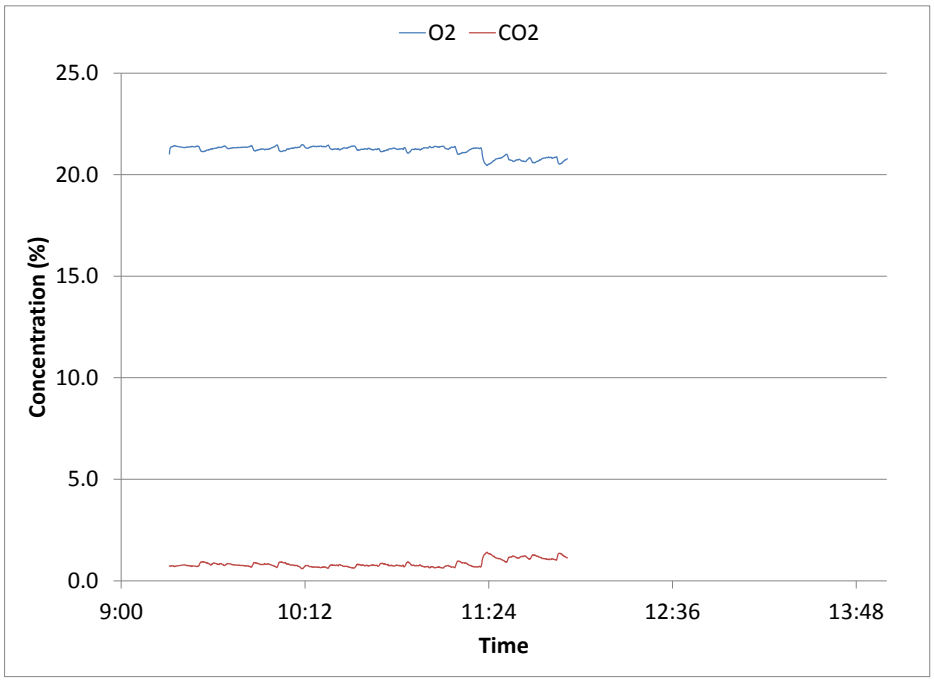


Figure 19. O_2 and CO_2 from Test at Maximum Poultry Feed Rate (2-16-11)

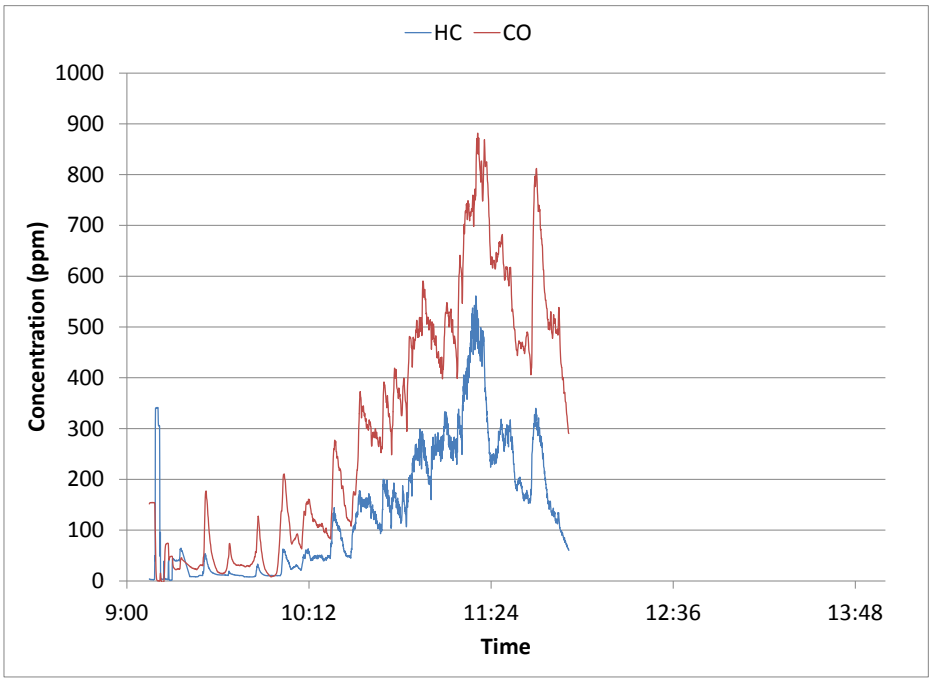


Figure 20. THC and CO from Test at Maximum Poultry Feed Rate (2-16-11)

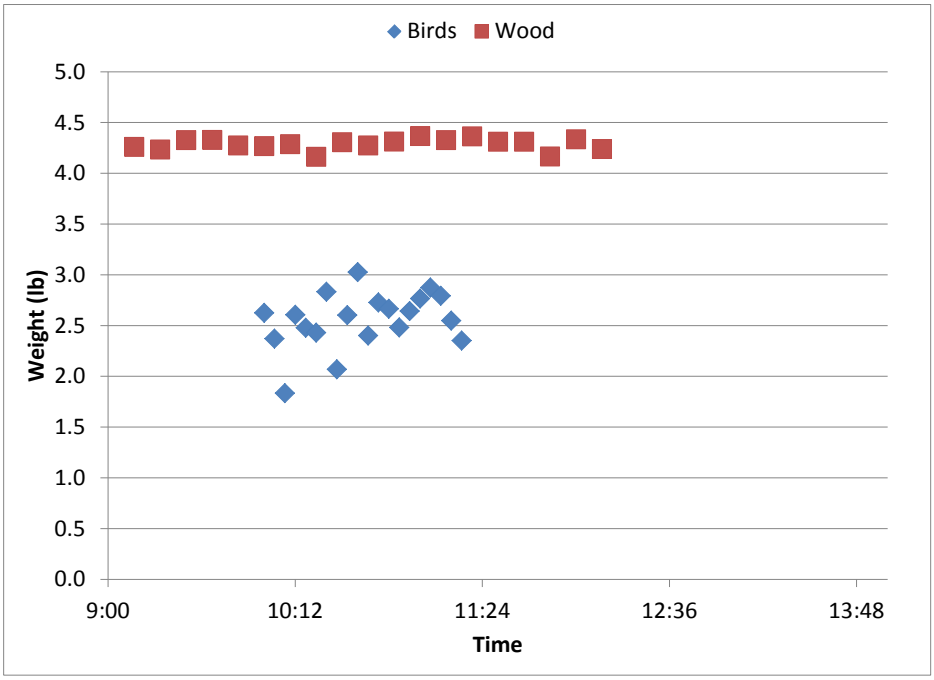


Figure 21. Fuel Feed from Test at Maximum Poultry Feed Rate (2-16-11)

5.2.1.5 Biosampling Tests under Baseline Poultry Feed Conditions

Figures 22 through 37 show the CEM, temperature, and feed rate traces for the tests under the baseline poultry feed conditions (25 lb/hr of wood and one bird every ten minutes).

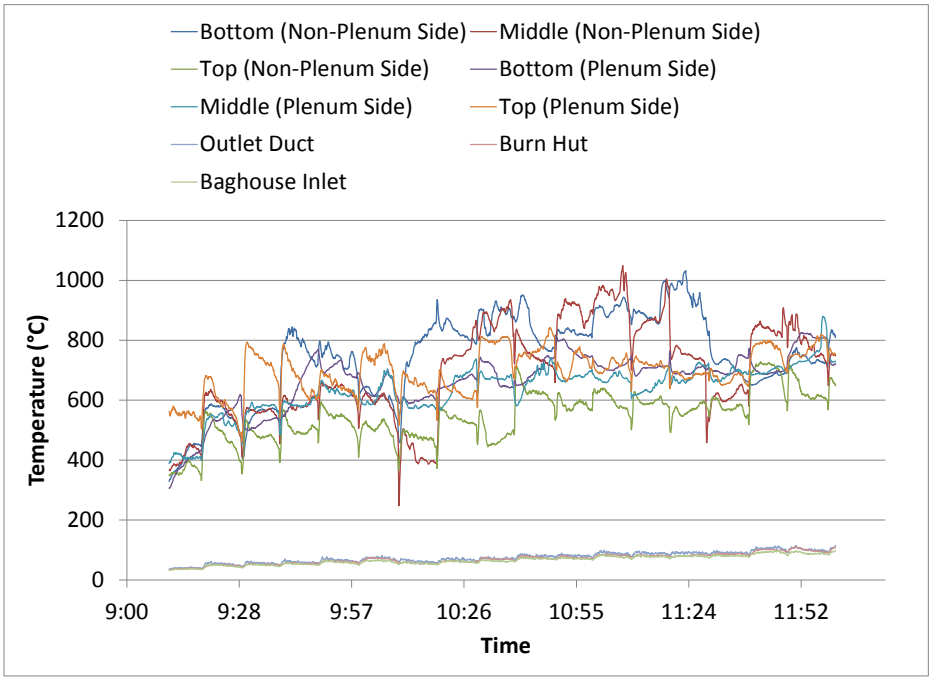


Figure 22. Temperatures from Biosampler Test 1 (2-23-11)

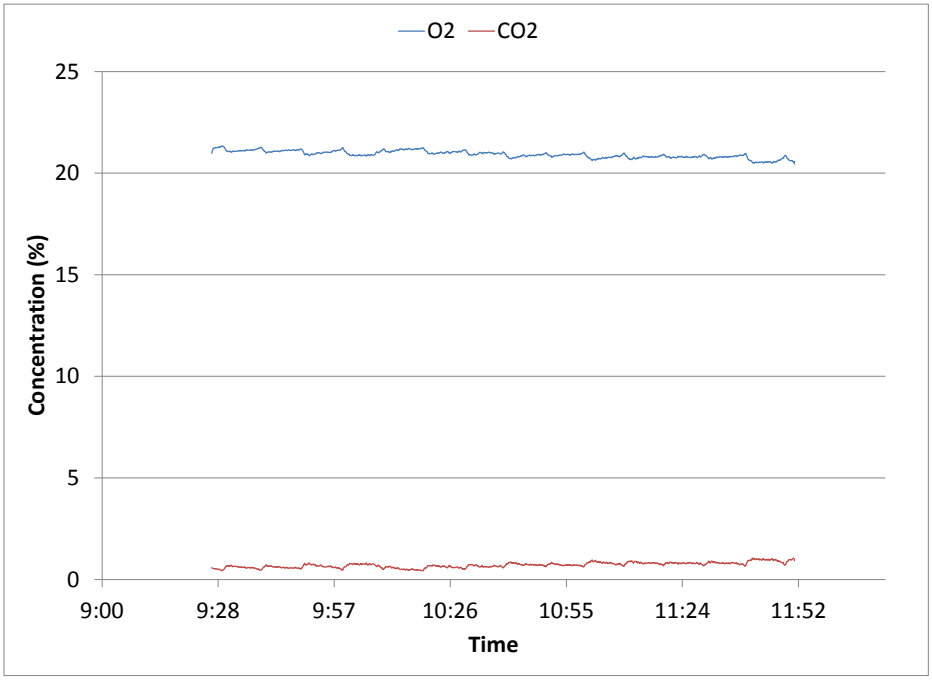


Figure 23. O_2 and CO_2 from Biosampler Test 1 (2-23-11)

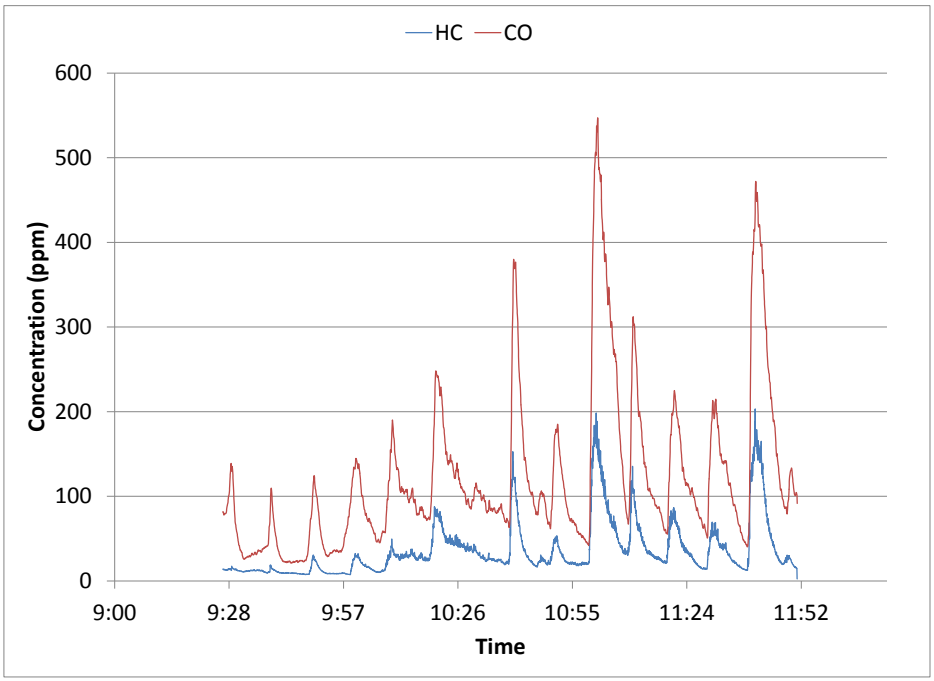


Figure 24. THC and CO from Biosampler Test 1 (2-23-11)

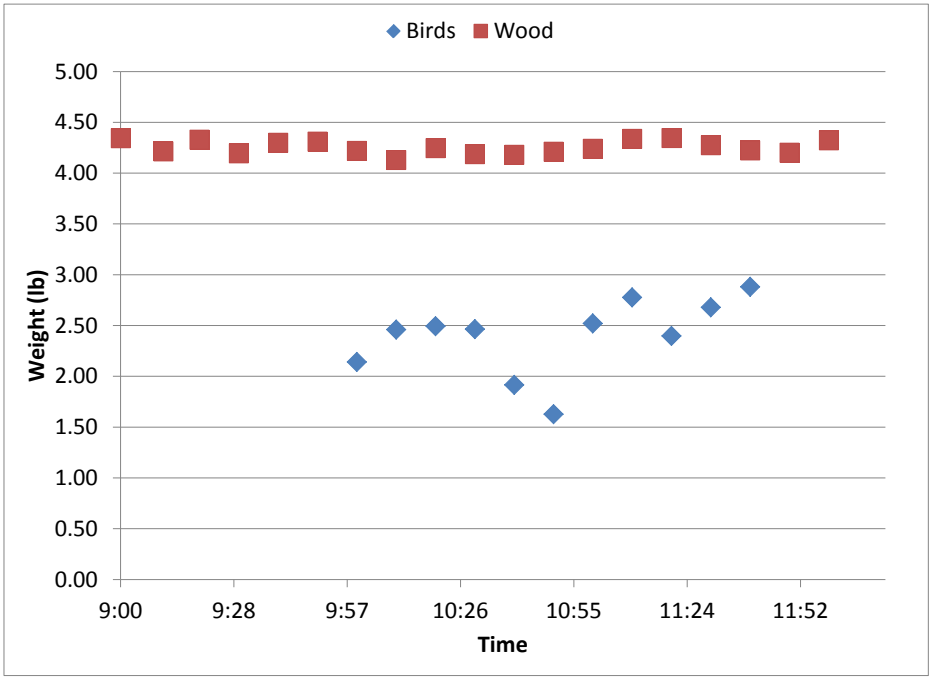


Figure 25. Fuel Feed from Biosampler Test 1 (2-23-11)

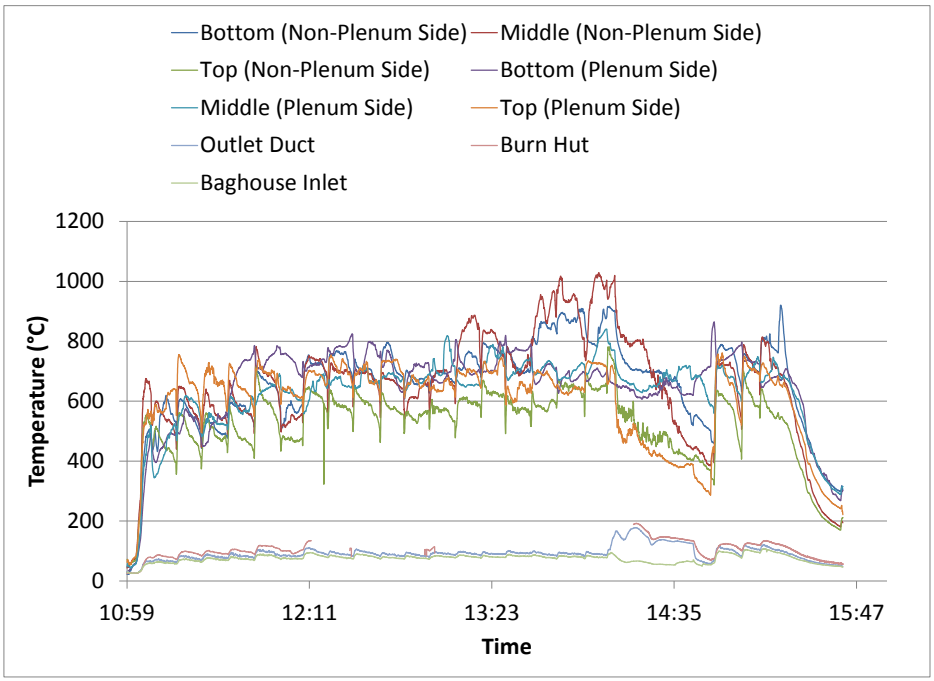


Figure 26. Temperatures from Biosampler Test 2 (2-28-11)

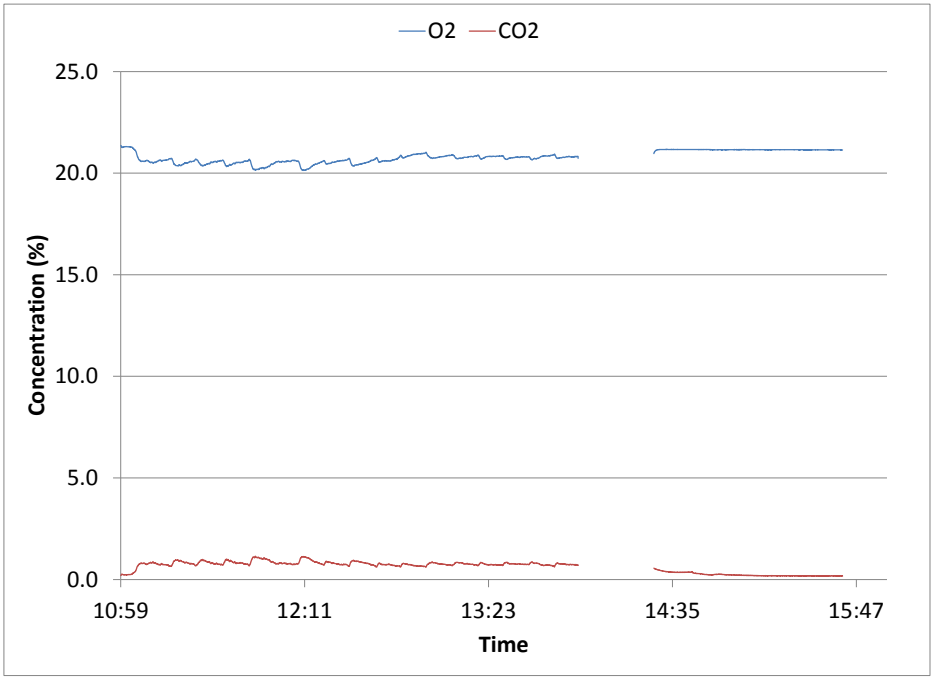


Figure 27. O_2 and CO_2 from Biosampler Test 2 (2-28-11)

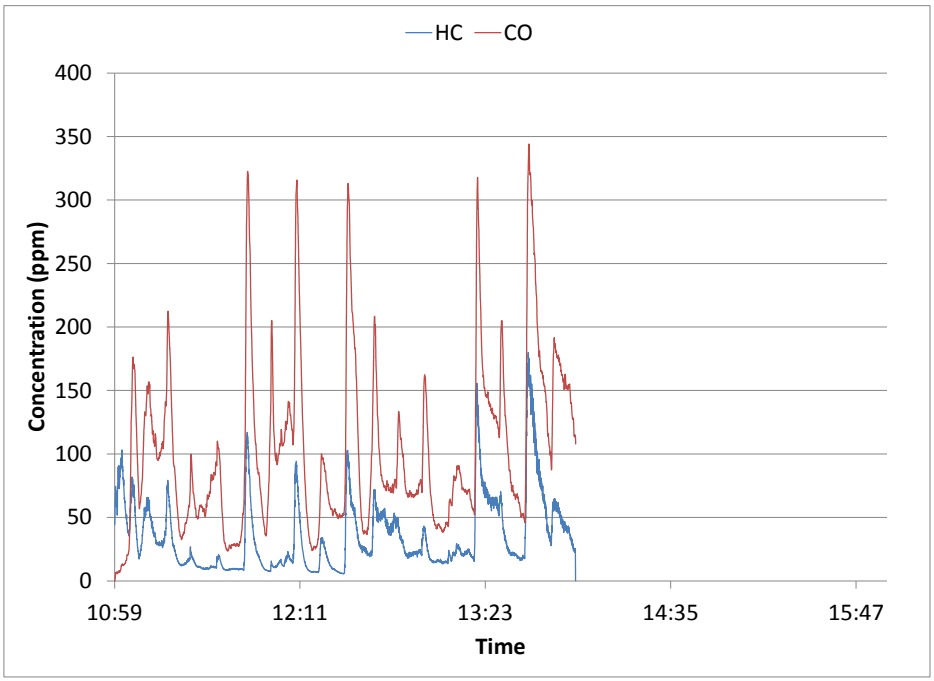


Figure 28. THC and CO from Biosampler Test 2 (2-28-11)

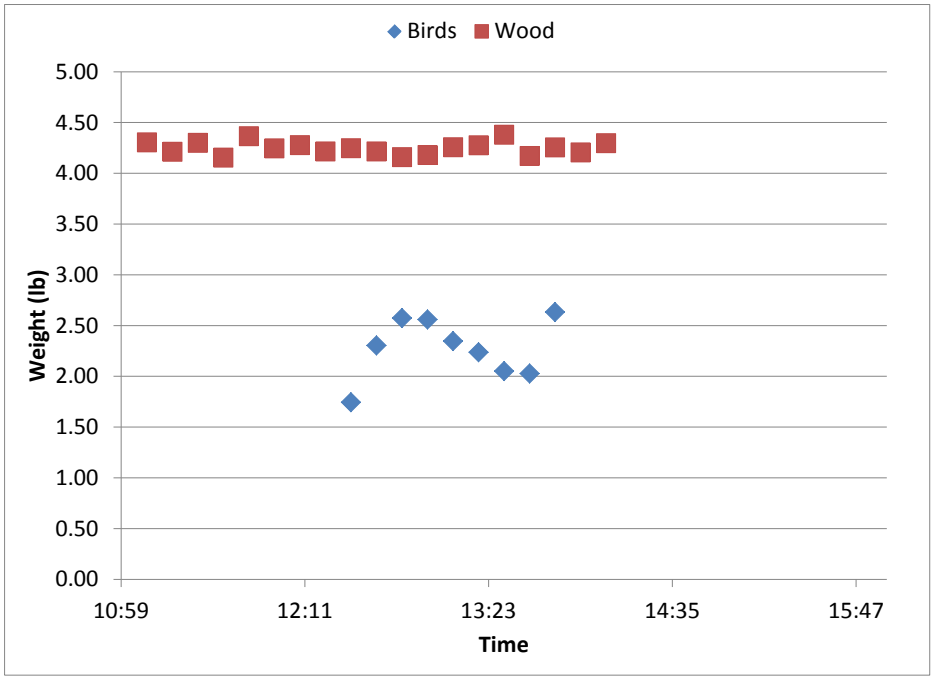


Figure 29. Fuel Feed from Biosampler Test 2 (2-28-11)

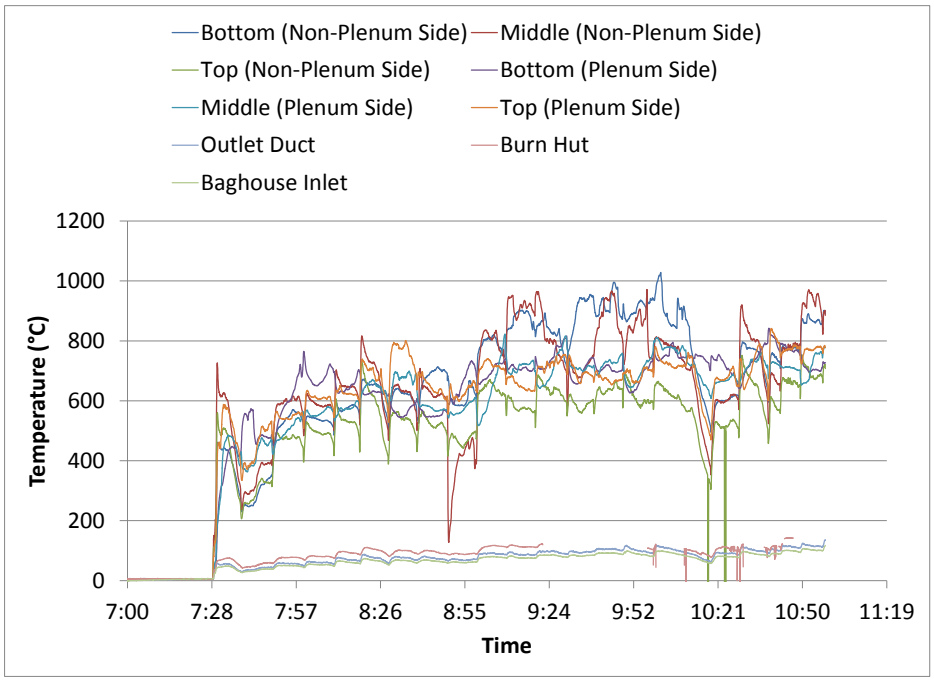


Figure 30. Temperatures from Biosampler Test 3 (3-2-11)

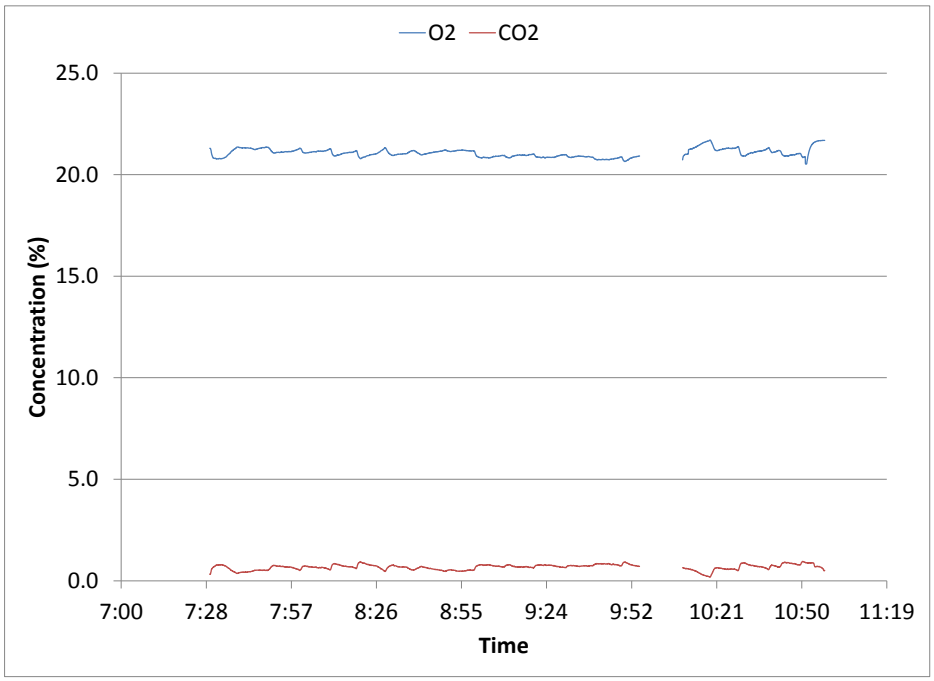


Figure 31. O_2 and CO_2 from Biosampler Test 3 (3-2-11)

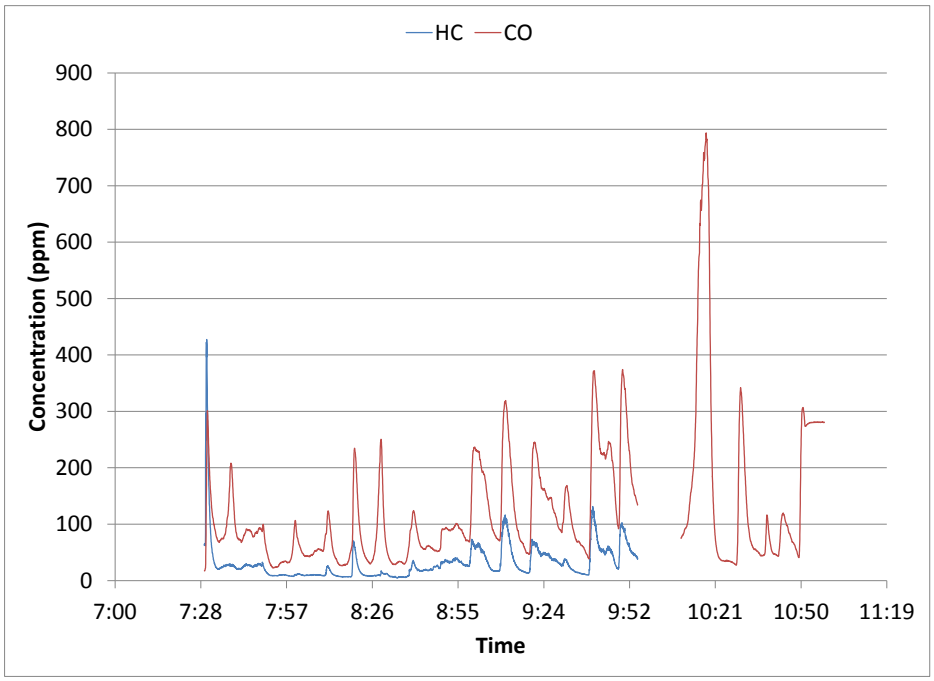


Figure 32. THC and CO from Biosampler Test 3 (3-2-11)

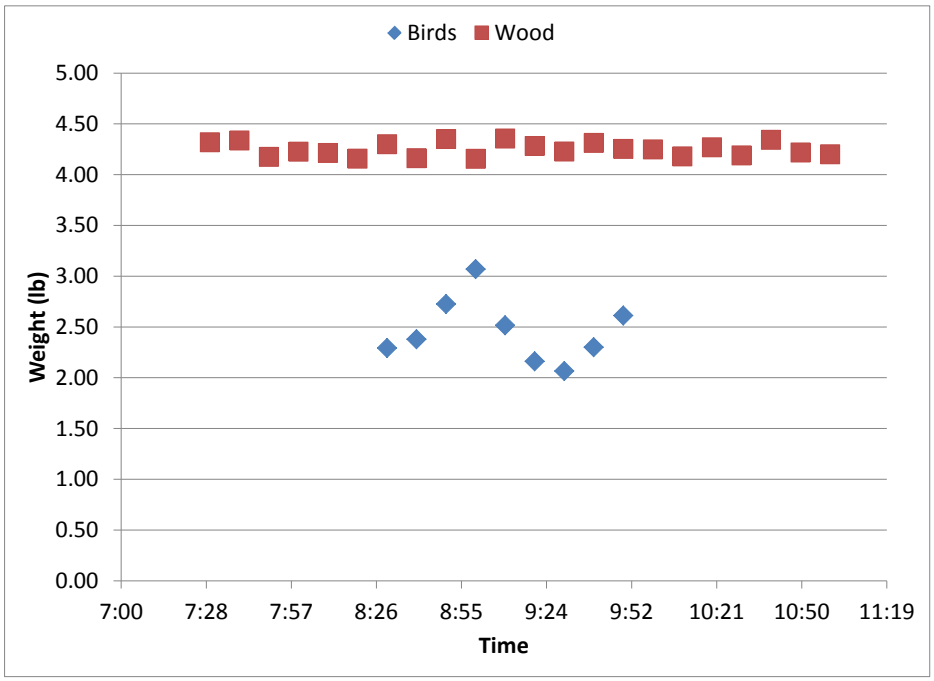


Figure 33. Fuel Feed from Biosampler Test 3 (3-2-11)

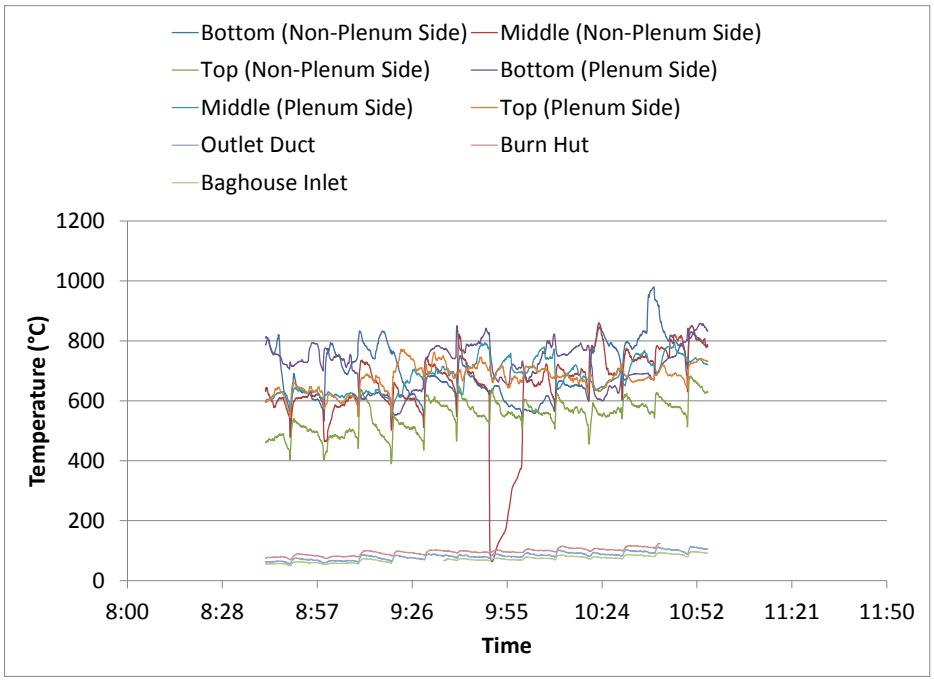


Figure 34. Temperatures from Biosampler Test 4 (3-8-11)

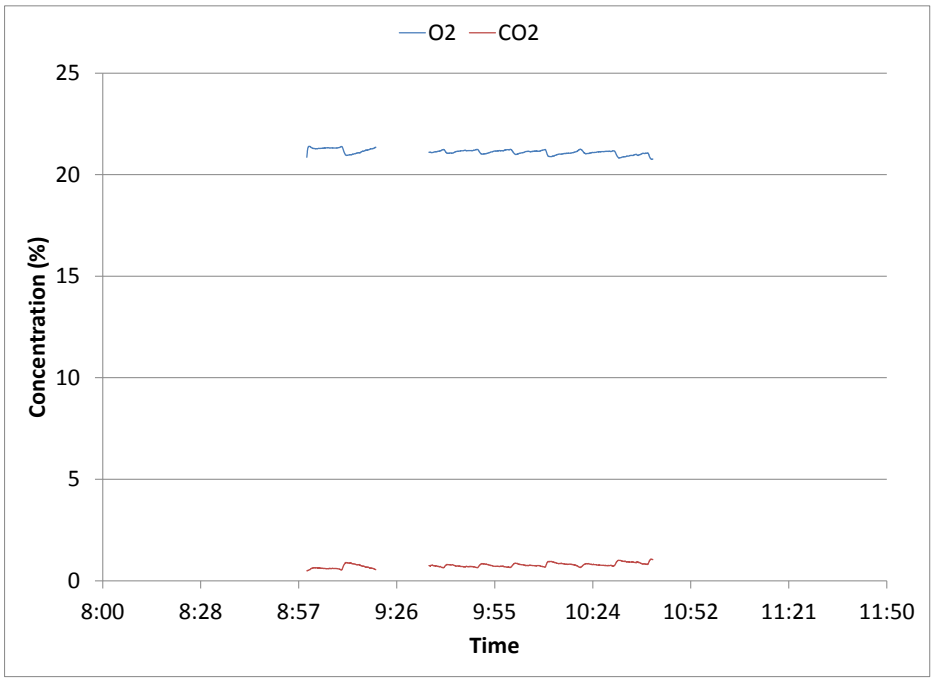


Figure 35. O_2 and CO_2 from Biosampler Test 4 (3-8-11)

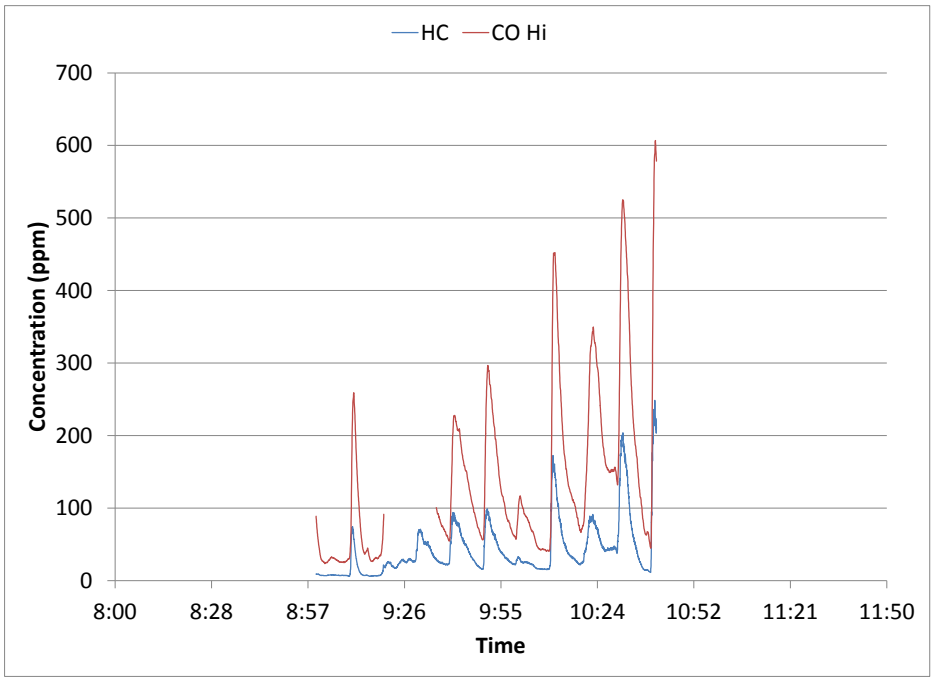


Figure 36. THC and CO from Biosampler Test 4 (3-8-11)

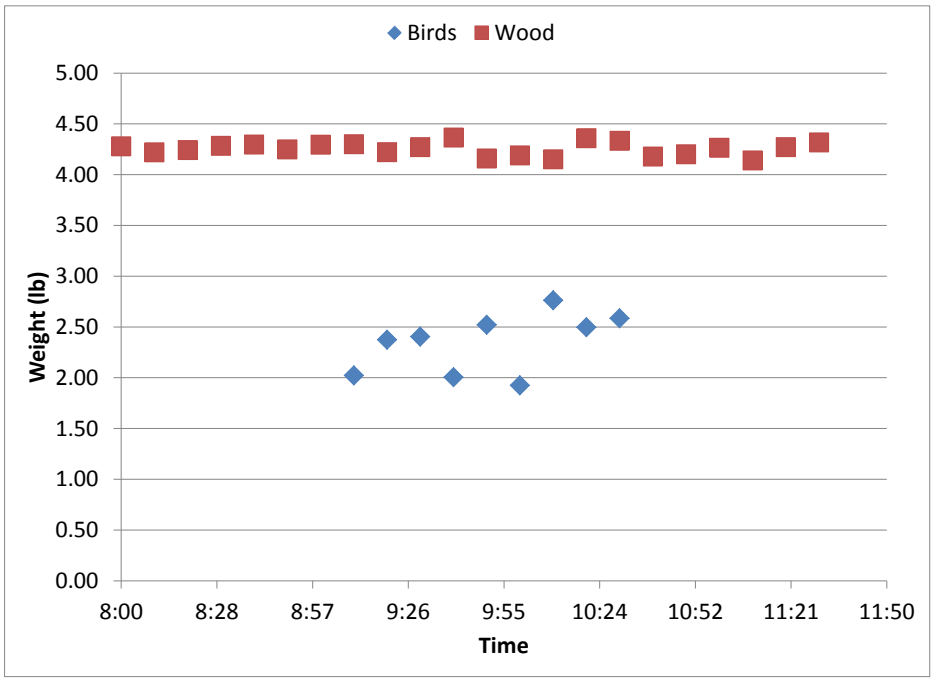


Figure 37. Fuel Feed from Biosampler Test 4 (3-8-11)

5.2.1.6 Biosampling Tests under Maximum Poultry Feed Conditions

Figures 38 through 53 show the CEM, temperature, and feed rate traces for the tests under the maximum poultry feed conditions (25 lb/hr of wood and one bird every four minutes).

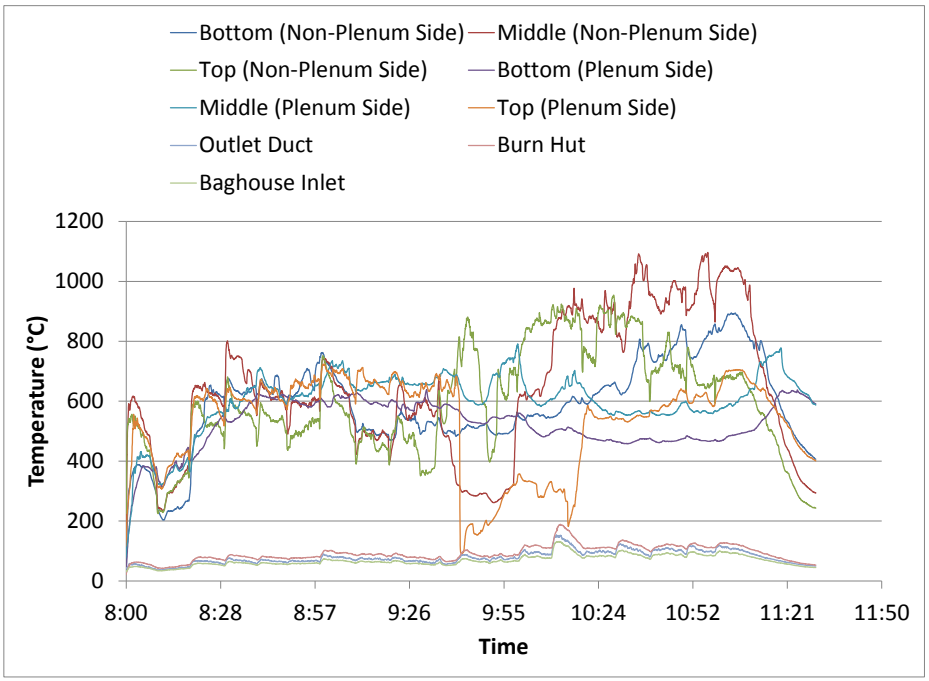


Figure 38. Temperatures from Biosampler Test 5 (3-10-11)

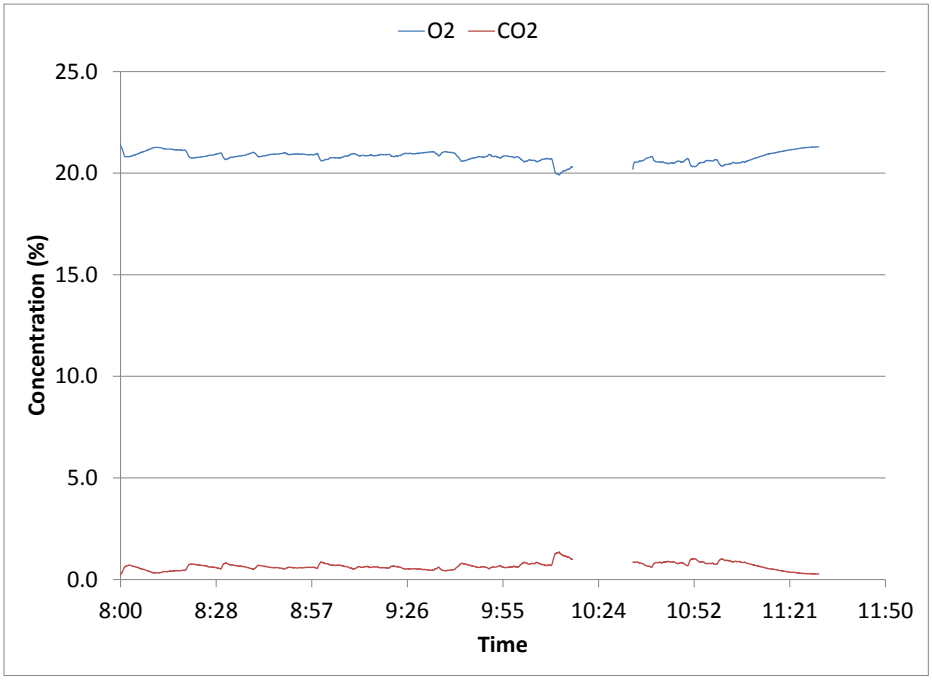


Figure 39. O_2 and CO_2 from Biosampler Test 5 (3-10-11)

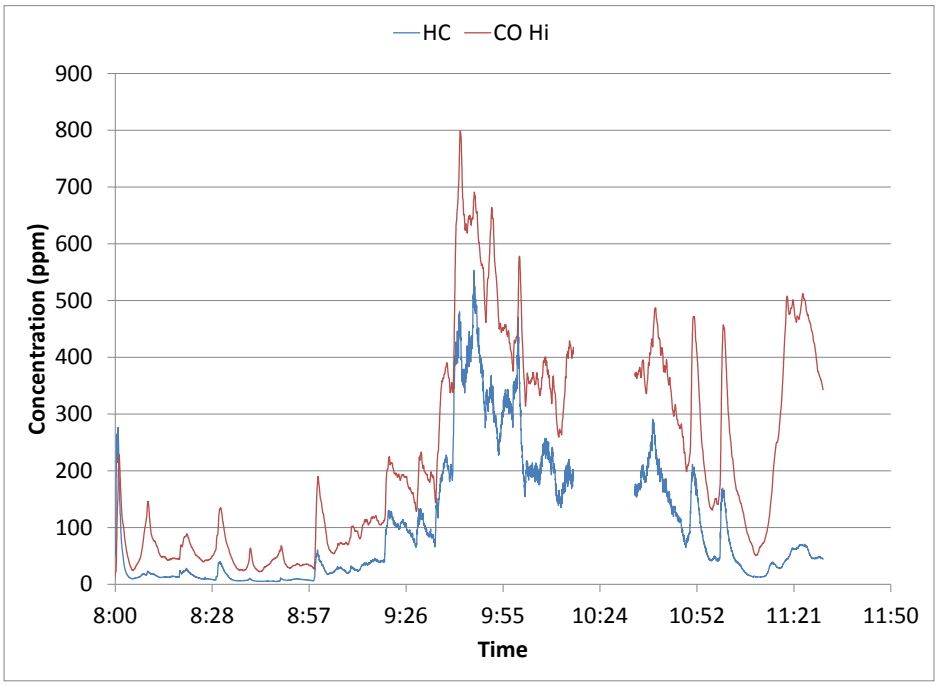


Figure 40. THC and CO from Biosampler Test 5 (3-10-11)

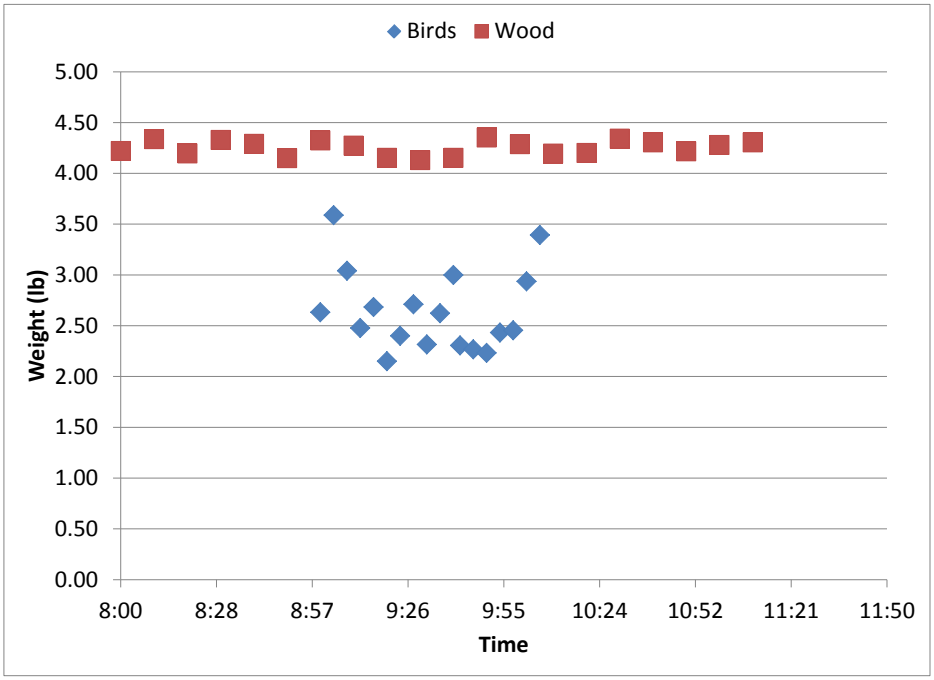


Figure 41. Fuel Feed from Biosampler Test 5 (3-10-11)

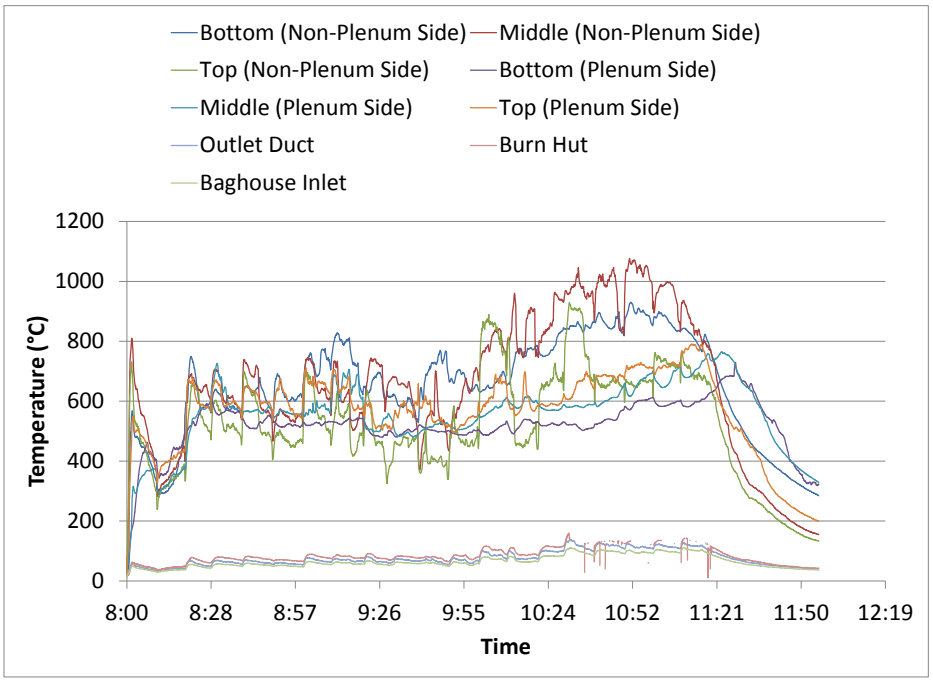


Figure 42. Temperatures from Biosampler Test 6 (3-14-11)

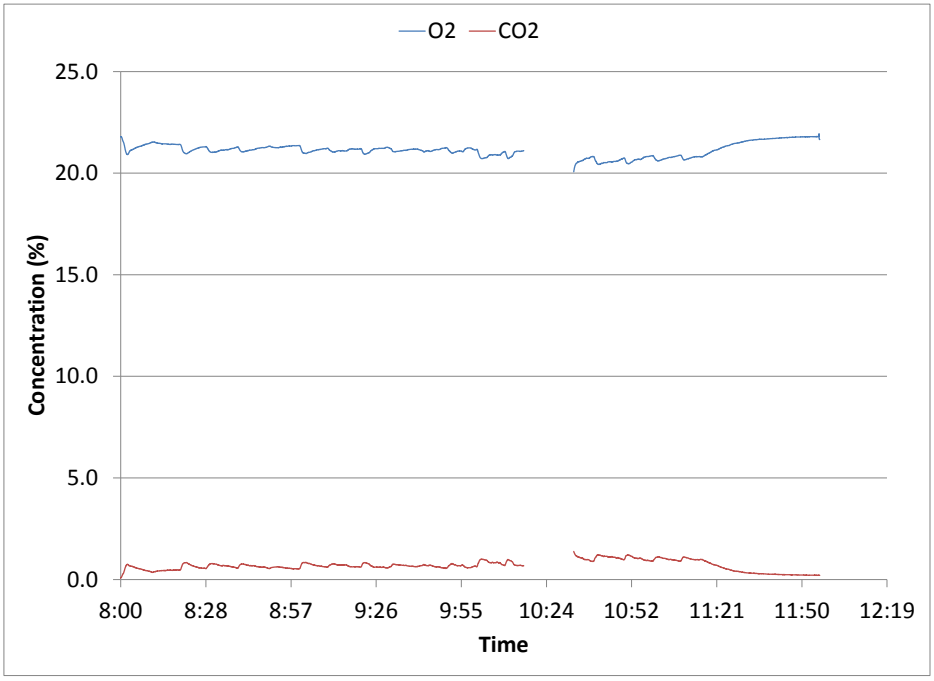


Figure 43. O_2 and CO_2 from Biosampler Test 6 (3-14-11)

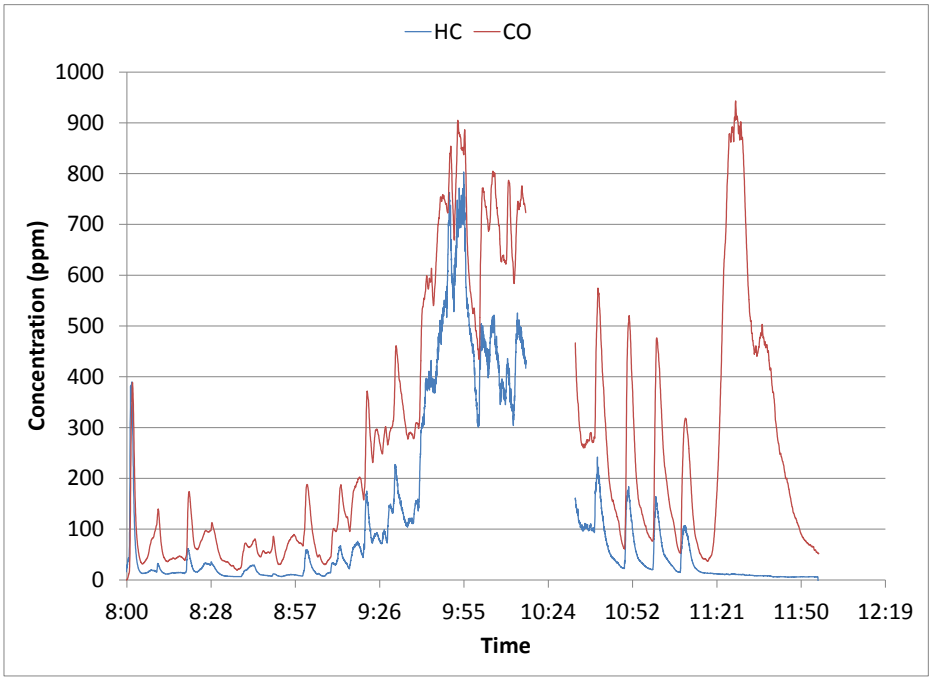


Figure 44. THC and CO from Biosampler Test 6 (3-14-11)

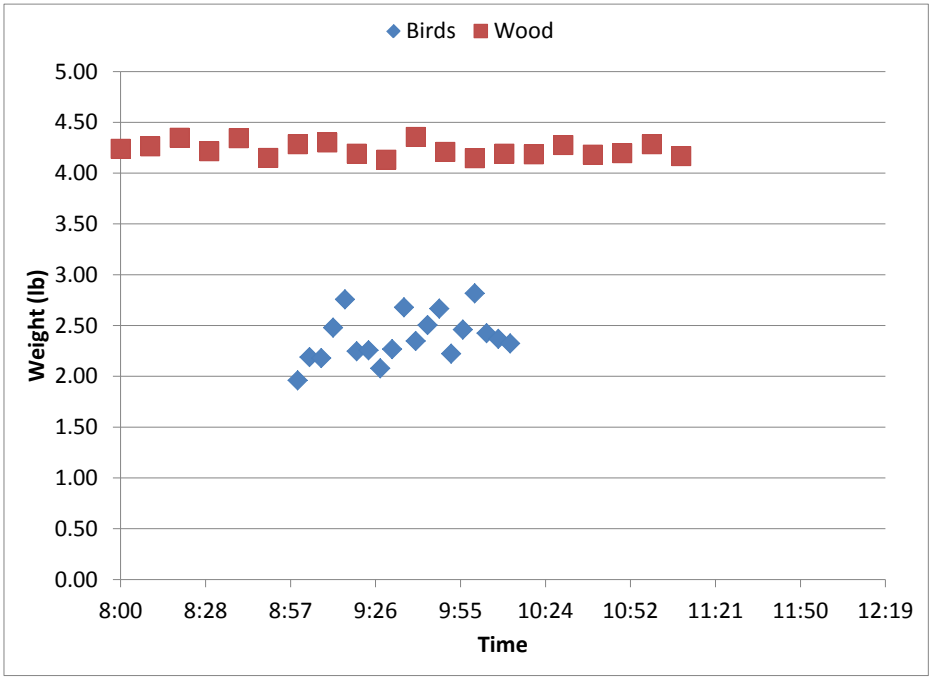


Figure 45. Fuel Feed from Biosampler Test 6 (3-14-11)

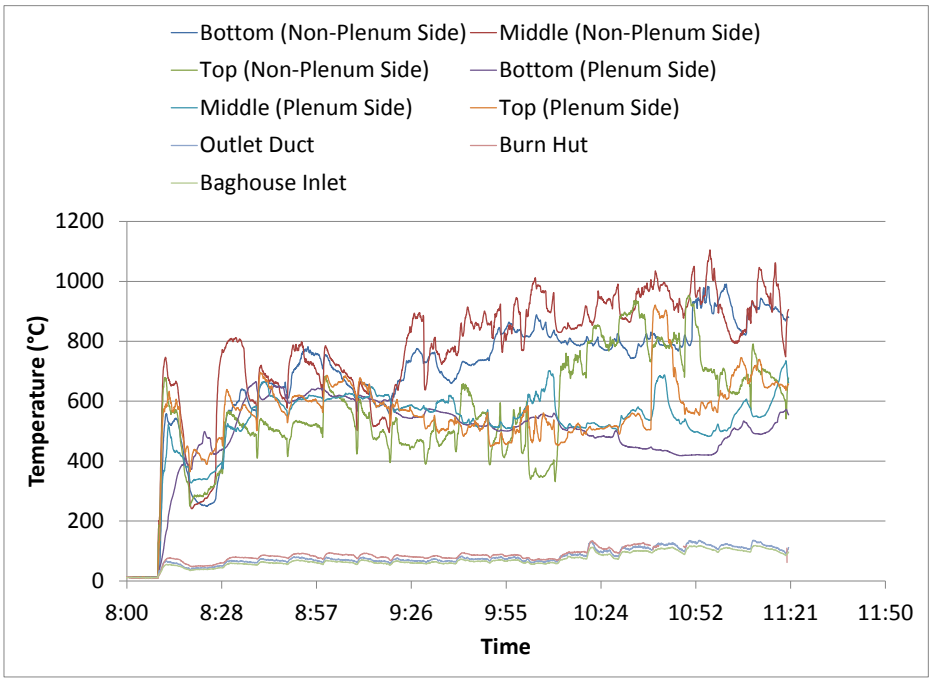


Figure 46. Temperatures from Biosampler Test 7 (3-16-11)

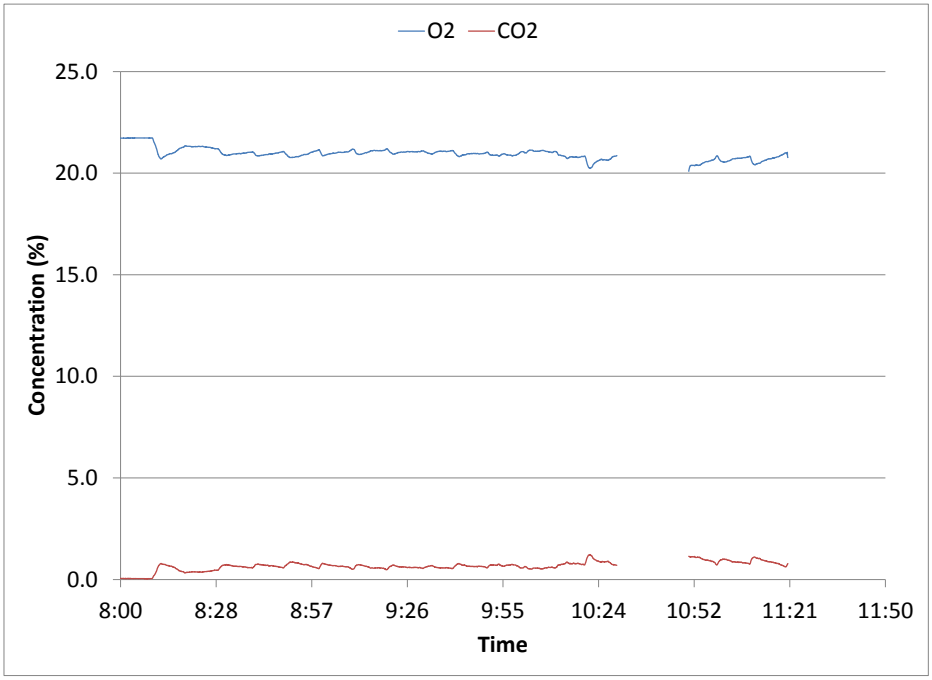


Figure 47. O_2 and CO_2 from Biosampler Test 7 (3-16-11)

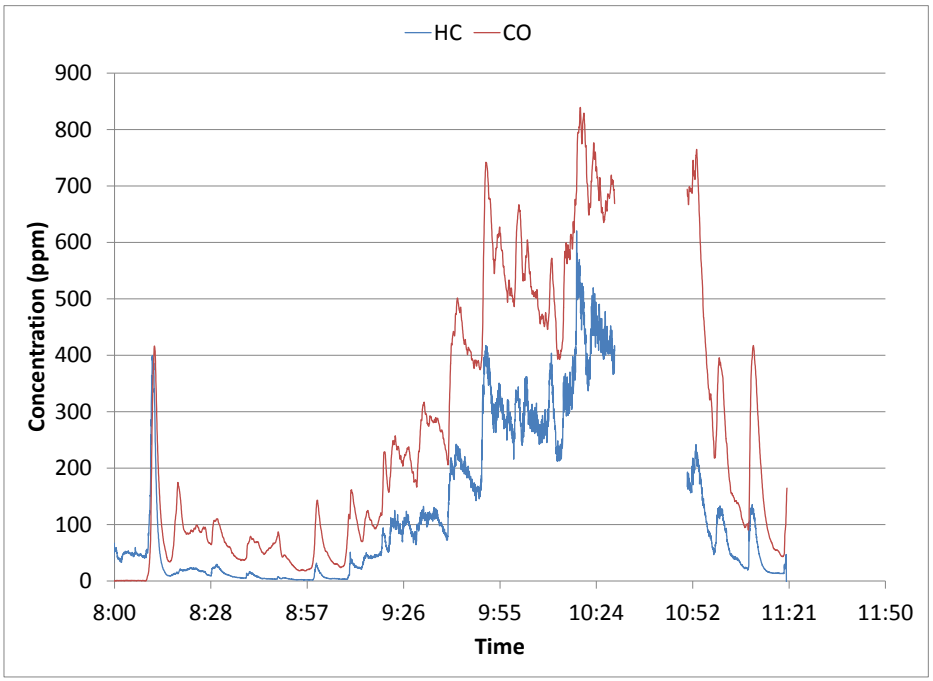


Figure 48. THC and CO from Biosampler Test 7 (3-16-11)

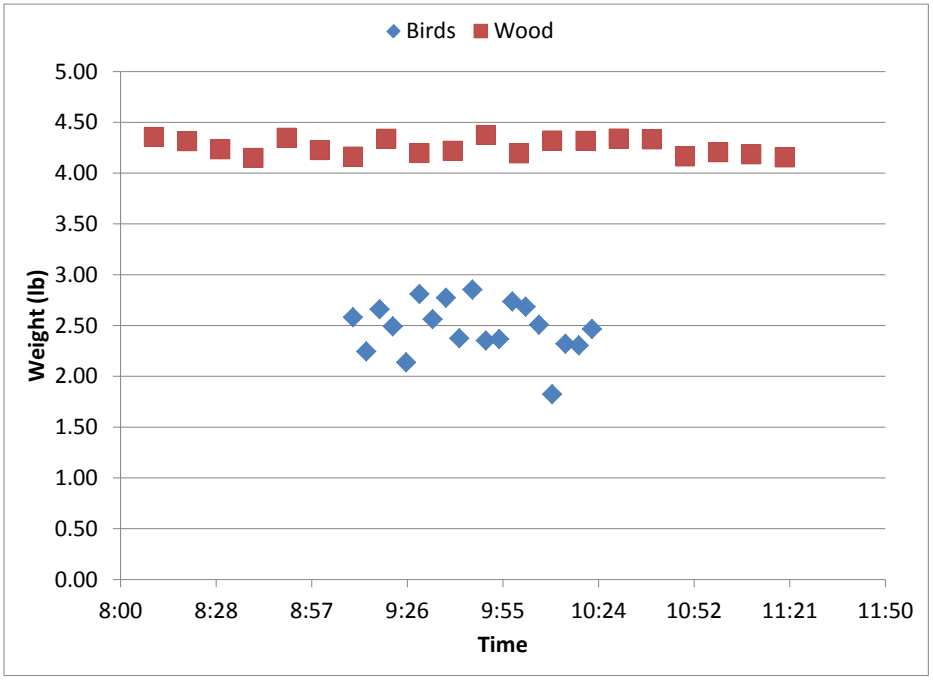


Figure 49. Fuel Feed from Biosampler Test 7 (3-16-11)

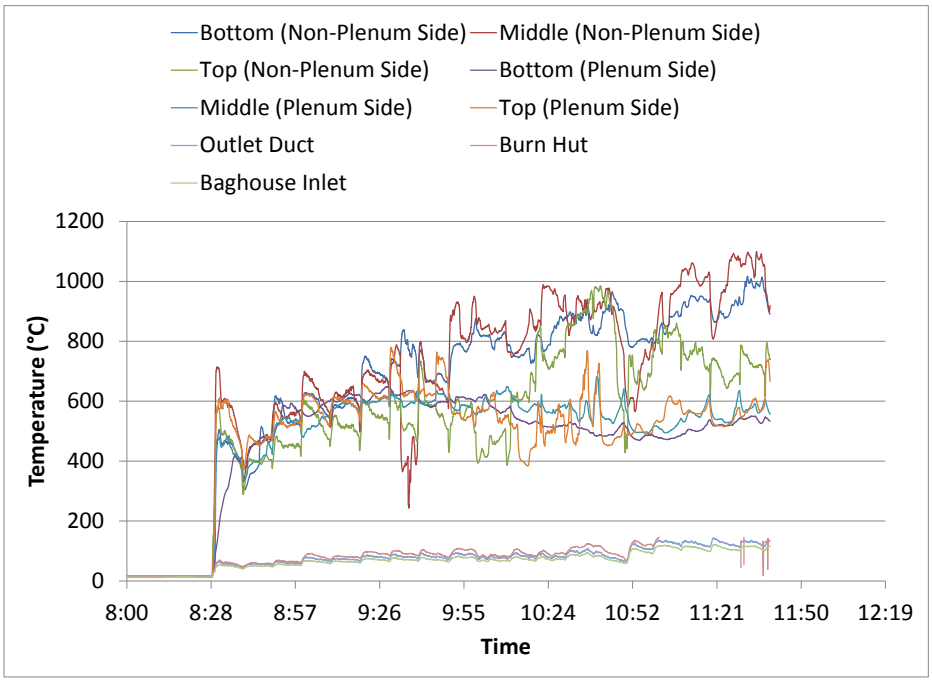


Figure 50. Temperatures from Biosampler Test 8 (3-21-11)

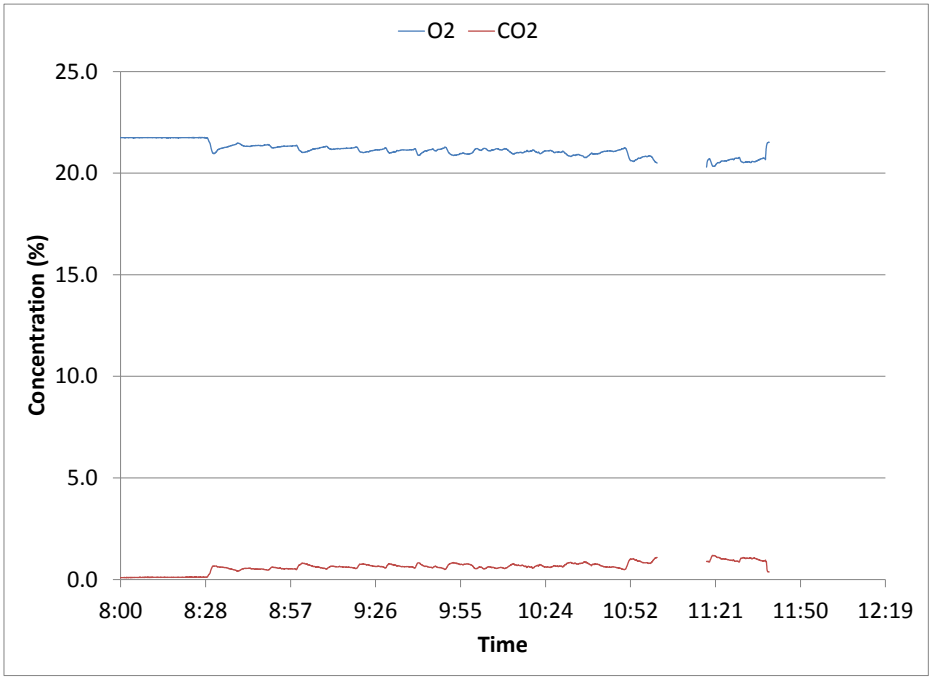


Figure 51. O_2 and CO_2 from Biosampler Test 8 (3-21-11)

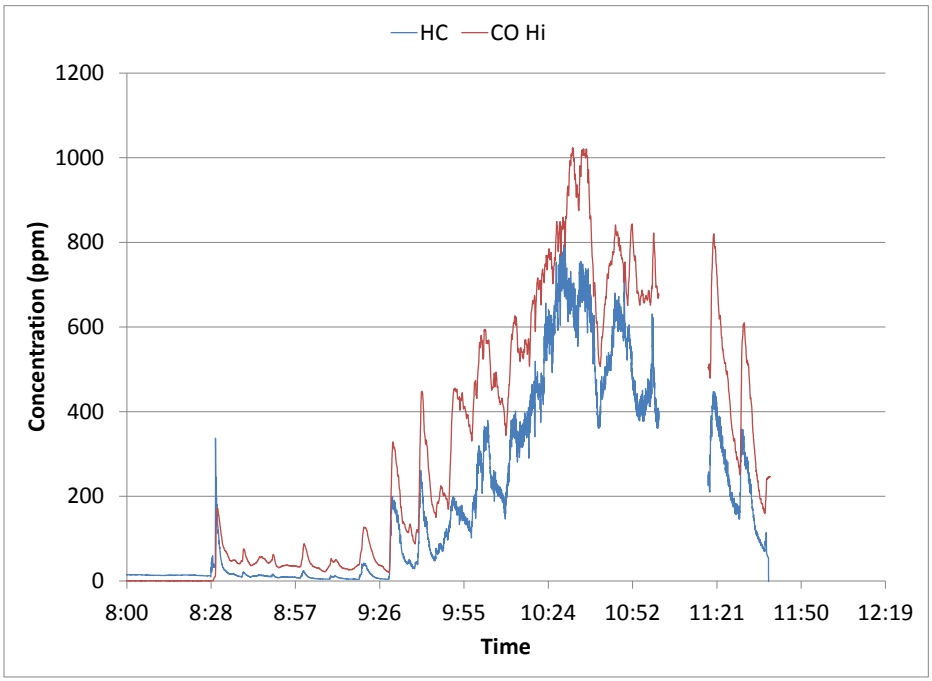


Figure 52. THC and CO from Biosampler Test 8 (3-21-11)

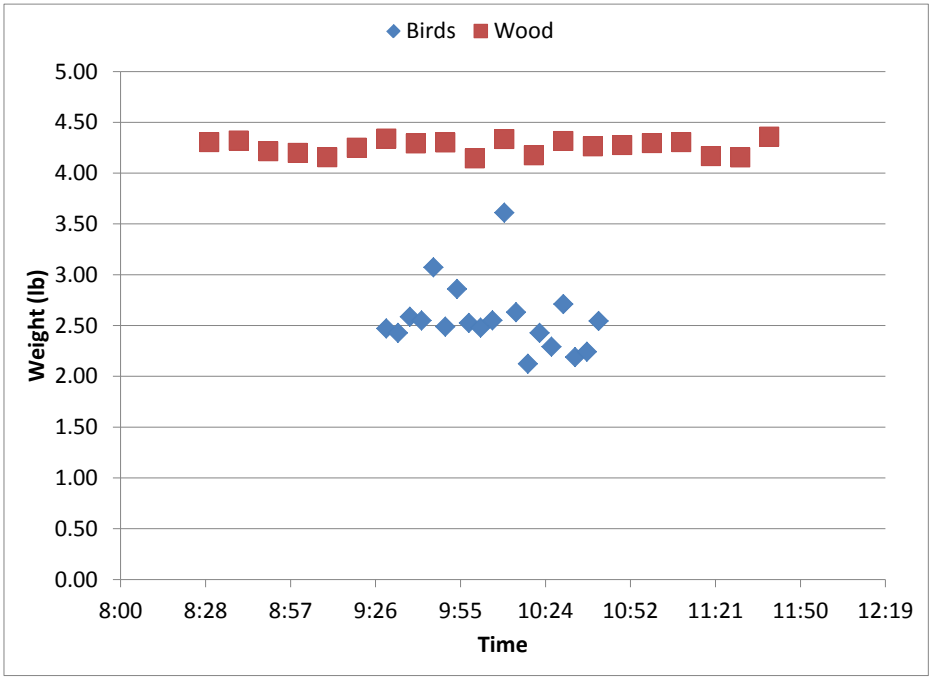


Figure 53. Fuel Feed from Biosampler Test 8 (3-21-11)

5.2.2 Average CEM and Thermocouple Data

Table 8 lists the test variables including the total mass of wood and birds fed into the ACB, as well as the times for initiation and cessation of wood and poultry feed to the ACB. Table 8 also lists the calculated average feed rates for wood and poultry over the duration of the test. Table 9 lists the average temperature and CEM measurements for the operation of the ACB on wood only. Note that for the tests where the poultry feed rate was varied, the average results for

wood only were calculated based on the timeframe prior to initiation of any poultry feed at all, so the same results were reported for each poultry feed rate case. Table 10 lists the average temperature and CEM measurements for the operation of the ACB on both wood and poultry. In general, the temperatures are relatively consistent between the conditions with and without poultry. CO and THC are significantly higher (approximately by a factor of three) for the conditions with poultry feed.

Figure 54 shows the average temperatures at different points in the ACB system for the three main test conditions (wood only, wood + 1 bird/10 min, wood + 1 bird/4 minutes). The ACB temperatures are slightly lower for the conditions with 1 bird/4 minutes. Figure 55 shows the average CO and THC for the various test conditions. It is readily apparent that increasing the feed rate of poultry while holding the feed rate of wood constant results in an increase in CO and THC emissions.

Table 8. Test Variables for Wood and Poultry Feedstocks

Date	Run Description	Total Mass of Wood Fed (lb)	Total Mass of Birds Fed (lb)	Time at First Wood Feed Event	Time at Last Wood Feed Event	Time at First Bird Feed Event	Time at Last Bird Feed Event	Wood Feeding Time (min)	Bird Feeding Time (min)	Wood Feed Rate (lb/hr)	Bird Feed Rate (lb/hr)
11/17/2010	Trial Test	131.46	36.12	8:10	13:10	9:30	12:00	300	150	25.4	13.5
1/20/2011	Baseline Organic Sampling	132.58	26.57	8:00	13:00	10:20	12:00	300	100	25.7	14.5
2/2/2011	Variable Bird Feed 1 Bird/10 min	119.69	8.92	9:10	13:40	10:20	10:50	270	30	25.6	13.4
2/2/2011	Variable Bird Feed 1 Bird/8 min	119.69	7.25	9:10	13:40	10:58	11:14	270	16	25.6	18.1
2/2/2011	Variable Bird Feed 1 Bird/6 min	119.69	8.74	9:10	13:40	11:22	11:40	270	18	25.6	21.9
2/2/2011	Variable Bird Feed 1 Bird/4 min	119.69	9.85	9:10	13:40	11:44	11:56	270	12	25.6	36.9
2/2/2011	Variable Bird Feed 1 Bird/2 min	119.69	16.94	9:10	13:40	12:00	12:12	270	12	25.6	72.6
2/16/2011	High Poultry Feed Organic Test	81.45	51.12	9:10	12:10	10:00	11:16	180	76	25.7	38.3
2/23/2011	Biosampler Test 1	97.76	26.35	9:00	12:40	10:00	11:40	220	100	25.5	14.4
2/28/2011	Biosampler Test 2	80.72	20.48	11:10	14:10	12:30	13:50	180	80	25.5	13.7
3/2/2011	Biosampler Test 3	93.48	22.12	7:30	11:00	8:30	9:50	210	80	25.5	14.7
3/8/2011	Biosampler Test 4	93.59	21.10	8:00	11:30	9:10	10:30	210	80	25.5	14.1
3/10/2011	Biosampler Test 5	85.05	47.64	8:00	11:10	9:00	10:06	190	66	25.5	40.8
3/14/2011	Biosampler Test 6	84.67	45.22	8:00	11:10	9:00	10:12	190	72	25.4	35.7
3/16/2011	Biosampler Test 7	85.14	47.05	8:10	11:20	9:10	10:22	190	72	25.5	37.1
3/21/2011	Biosampler Test 8	85.18	48.77	8:30	11:39	9:30	10:42	190	72	25.6	38.5

Table 9. Average Continuous Measurements (Wood Only)

Date	Run	Bottom (Non-Plenum Side) Temp (°C)	Middle (Non-Plenum Side) Temp (°C)	Top (Non-Plenum Side) Temp (°C)	Bottom (Plenum Side) Temp (°C)	Middle (Plenum Side) Temp (°C)	Top (Plenum Side) Temp (°C)	Outlet Duct Temp (°C)	Burn Hut Temp (°C)	Bag-house Inlet Temp (°C)	O_2 (%)	CO_2 (%)	CO (ppm)	THC (ppm)
11/17/2010	Trial Test	846	632	556	725	619	650	73	87		21	0.74	59	5
1/20/2011	Baseline Organic Sampling		630	562	790	675	697	60	69	52	21	0.20	65	16
2/2/2011	Variable Bird Feed 1 Bird/10 min	821	629	549	625	721	680	71	86	63	21	0.75	59	11
2/2/2011	Variable Bird Feed 1 Bird/8 min	821	629	549	625	721	680	71	86	63	21	0.75	59	11
2/2/2011	Variable Bird Feed 1 Bird/6 min	821	629	549	625	721	680	71	86	63	21	0.75	59	11
2/2/2011	Variable Bird Feed 1 Bird/4 min	821	629	549	625	721	680	71	86	63	21	0.75	59	11
2/2/2011	Variable Bird Feed 1 Bird/2 min	821	629	549	625	721	680	71	86	63	21	0.75	59	11
2/16/2011	High Poultry Feed Organic Sampling	781	672	561	611	666	686	68	91		21	0.80	34	12
2/23/2011	Biosampler Test 1	699	593	508	634	599	679	61	56	54	21	0.62	44	11
2/28/2011	Biosampler Test 2	629	633	543	701	613	672	89	103	79	20	0.86	88	19
3/2/2011	Biosampler Test 3	567	623	519	641	570	614	65	86	57	21	0.70	63	12
3/8/2011	Biosampler Test 4	733	591	486	728	618	606	66	81	58	21	0.61	28	7
3/10/2011	Biosampler Test 5	631	637	541	563	602	621	66	78	58	21	0.63	48	11
3/14/2011	Biosampler Test 6	617	612	531	540	575	606	60	72	52	21	0.64	64	16
3/16/2011	Biosampler Test 7	667	706	536	609	591	615	69	83	61	21	0.68	53	7
3/21/2011	Biosampler Test 8	609	618	517	592	560	583	71	80	63	21	0.62	44	10

Note: Averages for wood feeding started after two wood feed intervals and continued until the first bird feed event
Note: Averages for birds started at first bird feed event and continued until one bird feed interval after the last bird feed event

Table 10. Average Continuous Measurements (Wood + Poultry)

Date	Run	Bottom (Non-Plenum Side) Temp (°C)	Middle (Non-Plenum Side) Temp (°C)	Top (Non-Plenum Side) Temp (°C)	Bottom (Plenum Side) Temp (°C)	Middle (Plenum Side) Temp (°C)	Top (Plenum Side) Temp (°C)	Outlet Duct Temp (°C)	Burn Hut Temp (°C)	Bag-house Inlet Temp (°C)	O_2 (%)	CO_2 (%)	CO (ppm)	THC (ppm)
11/17/2010	Trial Test	811	722	648	662	636	731	105	125		20.5	0.90	176	78
1/20/2011	Baseline Organic Sampling		687	638	786	683	759	83	96	72	21.0	0.23	159	56
2/2/2011	Variable Bird Feed 1 Bird/10 min	849	647	585	693	724	735	85	101	75	20.7	0.83	101	32
2/2/2011	Variable Bird Feed 1 Bird/8 min	872	673	621	611	601	680	89	111	80	20.7	0.80	160	69
2/2/2011	Variable Bird Feed 1 Bird/6 min	826	663	609	570	671	724	91	114	84	20.7	0.77	263	103
2/2/2011	Variable Bird Feed 1 Bird/4 min	797	720	564	555	563	658	94	114	86	20.7	0.79	302	126
2/2/2011	Variable Bird Feed 1 Bird/2 min	817	657	558	584	552	613	105	127	97	20.6	0.90	516	259
2/16/2011	High Poultry Feed Organic Sampling	823	786	597	521	583	616	74	96		21.3	0.75	338	169
2/23/2011	Biosampler Test 1	807	752	568	690	661	712	82	76	72	20.9	0.74	145	44
2/28/2011	Biosampler Test 2	747	760	589	715	697	673	91	105	81	20.8	0.75	118	44
3/2/2011	Biosampler Test 3	793	731	581	670	669	686	88	102	77	20.9	0.69	131	37
3/8/2011	Biosampler Test 4	692	632	559	700	689	688	85	100	74	21.1	0.78	147	43
3/10/2011	Biosampler Test 5	536	500	602	568	662	497	75	89	66	20.8	0.63	302	176
3/14/2011	Biosampler Test 6	685	654	532	508	554	587	71	84	61	21.1	0.71	432	263
3/16/2011	Biosampler Test 7	748	807	535	540	566	527	75	85	67	20.9	0.67	412	216
3/21/2011	Biosampler Test 8	794	804	652	562	589	568	85	96	75	21.0	0.67	521	329

Note: Averages for wood feeding started after two wood feed intervals and continued until the first bird feed event
Note: Averages for birds started at first bird feed event and continued until one bird feed interval after the last bird feed event



Figure 54. Average Temperatures with the ACB under Different Test Conditions

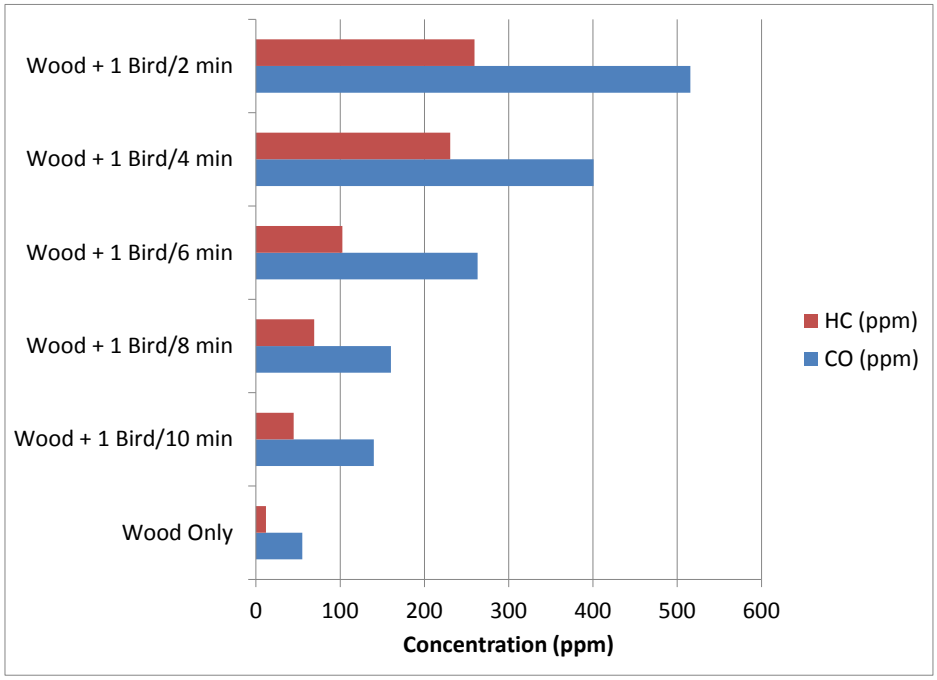


Figure 55. Average CO and THC from Various Test Conditions

5.3 EXTRACTIVE SAMPLING RESULTS

Table 11 shows the total filterable particulate results for both poultry feed conditions. Although it is difficult to make a conclusion based on statistical significance due to there only being one measurement, it appears that the PM emissions, on a concentration basis, at the higher poultry feed rate are approximately 2.5 times the PM emissions, on a concentration basis, at the lower poultry feed rate. Although it was not possible to make measurements of visible smoke emissions (i.e., opacity) inside the Burn Hut, there was a visible difference in emissions between the two feed conditions, with the higher poultry feed rate resulting in the formation of black smoke.

Table 11. Total Filterable PM Results [milligrams/dry standard cubic meters (mg/dscm)]

Condition	Total Filterable Particulate
1 Bird/10 min	19.0
1 Bird/4 min	44.6

Table 12 shows the VOC emissions from only the high poultry feed rate test (laboratory problems with the analysis of the low poultry feed rate test conditions prevented the display of those data). Note the relative abundance of acetone in the emissions relative to other identified VOC compounds. The observation of acetone was somewhat consistent with some previous findings where carboxyl compounds were found at levels generally at or above those of more conventional combustion-generated VOCs (e.g., benzene) from measurements made grilling chicken on cookstoves [22].

Table 13 shows the PAH emissions from both poultry feed conditions. Consistent with the PM results, the PAH emissions from the high poultry feed rate condition (1 bird/4 min) was approximately two to three times the PAH emissions from the low poultry feed rate conditions (1 bird/10 min). The quantitation on some of the PAH measurements is somewhat questionable because the concentrations were below the lowest point on the calibration curve for the GC/MS instrument. Even so, the confidence in the identification of the individual compounds was high.

Table 12. Volatile Organic Compound Sampling Results (µg/dscm)

Compound	1 Bird/10 min		1 Bird/4 min	
1,3-Butadiene	N/A		6.6	
2-Hexanone	N/A		ND	
Acetone	N/A		286.0	
Acetonitrile	N/A		41.8	
Acrolein	N/A		1.4	J
Benzene	N/A		2.5	
Carbon disulfide	N/A		ND	
Chloroethane	N/A		ND	
Chloroform	N/A		ND	
Chloromethane	N/A		ND	
Ethanol	N/A		ND	
Ethyl Acetate	N/A		ND	
Ethylbenzene	N/A		ND	
Heptane	N/A		ND	
Hexane	N/A		ND	
Isopropyl Alcohol	N/A		ND	
m-/*p*-Xylene	N/A		ND	
Methylene Chloride	N/A		2.3	
o-Xylene	N/A		ND	
Styrene	N/A		ND	
Tetrahydrofuran	N/A		7.8	
Toluene	N/A		1.6	J

N/A – Not available – Laboratory did not provide QC and calibration data, so unable to determine reliability of analytical results
ND – not detected
J – below quantitation level

Table 13. PAH Sampling Results [parts per billion (ppb)]

Compound	1 Bird/10 min		1 Bird/4 min	
Naphthalene	268		786	
2-Methylnaphthalene	21.8		98.0	
1-Methylnaphthalene	16.9	J	78.7	
Acenaphthylene	42.1		198.0	
Acenaphthene	ND		9.7	J
Fluorene	14.7	J	63.3	
Phenanthrene	52.3		151.1	
Anthracene	5.16	J	33.32	J
Fluoranthene	27.4		71.8	
Pyrene	22.7		58.0	
Benzo(a)anthracene	4.34	J	14.21	J
Chrysene	4.31	J	13.45	J
Benzo(b)fluoranthene	5.31	J	14.76	J
Benzo(k)fluoranthene	2.16	J	5.38	J
Benzo(e)pyrene	2.48	J	6.11	J
Benzo(a)pyrene	3.39	J	10.42	J
Perylene	ND		ND	
Indeno(1,2,3-cd)pyrene	2.44	J	5.52	J
Dibenz(a,h)anthracene	ND		ND	
Benzo(g,h,i)perylene	3.21	J	6.03	J

ND – not detected
J – below quantitation level

5.4 SKC BIOSAMPLER RESULTS

Table 14 shows the results from the SKC Biosamplers for all runs. No viable spores were identified in the Biosampler (both oil and rinsate) for all runs. This observation suggests that, within detection limits, no viable spores that were inoculated into the birds survived combustion and/or became airborne and were released from the Burn Hut into the transition duct and were captured by sampler. In addition, within detection limits and reflecting observed recoveries for positive controls, release of pathogens into the air emissions in a form suitable for airborne transport from an ACB burning poultry carcasses is minimal even at poultry feed rates that produced a significant deterioration in the environmental effectiveness of ACB operation.

Table 14. Bioaerosol Sampling Results

Test	Run Date	CFU in Oil	CFU in Rinse	Volume Plated (mL)	Dilution Factor	Oil Extraction Volume (mL)	Rinse Extraction Volume (mL)	CFU Captured	m^3 Sampled	m^3/ min in Duct	CFU Fed	CFU/m^3	CFU Recovered	CFU Emitted/CFU Fed
Biosampler Test 1	2/23/2011	0	0	0.1	1	13.0	100	0	0.92	1,209	100000	0	0E+00	0
Biosampler Test 2	2/28/2011	0	0	0.1	1	11.5	100	0	0.77	1,231	80000	0	0E+00	0
Biosampler Test 3	3/2/2011	0	0	0.1	1	12.0	100	0	0.81	1,207	80000	0	0E+00	0
Biosampler Test 4	3/8/2011	0	0	0.1	1	11.5	199	0	0.83	1,217	80000	0	0E+00	0
Biosampler Test 5	3/10/2011	0	0	0.1	1	12.5	100	0	0.91	1,269	165000	0	0E+00	0
Biosampler Test 6	3/14/2011	0	0	0.1	1	12.5	100	0	0.83	1,278	180000	0	0E+00	0
Biosampler Test 7	3/16/2011	0	0	0.1	1	12.5	100	0	0.84	1,224	180000	0	0E+00	0
Biosampler Test 8	3/21/2011	0	0	0.1	1	12.5	100	0	0.90	1,260	180000	0	0E+00	0

5.5 RESIDUAL SPORES IN ASH AND BONES

Table 15 lists the results for the viable spore analysis of the ash that left the ACB but was of a larger particle nature. This material did not get entrained into the exhaust duct but fell back to the floor of the Burn Hut. For most of the runs, there were no CFU identified in the cultures. A number of tests (4 out of 16) did show low but detectable levels of CFU in the floor sweepings (below quantitation level), suggesting that it is possible that, under some conditions, spores can leave the ACB bound on (or possibly carried along with) the larger particles that would settle to the ground in close proximity to the ACB. The reliability of viable spore measurement results below the CFU cutoff criteria established in the methods [20] is not well-defined.

Table 15. Residual Spores in Fly Ash (Floor Sweepings)

Test	Run Date	CFU in Flyash	Volume Plated (mL)	Dilution Factor	Extraction Volume (mL)	Mass of Ash Collected (g)	CFU/g Flyash
Biosampler Test 1a	2/23/2011	0	0.1	1	40	N/A	0
Biosampler Test 1b	2/23/2011	0	0.1	1	40	N/A	0
Biosampler Test 2a	2/28/2011	0	0.1	1	40	1.04	0
Biosampler Test 2b	2/28/2011	0	0.1	1	40	1.57	0
Biosampler Test 3a	3/2/2011	0.7J	0.1	0.1	40	1.25	2133J
Biosampler Test 3b	3/2/2011	0	0.1	1	40	1.54	0
Biosampler Test 4a	3/8/2011	0.3J	0.1	1	40	1.70	78J
Biosampler Test 4b	3/8/2011	0.3J	0.1	1	40	1.39	96J
Biosampler Test 5a	3/10/2011	0	0.1	1	40	1.16	0
Biosampler Test 5b	3/10/2011	0	0.1	1	40	1.41	0
Biosampler Test 6a	3/14/2011	0	0.1	1	40	1.35	0
Biosampler Test 6b	3/14/2011	0	0.1	1	40	1.28	0
Biosampler Test 7a	3/16/2011	0	0.1	1	40	1.74	0
Biosampler Test 7b	3/16/2011	1.0J	0.1	0.1	40	1.67	2395J
Biosampler Test 8a	3/21/2011	0	0.1	1	40	2.03	0
Biosampler Test 8b	3/21/2011	0	0.1	1	40	1.75	0

J – below quantitation level

Table 16 shows the analytical results for residual viable spores in the poultry bones remaining in the ACB after the burn. A small amount of viable *Gs* spores (below quantitation level) was found on one out of eight samples.

Table 16. Residual Spores in Poultry Bones

Test	Run Date	CFU in Bone	Volume Plated (mL)	Dilution Factor	Extraction Volume (mL)	Mass of Bone Collected (g)	CFU/g Bone
Biosampler Test 1	2/23/2011	ND	0.1	1	25	3.13	ND
Biosampler Test 2	2/28/2011	ND	0.1	1	20	3.17	ND
Biosampler Test 3	3/2/2011	ND	0.1	1	20	4.11	ND
Biosampler Test 4	3/8/2011	ND	0.1	1	20	2.05	ND
Biosampler Test 5	3/10/2011	ND	0.1	1	20	2.80	ND
Biosampler Test 6	3/14/2011	ND	0.1	1	20	4.10	ND
Biosampler Test 7	3/16/2011	14J	0.1	0.1	20	3.45	8116J
Biosampler Test 8	3/21/2011	ND	0.1	1	20	2.35	ND

J – below quantitation level
ND – not detected

Table 17 shows the viable residual *Gs* spores in the ash residue remaining in the ACB following the burn. No viable spores were found in any of those samples, suggesting that, within measurement limits, using operational procedures similar to procedures used in these tests (i.e., 1) startup with fuel and no poultry, 2) operation with poultry and fuel, 3) cessation of poultry while maintaining operation with fuel only, 4) cool-down), complete inactivation of spores occurs in whatever materials remain inside the ACB chamber.

Table 17. Residual Spores in ACB Bottom Ash

Test	Run Date	CFU in Bottom Ash	Volume Plated (mL)	Dilution Factor	Extraction Volume (mL)	Mass of Bottom Ash Collected (g)	CFU/g Bottom Ash
Biosampler Test 1	2/23/2011	0	0.1	1	20	1.23	0
Biosampler Test 2	2/28/2011	0	0.1	1	20	1.00	0
Biosampler Test 3	3/2/2011	0	0.1	1	20	1.09	0
Biosampler Test 4	3/8/2011	0	0.1	1	20	1.05	0
Biosampler Test 5	3/10/2011	0	0.1	1	20	1.05	0
Biosampler Test 6	3/14/2011	0	0.1	1	20	0.96	0
Biosampler Test 7	3/16/2011	0	0.1	1	20	0.88	0
Biosampler Test 8	3/21/2011	0	0.1	1	20	0.80	0

5.6 WIPE SAMPLE RESULTS

Table 18 shows the results from the wipe samples that were taken following each of the combustion tests where the poultry carcasses were inoculated with *G. stearothermophilus*. There were no viable *Gs* spores found on any of the samples. This observation is consistent with the results from the SKC Biosampler samples, suggesting that, within measurement limitations, no measurable quantities of spores were entrained into the exhaust gases leaving the Burn Hut.

Table 18. Results from Wipe Samples after Combustion Tests

Test	Run Date	Wipe Location	CFU	Volume Plated (mL)	Dilution Factor	Extraction Volume (mL)	Surface Area Sampled (ft^2)	CFU/ft^2
Extraction Test #1	1/20/2011	W1	0	0.1	1	20	1	0
		W2	0	0.1	1	20	1	0
Extraction Test #2	2/16/2011	W1	0	0.1	1	20	1	0
		W3	0	0.1	1	20	1	0
Biosampler Test 1	2/23/2011	W1	0	0.1	1	20	1	0
		W3	0	0.1	1	20	1	0
Biosampler Test 2	2/28/2011	W1	0	0.1	1	20	1	0
		W3	0	0.1	1	20	1	0
Biosampler Test 3	3/2/2011	W1	0	0.1	1	13	1	0
		W3	0	0.1	1	13	1	0
Biosampler Test 4	3/8/2011	W1	0	0.1	1	14	1	0
		W3	0	0.1	1	13.5	1	0
Biosampler Test 5	3/10/2011	W1	0	0.1	1	10	1	0
		W3	0	0.1	1	11	1	0
Biosampler Test 6	3/14/2011	W1	0	0.1	1	9	1	0
		W3	0	0.1	1	10	1	0
Biosampler Test 7	3/16/2011	W1	0	0.1	1	9.5	1	0
		W3	0	0.1	1	10.5	1	0
Biosampler Test 8	3/21/2011	W1	0	0.1	1	10	1	0
		W3	0	0.1	1	12	1	0

Table 19 shows the results from the wipe samples taken after the Burn Hut interior walls and floor were decontaminated with Spor-Klenz®. However, there were two sets of wipe samples (before Biosampler Test 5 and before Biosampler Test 6) that showed low numbers (below the quantitation limit) of spores. Given that the samples of the walls taken after the runs but before decontamination all showed no growth of viable spores, it is possible that there may have been some cross-contamination of the Burn Hut, or maybe, because there were small numbers of viable spores found in some of the floor sweepings, that they may have been disturbed during the collection process and deposited on the walls and not been effectively treated with the Spor-Klenz®.

Table 19. Results from Wipe Samples after Burn Hut Decontamination

Test	Run Date	Wipe Location	CFU	Volume Plated (mL)	Dilution Factor	Extraction Volume (mL)	Surface Area Sampled (ft^2)	CFU/ft^2
Before Biosampler Test 1	2/22/2011	W1	0	0.1	1	10	1	0
		W2	0	0.1	1	10	1	0
		W3	0	0.1	1	10	1	0
Before Biosampler Test 2	2/24/2011	W2	0	0.1	1	20	1	0
		W4	0	0.1	1	20	1	0
Before Biosampler Test 3	3/1/2011	W2	0	0.1	1	13	1	0
		W4	0	0.1	1	13	1	0
Before Biosampler Test 4	3/4/2011	W2	0	0.1	1	12	1	0
		W4	0	0.1	1	13	1	0
Before Biosampler Test 5	3/10/2011	W2	0	0.1	1	13	1	0
		W4	26 J	0.1	1	1	1	260 J
Before Biosampler Test 6	3/14/2011	W2	25 J	0.1	1	10	1	2500 J
		W4	68 J	0.1	1	9	1	6120 J
Before Biosampler Test 7	3/16/2011	W2	0	0.1	1	1	1	0
		W4	0	0.1	1	1	1	0
Before Biosampler Test 8	3/18/2011	W2	0	0.1	1	1	1	0
		W4	0	0.1	1	1	1	0

J - Below Quantitation Limit

5.7 POSITIVE CONTROL TESTS

The final set of data involved performing a series of tests to verify that had the spores escaped the ACB, they would be entrained into the Burn Hut, and either exit the Burn Hut in the exhaust gas duct and subsequently be captured in the SKC Biosampler or else be deposited on the walls of the Burn Hut. The results from these experiments are shown in Tables 20 and 21. The following was used for the inoculum: 1.74 mL of sterile 200 proof ethanol, 4.26 mL of sterile deionized (DI) water, 21.6 µL of 2.8E8 CFU/mL *Geobacillus stearothermophilus* solution, and 14 mL of sterile water (to bring the spore solution to ~20 mL. A collision nebulizer with precious fluids bottle (Model CN25/CN40, BGI Incorporated, Waltham, Massachusetts, USA) was used for all positive control tests. The nebulizer is a three-jet model that requires a source of clean compressed air to nebulize the solution. The stem of the nebulizer was placed below the liquid level and the solution was nebulized through small holes on the section of the stem above the liquid level. Clean compressed air was supplied to the nebulizer at 50 psi for the duration of all positive control tests. The end of the 11/21/11 test revealed that all the fluid had been used, and no fluid remained at the end of the test. However, small amounts of residual fluid remained at the end of other tests. For calculation purposes however, it was assumed that each whole suspension was sprayed in using the nebulizer, a total of approximately 2E6 CFU of *Gs* was sprayed in for each positive control experiment. The first positive control experiment involved spraying spore inoculum directly into the Burn Hut exit duct, with no combustion occurring in the

ACB. Viable spores were found on some of the wipe samples and in the SKC Biosamplers. Even a small number of spores captured in a sampler still can translate into large numbers emitted from the duct due to high flow rate and small sample volume. The second positive control experiment involved spraying spore inoculum directly into the Burn Hut, with no combustion occurring in the ACB. Small numbers of viable spores (below quantitation limit) were found on most of the wipe samples and in the SKC Biosamplers. The third positive control experiment involved spraying spore inoculum directly into the Burn Hut exit duct, with combustion occurring in the ACB (wood and non-inoculated birds, fed at 1 bird/10 minutes). No viable spores were found on any of the wipe samples. However, viable spores were found in the SKC Biosamplers. Recoveries ranged from 43 to 149%, indicating that the SKC Biosamplers successfully captured the spores from the duct.

Table 20. Results from Positive Controls – Wipe Samples

Test	Run Date	Sample	CFU	Volume Plated (mL)	Dilution Factor	Extraction Volume (mL)	Surface Area Sampled (ft^2)	CFU/ft^2
Positive Control Test 1	11/21/2011	W1	0.00	0.1	1	20	1	0
		W2	0.00	0.1	1	20	1	0
		W3	0.00	0.1	1	20	1	0
		W4	0.33 J	0.1	1	20	1	67 J
Positive Control Test 2	11/22/2011	W1	0.00	0.1	1	20	1	0
		W1	0.67 J	0.1	1	20	1	133 J
		W3	0.33 J	0.1	1	20	1	67 J
		W4	0.33 J	0.1	1	20	1	67 J
Positive Control Test 3	11/29/2011	W1	0.00	0.1	1	20	1	0
		W2	0.00	0.1	1	20	1	0
		W3	0.00	0.1	1	20	1	0
		W4	0.00	0.1	1	20	1	0

J - Below Quantitation Limit

Table 21. Results from Positive Controls – SKC Biosamplers

Test	Run Date	CFU in Oil	CFU in Rinse	Volume Plated (mL)	Dilution Factor	Oil Extraction Volume (mL)	Rinse Extraction Volume (mL)	CFU Captured	m^3 Sampled	m^3 /min in Duct	CFU Fed	CFU/m^3	CFU Recovered	Recovery %
Positive Control Test 1	11/21/2011	5.7 J	0	0.1	1	20.0	40	1133	0.81	36	2E+06	1391	3E+06	149%
Positive Control Test 2	11/22/2011	3.3 J	0	0.1	1	20.0	20	667	0.78	38	2E+06	854	2E+06	96%
Positive Control Test 3	11/29/2011	1.7 J	0	0.1	1	20.0	40	333	0.74	32	2E+06	450	9E+05	43%

J - Below Quantitation Limit

5.8 ESTIMATED EMISSIONS IN EMISSION FACTOR UNITS

A useful way to compare emissions from combustion devices over a wide range of sizes and designs is to calculate the emissions in terms of emission factor (EF) units, which typically normalize emissions per unit mass of fuel fed to the process. Equation (1) shows the formula to calculate the estimated emissions in EF units.

$$EF = \frac{C_i Q_{total}}{m_{feed}} \quad (1)$$

where EF is the emission factor in units of mass emitted per mass of fuel burned; C_i is the concentration of pollutant i, Q_{total} is the total volumetric flow rate of flue gases, and m_{feed} is the mass feed rate of the fuel being burned.

Table 22 shows the estimated emissions of various pollutants in EF units. Note that the column with the heading Σ PAH represents the sum of all identified PAH species. The PM EF for trench burners reported in the EPA's AP-42 Emission Factor Database [23] is 6,500 mg/kg fuel burned, which is similar in magnitude to the EF from the pilot-scale ACB burning wood with poultry. The CO EF for ACBs burning woody debris was 5,000 mg/kg fuel burned [3], which is approximately half the CO emissions from the pilot-scale ACB burning wood only. There are no published EFs for THCs and PAHs.

Table 22. Estimated Emissions of Various Pollutants in Emission Factor Units

Condition	CO (ppm)	THC (ppm)	PM (mg/m^3)	Σ PAH ($\mu g/m^3$)	CO (mg/kg total fuel)	THC (mg/kg total fuel)	PM (mg/kg total fuel)	Σ PAH (µg/kg total fuel)
Wood Only	55	12	NA	NA	11,500	3,900	NA	NA
Wood + 1 Bird/10 min	140	45	19	499	18,300	9,200	2,200	57,200
Wood + 1 Bird/4 min	401	231	45	1623	33,900	30,700	3,300	119,900

NA – not applicable

6.0 QUALITY CONTROL EVALUATION REPORT

6.1 CEM AND THERMOCOUPLE DATA

The thermocouples used in this testing were new before being installed in the ACB. They arrived from the factory with certified calibrations. Two thermocouples in the ACB failed during the testing, but these were replaced with new units. All the temperature measurements were in agreement with previous testing and therefore are deemed to have met the criteria for critical measurements of ±5 °C. The thermocouples used for the sampling trains are also calibrated by the U.S. EPA Metrology Laboratory and have certified calibration sheets associated with each of them.

The 100% completeness criterion was met for the Burn Hut exhaust velocity traverses, volumetric flow rates, and exhaust moisture content measurements. In addition, the two meter boxes used for the volumetric flow rate were calibrated prior to sampling and following sampling with acceptable results.

The CEMs used in this testing were CO_2/O_2, low and high CO, and THC. Each day of testing did not proceed until these instruments were successfully calibrated with protocol calibration gases. In addition, a bias check was run at the end of each test to check for drift and to verify instrument operation throughout the test.

6.2 PM DATA

An accredited laboratory (Resolution Analytics, Inc., of Sanford, NC) was used for the analyses of filterable particulate (PM) from the two extraction tests conducted on 1-20-2011 and 2-16-2011. EPA Method 5 was used and a complete analytical report was provided for each event.

6.3 VOC DATA

After the first set of sample results were returned from the analytical laboratory, it was discovered that their report contained nothing but the results. Upon being contacted to provide their QC and calibration data, the laboratory stated they did not have any backup to provide. The decision was made to cease using this laboratory for any future testing done on this project. Without any QC or calibration data, it is impossible to judge the quality of the VOC results from the baseline test. The data from the 1-20-11 tests are therefore not reported.

An accredited laboratory was used for the 2-16-11 tests with the high poultry feed rate. This laboratory provided a complete and consistent Level IV report. QC data, calibrations and chromatograms were provided, and there seems to be no cause to question the validity of their results. The 5,000X dilution (and subsequent 10,000X dilution to bring acetone within the calibration range of the instrument) was required to meet the client-requested 1 ppmv reporting limit. Because the results must be multiplied by these dilution factors, small errors do become magnified.

6.4 PAH DATA

An accredited laboratory (Enthalpy Analytical, Inc. of Durham, NC) was used for the PAH analysis of the two extraction tests conducted on 1-20-2011 and 2-16-2011. EPA Method 8270D [16] was used and a complete analytical report was provided for each event.

6.5 SKC BIOSAMPLER DATA

All SKC Biosamplers were processed through the BL according to established Miscellaneous Operating Procedures (MOPs). All QAPP acceptance criteria were met pertaining to data collection and how spores were enumerated for the SKC Biosampler exhaust samples, as well as for those processed from the floor sweeping HEPA vacuum samples, the sterile wipes used

on the walls of the Burn Hut, and from the bulk ash samples.

6.6 BLANKS, POSITIVE CONTROLS, AND NEGATIVE CONTROLS

The positive and negative controls from the bird homogenates could not be analyzed. The mass of debris simply overwhelmed the plates and made the identification and enumeration of spores impossible. All other blanks such as the wipe blanks and field sampling blanks were collected as planned. Recoveries from the positive controls performed during November 2011 that involved injection of the inoculum into the Burn Hut and Burn Hut duct were within an acceptable range.

6.7 SUMMARY OF QC OBSERVATIONS

All data were collected with the deviations noted above, except for the RTP Laboratories VOC data which were not reported as useable due to lack of QC and are considered unuseable for the purposes of this study.

7.0 CONCLUSIONS

Tests were run on a pilot-scale ACB burning a combination of wood and poultry carcasses. The tests were run to evaluate potential emissions of pathogens (using spores of a nonpathogenic bacterium as a surrogate pathogen) as a function of degrading system combustion efficiency due to overcharging of poultry carcasses. The objective of the tests was to evaluate whether pathogens might be released from an ACB system as air emissions or in ash if the performance of the ACB began to degrade due to operational issues, or whether effective pathogen destruction still occurred in spite of potentially increased air emissions from the ACB due to operational issues. If environmental performance degrades prior to a reduction in complete pathogen destruction, then it is likely that operational adjustments and corrective actions could be made based on easily observable increases in visible emissions without an increased risk of pathogen release, provided corrective action is taken quickly. Although the nature of the test facility prevented the quantitative measurement of visible emissions using opacity measurement methods, there was significantly more black smoke formed during the high poultry feed rate conditions.

7.1 COMPARISON OF PILOT-SCALE ACB EMISSIONS TO FULL-SCALE ACB EMISSIONS

Several observations were noted:

- The estimated emissions of PM in emission factor units when poultry combustion was occurring compared favorably to published PM emission factors for ACBs burning vegetative debris;
- The estimated emissions of CO in emission factor units when poultry combustion was occurring were approximately a factor of two higher than published CO emission factors for ACBs burning vegetative debris; and
- These two observations suggest that the overall operation of the pilot-scale ACB effectively mimicked a much larger full-scale ACB.

7.2 EFFECT OF BURNING POULTRY ON EMISSIONS

- The addition of poultry at the baseline feed rate (1 bird/10 min) to the combustion of wood in the pilot-scale ACB increased the emissions of CO and THC by a factor of approximately 2.5; and
- The increase in emissions in going from 1 bird every 10 minutes to 1 bird every 4 minutes increased emissions by approximately another factor of 2.5.

7.3 EMISSION OF VIABLE SPORES FROM COMBUSTION OF CONTAMINATED POULTRY

- Viable spores were not detected in the air emissions in any of the SKC Biosampler runs. Positive control experiments showed that if not destroyed in the ACB, spores could be detected in the ACB exhaust duct using the SKC Biosamplers, albeit at a low concentration;
- Small amounts of viable spores were measured in the residual poultry bones in one of the eight runs;
- Small amounts of viable spores were measured in the floor sweepings of 50% of the runs at the low poultry feed rate condition and in the floor sweepings of 25% of the runs at the high poultry feed rate condition;

- Viable spores were not detected in the residual ash left behind in the ACB for any of the runs; and
- Viable spores were not detected in any of the post-combustion wipe samples of the Burn Hut walls.

7.4 SUMMARY

Overall these observations suggest that:

- There does not appear to be an observable difference between the residual viable spore results at the two test conditions. All test conditions resulted in no measureable viable spores in the exhaust gases, residual bottom ash, or on the post-combustion wall wipe samples. The floor sweeping samples showed positive spore counts on occasional samples, but there was not a difference that was statistically quantifiable; and
- Within the limitations of the experimental apparatus and associated detection limits, it does not appear that measurable quantities of viable spores were released from combustion of the inoculated poultry even at poultry feed rates that resulted in pollutant emissions at least a factor of five higher than the baseline ACB emissions while burning wood only.

7.5 RECOMMENDATIONS FOR FUTURE WORK

Based on some of the limitations of the experiments and analytical methods, if future follow-on work were to be done the following recommendations are made:

- Use an inoculum with at least a factor of ten higher concentration of spores; and
- Operate the SKC Biosamplers for at least two hours;

8.0 REFERENCES

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APPENDIX A: ISOKINETIC SAMPLING WORKSHEETS

Blue = Input Items
Red = Calculated/Protected Items

Facility Name:	US EPA	Stack Diameter (Rd):	8	Rd Area:=>	0.35		
Sampling Location:	Air Curtain Burner Outlet Duct	Stack Dimension (Rec):		Rec Area:=>	0.00		
City, State:	RTP, NC	Width	0				
Operator's Initials:		Depth	0				
Run Number:	1R-ACB-PM-01			Area Used	0.349066		
Test Date:	1/20/2011						
Run Time:	1042-1202						
		md=	28.84				
K Factor Setup		Ps=	30.80				
Stack Temp.	150 <--input	Mfd=	0.980				
Average Delta P	1.3 <--input	Ms=	28.62				
Meter Temp.	64 <--input						
% Moisture	2 <--input						
Sample Rate	0.75 <--input						
Barometric Pres.	31.01 <--input						
Delta H@	1.72 <--input						
Static Pressure	-2.8 <--input						
Pitot Coefficient	0.84 <--input						
O2 %	20.9 <--input						
CO2 %	0 <--input						
Desired Nozzle =	0.206 <--CALCULATED						
Actual Nozzle =	0.208 <--input						
K Factor =	1.58 <--CALCULATED						
Minutes/Point =	5 <--input						
Meter Box Gamma =	0.894 <--input						

REMEMBER TO INPUT YOUR DELTA P AND STACK TEMPERATURE BELOW

Sample Point	Elapsed Time	Pitot Reading	Dry Gas Meter Reading	Delta H	Flue Gas Temp.	Meter Temp. Outlet	% Iso	Volume Metered	Volume Metered Standard	Velocity (vs)	Square Root Delta P	K-factor
1	0	1.3	478.127	2.06	166	71	97.4	4.373	4.047	69.0	1.140	1.58
	5	1.3	483	2.06	171	70	130.7	5.830	5.406	69.3	1.140	1.55
	10	1.3	488.33	2.01	181	71	107.5	4.770	4.414	69.8	1.140	1.53
	15	1.3	493.1	1.98	150	71	101.1	4.600	4.256	68.1	1.140	1.60
	20	1.3	497.7	2.08	169	74	106.6	4.800	4.418	69.2	1.140	1.56
	25	1.3	502.5	2.03	152	75	98.4	4.500	4.133	68.2	1.140	1.61
	30	1.3	507	2.09	158	75	118.7	5.400	4.961	68.6	1.140	1.59
	35	1.3	512.4	2.07	146	75	92.0	4.230	3.886	67.9	1.140	1.63
	40	1.3	516.63	2.11	180	75	96.6	4.320	3.969	69.8	1.140	1.54
	45	1.3	520.95	2.00	174	74	96.5	4.330	3.984	69.4	1.140	1.55
	50	1.3	525.28	2.02	181	73	96.3	4.290	3.955	69.8	1.140	1.53
	55	1.3	529.57	1.99	178	73	99.2	4.430	4.084	69.7	1.140	1.54
Stop	60		534									
	Averages-->	1.30		2.04	167.17	73	103.43	4.656		69.06	1.14	

TOTAL VOLUME = 55.873

US EPA
Air Curtain Burner Outlet Duct
RTP, NC
Particulate and Metals Test Results

	RUN NUMBER	1R-ACB-PM-01
	RUN DATE	1/20/2011
	RUN TIME	1042-1202
	MEASURED DATA	
(Y)	Meter Box Y	0.894
(DeltaH)	Avg Delta H, inches H2O	2.04
(Pbar)	Barometric Pressure, inches Hg	31.01
(Vm)	Meter Volume, ft³	55.873
(Tm)	Avg Meter Temp, deg F	73
(Pg)	Static Pressure, inches H2O	-2.80
(Ts)	Avg Stack Temp, deg F	167
(Vlc)	Water Collected, mL	0.00
(%CO2)	Carbon Dioxide, %	0.0
(%O2)	Oxygen, %	20.9
(%N2)	Nitrogen, %	79.1
(Cp)	Pitot Tube Coefficient	0.84
(DeltaP)	Avg Sqrt Delta P, (inches H2O)½	1.140
(Theta)	Sample Time, min	60.0
(Dn)	Nozzle Diameter, inches	0.208
	CALCULATED DATA	
(An)	Nozzle Area, square feet	0.000235969
(Vmstd)	Standard Meter Volume, ft³	51.504
(Ps)	Stack Pressure, inches Hg	30.80
(%H2O)	Moisture, %	1.7
(%H2Osat)	Moisture (at saturation), %	37.0
(Vwstd)	Standard Water Vapor Volume, ft³	0.000
(Mfd)	Dry Mole Fraction	0.983
(Md)	Molecular Weight-dry, lb/lb-mole	28.84
(Ms)	Molecular Weight-wet, lb/lb-mole	28.65
(Vs)	Velocity, ft/s	69.0
(A)	Stack Area, ft²	0.35
(Qa)	Volumetric flow, acfm	1,446
(Qs)	Volumetric flow, dscfm	1,231
(I)	Isokinetic Rate, %	103.2

Distance from far wall to outside of port	75.75
Nipple length and/or wall thickness	7.25
Depth of stack or duct	68.5

% of depth	distance from inside wall	distance including nipple*
2.1	1.44	8.69
6.7	4.59	11.84
11.8	8.08	15.33
17.7	12.12	19.37
25	17.13	24.38
35.6	24.39	31.64
64.4	44.11	51.36
75	51.38	58.63
82.3	56.38	63.63
88.2	60.42	67.67
93.3	63.91	71.16
97.9	67.06	74.31

* mark these points on probe

Blue = Input Items
Red = Calculated/Protected Items

Facility Name:	US EPA	Stack Diameter (Rd):	8	Rd Area:=>	0.35		
Sampling Location:	Air Curtain Burner Outlet Duct	Stack Dimension (Rec):		Rec Area:=>	0.00		
City, State:	RTP, NC	Width	0				
Operator's Initials:		Depth	0				
Run Number:	1R-ACB-PM-02			Area Used	0.349066		
Test Date:	2/16/2011						
Run Time:	1016-1118						
		md=	28.84				
K Factor Setup		Ps=	29.85				
Stack Temp.	150 <--input	Mfd=	0.980				
Average Delta P	1.4 <--input	Ms=	28.62				
Meter Temp.	66 <--input						
% Moisture	2 <--input						
Sample Rate	0.75 <--input						
Barometric Pres.	30.06 <--input						
Delta H@	1.72 <--input						
Static Pressure	-2.8 <--input						
Pitot Coefficient	0.84 <--input						
O2 %	20.9 <--input						
CO2 %	0 <--input						
Desired Nozzle =	0.201 <--CALCULATED						
Actual Nozzle =	0.208 <--input						
K Factor =	1.59 <--CALCULATED						
Minutes/Point =	5 <--input						
Meter Box Gamma =	0.894 <--input						

REMEMBER TO INPUT YOUR DELTA P AND STACK TEMPERATURE BELOW

Sample Point	Elapsed Time	Pitot Reading	Dry Gas Meter Reading	Delta H	Flue Gas Temp.	Meter Temp. Outlet	% Iso	Volume Metered	Volume Metered Standard	Velocity (vs)	Square Root Delta P	K-factor
1	0	1.4	535.954	2.22	141	66	95.5	4.566	4.137	71.3	1.183	1.59
	5	1.4	541	2.22	158	65	95.1	4.475	4.063	72.3	1.183	1.56
	10	1.4	544.995	2.19	152	64	94.4	4.455	4.052	71.9	1.183	1.58
	15	1.4	549.45	2.21	142	64	96.1	4.570	4.157	71.3	1.183	1.60
	20	1.4	554.02	2.24	157	64	99.0	4.650	4.230	72.2	1.183	1.56
	25	1.4	558.67	2.19	181	64	97.2	4.480	4.075	73.6	1.183	1.51
	30	1.4	563.15	2.11	152	65	96.1	4.545	4.125	71.9	1.183	1.58
	35	1.4	567.695	2.21	187	66	100.8	4.645	4.209	73.9	1.183	1.50
	40	1.4	572.34	2.10	158	66	97.8	4.610	4.176	72.3	1.183	1.57
	45	1.4	576.95	2.19	155	66	86.8	4.100	3.715	72.1	1.183	1.57
	50	1.4	581.05	2.20	149	66	87.3	4.145	3.756	71.7	1.183	1.59
	55	1.4	585.195	2.23	218	67	62.4	2.812	2.543	75.7	1.183	1.43
Stop	60		588.007									
	Averages-->	1.40		2.19	162.50	65	92.36	4.338		72.52	1.18	

TOTAL VOLUME = 52.053

US EPA
Air Curtain Burner Outlet Duct
RTP, NC
Particulate Test Results

	RUN NUMBER	1R-ACB-PM-02
	RUN DATE	2/16/2011
	RUN TIME	1016-1118
	MEASURED DATA	
(Y)	Meter Box Y	0.894
(DeltaH)	Avg Delta H, inches H2O	2.19
(Pbar)	Barometric Pressure, inches Hg	30.06
(Vm)	Meter Volume, ft³	52.053
(Tm)	Avg Meter Temp, deg F	65
(Pg)	Static Pressure, inches H2O	-2.80
(Ts)	Avg Stack Temp, deg F	163
(Vlc)	Water Collected, mL	18.03
(%CO2)	Carbon Dioxide, %	0.0
(%O2)	Oxygen, %	20.9
(%N2)	Nitrogen, %	79.1
(Cp)	Pitot Tube Coefficient	0.84
(DeltaP)	Avg Sqrt Delta P, (inches H2O)½	1.183
(Theta)	Sample Time, min	60.0
(Dn)	Nozzle Diameter, inches	0.208
	CALCULATED DATA	
(An)	Nozzle Area, square feet	0.000235969
(Vmstd)	Standard Meter Volume, ft³	47.231
(Ps)	Stack Pressure, inches Hg	29.85
(%H2O)	Moisture, %	1.8
(%H2Osat)	Moisture (at saturation), %	34.2
(Vwstd)	Standard Water Vapor Volume, ft³	0.850
(Mfd)	Dry Mole Fraction	0.982
(Md)	Molecular Weight-dry, lb/lb-mole	28.84
(Ms)	Molecular Weight-wet, lb/lb-mole	28.64
(Vs)	Velocity, ft/s	72.5
(A)	Stack Area, ft²	0.35
(Qa)	Volumetric flow, acfm	1,518
(Qs)	Volumetric flow, dscfm	1,262
(I)	Isokinetic Rate, %	92.3

Distance from far wall to outside of port	75.75
Nipple length and/or wall thickness	7.25
Depth of stack or duct	68.5

% of depth	distance from inside wall	distance including nipple*
2.1	1.44	8.69
6.7	4.59	11.84
11.8	8.08	15.33
17.7	12.12	19.37
25	17.13	24.38
35.6	24.39	31.64
64.4	44.11	51.36
75	51.38	58.63
82.3	56.38	63.63
88.2	60.42	67.67
93.3	63.91	71.16
97.9	67.06	74.31

* mark these points on probe

Blue = Input Items
Red = Calculated/Protected Items

Facility Name:	USEPA	Stack Diameter (Rd):	8	Rd Area:=>	0.35
Sampling Location:	ACB Outlet Duct	Stack Dimension (Rec):		Rec Area:=>	0.00
City, State:	RTP, NC	Width	0		
Operator's Initials:	jtn	Depth	0		
Run Number:	2-ACB-BS-01			Area Used	0.349066
Test Date:	2/23/2011				
Run Time:	1040-1140				

md=	28.84
Ps=	30.08
Mfd=	0.980
Ms=	28.62

K Factor Setup

Stack Temp.	156	<--input
Average Delta P	1.3	<--input
Meter Temp.	60	<--input
% Moisture	2	<--input
Sample Rate	0.44	<--input
Barometric Pres.	30.21	<--input
Delta H@	1.88	<--input
Static Pressure	-1.8	<--input
Pitot Coefficient	0.84	<--input
O2 %	20.9	<--input
CO2 %	0	<--input

Desired Nozzle =	0.157	<--CALCULATED
Actual Nozzle =	0.157	<--input
K Factor =	0.55	<--CALCULATED
Minutes/Point =	5	<--input
Meter Box Gamma =	1.021	<--input

Sample Point	Elapsed Time	Pitot Reading	Dry Gas Meter Reading	Delta H	Flue Gas Temp.	Outlet Meter Temp.	% Iso	Volume Metered	Volume Metered Standard	Velocity (vs)	Square Root Delta P	K-factor
1	0	1.3	480.63	0.72	156	57	116.7	2.610	2.752	69.3	1.140	0.55
2	5	1.3	483.24	0.72	158	57	119.1	2.660	2.804	69.4	1.140	0.55
3	10	1.3	485.9	0.71	164	57	119.7	2.660	2.804	69.7	1.140	0.54
4	15	1.3	488.56	0.71	161	57	115.8	2.580	2.720	69.5	1.140	0.54
5	20	1.3	491.14	0.71	166	57	117.2	2.600	2.741	69.8	1.140	0.54
6	25	1.3	493.74	0.70	183	57	118.3	2.590	2.730	70.8	1.140	0.53
7	30	1.3	496.33	0.68	179	58	116.8	2.570	2.704	70.5	1.140	0.53
8	35	1.3	498.9	0.69	175	59	115.8	2.560	2.688	70.3	1.140	0.54
9	40	1.3	501.46	0.70	175	60	114.7	2.540	2.662	70.3	1.140	0.54
10	45	1.3	504	0.70	179	60	114.6	2.530	2.652	70.5	1.140	0.53
11	50	1.3	506.53	0.69	186	61	114.1	2.510	2.626	70.9	1.140	0.53
12	55	1.3	509.04	0.69	182	61	113.3	2.502	2.617	70.7	1.140	0.53
Stop	60		511.542									
Averages-->		1.30		0.70	172.00	58.42	116.35			70.16	1.14	

TOTAL VOLUME = 30.912

USEPA
ACB Outlet Duct
RTP, NC
BioSampler Test Results

	RUN NUMBER	2-ACB-BS-01
	RUN DATE	2/23/2011
	RUN TIME	1040-1140
	MEASURED DATA	
(Y)	Meter Box Y	1.021
(DeltaH)	Avg Delta H, inches H2O	0.70
(Pbar)	Barometric Pressure, inches Hg	30.21
(Vm)	Meter Volume, ft³	30.912
(Tm)	Avg Meter Temp, deg F	58
(Pg)	Static Pressure, inches H2O	-1.80
(Ts)	Avg Stack Temp, deg F	172
(Vlc)	Water Collected, mL	0.0
(%CO2)	Carbon Dioxide, %	0.0
(%O2)	Oxygen, %	20.9
(%N2)	Nitrogen, %	79.1
(Cp)	Pitot Tube Coefficient	0.84
(DeltaP)	Avg Sqrt Delta P, (inches H2O)½	1.140
(Theta)	Sample Time, min	60.0
(Dn)	Nozzle Diameter, inches	0.157
	CALCULATED DATA	
(An)	Nozzle Area, square feet	0.000134439
(Vmstd)	Standard Meter Volume, ft³	32.499
(Ps)	Stack Pressure, inches Hg	30.08
(%H2O)	Moisture, %	2.0
(%H2Osat)	Moisture (at saturation), %	42.4
(Vwstd)	Standard Water Vapor Volume, ft³	0.000
(Mfd)	Dry Mole Fraction	0.980
(Md)	Molecular Weight-dry, lb/lb-mole	28.84
(Ms)	Molecular Weight-wet, lb/lb-mole	28.62
(Vs)	Velocity, ft/s	70.2
(A)	Stack Area, ft²	0.35
(Qa)	Volumetric flow, acfm	1,469
(Qs)	Volumetric flow, dscfm	1,209
(I)	Isokinetic Rate, %	116.4

Distance from far wall to outside of port	19
Nipple length and/or wall thickness	3.5
Depth of stack or duct	15.5

% of depth	distance from inside wall	distance including nipple*
2.1	0.33	3.83
6.7	1.04	4.54
11.8	1.83	5.33
17.7	2.74	6.24
25	3.88	7.38
35.6	5.52	9.02
64.4	9.98	13.48
75	11.63	15.13
82.3	12.76	16.26
88.2	13.67	17.17
93.3	14.46	17.96
97.9	15.17	18.67

* mark these points on probe

Blue = Input Items
Red = Calculated/Protected Items

Facility Name:	USEPA	Stack Diameter (Rd):	8	Rd Area:=>	0.35
Sampling Location:	ACB Outlet Duct	Stack Dimension (Rec):		Rec Area:=>	0.00
City, State:	RTP, NC	Width	0		
Operator's Initials:	jtn	Depth	0		
Run Number:	2-ACB-BS-02			Area Used	0.349066
Test Date:	2/28/2011				
Run Time:	1250-1350				

md=	28.84
Ps=	29.38
Mfd=	0.980
Ms=	28.62

K Factor Setup

Stack Temp.	170	<--input
Average Delta P	1.4	<--input
Meter Temp.	70	<--input
% Moisture	2	<--input
Sample Rate	0.44	<--input
Barometric Pres.	29.5	<--input
Delta H@	1.88	<--input
Static Pressure	-1.7	<--input
Pitot Coefficient	0.84	<--input
O2 %	20.9	<--input
CO2 %	0	<--input

Desired Nozzle =	0.154	<--CALCULATED
Actual Nozzle =	0.157	<--input
K Factor =	0.55	<--CALCULATED
Minutes/Point =	5	<--input
Meter Box Gamma =	1.021	<--input

Sample Point	Elapsed Time	Pitot Reading	Dry Gas Meter Reading	Delta H	Flue Gas Temp.	Outlet Meter Temp.	% Iso	Volume Metered	Volume Metered Standard	Velocity (vs)	Square Root Delta P	K-factor
1	0	1.4	511.619	0.77	175	69	97.7	2.311	2.326	73.8	1.183	0.55
2	5	1.4	513.93	0.77	168	69	97.1	2.310	2.325	73.4	1.183	0.55
3	10	1.4	516.24	0.77	182	69	99.4	2.340	2.355	74.3	1.183	0.54
4	15	1.4	518.58	0.76	177	70	98.0	2.320	2.330	74.0	1.183	0.54
5	20	1.4	520.9	0.76	188	70	96.3	2.260	2.270	74.6	1.183	0.54
6	25	1.4	523.16	0.75	180	71	97.2	2.300	2.306	74.1	1.183	0.54
7	30	1.4	525.46	0.76	187	71	96.5	2.270	2.276	74.5	1.183	0.54
8	35	1.4	527.73	0.75	176	72	93.4	2.220	2.221	73.9	1.183	0.55
9	40	1.4	529.95	0.77	194	72	94.2	2.210	2.211	74.9	1.183	0.53
10	45	1.4	532.16	0.75	182	73	94.5	2.240	2.237	74.3	1.183	0.54
11	50	1.4	534.4	0.76	186	73	92.6	2.190	2.187	74.5	1.183	0.54
12	55	1.4	536.59	0.76	173	74	91.7	2.194	2.187	73.7	1.183	0.55
Stop	60		538.784									
Averages-->		1.40		0.76	180.67	71.08	95.71			74.17	1.18	

TOTAL VOLUME = 27.165

USEPA
ACB Outlet Duct
RTP, NC
BioSampler Test Results

	RUN NUMBER	2-ACB-BS-02
	RUN DATE	2/28/2011
	RUN TIME	1250-1350
	MEASURED DATA	
(Y)	Meter Box Y	1.021
(DeltaH)	Avg Delta H, inches H2O	0.76
(Pbar)	Barometric Pressure, inches Hg	29.50
(Vm)	Meter Volume, ft³	27.165
(Tm)	Avg Meter Temp, deg F	71
(Pg)	Static Pressure, inches H2O	-1.70
(Ts)	Avg Stack Temp, deg F	181
(Vlc)	Water Collected, mL	0.0
(%CO2)	Carbon Dioxide, %	0.0
(%O2)	Oxygen, %	20.9
(%N2)	Nitrogen, %	79.1
(Cp)	Pitot Tube Coefficient	0.84
(DeltaP)	Avg Sqrt Delta P, (inches H2O)½	1.183
(Theta)	Sample Time, min	60.0
(Dn)	Nozzle Diameter, inches	0.157
	CALCULATED DATA	
(An)	Nozzle Area, square feet	0.000134439
(Vmstd)	Standard Meter Volume, ft³	27.228
(Ps)	Stack Pressure, inches Hg	29.38
(%H2O)	Moisture, %	2.0
(%H2Osat)	Moisture (at saturation), %	52.7
(Vwstd)	Standard Water Vapor Volume, ft³	0.000
(Mfd)	Dry Mole Fraction	0.980
(Md)	Molecular Weight-dry, lb/lb-mole	28.84
(Ms)	Molecular Weight-wet, lb/lb-mole	28.62
(Vs)	Velocity, ft/s	74.2
(A)	Stack Area, ft²	0.35
(Qa)	Volumetric flow, acfm	1,554
(Qs)	Volumetric flow, dscfm	1,231
(I)	Isokinetic Rate, %	95.7

Distance from far wall to outside of port	19
Nipple length and/or wall thickness	3.5
Depth of stack or duct	15.5

% of depth	distance from inside wall	distance including nipple*
2.1	0.33	3.83
6.7	1.04	4.54
11.8	1.83	5.33
17.7	2.74	6.24
25	3.88	7.38
35.6	5.52	9.02
64.4	9.98	13.48
75	11.63	15.13
82.3	12.76	16.26
88.2	13.67	17.17
93.3	14.46	17.96
97.9	15.17	18.67

* mark these points on probe

Blue = Input Items
Red = Calculated/Protected Items

Facility Name:	USEPA	Stack Diameter (Rd):	8	Rd Area:=>	0.35
Sampling Location:	ACB Outlet Duct	Stack Dimension (Rec):		Rec Area:=>	0.00
City, State:	RTP, NC	Width	0		
Operator's Initials:	jtn	Depth	0		
Run Number:	2-ACB-BS-03			Area Used	0.349066
Test Date:	3/2/2011				
Run Time:	0850-0950				

md=	28.84		
Ps=	30.19		
Mfd=	0.980		
Ms=	28.62		

K Factor Setup

Stack Temp.	160	<--input
Average Delta P	1.3	<--input
Meter Temp.	55	<--input
% Moisture	2	<--input
Sample Rate	0.44	<--input
Barometric Pres.	30.31	<--input
Delta H@	1.88	<--input
Static Pressure	-1.7	<--input
Pitot Coefficient	0.84	<--input
O2 %	20.9	<--input
CO2 %	0	<--input

Desired Nozzle =	0.159	<--CALCULATED
Actual Nozzle =	0.157	<--input
K Factor =	0.54	<--CALCULATED
Minutes/Point =	5	<--input
Meter Box Gamma =	1.021	<--input

Sample Point	Elapsed Time	Pitot Reading	Dry Gas Meter Reading	Delta H	Flue Gas Temp.	Outlet Meter Temp.	% Iso	Volume Metered	Volume Metered Standard	Velocity (vs)	Square Root Delta P	K-factor
1	0	1.3	538.726	0.71	150	56	106.0	2.374	2.516	68.8	1.140	0.54
2	5	1.3	541.1	0.71	148	56	102.1	2.290	2.427	68.7	1.140	0.56
3	10	1.3	543.39	0.72	173	56	105.1	2.310	2.448	70.1	1.140	0.53
4	15	1.3	545.7	0.69	176	53	105.0	2.290	2.441	70.3	1.140	0.53
5	20	1.3	547.99	0.69	166	52	103.5	2.270	2.424	69.7	1.140	0.54
6	25	1.3	550.26	0.70	172	52	103.5	2.260	2.414	70.0	1.140	0.53
7	30	1.3	552.52	0.69	168	52	104.6	2.290	2.446	69.8	1.140	0.53
8	35	1.3	554.81	0.69	189	53	103.3	2.230	2.377	71.0	1.140	0.52
9	40	1.3	557.04	0.67	182	53	101.8	2.210	2.356	70.6	1.140	0.52
10	45	1.3	559.25	0.68	183	54	99.9	2.170	2.308	70.6	1.140	0.52
11	50	1.3	561.42	0.68	199	54	99.2	2.130	2.266	71.5	1.140	0.51
12	55	1.3	563.55	0.66	205	55	98.8	2.116	2.247	71.8	1.140	0.51
Stop	60		565.666									
Averages-->		1.30		0.69	175.92	53.83	102.74			70.24	1.14	

TOTAL VOLUME = 26.94

USEPA
ACB Outlet Duct
RTP, NC
BioSampler Test Results

	RUN NUMBER	2-ACB-BS-03
	RUN DATE	3/2/2011
	RUN TIME	0850-0950
	MEASURED DATA	
(Y)	Meter Box Y	1.021
(DeltaH)	Avg Delta H, inches H2O	0.69
(Pbar)	Barometric Pressure, inches Hg	30.31
(Vm)	Meter Volume, ft³	26.940
(Tm)	Avg Meter Temp, deg F	54
(Pg)	Static Pressure, inches H2O	-1.70
(Ts)	Avg Stack Temp, deg F	176
(Vlc)	Water Collected, mL	0.0
(%CO2)	Carbon Dioxide, %	0.0
(%O2)	Oxygen, %	20.9
(%N2)	Nitrogen, %	79.1
(Cp)	Pitot Tube Coefficient	0.84
(DeltaP)	Avg Sqrt Delta P, (inches H2O)½	1.140
(Theta)	Sample Time, min	60.0
(Dn)	Nozzle Diameter, inches	0.157
	CALCULATED DATA	
(An)	Nozzle Area, square feet	0.000134439
(Vmstd)	Standard Meter Volume, ft³	28.669
(Ps)	Stack Pressure, inches Hg	30.19
(%H2O)	Moisture, %	2.0
(%H2Osat)	Moisture (at saturation), %	46.1
(Vwstd)	Standard Water Vapor Volume, ft³	0.000
(Mfd)	Dry Mole Fraction	0.980
(Md)	Molecular Weight-dry, lb/lb-mole	28.84
(Ms)	Molecular Weight-wet, lb/lb-mole	28.62
(Vs)	Velocity, ft/s	70.2
(A)	Stack Area, ft²	0.35
(Qa)	Volumetric flow, acfm	1,471
(Qs)	Volumetric flow, dscfm	1,207
(I)	Isokinetic Rate, %	102.8

Distance from far wall to outside of port	19
Nipple length and/or wall thickness	3.5
Depth of stack or duct	15.5

% of depth	distance from inside wall	distance including nipple*
2.1	0.33	3.83
6.7	1.04	4.54
11.8	1.83	5.33
17.7	2.74	6.24
25	3.88	7.38
35.6	5.52	9.02
64.4	9.98	13.48
75	11.63	15.13
82.3	12.76	16.26
88.2	13.67	17.17
93.3	14.46	17.96
97.9	15.17	18.67

* mark these points on probe

Blue = Input Items
Red = Calculated/Protected Items

Facility Name:	USEPA	Stack Diameter (Rd):	8	Rd Area:=>	0.35
Sampling Location:	ACB Outlet Duct	Stack Dimension (Rec):		Rec Area:=>	0.00
City, State:	RTP, NC	Width	0		
Operator's Initials:	jtn	Depth	0		
Run Number:	2-ACB-BS-04			Area Used	0.349066
Test Date:	3/8/2011				
Run Time:	0930-1030				

md=	28.84
Ps=	30.28
Mfd=	0.980
Ms=	28.62

K Factor Setup

Stack Temp.	140	<--input
Average Delta P	1.3	<--input
Meter Temp.	40	<--input
% Moisture	2	<--input
Sample Rate	0.44	<--input
Barometric Pres.	30.4	<--input
Delta H@	1.88	<--input
Static Pressure	-1.6	<--input
Pitot Coefficient	0.84	<--input
O2 %	20.9	<--input
CO2 %	0	<--input

Desired Nozzle =	0.160	<--CALCULATED
Actual Nozzle =	0.157	<--input
K Factor =	0.55	<--CALCULATED
Minutes/Point =	5	<--input
Meter Box Gamma =	1.021	<--input

Sample Point	Elapsed Time	Pitot Reading	Dry Gas Meter Reading	Delta H	Flue Gas Temp.	Outlet Meter Temp.	% Iso	Volume Metered	Volume Metered Standard	Velocity (vs)	Square Root Delta P	K-factor
1	0	1.3	565.777	0.71	160	40	105.7	2.273	2.493	69.3	1.140	0.55
2	5	1.3	568.05	0.71	169	40	106.8	2.280	2.501	69.8	1.140	0.52
3	10	1.3	570.33	0.68	164	41	105.7	2.270	2.485	69.5	1.140	0.53
4	15	1.3	572.6	0.68	163	41	105.2	2.260	2.474	69.4	1.140	0.53
5	20	1.3	574.86	0.68	161	42	105.7	2.280	2.491	69.3	1.140	0.53
6	25	1.3	577.14	0.69	163	43	105.2	2.270	2.475	69.4	1.140	0.53
7	30	1.3	579.41	0.69	161	44	103.0	2.230	2.427	69.3	1.140	0.53
8	35	1.3	581.64	0.69	170	45	103.5	2.230	2.422	69.8	1.140	0.52
9	40	1.3	583.87	0.68	166	45	103.2	2.230	2.422	69.6	1.140	0.53
10	45	1.3	586.1	0.69	184	47	104.3	2.230	2.412	70.6	1.140	0.52
11	50	1.3	588.33	0.67	181	47	103.6	2.220	2.401	70.4	1.140	0.52
12	55	1.3	590.55	0.67	175	48	100.2	2.163	2.335	70.1	1.140	0.52
Stop	60		592.713									
Averages-->		1.30		0.69	168.08	43.58	104.35			69.70	1.14	

TOTAL VOLUME = 26.936

USEPA
ACB Outlet Duct
RTP, NC
BioSampler Test Results

	RUN NUMBER	2-ACB-BS-04
	RUN DATE	3/8/2011
	RUN TIME	0930-1030
	MEASURED DATA	
(Y)	Meter Box Y	1.021
(DeltaH)	Avg Delta H, inches H2O	0.69
(Pbar)	Barometric Pressure, inches Hg	30.40
(Vm)	Meter Volume, ft³	26.936
(Tm)	Avg Meter Temp, deg F	44
(Pg)	Static Pressure, inches H2O	-1.60
(Ts)	Avg Stack Temp, deg F	168
(Vlc)	Water Collected, mL	0.0
(%CO2)	Carbon Dioxide, %	0.0
(%O2)	Oxygen, %	20.9
(%N2)	Nitrogen, %	79.1
(Cp)	Pitot Tube Coefficient	0.84
(DeltaP)	Avg Sqrt Delta P, (inches H2O)½	1.140
(Theta)	Sample Time, min	60.0
(Dn)	Nozzle Diameter, inches	0.157
	CALCULATED DATA	
(An)	Nozzle Area, square feet	0.000134439
(Vmstd)	Standard Meter Volume, ft³	29.335
(Ps)	Stack Pressure, inches Hg	30.28
(%H2O)	Moisture, %	2.0
(%H2Osat)	Moisture (at saturation), %	38.5
(Vwstd)	Standard Water Vapor Volume, ft³	0.000
(Mfd)	Dry Mole Fraction	0.980
(Md)	Molecular Weight-dry, lb/lb-mole	28.84
(Ms)	Molecular Weight-wet, lb/lb-mole	28.62
(Vs)	Velocity, ft/s	69.7
(A)	Stack Area, ft²	0.35
(Qa)	Volumetric flow, acfm	1,460
(Qs)	Volumetric flow, dscfm	1,217
(I)	Isokinetic Rate, %	104.4

Distance from far wall to outside of port	19
Nipple length and/or wall thickness	3.5
Depth of stack or duct	15.5

% of depth	distance from inside wall	distance including nipple*
2.1	0.33	3.83
6.7	1.04	4.54
11.8	1.83	5.33
17.7	2.74	6.24
25	3.88	7.38
35.6	5.52	9.02
64.4	9.98	13.48
75	11.63	15.13
82.3	12.76	16.26
88.2	13.67	17.17
93.3	14.46	17.96
97.9	15.17	18.67

* mark these points on probe

Blue = Input Items
Red = Calculated/Protected Items

Facility Name:	USEPA	Stack Diameter (Rd):	8	Rd Area:=>	0.35
Sampling Location:	ACB Outlet Duct	Stack Dimension (Rec):		Rec Area:=>	0.00
City, State:	RTP, NC	Width	0		
Operator's Initials:	jtn	Depth	0		
Run Number:	2-ACB-BS-05			Area Used	0.349066
Test Date:	3/10/2011				
Run Time:	0912-1012				

md=	28.84
Ps=	29.78
Mfd=	0.980
Ms=	28.62

K Factor Setup

Stack Temp.	154	<--input
Average Delta P	1.4	<--input
Meter Temp.	40	<--input
% Moisture	2	<--input
Sample Rate	0.44	<--input
Barometric Pres.	29.92	<--input
Delta H@	1.88	<--input
Static Pressure	-1.9	<--input
Pitot Coefficient	0.84	<--input
O2 %	20.9	<--input
CO2 %	0	<--input

Desired Nozzle =	0.158	<--CALCULATED
Actual Nozzle =	0.157	<--input
K Factor =	0.53	<--CALCULATED
Minutes/Point =	5	<--input
Meter Box Gamma =	1.021	<--input

Sample Point	Elapsed Time	Pitot Reading	Dry Gas Meter Reading	Delta H	Flue Gas Temp.	Outlet Meter Temp.	% Iso	Volume Metered	Volume Metered Standard	Velocity (vs)	Square Root Delta P	K-factor
1	0	1.4	592.915	0.75	154	53	116.3	2.695	2.836	72.1	1.183	0.53
2	5	1.4	595.61	0.75	146	53	112.3	2.620	2.757	71.6	1.183	0.55
3	10	1.4	598.23	0.78	151	54	111.7	2.600	2.731	71.9	1.183	0.55
4	15	1.4	600.83	0.77	139	55	111.3	2.620	2.747	71.2	1.183	0.56
5	20	1.4	603.45	0.79	126	55	109.6	2.610	2.736	70.5	1.183	0.58
6	25	1.4	606.06	0.81	125	56	108.9	2.600	2.721	70.4	1.183	0.58
7	30	1.4	608.66	0.81	169	57	110.1	2.540	2.653	73.0	1.183	0.54
8	35	1.4	611.2	0.75	147	57	107.7	2.530	2.642	71.7	1.183	0.56
9	40	1.4	613.73	0.78	152	58	108.0	2.530	2.637	72.0	1.183	0.55
10	45	1.4	616.26	0.78	154	59	108.4	2.540	2.642	72.1	1.183	0.55
11	50	1.4	618.8	0.77	185	59	107.6	2.460	2.559	73.9	1.183	0.53
12	55	1.4	621.26	0.74	175	60	107.0	2.472	2.566	73.3	1.183	0.54
Stop	60		623.732									
Averages-->		1.40		0.77	151.92	56.33	109.91			71.99	1.18	

TOTAL VOLUME = 30.817

USEPA
ACB Outlet Duct
RTP, NC
BioSampler Test Results

	RUN NUMBER	2-ACB-BS-05
	RUN DATE	3/10/2011
	RUN TIME	0912-1012
	MEASURED DATA	
(Y)	Meter Box Y	1.021
(DeltaH)	Avg Delta H, inches H2O	0.77
(Pbar)	Barometric Pressure, inches Hg	29.92
(Vm)	Meter Volume, ft³	30.817
(Tm)	Avg Meter Temp, deg F	56
(Pg)	Static Pressure, inches H2O	-1.90
(Ts)	Avg Stack Temp, deg F	152
(Vlc)	Water Collected, mL	0.0
(%CO2)	Carbon Dioxide, %	0.0
(%O2)	Oxygen, %	20.9
(%N2)	Nitrogen, %	79.1
(Cp)	Pitot Tube Coefficient	0.84
(DeltaP)	Avg Sqrt Delta P, (inches H2O)½	1.183
(Theta)	Sample Time, min	60.0
(Dn)	Nozzle Diameter, inches	0.157
	CALCULATED DATA	
(An)	Nozzle Area, square feet	0.000134439
(Vmstd)	Standard Meter Volume, ft³	32.223
(Ps)	Stack Pressure, inches Hg	29.78
(%H2O)	Moisture, %	2.0
(%H2Osat)	Moisture (at saturation), %	26.6
(Vwstd)	Standard Water Vapor Volume, ft³	0.000
(Mfd)	Dry Mole Fraction	0.980
(Md)	Molecular Weight-dry, lb/lb-mole	28.84
(Ms)	Molecular Weight-wet, lb/lb-mole	28.62
(Vs)	Velocity, ft/s	72.0
(A)	Stack Area, ft²	0.35
(Qa)	Volumetric flow, acfm	1,508
(Qs)	Volumetric flow, dscfm	1,269
(I)	Isokinetic Rate, %	109.9

Distance from far wall to outside of port	19
Nipple length and/or wall thickness	3.5
Depth of stack or duct	15.5

% of depth	distance from inside wall	distance including nipple*
2.1	0.33	3.83
6.7	1.04	4.54
11.8	1.83	5.33
17.7	2.74	6.24
25	3.88	7.38
35.6	5.52	9.02
64.4	9.98	13.48
75	11.63	15.13
82.3	12.76	16.26
88.2	13.67	17.17
93.3	14.46	17.96
97.9	15.17	18.67

* mark these points on probe

Blue = Input Items
Red = Calculated/Protected Items

Facility Name:	USEPA	Stack Diameter (Rd):	8	Rd Area:=>	0.35
Sampling Location:	ACB Outlet Duct	Stack Dimension (Rec):		Rec Area:=>	0.00
City, State:	RTP, NC	Width	0		
Operator's Initials:	jtn	Depth	0		
Run Number:	2-ACB-BS-06			Area Used	0.349066
Test Date:	3/14/2011				
Run Time:	0912-1012				

md=	28.84
Ps=	30.12
Mfd=	0.980
Ms=	28.62

K Factor Setup

Stack Temp.	150	<--input
Average Delta P	1.4	<--input
Meter Temp.	40	<--input
% Moisture	2	<--input
Sample Rate	0.44	<--input
Barometric Pres.	30.26	<--input
Delta H@	1.88	<--input
Static Pressure	-1.9	<--input
Pitot Coefficient	0.84	<--input
O2 %	20.9	<--input
CO2 %	0	<--input

Desired Nozzle =	0.158	<--CALCULATED
Actual Nozzle =	0.157	<--input
K Factor =	0.54	<--CALCULATED
Minutes/Point =	5	<--input
Meter Box Gamma =	1.021	<--input

Sample Point	Elapsed Time	Pitot Reading	Dry Gas Meter Reading	Delta H	Flue Gas Temp.	Outlet Meter Temp.	% Iso	Volume Metered	Volume Metered Standard	Velocity (vs)	Square Root Delta P	K-factor
1	0	1.4	624.419	0.75	151	41	104.7	2.361	2.573	71.5	1.183	0.54
2	5	1.4	626.78	0.75	145	41	101.9	2.310	2.517	71.2	1.183	0.54
3	10	1.4	629.09	0.76	160	42	103.0	2.310	2.512	72.1	1.183	0.53
4	15	1.4	631.4	0.74	133	42	100.7	2.310	2.512	70.5	1.183	0.55
5	20	1.4	633.71	0.78	150	43	100.6	2.280	2.475	71.5	1.183	0.54
6	25	1.4	635.99	0.76	140	43	98.9	2.260	2.453	70.9	1.183	0.55
7	30	1.4	638.25	0.77	141	44	98.3	2.250	2.438	70.9	1.183	0.55
8	35	1.4	640.5	0.77	134	45	96.7	2.230	2.411	70.5	1.183	0.56
9	40	1.4	642.73	0.78	153	45	97.4	2.210	2.390	71.7	1.183	0.54
10	45	1.4	644.94	0.75	130	45	94.7	2.190	2.368	70.3	1.183	0.56
11	50	1.4	647.13	0.78	186	46	97.0	2.150	2.320	73.6	1.183	0.51
12	55	1.4	649.28	0.72	170	46	92.7	2.079	2.243	72.6	1.183	0.53
Stop	60		651.359									
Averages-->		1.40		0.76	149.42	43.58	98.87			71.44	1.18	

TOTAL VOLUME = 26.94

USEPA
ACB Outlet Duct
RTP, NC
BioSampler Test Results

	RUN NUMBER	2-ACB-BS-06
	RUN DATE	3/14/2011
	RUN TIME	0912-1012
	MEASURED DATA	
(Y)	Meter Box Y	1.021
(DeltaH)	Avg Delta H, inches H2O	0.76
(Pbar)	Barometric Pressure, inches Hg	30.26
(Vm)	Meter Volume, ft³	26.940
(Tm)	Avg Meter Temp, deg F	44
(Pg)	Static Pressure, inches H2O	-1.90
(Ts)	Avg Stack Temp, deg F	149
(Vlc)	Water Collected, mL	0.0
(%CO2)	Carbon Dioxide, %	0.0
(%O2)	Oxygen, %	20.9
(%N2)	Nitrogen, %	79.1
(Cp)	Pitot Tube Coefficient	0.84
(DeltaP)	Avg Sqrt Delta P, (inches H2O)½	1.183
(Theta)	Sample Time, min	60.0
(Dn)	Nozzle Diameter, inches	0.157
	CALCULATED DATA	
(An)	Nozzle Area, square feet	0.000134439
(Vmstd)	Standard Meter Volume, ft³	29.209
(Ps)	Stack Pressure, inches Hg	30.12
(%H2O)	Moisture, %	2.0
(%H2Osat)	Moisture (at saturation), %	24.7
(Vwstd)	Standard Water Vapor Volume, ft³	0.000
(Mfd)	Dry Mole Fraction	0.980
(Md)	Molecular Weight-dry, lb/lb-mole	28.84
(Ms)	Molecular Weight-wet, lb/lb-mole	28.62
(Vs)	Velocity, ft/s	71.4
(A)	Stack Area, ft²	0.35
(Qa)	Volumetric flow, acfm	1,496
(Qs)	Volumetric flow, dscfm	1,278
(I)	Isokinetic Rate, %	98.9

Distance from far wall to outside of port	19
Nipple length and/or wall thickness	3.5
Depth of stack or duct	15.5

% of depth	distance from inside wall	distance including nipple*
2.1	0.33	3.83
6.7	1.04	4.54
11.8	1.83	5.33
17.7	2.74	6.24
25	3.88	7.38
35.6	5.52	9.02
64.4	9.98	13.48
75	11.63	15.13
82.3	12.76	16.26
88.2	13.67	17.17
93.3	14.46	17.96
97.9	15.17	18.67

* mark these points on probe

Blue = Input Items
Red = Calculated/Protected Items

Facility Name:	USEPA	Stack Diameter (Rd):	8	Rd Area:=>	0.35
Sampling Location:	ACB Outlet Duct	Stack Dimension (Rec):		Rec Area:=>	0.00
City, State:	RTP, NC	Width	0		
Operator's Initials:	jtn	Depth	0		
Run Number:	2-ACB-BS-07			Area Used	0.349066
Test Date:	3/16/2011				
Run Time:	0922-1022				

md=	28.84		
Ps=	29.98		
Mfd=	0.980		
Ms=	28.62		

K Factor Setup

Stack Temp.	160	<--input
Average Delta P	1.3	<--input
Meter Temp.	40	<--input
% Moisture	2	<--input
Sample Rate	0.44	<--input
Barometric Pres.	30.12	<--input
Delta H@	1.88	<--input
Static Pressure	-1.9	<--input
Pitot Coefficient	0.84	<--input
O2 %	20.9	<--input
CO2 %	0	<--input

Desired Nozzle =	0.161	<--CALCULATED
Actual Nozzle =	0.157	<--input
K Factor =	0.53	<--CALCULATED
Minutes/Point =	5	<--input
Meter Box Gamma =	1.021	<--input

Sample Point	Elapsed Time	Pitot Reading	Dry Gas Meter Reading	Delta H	Flue Gas Temp.	Outlet Meter Temp.	% Iso	Volume Metered	Volume Metered Standard	Velocity (vs)	Square Root Delta P	K-factor
1	0	1.3	651.707	0.69	154	43	108.7	2.373	2.564	69.3	1.140	0.53
2	5	1.3	654.08	0.69	141	43	107.0	2.360	2.549	68.5	1.140	0.55
3	10	1.3	656.44	0.71	143	44	107.0	2.360	2.545	68.6	1.140	0.55
4	15	1.3	658.8	0.71	142	44	106.4	2.350	2.534	68.6	1.140	0.55
5	20	1.3	661.15	0.71	168	44	107.8	2.330	2.512	70.0	1.140	0.53
6	25	1.3	663.48	0.68	152	45	105.3	2.310	2.486	69.2	1.140	0.54
7	30	1.3	665.79	0.70	158	46	103.7	2.270	2.438	69.5	1.140	0.54
8	35	1.3	668.06	0.70	158	46	104.2	2.280	2.449	69.5	1.140	0.54
9	40	1.3	670.34	0.70	150	47	103.8	2.290	2.454	69.0	1.140	0.54
10	45	1.3	672.63	0.71	135	48	103.2	2.310	2.471	68.2	1.140	0.56
11	50	1.3	674.94	0.73	174	49	104.5	2.270	2.424	70.4	1.140	0.53
12	55	1.3	677.21	0.68	176	49	102.9	2.232	2.383	70.5	1.140	0.52
Stop	60		679.442									
Averages-->		1.30		0.70	154.25	45.67	105.36			69.27	1.14	

TOTAL VOLUME = 27.735

USEPA
ACB Outlet Duct
RTP, NC
BioSampler Test Results

	RUN NUMBER	2-ACB-BS-07
	RUN DATE	3/16/2011
	RUN TIME	0922-1022
	MEASURED DATA	
(Y)	Meter Box Y	1.021
(DeltaH)	Avg Delta H, inches H2O	0.70
(Pbar)	Barometric Pressure, inches Hg	30.12
(Vm)	Meter Volume, ft³	27.735
(Tm)	Avg Meter Temp, deg F	46
(Pg)	Static Pressure, inches H2O	-1.90
(Ts)	Avg Stack Temp, deg F	154
(Vlc)	Water Collected, mL	0.0
(%CO2)	Carbon Dioxide, %	0.0
(%O2)	Oxygen, %	20.9
(%N2)	Nitrogen, %	79.1
(Cp)	Pitot Tube Coefficient	0.84
(DeltaP)	Avg Sqrt Delta P, (inches H2O)½	1.140
(Theta)	Sample Time, min	60.0
(Dn)	Nozzle Diameter, inches	0.157
	CALCULATED DATA	
(An)	Nozzle Area, square feet	0.000134439
(Vmstd)	Standard Meter Volume, ft³	29.805
(Ps)	Stack Pressure, inches Hg	29.98
(%H2O)	Moisture, %	2.0
(%H2Osat)	Moisture (at saturation), %	28.0
(Vwstd)	Standard Water Vapor Volume, ft³	0.000
(Mfd)	Dry Mole Fraction	0.980
(Md)	Molecular Weight-dry, lb/lb-mole	28.84
(Ms)	Molecular Weight-wet, lb/lb-mole	28.62
(Vs)	Velocity, ft/s	69.3
(A)	Stack Area, ft²	0.35
(Qa)	Volumetric flow, acfm	1,451
(Qs)	Volumetric flow, dscfm	1,224
(I)	Isokinetic Rate, %	105.4

Distance from far wall to outside of port	19
Nipple length and/or wall thickness	3.5
Depth of stack or duct	15.5

% of depth	distance from inside wall	distance including nipple*
2.1	0.33	3.83
6.7	1.04	4.54
11.8	1.83	5.33
17.7	2.74	6.24
25	3.88	7.38
35.6	5.52	9.02
64.4	9.98	13.48
75	11.63	15.13
82.3	12.76	16.26
88.2	13.67	17.17
93.3	14.46	17.96
97.9	15.17	18.67

* mark these points on probe

Blue = Input Items
Red = Calculated/Protected Items

Facility Name:	USEPA	Stack Diameter (Rd):	8	Rd Area:=>	0.35
Sampling Location:	ACB Outlet Duct	Stack Dimension (Rec):		Rec Area:=>	0.00
City, State:	RTP, NC	Width	0		
Operator's Initials:	jtn	Depth	0		
Run Number:	2-ACB-BS-08			Area Used	0.349066
Test Date:	3/21/2011				
Run Time:	0938-1038				

md=	28.84
Ps=	30.22
Mfd=	0.980
Ms=	28.62

K Factor Setup

Stack Temp.	160	<--input
Average Delta P	1.4	<--input
Meter Temp.	60	<--input
% Moisture	2	<--input
Sample Rate	0.44	<--input
Barometric Pres.	30.34	<--input
Delta H@	1.88	<--input
Static Pressure	-1.6	<--input
Pitot Coefficient	0.84	<--input
O2 %	20.9	<--input
CO2 %	0	<--input

Desired Nozzle =	0.156	<--CALCULATED
Actual Nozzle =	0.157	<--input
K Factor =	0.55	<--CALCULATED
Minutes/Point =	5	<--input
Meter Box Gamma =	1.021	<--input

Sample Point	Elapsed Time	Pitot Reading	Dry Gas Meter Reading	Delta H	Flue Gas Temp.	Outlet Meter Temp.	% Iso	Volume Metered	Volume Metered Standard	Velocity (vs)	Square Root Delta P	K-factor
1	0	1.4	679.842	0.77	179	56	114.5	2.598	2.756	73.0	1.183	0.55
2	5	1.4	682.44	0.77	164	56	113.2	2.600	2.758	72.2	1.183	0.54
3	10	1.4	685.04	0.76	156	56	110.3	2.550	2.705	71.7	1.183	0.55
4	15	1.4	687.59	0.77	186	56	111.6	2.520	2.674	73.4	1.183	0.52
5	20	1.4	690.11	0.73	179	57	110.4	2.510	2.658	73.0	1.183	0.53
6	25	1.4	692.62	0.74	153	58	110.9	2.580	2.727	71.5	1.183	0.55
7	30	1.4	695.2	0.77	158	58	105.3	2.440	2.579	71.8	1.183	0.55
8	35	1.4	697.64	0.77	174	59	108.7	2.490	2.627	72.7	1.183	0.54
9	40	1.4	700.13	0.75	160	60	107.2	2.490	2.621	71.9	1.183	0.55
10	45	1.4	702.62	0.77	168	61	106.9	2.470	2.595	72.4	1.183	0.54
11	50	1.4	705.09	0.76	164	62	106.7	2.480	2.601	72.2	1.183	0.55
12	55	1.4	707.57	0.77	196	62	109.3	2.477	2.598	74.0	1.183	0.52
Stop	60		710.047									
Averages-->		1.40		0.76	169.75	58.42	109.59			72.50	1.18	

TOTAL VOLUME = 30.205

USEPA
ACB Outlet Duct
RTP, NC
BioSampler Test Results

	RUN NUMBER	2-ACB-BS-08
	RUN DATE	3/21/2011
	RUN TIME	0938-1038
	MEASURED DATA	
(Y)	Meter Box Y	1.021
(DeltaH)	Avg Delta H, inches H2O	0.76
(Pbar)	Barometric Pressure, inches Hg	30.34
(Vm)	Meter Volume, ft³	30.205
(Tm)	Avg Meter Temp, deg F	58
(Pg)	Static Pressure, inches H2O	-1.60
(Ts)	Avg Stack Temp, deg F	170
(Vlc)	Water Collected, mL	0.0
(%CO2)	Carbon Dioxide, %	0.0
(%O2)	Oxygen, %	20.9
(%N2)	Nitrogen, %	79.1
(Cp)	Pitot Tube Coefficient	0.84
(DeltaP)	Avg Sqrt Delta P, (inches H2O)½	1.183
(Theta)	Sample Time, min	60.0
(Dn)	Nozzle Diameter, inches	0.157
	CALCULATED DATA	
(An)	Nozzle Area, square feet	0.000134439
(Vmstd)	Standard Meter Volume, ft³	31.896
(Ps)	Stack Pressure, inches Hg	30.22
(%H2O)	Moisture, %	2.0
(%H2Osat)	Moisture (at saturation), %	40.0
(Vwstd)	Standard Water Vapor Volume, ft³	0.000
(Mfd)	Dry Mole Fraction	0.980
(Md)	Molecular Weight-dry, lb/lb-mole	28.84
(Ms)	Molecular Weight-wet, lb/lb-mole	28.62
(Vs)	Velocity, ft/s	72.5
(A)	Stack Area, ft²	0.35
(Qa)	Volumetric flow, acfm	1,518
(Qs)	Volumetric flow, dscfm	1,260
(I)	Isokinetic Rate, %	109.6

Distance from far wall to outside of port	19
Nipple length and/or wall thickness	3.5
Depth of stack or duct	15.5

% of depth	distance from inside wall	distance including nipple*
2.1	0.33	3.83
6.7	1.04	4.54
11.8	1.83	5.33
17.7	2.74	6.24
25	3.88	7.38
35.6	5.52	9.02
64.4	9.98	13.48
75	11.63	15.13
82.3	12.76	16.26
88.2	13.67	17.17
93.3	14.46	17.96
97.9	15.17	18.67

* mark these points on probe

Blue = Input Items
Red = Calculated/Protected Items

Facility Name:	USEPA	Stack Diameter (Rd):	8	Rd Area:=>	0.35
Sampling Location:	ACB Outlet Duct	Stack Dimension (Rec):		Rec Area:=>	0.00
City, State:	RTP, NC	Width	0		
Operator's Initials:	jtn	Depth	0		
Run Number:	BS-1			Area Used	0.349066
Test Date:	11/21/2011				
Run Time:					

md=	28.84
Ps=	30.05
Mfd=	0.995
Ms=	28.78

K Factor Setup

Stack Temp.	70	<--input
Average Delta P	1.2	<--input
Meter Temp.	75	<--input
% Moisture	0.5	<--input
Sample Rate	0.44	<--input
Barometric Pres.	30.2	<--input
Delta H@	1.77	<--input
Static Pressure	-2	<--input
Pitot Coefficient	0.84	<--input
O2 %	20.9	<--input
CO2 %	0	<--input

Desired Nozzle =	0.149	<--CALCULATED
Actual Nozzle =	0.157	<--input
K Factor =	0.64	<--CALCULATED
Minutes/Point =	5	<--input
Meter Box Gamma =	0.886	<--input

Sample Point	Elapsed Time	Pitot Reading	Dry Gas Meter Reading	Delta H	Flue Gas Temp.	Outlet Meter Temp.	% Iso	Volume Metered	Volume Metered Standard	Velocity (vs)	Square Root Delta P	K-factor
1	0	1.2	290.233	0.77	75	74	97.5	2.707	2.397	61.9	1.095	0.64
2	5	1.2	292.94	0.77	75	75	99.2	2.760	2.440	61.9	1.095	0.63
3	10	1.2	295.7	0.76	75	75	99.9	2.780	2.457	61.9	1.095	0.63
4	15	1.2	298.48	0.76	75	75	96.7	2.690	2.378	61.9	1.095	0.63
5	20	1.2	301.17	0.76	75	75	96.7	2.690	2.378	61.9	1.095	0.63
6	25	1.2	303.86	0.76	75	76	98.6	2.750	2.426	61.9	1.095	0.63
7	30	1.2	306.61	0.76	75	76	97.6	2.720	2.400	61.9	1.095	0.63
8	35	1.2	309.33	0.76	75	76	96.8	2.700	2.382	61.9	1.095	0.63
9	40	1.2	312.03	0.76	75	77	97.0	2.710	2.386	61.9	1.095	0.63
10	45	1.2	314.74	0.76	75	77	97.0	2.710	2.386	61.9	1.095	0.63
11	50	1.2	317.45	0.76	75	78	96.8	2.710	2.382	61.9	1.095	0.64
12	55	1.2	320.16	0.76	75	78	95.9	2.684	2.359	61.9	1.095	0.64
Stop	60		322.844									
Averages-->		1.20		0.76	75.00	76.00	97.48			61.87	1.10	

TOTAL VOLUME = 32.611

USEPA
ACB Outlet Duct
RTP, NC
BioSampler Test Results

	RUN NUMBER	BS-1
	RUN DATE	11/21/2011
	RUN TIME	0
	MEASURED DATA	
(Y)	Meter Box Y	0.886
(DeltaH)	Avg Delta H, inches H2O	0.76
(Pbar)	Barometric Pressure, inches Hg	30.20
(Vm)	Meter Volume, ft³	32.611
(Tm)	Avg Meter Temp, deg F	76
(Pg)	Static Pressure, inches H2O	-2.00
(Ts)	Avg Stack Temp, deg F	75
(Vlc)	Water Collected, mL	0.0
(%CO2)	Carbon Dioxide, %	0.0
(%O2)	Oxygen, %	20.9
(%N2)	Nitrogen, %	79.1
(Cp)	Pitot Tube Coefficient	0.84
(DeltaP)	Avg Sqrt Delta P, (inches H2O)½	1.095
(Theta)	Sample Time, min	60.0
(Dn)	Nozzle Diameter, inches	0.157
	CALCULATED DATA	
(An)	Nozzle Area, square feet	0.000134439
(Vmstd)	Standard Meter Volume, ft³	28.770
(Ps)	Stack Pressure, inches Hg	30.05
(%H2O)	Moisture, %	2.0
(%H2Osat)	Moisture (at saturation), %	2.9
(Vwstd)	Standard Water Vapor Volume, ft³	0.000
(Mfd)	Dry Mole Fraction	0.980
(Md)	Molecular Weight-dry, lb/lb-mole	28.84
(Ms)	Molecular Weight-wet, lb/lb-mole	28.62
(Vs)	Velocity, ft/s	62.0
(A)	Stack Area, ft²	0.35
(Qa)	Volumetric flow, acfm	1,299
(Qs)	Volumetric flow, dscfm	1,262
(I)	Isokinetic Rate, %	98.7

Distance from far wall to outside of port	19
Nipple length and/or wall thickness	3.5
Depth of stack or duct	15.5

% of depth	distance from inside wall	distance including nipple*
2.1	0.33	3.83
6.7	1.04	4.54
11.8	1.83	5.33
17.7	2.74	6.24
25	3.88	7.38
35.6	5.52	9.02
64.4	9.98	13.48
75	11.63	15.13
82.3	12.76	16.26
88.2	13.67	17.17
93.3	14.46	17.96
97.9	15.17	18.67

* mark these points on probe

Blue = Input Items
Red = Calculated/Protected Items

Facility Name:	USEPA	Stack Diameter (Rd):	8	Rd Area:=>	0.35
Sampling Location:	ACB Outlet Duct	Stack Dimension (Rec):		Rec Area:=>	0.00
City, State:	RTP, NC	Width	0		
Operator's Initials:	jtn	Depth	0		
Run Number:	BS-2			Area Used	0.349066
Test Date:	11/22/2011				
Run Time:					

md=	28.84
Ps=	30.04
Mfd=	0.995
Ms=	28.78

K Factor Setup

Stack Temp.	65	<--input
Average Delta P	1.3	<--input
Meter Temp.	75	<--input
% Moisture	0.5	<--input
Sample Rate	0.44	<--input
Barometric Pres.	30.2	<--input
Delta H@	1.77	<--input
Static Pressure	-2.2	<--input
Pitot Coefficient	0.84	<--input
O2 %	20.9	<--input
CO2 %	0	<--input
Desired Nozzle =	0.147	<--CALCULATED
Actual Nozzle =	0.157	<--input
K Factor =	0.64	<--CALCULATED
Minutes/Point =	5	<--input
Meter Box Gamma =	0.886	<--input

Sample Point	Elapsed Time	Pitot Reading	Dry Gas Meter Reading	Delta H	Flue Gas Temp.	Outlet Meter Temp.	% Iso	Volume Metered	Volume Metered Standard	Velocity (vs)	Square Root Delta P	K-factor
1	0	1.3	322.846	0.84	65	69	89.8	2.594	2.319	63.8	1.140	0.64
2	5	1.3	325.44	0.84	65	69	92.0	2.660	2.378	63.8	1.140	0.64
3	10	1.3	328.1	0.83	65	69	92.0	2.660	2.378	63.8	1.140	0.64
4	15	1.3	330.76	0.83	65	70	86.0	2.490	2.222	63.8	1.140	0.64
5	20	1.3	333.25	0.83	65	70	88.4	2.560	2.284	63.8	1.140	0.64
6	25	1.3	335.81	0.83	65	70	89.1	2.580	2.302	63.8	1.140	0.64
7	30	1.3	338.39	0.83	65	71	88.6	2.570	2.289	63.8	1.140	0.64
8	35	1.3	340.96	0.83	65	71	88.6	2.570	2.289	63.8	1.140	0.64
9	40	1.3	343.53	0.83	65	72	88.1	2.560	2.276	63.8	1.140	0.64
10	45	1.3	346.09	0.83	65	72	88.1	2.560	2.276	63.8	1.140	0.64
11	50	1.3	348.65	0.83	65	72	88.8	2.580	2.294	63.8	1.140	0.64
12	55	1.3	351.23	0.83	65	72	87.7	2.548	2.265	63.8	1.140	0.64
Stop	60		353.778									
Averages-->		1.30		0.83	65.00	70.58	88.93			63.80	1.14	

TOTAL VOLUME = 30.932

USEPA
ACB Outlet Duct
RTP, NC
BioSampler Test Results

	RUN NUMBER	BS-2
	RUN DATE	11/22/2011
	RUN TIME	0
	MEASURED DATA	
(Y)	Meter Box Y	0.886
(DeltaH)	Avg Delta H, inches H2O	0.83
(Pbar)	Barometric Pressure, inches Hg	30.20
(Vm)	Meter Volume, ft³	30.932
(Tm)	Avg Meter Temp, deg F	71
(Pg)	Static Pressure, inches H2O	-2.20
(Ts)	Avg Stack Temp, deg F	65
(Vlc)	Water Collected, mL	0.0
(%CO2)	Carbon Dioxide, %	0.0
(%O2)	Oxygen, %	20.9
(%N2)	Nitrogen, %	79.1
(Cp)	Pitot Tube Coefficient	0.84
(DeltaP)	Avg Sqrt Delta P, (inches H2O)½	1.140
(Theta)	Sample Time, min	60.0
(Dn)	Nozzle Diameter, inches	0.157
	CALCULATED DATA	
(An)	Nozzle Area, square feet	0.000134439
(Vmstd)	Standard Meter Volume, ft³	27.572
(Ps)	Stack Pressure, inches Hg	30.04
(%H2O)	Moisture, %	2.0
(%H2Osat)	Moisture (at saturation), %	2.1
(Vwstd)	Standard Water Vapor Volume, ft³	0.000
(Mfd)	Dry Mole Fraction	0.980
(Md)	Molecular Weight-dry, lb/lb-mole	28.84
(Ms)	Molecular Weight-wet, lb/lb-mole	28.62
(Vs)	Velocity, ft/s	64.0
(A)	Stack Area, ft²	0.35
(Qa)	Volumetric flow, acfm	1,340
(Qs)	Volumetric flow, dscfm	1,325
(I)	Isokinetic Rate, %	90.0

Distance from far wall to outside of port	19
Nipple length and/or wall thickness	3.5
Depth of stack or duct	15.5

% of depth	distance from inside wall	distance including nipple*
2.1	0.33	3.83
6.7	1.04	4.54
11.8	1.83	5.33
17.7	2.74	6.24
25	3.88	7.38
35.6	5.52	9.02
64.4	9.98	13.48
75	11.63	15.13
82.3	12.76	16.26
88.2	13.67	17.17
93.3	14.46	17.96
97.9	15.17	18.67

* mark these points on probe

Blue = Input Items
Red = Calculated/Protected Items

Facility Name:	USEPA	Stack Diameter (Rd):	8	Rd Area:=>	0.35
Sampling Location:	ACB Outlet Duct	Stack Dimension (Rec):		Rec Area:=>	0.00
City, State:	RTP, NC	Width	0		
Operator's Initials:	jtn	Depth	0		
Run Number:	BS-3			Area Used	0.349066
Test Date:	11/29/2011				
Run Time:	1400-1500				

md=	28.84	
Ps=	29.71	
Mfd=	0.980	
Ms=	28.62	

K Factor Setup

Stack Temp.	160	<--input
Average Delta P	1.14	<--input
Meter Temp.	65	<--input
% Moisture	2	<--input
Sample Rate	0.44	<--input
Barometric Pres.	29.87	<--input
Delta H@	1.77	<--input
Static Pressure	-2.2	<--input
Pitot Coefficient	0.84	<--input
O2 %	20.9	<--input
CO2 %	0	<--input

Desired Nozzle =	0.160	<--CALCULATED
Actual Nozzle =	0.157	<--input
K Factor =	0.52	<--CALCULATED
Minutes/Point =	5	<--input
Meter Box Gamma =	0.886	<--input

Sample Point	Elapsed Time	Pitot Reading	Dry Gas Meter Reading	Delta H	Flue Gas Temp.	Outlet Meter Temp.	% Iso	Volume Metered	Volume Metered Standard	Velocity (vs)	Square Root Delta P	K-factor
1	0	1.14	353.778	0.59	178	68	100.7	2.452	2.171	66.4	1.068	0.52
2	5	1.14	356.23	0.59	160	69	100.2	2.480	2.192	65.5	1.068	0.53
3	10	1.14	358.71	0.60	148	69	98.4	2.460	2.174	64.8	1.068	0.54
4	15	1.14	361.17	0.61	155	70	98.8	2.460	2.170	65.2	1.068	0.53
5	20	1.14	363.63	0.60	151	70	99.7	2.490	2.197	65.0	1.068	0.53
6	25	1.14	366.12	0.61	171	71	100.3	2.470	2.175	66.1	1.068	0.52
7	30	1.14	368.59	0.59	176	71	101.1	2.480	2.184	66.3	1.068	0.51
8	35	1.14	371.07	0.59	178	72	101.5	2.490	2.188	66.4	1.068	0.51
9	40	1.14	373.56	0.59	163	72	99.9	2.480	2.179	65.6	1.068	0.53
10	45	1.14	376.04	0.60	183	72	101.9	2.490	2.188	66.7	1.068	0.51
11	50	1.14	378.53	0.58	174	73	100.6	2.480	2.175	66.2	1.068	0.52
12	55	1.14	381.01	0.59	187	73	100.8	2.459	2.157	66.9	1.068	0.51
Stop	60		383.469									
Averages-->		1.14		0.60	168.67	70.83	100.33			65.93	1.07	

TOTAL VOLUME = 29.691

USEPA
ACB Outlet Duct
RTP, NC
BioSampler Test Results

	RUN NUMBER	BS-3
	RUN DATE	11/29/2011
	RUN TIME	1400-1500
	MEASURED DATA	
(Y)	Meter Box Y	0.886
(DeltaH)	Avg Delta H, inches H2O	0.60
(Pbar)	Barometric Pressure, inches Hg	29.87
(Vm)	Meter Volume, ft³	29.691
(Tm)	Avg Meter Temp, deg F	71
(Pg)	Static Pressure, inches H2O	-2.20
(Ts)	Avg Stack Temp, deg F	169
(Vlc)	Water Collected, mL	0.0
(%CO2)	Carbon Dioxide, %	0.0
(%O2)	Oxygen, %	20.9
(%N2)	Nitrogen, %	79.1
(Cp)	Pitot Tube Coefficient	0.84
(DeltaP)	Avg Sqrt Delta P, (inches H2O)½	1.068
(Theta)	Sample Time, min	60.0
(Dn)	Nozzle Diameter, inches	0.157
	CALCULATED DATA	
(An)	Nozzle Area, square feet	0.000134439
(Vmstd)	Standard Meter Volume, ft³	26.150
(Ps)	Stack Pressure, inches Hg	29.71
(%H2O)	Moisture, %	2.0
(%H2Osat)	Moisture (at saturation), %	39.7
(Vwstd)	Standard Water Vapor Volume, ft³	0.000
(Mfd)	Dry Mole Fraction	0.980
(Md)	Molecular Weight-dry, lb/lb-mole	28.84
(Ms)	Molecular Weight-wet, lb/lb-mole	28.62
(Vs)	Velocity, ft/s	65.9
(A)	Stack Area, ft²	0.35
(Qa)	Volumetric flow, acfm	1,381
(Qs)	Volumetric flow, dscfm	1,128
(I)	Isokinetic Rate, %	100.3

Distance from far wall to outside of port	19
Nipple length and/or wall thickness	3.5
Depth of stack or duct	15.5

% of depth	distance from inside wall	distance including nipple*
2.1	0.33	3.83
6.7	1.04	4.54
11.8	1.83	5.33
17.7	2.74	6.24
25	3.88	7.38
35.6	5.52	9.02
64.4	9.98	13.48
75	11.63	15.13
82.3	12.76	16.26
88.2	13.67	17.17
93.3	14.46	17.96
97.9	15.17	18.67

* mark these points on probe

APPENDIX B: PM AND ORGANIC LABORATORY RESULTS

RESOLUTION ANALYTICS, INC.
Specialists in Air Emissions Analysis

ANALYTICAL REPORT

CLIENT: **ARCADIS, INC.**

PROJECT: RN990271.0002- US EPA

ANALYTICAL SERVICES PROVIDED:

- FILTERABLE PARTICULATE
  (EPA METHOD 5)

Confirmation of Data Review:

To the best of my knowledge this analytical data has been checked thoroughly for completeness and the results presented are accurate, error-free, legible, and have been performed and validated in accordance with the approved method(s).

Date of Review: February 1, 2011

J. Bruce Nemet

Quality Assurance Officer

www.resolutionanalytics.com
2733 Lee Avenue • Sanford, NC 27332 • Phone: 919-774-5557 • Fax: 919-776-6785

CHAIN OF CUSTODY RECORD

Project Name	US EPA
Project Location	RTP, NC
Sampling Location	ACB Outlet Duct
Project Number	RN990271.0002
Laboratory	Resolution Analytics
Laboratory P.O. #	

Sample ID	Sample Matrix	Analysis Requested
1R-ACB-PM-01	Dry filter	Particulate
	Front Half Acetone Rinse	Particulate
~~Acetone Blank~~		~~Particulate~~ BY
ACETONE BLANK		PARTICULATE

Notes/Comments:

Relinquished By:	BRENT HALL	Relinquished By:	BRENT HALL
Date/Time:	1-24-11 9:53 AM	Date/Time:	1-24-11 4:31
Received By:		Received By:	
Date/Time:	1/24/11 9:53 AM	Date/Time:	1-24-11 4:31

ARCADIS U.S., Inc.
4915 Prospectus Drive, Suite F
Durham, North Carolina 27713

Phone Number: (919) 544-4535
Fax Number: (919) 544-5690

RESOLUTION ANALYTICS, INC.
Specialists in Air Emissions Analysis

Client: Arcadis
RFA #: RN990271.0002
Method: EPA M5

Report Summary

SAMPLE ID	TOTAL FILTERABLE PARTICULATE
Acetone Blank	0.3 mg (in 230 mls)
IR-ACS-PM-01	27.7 mg

RESOLUTION ANALYTICS, INC.
Specialists in Air Emissions Analysis

Client: Arcadis
RFA #: RN990271.0002
Date Received: 1/24/11
Date Analyzed: 1/24/11
Analyst: JSC
Analysis: EPA M5
Analyte(s): Filterble Particulate

Analytical Narrative

Sample Matrix & Components:

Dry Filters, Front½ Acetone Rinses, Acetone Blank

Summary of Sample Prep:

The acetone rinses were transferred to pre-tared teflon "baggies" in a low humidity environment. The acetone rinses were evaporated overnight then desiccated for 24 hours, after which time they were weighed daily every six hours until consecutive weights agreed within ±0.5 mg. The filters were baked 2 to 3 hours at 105° C, desiccated for 2 hours and weighed.

All weights were recorded to the nearest 0.1 mg and include filterable particulate catch only. The total catch reported for each run is a sum of the filter and rinse catches. The acetone blank catch has been subtracted from sample rinse catches in proportion with their respective volumes.

Summary of Instrumentation:

Denver model Pinnacle Series analytical balance

Analytical Detection Limit(s): 0.1 mg

Miscellaneous Comments Regarding Sample Analysis: (Note unusual catch weights, interferences, odd sample behavior, and steps taken to confirm unusual results. Also note any deviations from standard analytical procedures, together with justification and possible affect on results. Specify samples when applicable.)

No modifications to EPA Method 5 analytical procedure were made. See data sheets for individual sample descriptions.

PARTICULATE SAMPLING LABORATORY RESULTS

Client: ***Arcadis*** *RFA #:* ***RN990271.0002***
Method: EPA M5

Run Number	*IR-ACS-PM-01*	*Run 2*	*Run 3*
Filter Container #			
Date / Init	*1/25/11 JSC*	*Date*	*Date*
	0.3758		
Baggie Tare Wt., g.	*#N/A*	*#N/A*	*#N/A*
Filter Tare Wt., g.	*0.3535*		
FILTER SAMPLE WT., g.	*0.0223*	*#N/A ##*	*#N/A #N/A*
#N/A			
Front ½ Rinse Container #	*929*		
Date / Init		*Date*	*Date*
1/27/11 JSC F	*3.3650*		
1/26/11 JSC	*3.3653*	*###*	*##*
Tare Wt., g. (*40 ml)*	*3.3595*	(*ml) #N/A*	(*ml) #N/A*
RINSE SAMPLE WT., g.	*0.0055*	*#N/A*	*#N/A*
Filter Catch, mg.	***22.3***	***#N/A***	***#N/A***
Rinse Catch, mg.	*5.5*	*#N/A*	*#N/A*
Rinse Blank Residue, mg.	*0.1*	*0.0*	*0.0*
Net Rinse Catch, mg.	***5.4***	***#N/A***	***#N/A***
FILTERABLE PARTICULATE, mg.	***27.7***	***#N/A***	***#N/A***

Legend: *F = Final Weight*

Notes & Comments:

REAGENT BLANK LABORATORY RESULTS

Client: ***Arcadis*** *RFA #:* ***RN990271.0002***
Method: EPA M5

Run Number	*Acetone Blank*
Sample ID/Container #	*2273*

	Date	*Init*		
	1/27/11	*JSC*		*3.5824*
	1/26/11	*JSC*	*F*	*3.5821*
Tare Wt., g.	*(*	*230*	*ml)*	*3.5818*
SAMPLE WT., g.				*0.0003*

Blank Beaker #	*2273*	
Final wt., mg.	*3.5821*	
Tare wt., mg.	*3.5818*	
Residue, mg.	*0.3*	
Volume, ml.	*230*	
Density, mg/ml	*785.0*	
Conc., mg/mg	*1.66E-06*	*<--*
Upper Limit, mg	*1.00E-05*	

Legend: *F = Final Weight*

Notes & Comments:

M5/17 Particulate Bench Sheet

Client: ARCADIS
Analyst: JSC

RFA #: R1990271.0002
Method: 5

Date Received: 1/24/11
Date Analyzed: 1/24/11

Run #	Filter			Acetone Rinse	
	Baggie #	Filter #	Filter Tare	Baggie #	Rinse Volume
1R-ACB-PM-01		836-3730	0.3535	929	40
ACETONE BLANK				2273	230

RESOLUTION ANALYTICS, INC.
Specialists in Air Emissions Analysis

ANALYTICAL REPORT

CLIENT: **ARCADIS**

PROJECT: RN990271.0002

ANALYTICAL SERVICES PROVIDED:

- FILTERABLE PARTICULATE
  (EPA METHOD 5)

Confirmation of Data Review:

To the best of my knowledge this analytical data has been checked thoroughly for completeness and the results presented are accurate, error-free, legible, and have been performed and validated in accordance with the approved method(s).

Date of Review: March 3, 2011

J. Bruce Nemet

Quality Assurance Officer

www.resolutionanalytics.com
2733 Lee Avenue • Sanford, NC 27332 • Phone: 919-774-5557 • Fax: 919-776-6785

CHAIN OF CUSTODY RECORD

Project Name	US EPA
Project Location	RTP, NC
Sampling Location	ACB Outlet Duct
Project Number	RN990271.0002
Laboratory	Resolution Analytics
Laboratory P.O. #	

Sample ID	Sample Matrix	Analysis Requested
1R-ACB-PM-02	Dry filter	Particulate
	Front Half Acetone Rinse	Particulate
ACB-PM-FB	Dry filter	Particulate
	Front Half Acetone Rinse	Particulate
Acetone Blank		Particulate

Reling. by: Erica Shepherd
Date/Time: 2/18/11 1:13
Received by: Brian Gantz
Date/Time: 2/18/11

Notes/Comments:
Field blank collected 2/9/11. Emission sample collected 2/16/11.

Relinquished By:		Relinquished By:	
Date/Time:	2/17/11 10:20	Date/Time:	2-17-11 10:40
Received By:		Received By:	Brian M. Gantz
Date/Time:	2/17/11 10:20	Date/Time:	2-17-11 10:40

ARCADIS U.S., Inc.
4915 Prospectus Drive, Suite F
Durham, North Carolina 27713

Phone Number: (919) 544-4535
Fax Number: (919) 544-5690

RESOLUTION ANALYTICS, INC.
Specialists in Air Emissions Analysis

Client: Arcadis
RFA #: RN990271.0002
Method: EPA M5

Report Summary

SAMPLE ID	TOTAL FILTERABLE PARTICULATE
Acetone Blank	0.4 mg (in 220 mls)
1R-ACB-PM-02	59.6 mg
ACB-PM-FB	0.8 mg
In House Filter Blank	0.5 mg

RESOLUTION ANALYTICS, INC.
Specialists in Air Emissions Analysis

Client:	Arcadis
RFA #:	RN990271.0002
Date Received:	2/22/11
Date Analyzed:	2/23/11
Analyst:	JSC
Analysis:	EPA M5
Analyte(s):	Filterble Particulate

Analytical Narrative

Sample Matrix & Components:

Dry Filters, Front½ Acetone Rinses, Acetone Blank

Summary of Sample Prep:

The acetone rinses were transferred to pre-tared teflon "baggies" in a low humidity environment. The acetone rinses were evaporated overnight then desiccated for 24 hours, after which time they were weighed daily every six hours until consecutive weights agreed within ±0.5 mg. The filters were baked 2 to 3 hours at 105° C, desiccated for 2 hours and weighed.

All weights were recorded to the nearest 0.1 mg and include filterable particulate catch only. The total catch reported for each run is a sum of the filter and rinse catches. The acetone blank catch has been subtracted from sample rinse catches in proportion with their respective volumes.

Summary of Instrumentation:

Denver model Pinnacle Series analytical balance

Analytical Detection Limit(s): 0.1 mg

Miscellaneous Comments Regarding Sample Analysis: (Note unusual catch weights, interferences, odd sample behavior, and steps taken to confirm unusual results. Also note any deviations from standard analytical procedures, together with justification and possible affect on results. Specify samples when applicable.)

No modifications to EPA Method 5 analytical procedure were made. See data sheets for individual sample descriptions.

PARTICULATE SAMPLING LABORATORY RESULTS

Client: ***Arcadis*** *RFA #:* ***RN990271.0002***
Method: EPA M5

Run Number	*1R-ACB-PM-02*	*ACB-PM-FB*	*In House Filter Blank*
Filter Container #			
Date / *Init*	*2/23/11* *JSC*	*2/23/11*	*2/23/11*
Baggie Tare Wt., g.	*0.4066*	*0.3549*	*0.3542*
Filter Tare Wt., g.	*#N/A*	*#N/A*	*#N/A*
FILTER SAMPLE WT., g.	*0.3526*	*0.3545*	*0.3537*
	0.0540	*0.0004*	*0.0005*
Front ½ Rinse Container #	*2572*	*2560*	
Date / *Init*			
	2/24/11 *JSC* *F*	*2/14/11*	
	2/23/11 *JSC* *F*	*2/23/11* *F*	##
Tare Wt., g.	*3.5353* (*60 ml)*	*3.5296* (*10 ml)*	*3.5441* (*ml)*
RINSE SAMPLE WT., g.	*3.5437*	*#N/A*	
	0.0057	*0.0004*	*#N/A*
Filter Catch, mg.	***54.0***	***0.4***	***0.5***
Rinse Catch, mg.	*5.7*	*0.4*	*#N/A*
Rinse Blank Residue, mg.	*0.1*	*0.0*	*0.0*
Net Rinse Catch, mg.	***5.6***	***0.4***	***#N/A***
FILTERABLE PARTICULATE, mg.	***59.6***	***0.8***	***0.5***

Legend: *F = Final Weight*

Notes & Comments:

REAGENT BLANK LABORATORY RESULTS

Client: ***Arcadis*** *RFA #:* ***RN990271.0002***
Method: EPA M5

Run Number	*Acetone Blank*
Sample ID/Container #	*2614*

	Date	*Init*		
	2/24/11	*JSC*		*3.5329*
	2/23/11	*JSC*	*F*	*3.5328*
Tare Wt., g.	(	*220*	*ml)*	*3.5324*
SAMPLE WT., g.				*0.0004*

Blank Beaker #	*2614*	
Final wt., mg.	*3.5328*	
Tare wt., mg.	*3.5324*	
Residue, mg.	*0.4*	
Volume, ml.	*220*	
Density, mg/ml	*785.0*	
Conc., mg/mg	*2.32E-06*	*<--*
Upper Limit, mg	*1.00E-05*	

Legend: *F = Final Weight*

Notes & Comments:

M5/17 Particulate Bench Sheet

Client: ARCADIS
Analyst: JSC
RFA #: A1990271.0002
Method: 5
Date Received: 2/22/11
Date Analyzed: 2/23/11

Run #	Filter			Acetone Rinse	
	Baggie #	Filter #	Filter Tare	Baggie #	Rinse Volume
1R - ACB - PM - 02		83G - 3731	0.3526	2572	60
ACB - PM - FB		83G-3732	0.3545	2560	10
ACETONE BLANK				2614	220
IHFB		83G - 3744	0.3537		

ARCADIS-US: Durham

4915 Prospectus Drive, Suite F
Durham, NC 27713

ACB Outlet Duct

Client RN990271.0002
PO # RB68316

Analytical Report
(0111-13)

EPA SW-846 Method 8270C

Polyaromatic Hydrocarbons - SCAN Mode

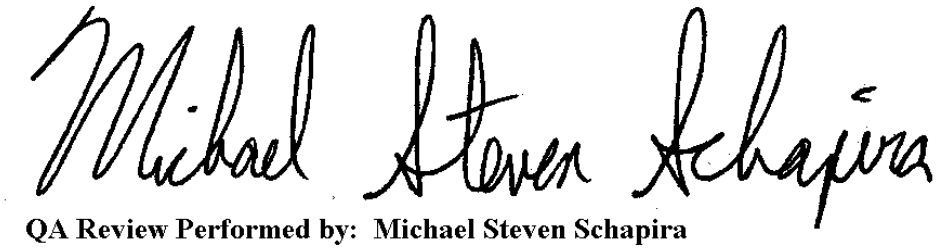
Enthalpy Analytical, Inc.

Phone: (919) 850 - 4392 / Fax: (919) 850 - 9012 / www.enthalpy.com
2202 Ellis Road Durham, NC 27703 - 5518

I certify that to the best of my knowledge all analytical data presented in this report:

- Have been checked for completeness
- Are accurate, error-free, and legible
- Have been conducted in accordance with approved protocol, and that all deviations and analytical problems are summarized in the appropriate narrative(s)

This analytical report was prepared in Portable Document Format (.PDF) and contains 112 pages.



QA Review Performed by: Michael Steven Schapira

Report Issued: 2/4/11

Results

Company	ARCADIS-US: Durham
Analyst	TDD
Parameters	EPA Method 8270C
# Samples	1 Run

Client #	RN990271.0002
Job #	0111-13
PO #	RB68316
Report Date	1/28/2011

Sample ID: **0111-13 Run 1**
Data File: W1100050.D
Tank/Misc ID:

DF: 1.00
Aliquot Factor: 1.00
Extraction Vol (mL): 5.00
ConCal 1

Compound	Quant	Ret. Time (min)	Area	Conc. (ug/mL)	Catch Weight (ug)	Flags
Naphthalene	128	6.52	3,869,796	77.8	389	
2-Methylnaphthalene	142	7.20	201,854	6.34	31.7	
1-Methylnaphthalene	142	7.30	151,061	4.90	24.5	J
Acenaphthylene	152	8.12	595,949	12.2	61.1	
Acenaphthene (CCC)	154	NA	0	0.934	4.67	ND
Fluorene	166	8.80	149,347	4.28	21.4	J
Phenanthrene	178	9.79	756,841	15.2	76.0	
Anthracene	178	9.84	74,643	1.50	7.50	J
Fluoranthene (CCC)	202	11.0	412,863	7.97	39.8	
Pyrene	202	11.2	367,230	6.60	33.0	
Benzo(a)anthracene	228	12.5	61,611	1.26	6.31	J
Chrysene	228	12.6	57,553	1.25	6.26	J
Benzo(b)fluoranthene	252	14.1	62,551	1.54	7.71	J
Benzo(k)fluoranthene	252	14.1	24,878	0.628	3.14	J
Benzo(e)pyrene	252	14.6	26,025	0.720	3.60	J
Benzo(a)pyrene (CCC)	252	14.6	36,754	0.986	4.93	J
Perylene	252	NA	0	0.340	1.70	ND
Indeno(1,2,3-cd)pyrene	276	16.8	26,218	0.711	3.55	J
Dibenz(a,h)anthracene	278	NA	0	0.425	2.13	ND
Benzo(g,h,i)perylene	276	17.3	28,060	0.933	4.66	J

					Rec. (%)	Spk Amt	Flags
1,4-Dichlorobenzene-d4 (I)	152	5.29	568,852	40.0	N/A		
Naphthalene-d8 (I)	136	6.50	2,065,421	40.0	N/A		
Acenaphthene-d10 (I)	164	8.25	1,212,574	40.0	N/A		
Phenanthrene-d10 (I)	188	9.77	2,206,499	40.0	N/A		
Chrysene-d12 (I)	240	12.6	2,022,092	40.0	N/A		
Perylene-d12 (I)	264	14.7	1,621,593	40.0	N/A		
2-Fluorophenol (surr)	112	4.17	257,460	16.6	83.0	100	PASS
Phenol-d5 (surr)	99	4.89	287,479	15.9	79.7	100	PASS
Nitrobenzene-d5 (surr)	82	5.79	331,339	18.7	93.6	100	PASS
2-Fluorobiphenyl (surr)	172	7.54	727,430	19.4	97.0	100	PASS
Fluorene-d10 (surr)	176	8.78	607,572	18.2	91.2	100	PASS
2,4,6-Tribromophenol (surr)	330	9.05	88,844	17.6	87.9	100	PASS
Pyrene-d10 (surr)	212	11.2	892,507	19.4	97.0	100	PASS
Terphenyl-d14 (surr)	244	11.3	749,952	20.5	102	100	PASS

Internal Standard Acceptance Criteria (Area -50%/+100%, RT +/- 30 sec.)

Internal Standard Name	Concal RT	Sample RT	Concal IS Area	Sample IS Area	Flag
1,4-Dichlorobenzene-d4 (I)	5.29	5.29	563,777	568,852	Pass
Naphthalene-d8 (I)	6.50	6.50	1,972,475	2,065,421	Pass
Acenaphthene-d10 (I)	8.26	8.25	1,079,691	1,212,574	Pass
Phenanthrene-d10 (I)	9.77	9.77	1,925,531	2,206,499	Pass
Chrysene-d12 (I)	12.57	12.56	1,937,140	2,022,092	Pass
Perylene-d12 (I)	14.75	14.75	1,582,057	1,621,593	Pass

Company	ARCADIS-US: Durham
Analyst	TDD
Parameters	EPA Method 8270C
# Samples	1 Run

Client #	RN990271.0002
Job #	0111-13
PO #	RB68316
Report Date	1/28/2011

Sample ID: **0111-13 Run 1 LD**
Data File: W1100051.D
Tank/Misc ID:

DF: 1.00
Aliquot Factor: 1.00
Extraction Vol (mL): 5.00
ConCal 1

Compound	Quant	Ret. Time (min)	Area	Conc. (ug/mL)	Catch Weight (ug)	Flags	% Diff
Naphthalene	128	6.52	4,009,940	81.4	407		4.6
2-Methylnaphthalene	142	7.20	199,158	6.31	31.6		0.4
1-Methylnaphthalene	142	7.30	155,319	5.09	25.5		3.8
Acenaphthylene	152	8.12	612,696	12.9	64.3		5.3
Acenaphthene (CCC)	154	NA	0	0.934	4.67	ND	0.0
Fluorene	166	8.81	152,878	4.48	22.4	J	4.9
Phenanthrene	178	9.79	795,360	15.9	79.4		4.6
Anthracene	178	9.85	78,485	1.57	7.85	J	4.6
Fluoranthene (CCC)	202	11.0	437,252	8.39	42.0		5.4
Pyrene	202	11.2	400,273	7.15	35.8		8.4
Benzo(a)anthracene	228	12.5	73,616	1.33	6.64	J	5.2
Chrysene	228	12.6	69,071	1.32	6.61	J	5.7
Benzo(b)fluoranthene	252	14.1	87,991	1.80	8.98	J	16.4
Benzo(k)fluoranthene	252	14.1	24,140	0.504	2.52	J	19.7
Benzo(e)pyrene	252	14.6	33,693	0.772	3.86	J	7.1
Benzo(a)pyrene (CCC)	252	14.6	47,912	1.06	5.32	J	7.9
Perylene	252	NA	0	0.340	1.70	ND	0.0
Indeno(1,2,3-cd)pyrene	276	16.8	32,792	0.736	3.68	J	3.5
Dibenz(a,h)anthracene	278	NA	0	0.425	2.13	ND	0.0
Benzo(g,h,i)perylene	276	17.3	33,051	0.909	4.55	J	2.5

					Rec. (%)	Spk Amt	Flags
1,4-Dichlorobenzene-d4 (I)	152	5.29	583,750	40.0	N/A		
Naphthalene-d8 (I)	136	6.50	2,045,145	40.0	N/A		
Acenaphthene-d10 (I)	164	8.25	1,183,673	40.0	N/A		
Phenanthrene-d10 (I)	188	9.77	2,217,759	40.0	N/A		
Chrysene-d12 (I)	240	12.6	2,296,315	40.0	N/A		
Perylene-d12 (I)	264	14.8	1,959,935	40.0	N/A		
2-Fluorophenol (surr)	112	4.17	280,212	17.6	88.0	100	PASS
Phenol-d5 (surr)	99	4.89	315,905	17.1	85.3	100	PASS
Nitrobenzene-d5 (surr)	82	5.79	341,189	18.8	93.9	100	PASS
2-Fluorobiphenyl (surr)	172	7.54	745,275	20.4	102	100	PASS
Fluorene-d10 (surr)	176	8.78	622,954	19.2	95.8	100	PASS
2,4,6-Tribromophenol (surr)	330	9.05	101,331	20.0	99.8	100	PASS
Pyrene-d10 (surr)	212	11.2	989,539	21.4	107	100	PASS
Terphenyl-d14 (surr)	244	11.3	846,772	23.0	115	100	PASS

Internal Standard Acceptance Criteria (Area -50%/+100%, RT +/- 30 sec.)

Internal Standard Name	Concal RT	Sample RT	Concal IS Area	Sample IS Area	Flag
1,4-Dichlorobenzene-d4 (I)	5.29	5.29	563,777	583,750	Pass
Naphthalene-d8 (I)	6.50	6.50	1,972,475	2,045,145	Pass
Acenaphthene-d10 (I)	8.26	8.25	1,079,691	1,183,673	Pass
Phenanthrene-d10 (I)	9.77	9.77	1,925,531	2,217,759	Pass
Chrysene-d12 (I)	12.57	12.56	1,937,140	2,296,315	Pass
Perylene-d12 (I)	14.75	14.75	1,582,057	1,959,935	Pass

Company	ARCADIS-US: Durham
Analyst	TDD
Parameters	EPA Method 8270C
# Samples	1 Run

Client #	RN990271.0002
Job #	0111-13
PO #	RB68316
Report Date	1/28/2011

Sample ID: **0111-13 MB**
Data File: W1100049.D
Tank/Misc ID:

DF: 1.00
Aliquot Factor: 1.00
Extraction Vol (mL): 5.00
ConCal 1

Compound	Quant	Ret. Time (min)	Area	Conc. (ug/mL)	Catch Weight (ug)	Flags
Naphthalene	128	NA	0	0.665	3.33	ND
2-Methylnaphthalene	142	NA	0	0.618	3.09	ND
1-Methylnaphthalene	142	NA	0	0.613	3.07	ND
Acenaphthylene	152	NA	0	0.675	3.37	ND
Acenaphthene (CCC)	154	NA	0	0.934	4.67	ND
Fluorene	166	NA	0	0.783	3.92	ND
Phenanthrene	178	NA	0	0.771	3.86	ND
Anthracene	178	NA	0	0.760	3.80	ND
Fluoranthene (CCC)	202	NA	0	0.919	4.60	ND
Pyrene	202	NA	0	0.937	4.69	ND
Benzo(a)anthracene	228	NA	0	0.550	2.75	ND
Chrysene	228	NA	0	0.556	2.78	ND
Benzo(b)fluoranthene	252	NA	0	0.300	1.50	ND
Benzo(k)fluoranthene	252	NA	0	0.356	1.78	ND
Benzo(e)pyrene	252	NA	0	0.340	1.70	ND
Benzo(a)pyrene (CCC)	252	NA	0	0.340	1.70	ND
Perylene	252	NA	0	0.340	1.70	ND
Indeno(1,2,3-cd)pyrene	276	NA	0	0.300	1.50	ND
Dibenz(a,h)anthracene	278	NA	0	0.425	2.13	ND
Benzo(g,h,i)perylene	276	NA	0	0.352	1.76	ND

					Rec. (%)	Spk Amt	Flags
1,4-Dichlorobenzene-d4 (I)	152	5.29	522,090	40.0	N/A		
Naphthalene-d8 (I)	136	6.50	1,845,188	40.0	N/A		
Acenaphthene-d10 (I)	164	8.25	1,083,822	40.0	N/A		
Phenanthrene-d10 (I)	188	9.77	1,974,624	40.0	N/A		
Chrysene-d12 (I)	240	12.6	1,995,220	40.0	N/A		
Perylene-d12 (I)	264	14.8	1,733,409	40.0	N/A		
2-Fluorophenol (surr)	112	4.16	218,019	15.3	76.6	100	PASS
Phenol-d5 (surr)	99	4.88	261,447	15.8	79.0	100	PASS
Nitrobenzene-d5 (surr)	82	5.79	226,918	14.0	69.8	100	PASS
2-Fluorobiphenyl (surr)	172	7.54	539,767	16.1	80.5	100	PASS
Fluorene-d10 (surr)	176	8.78	514,511	17.3	86.4	100	PASS
2,4,6-Tribromophenol (surr)	330	9.05	80,797	17.9	89.4	100	PASS
Pyrene-d10 (surr)	212	11.2	828,814	20.1	101	100	PASS
Terphenyl-d14 (surr)	244	11.3	634,438	19.4	96.8	100	PASS

Internal Standard Acceptance Criteria (Area -50%/+100%, RT +/- 30 sec.)

Internal Standard Name	Concal RT	Sample RT	Concal IS Area	Sample IS Area	Flag
1,4-Dichlorobenzene-d4 (I)	5.29	5.29	563,777	522,090	Pass
Naphthalene-d8 (I)	6.50	6.50	1,972,475	1,845,188	Pass
Acenaphthene-d10 (I)	8.26	8.25	1,079,691	1,083,822	Pass
Phenanthrene-d10 (I)	9.77	9.77	1,925,531	1,974,624	Pass
Chrysene-d12 (I)	12.57	12.56	1,937,140	1,995,220	Pass
Perylene-d12 (I)	14.75	14.75	1,582,057	1,733,409	Pass

Company	ARCADIS-US: Durham
Analyst	TDD
Parameters	EPA Method 8270C
# Samples	1 Run

Client #	RN990271.0002
Job #	0111-13
PO #	RB68316
Report Date	1/28/2011

Sample ID: **CH2Cl2 System Blank (Scan)**
Data File: W1100045.D
Tank/Misc ID:

DF: 1.00
Aliquot Factor: 1.00
Extraction Vol (mL): 5.00
ConCal 1

Compound	Quant	Ret. Time (min)	Area	Conc. (ug/mL)	Catch Weight (ug)	Flags
Naphthalene	128	NA	0	0.665	3.33	ND
2-Methylnaphthalene	142	NA	0	0.618	3.09	ND
1-Methylnaphthalene	142	NA	0	0.613	3.07	ND
Acenaphthylene	152	NA	0	0.675	3.37	ND
Acenaphthene (CCC)	154	NA	0	0.934	4.67	ND
Fluorene	166	NA	0	0.783	3.92	ND
Phenanthrene	178	NA	0	0.771	3.86	ND
Anthracene	178	NA	0	0.760	3.80	ND
Fluoranthene (CCC)	202	NA	0	0.919	4.60	ND
Pyrene	202	NA	0	0.937	4.69	ND
Benzo(a)anthracene	228	NA	0	0.550	2.75	ND
Chrysene	228	NA	0	0.556	2.78	ND
Benzo(b)fluoranthene	252	NA	0	0.300	1.50	ND
Benzo(k)fluoranthene	252	NA	0	0.356	1.78	ND
Benzo(e)pyrene	252	NA	0	0.340	1.70	ND
Benzo(a)pyrene (CCC)	252	NA	0	0.340	1.70	ND
Perylene	252	NA	0	0.340	1.70	ND
Indeno(1,2,3-cd)pyrene	276	NA	0	0.300	1.50	ND
Dibenz(a,h)anthracene	278	NA	0	0.425	2.13	ND
Benzo(g,h,i)perylene	276	NA	0	0.352	1.76	ND

					Rec. (%)	Spk Amt	Flags
1,4-Dichlorobenzene-d4 (I)	152	5.29	554,892	40.0	N/A		
Naphthalene-d8 (I)	136	6.50	1,981,163	40.0	N/A		
Acenaphthene-d10 (I)	164	8.26	1,122,172	40.0	N/A		
Phenanthrene-d10 (I)	188	9.77	1,929,188	40.0	N/A		
Chrysene-d12 (I)	240	12.6	1,719,405	40.0	N/A		
Perylene-d12 (I)	264	14.7	1,512,053	40.0	N/A		

Internal Standard Acceptance Criteria (Area -50%/+100%, RT +/- 30 sec.)

Internal Standard Name	Concal RT	Sample RT	Concal IS Area	Sample IS Area	Flag
1,4-Dichlorobenzene-d4 (I)	5.29	5.29	563,777	554,892	Pass
Naphthalene-d8 (I)	6.50	6.50	1,972,475	1,981,163	Pass
Acenaphthene-d10 (I)	8.26	8.26	1,079,691	1,122,172	Pass
Phenanthrene-d10 (I)	9.77	9.77	1,925,531	1,929,188	Pass
Chrysene-d12 (I)	12.57	12.56	1,937,140	1,719,405	Pass
Perylene-d12 (I)	14.75	14.75	1,582,057	1,512,053	Pass

Company	ARCADIS-US: Durham
Analyst	TDD
Parameters	EPA Method 8270C
# Samples	1 Run

Client #	RN990271.0002
Job #	0111-13
PO #	RB68316
Report Date	1/28/2011

Sample ID: **0111-13 LCS**
Data File: W1100043.D
Tank/Misc ID:

DF: 1.00
Aliquot Factor: 1.00
Extraction Vol (mL): 5.00
ConCal 1

Compound	Quant	Ret. Time (min)	Area	Conc. (ug/mL)	Catch Weight (ug)	Flags	Tag Value	% Diff. From Tag	%Rec
Naphthalene	128	6.52	840,530	17.6	88.1		100	11.9	88.1
2-Methylnaphthalene	142	7.20	543,266	17.8	88.9		100	11.1	88.9
1-Methylnaphthalene	142	7.30	523,921	17.7	88.6		100	11.4	88.6
Acenaphthylene	152	8.12	828,230	18.2	90.9		100	9.1	90.9
Acenaphthene (CCC)	154	8.29	518,942	17.8	89.1		100	10.9	89.1
Fluorene	166	8.81	615,875	18.9	94.4		100	5.6	94.4
Phenanthrene	178	9.79	870,089	19.4	97.2		100	2.8	97.2
Anthracene	178	9.85	851,163	19.0	95.2		100	4.8	95.2
Fluoranthene (CCC)	202	11.0	913,598	19.6	98.1		100	1.9	98.1
Pyrene	202	11.3	977,418	19.5	97.7		100	2.3	97.7
Benzo(a)anthracene	228	12.6	809,408	19.2	95.8		100	4.2	95.8
Chrysene	228	12.6	745,983	18.7	93.7		100	6.3	93.7
Benzo(b)fluoranthene	252	14.1	689,771	19.4	97.0		100	3.0	97.0
Benzo(k)fluoranthene	252	14.1	698,187	20.1	100		100	0.5	100.5
Benzo(e)pyrene	252	14.6	670,300	21.2	106		100	5.8	105.8
Benzo(a)pyrene (CCC)	252	14.7	634,625	19.4	97.0		100	3.0	97.0
Perylene	252	14.8	643,038	18.8	94.2		100	5.8	94.2
Indeno(1,2,3-cd)pyrene	276	16.8	594,964	18.4	92.0		100	8.0	92.0
Dibenz(a,h)anthracene	278	16.8	498,597	18.3	91.4		100	8.6	91.4
Benzo(g,h,i)perylene	276	17.3	478,483	18.1	90.7		100	9.3	90.7

					Rec. (%)	Spk Amt	Flags
1,4-Dichlorobenzene-d4 (I)	152	5.29	553,789	40.0	N/A		
Naphthalene-d8 (I)	136	6.50	1,980,939	40.0	N/A		
Acenaphthene-d10 (I)	164	8.26	1,132,651	40.0	N/A		
Phenanthrene-d10 (I)	188	9.77	1,983,150	40.0	N/A		
Chrysene-d12 (I)	240	12.6	1,750,154	40.0	N/A		
Perylene-d12 (I)	264	14.8	1,422,438	40.0	N/A		
2-Fluorophenol (surr)	112	4.16	254,174	16.8	84.2	100	PASS
Phenol-d5 (surr)	99	4.88	307,408	17.5	87.5	100	PASS
Nitrobenzene-d5 (surr)	82	5.79	293,850	17.0	85.2	100	PASS
2-Fluorobiphenyl (surr)	172	7.54	602,034	17.2	86.0	100	PASS
Fluorene-d10 (surr)	176	8.78	571,950	18.4	91.9	100	PASS
2,4,6-Tribromophenol (surr)	330	9.05	86,854	19.1	95.6	100	PASS
Pyrene-d10 (surr)	212	11.2	781,120	18.9	94.5	100	PASS
Terphenyl-d14 (surr)	244	11.3	587,552	17.9	89.3	100	PASS

Internal Standard Acceptance Criteria (Area -50%/+100%, RT +/- 30 sec.)

Internal Standard Name	Concal RT	Sample RT	Concal IS Area	Sample IS Area	Flag
1,4-Dichlorobenzene-d4 (I)	5.29	5.29	563,777	553,789	Pass
Naphthalene-d8 (I)	6.50	6.50	1,972,475	1,980,939	Pass
Acenaphthene-d10 (I)	8.26	8.26	1,079,691	1,132,651	Pass
Phenanthrene-d10 (I)	9.77	9.77	1,925,531	1,983,150	Pass
Chrysene-d12 (I)	12.57	12.57	1,937,140	1,750,154	Pass
Perylene-d12 (I)	14.75	14.76	1,582,057	1,422,438	Pass

Narrative Summary



Enthalpy Analytical Narrative Summary

Company	ARCADIS-US: Durham
Analyst	TDD
Parameters	EPA SW-846 Method 8270C
# Samples	1 Run

Client #	RN990271.0002
Job #	0111-13
PO #	RB68316
Report Date	January 31, 2011

Custody

Heather Tarjeft received the sample on 1/24/11 after being relinquished by ARCADIS-US: Durham. The sample was received at 7.4°C and in good condition. Prior to, during, and after analysis, the sample was kept under lock with access only to authorized personnel by Enthalpy Analytical, Inc.

Analysis

The sample was analyzed for SW-846 Method 8270C Polyaromatic Hydrocarbons (PAHs) - SCAN Mode using the analytical procedures in *EPA SW-846 Method 8270C, Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)*.

Prior to sample collection, the XAD-2 traps were spiked with a BN Surrogate Mix (100 µg of nitrobenzene-d_5, 2-fluorobiphenyl, and terphenyl-d_{14}).

The sample train consisted of five fractions: Filter, XAD Trap, FH Rinse, BH Rinse, and Condensate. All rinse fractions were methanol/methylene chloride.

The sample was spiked with the three acid extraction surrogates (100 µg of 2-fluorophenol, phenol-d_5, and 2, 4, 6-tribromophenol) and PAH extraction surrogates (fluorene-d_{10} and pyrene-d_{10}); 50% spiked into the XAD/Filter and 50% spiked into the condensate.

The filter and XAD-2 fractions were Soxhlet extracted for 18 hours. The rinse and condensate fractions were combined and Separatory funnel extracted using methylene chloride.

The Condensate/Rinse and Filter/XAD-2 extracts were combined and concentrated to a 5 mL final volume.

An LCS and method blank were prepared and analyzed with these samples. All QC samples were concentrated to a 5 mL final volume.

A 100-µL aliquot of each client or QC sample extract was spiked with SVOA internal standard spiking solution, before analyses.

Enthalpy Analytical Narrative Summary
(continued)

Analysis (continued)	The Agilent Technologies Model 6890N, Gas Chromatograph ("Wiley" S/N CN10244010) was equipped with a 5973 Mass Selective Detector and a Restek rxi-5Sil MS, 30 m x 0.25 mm x 0.5 µm (SN 982029) capillary column for these analyses.
Calibration	The RSD of all target compounds in the initial calibration were within the 20% acceptance limit. All continuing calibration criteria were met in the analysis of these samples. The calibration curve is included in the Calibration Curve Chromatograms section of this report.
Chromatographic Conditions	A copy of the acquisition method RXI-2A-EA.M is included in the Calibration Curve Chromatograms section of this report.
QC Notes	All internal standard criteria were met in the analyses of this sample. The sample was analyzed in duplicate and met all duplicate criteria. The analysis of the LCS exhibited recovery values of 80-120% for all compounds. All sample preparation and analytical holding times specified in the method were met.
Reporting Notes	The results presented in this report are representative of the samples as provided to the laboratory.

General Reporting Notes

The following are general reporting notes that are applicable to all Enthalpy Analytical, Inc. data reports, unless specifically noted otherwise.

- The acronym ***MDL*** represents the Minimum Detection Limit. Below this value the laboratory cannot determine the presence of the analyte of interest reliably.
- The acronym ***LOQ*** represents the Limit of Quantification. Below this value the laboratory cannot quantitate the analyte of interest within the criteria of the method.
- The acronym ***ND*** following a value indicates a non-detect or analytical result below the MDL.
- The letter ***J*** following a value indicates an analytical result between the MDL and the LOQ. A J flag indicates that the laboratory can positively identify the analyte of interest as present, but the value should be considered an estimate.
- The letter ***E*** following a value indicates an analytical result exceeding 100% of the highest calibration point. The associated value should be considered as an estimate.
- The acronym ***DF*** represents Dilution Factor. This number represents dilution of the sample during the preparation and/or analysis process. The analytical result taken from a laboratory instrument is multiplied by the DF to determine the final undiluted sample results.
- The addition of ***MS*** to the Sample ID represents a Matrix Spike. An aliquot of an actual sample is spiked with a known amount of analyte so that a percent recovery value can be determined. This shows what effect the sample matrix may have on the target analyte, i.e. whether or not anything in the sample matrix interferes with the analysis of the analyte(s).
- The addition of ***MSD*** to the Sample ID represents a Matrix Spike Duplicate. Prepared in the same manner as an MS, the use of duplicate matrix spikes allows further confirmation of laboratory quality by showing the consistency of results gained by performing the same steps multiple times.
- The addition of ***LD*** to the Sample ID represents a Laboratory Duplicate. The analyst prepares an additional aliquot of sample for testing and the results of the duplicate analysis are compared to the initial result. The result should have a difference value of within 10% of the initial result (if the results of the original analysis are greater than the LOQ).
- The addition of ***AD*** to the Sample ID represents an Alternate Dilution. The analyst prepares an additional aliquot at a different dilution factor (usually double the initial factor). This analysis helps confirm that no additional compound is present and coeluting or sharing absorbance with the analyte of interest, as they would have a different response/absorbance than the analyte of interest.
- The Sample ID ***LCS*** represents a Laboratory Control Sample. Clean matrix, similar to the client sample matrix, prepared and analyzed by the laboratory using the same reagents, spiking standards and procedures used for the client samples. The LCS is used to assess the control of the laboratory's analytical system. Whenever spikes are prepared for our client projects, two extra spikes are prepared. The extras (randomly chosen) are labeled with the associated project number and kept in-house at the appropriate temperature conditions. When the project samples are received for analysis, the LCSs are analyzed to confirm that the analyte could be recovered from the media, separate from the samples which were used on the project and which may have been affected by source matrix, sample collection and/or sample transport.

General Reporting Notes

(continued)

- **Significant Figures**: Where the reported value is much greater than unity (1.00) in the units expressed, the number is rounded to a whole number of units, rather than to 3 significant figures. For example, a value of 10,456.45 ug catch is rounded to 10,456 ug. There are five significant digits displayed, but no confidence should be placed on more than two significant digits.
- **Manual Integration**: The data systems used for processing will flag manually integrated peaks with an "M". There are several reasons a peak may be manually integrated. These reasons will be identified by the following two letter designations. The peak was ***not integrated*** by the software **"NI"**, the peak was ***integrated incorrectly*** by the software **"II"** or the ***wrong peak*** was integrated by the software **"WP"**. These codes will accompany the analyst's manual integration stamp placed next to the compound name.

Sample Custody



CHAIN OF CUSTODY RECORD

Project Name	US EPA
Project Location	RTP, NC
Sampling Location	ACB Outlet Duct
Project Number	RN990271.0002
Laboratory	Enthalpy
Laboratory P.O. #	

Sample ID	Sample Matrix	Analysis Requested
1R-ACB-M0010-01	Dry filter	SVOC
	Front Half MeOH/$MeCl_2$ Rinse	SVOC
	Impinger DI H_2O	SVOC
	Back Half MeOH/$MeCl_2$ Rinse	SVOC
	XAD trap	SVOC
BLANKS		
MeOH		Archive
$MeCl_2$		Archive
DI H_2O		Archive

Notes/Comments:
Temp= 17.4°C Raytek gun#2

Relinquished By:	BRENT HACC	Relinquished By:	
Date/Time:	1-24-11 3:33	Date/Time:	
Received By:		Received By:	
Date/Time:	1-24-11 3:33	Date/Time:	

ARCADIS U.S., Inc.
4915 Prospectus Drive, Suite F
Durham, North Carolina 27713

Phone Number: (919) 544-4535
Fax Number: (919) 544-5690

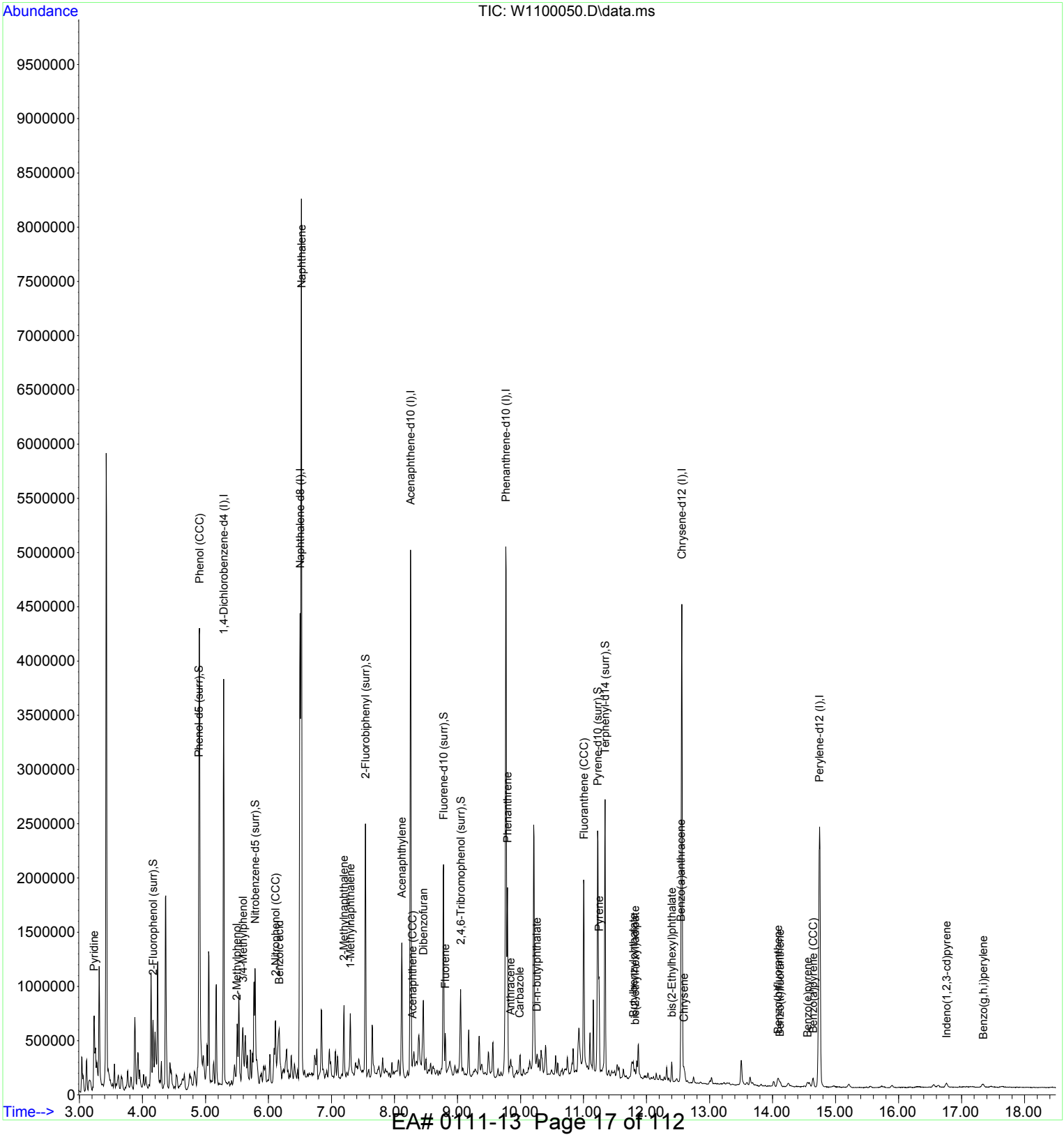
Sample Chromatograms (Scan)



Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\jan11\W012811A\
Data File : W1100050.D
Acq On : 28 Jan 2011 5:25 pm
Operator : tdd
Sample : 0111-13 Run 1
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jan 28 18:27:30 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Jan 04 17:58:34 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

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Quant Title : 8270C - Full List
QLast Update : Tue Jan 04 17:58:34 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4...	5.290	152	568852	40.00 µg/mL	0.00
21) Naphthalene-d8 (I)	6.502	136	2065421	40.00 µg/mL	0.00
36) Acenaphthene-d10 (I)	8.255	164	1212574	40.00 µg/mL	0.00
64) Phenanthrene-d10 (I)	9.767	188	2206499	40.00 µg/mL	0.00
78) Chrysene-d12 (I)	12.561	240	2022092	40.00 µg/mL	-0.01
87) Perylene-d12 (I)	14.746	264	1621593	40.00 µg/mL	-0.02
System Monitoring Compounds					
4) 2-Fluorophenol (surr)	4.168	112	257460	16.60 µg/mL	-0.01
5) Phenol-d5 (surr)	4.894	99	287479	15.94 µg/mL	0.00
19) Nitrobenzene-d5 (surr)	5.787	82	331339	18.71 µg/mL	0.00
39) 2-Fluorobiphenyl (surr)	7.539	172	727430	19.40 µg/mL	-0.01
57) Fluorene-d10 (surr)	8.778	176	607572	18.25 µg/mL	0.00
65) 2,4,6-Tribromophenol (...	9.051	330	88844	17.59 µg/mL	-0.01
75) Pyrene-d10 (surr)	11.225	212	892507	19.41 µg/mL	0.00
77) Terphenyl-d14 (surr)	11.343	244	749952	20.49 µg/mL	0.01
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	0.000		0	N.D. d	
3) Pyridine	3.233	79	316426	17.37 µg/mL#	74
6) Phenol (CCC)	4.905	94	1218976	64.74 µg/mL#	91
7) Aniline	0.000		0	N.D. d	
8) bis(2-Chloroethyl)ether	0.000		0	N.D. d	
9) 2-Chlorophenol	0.000		0	N.D. d	
10) 1,3-Dichlorobenzene	0.000		0	N.D.	
11) 1,4-Dichlorobenzene (CCC)	0.000		0	N.D.	
12) Benzyl alcohol	0.000		0	N.D. d	
13) 1,2-Dichlorobenzene	0.000		0	N.D. d	
14) 2-Methylphenol	5.498	107	39327	3.16 µg/mL	94
15) bis(2-Chloroisopropyl)...	0.000		0	N.D. d	
16) 3/4-Methylphenol	5.594	107	199247	12.21 µg/mL	98
17) N-Nitrso-di-n-propylam...	0.000		0	N.D. d	
18) Hexachloroethane	0.000		0	N.D. d	
20) Nitrobenzene	0.000		0	N.D. d	
22) Isophorone	0.000		0	N.D. d	
23) 2,4-Dimethylphenol	0.000		0	N.D. d	
24) 2-Nitrophenol (CCC)	6.112	139	114122	12.09 µg/mL#	94
25) Benzoic acid	6.171	105	279478m	27.93 µg/mL	
26) bis(2-Chloroethoxy)met...	0.000		0	N.D. d	
27) 2,4-Dichlorophenol (CCC)	0.000		0	N.D. d	
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.	
29) Naphthalene	6.524	128	3869796	77.80 µg/mL#	62
30) 4-Chloroaniline	0.000		0	N.D. d	
31) Hexachlorobutadiene (CCC)	0.000		0	N.D.	
32) 4-Chloro-3-methylpheno...	0.000		0	N.D. d	
33) 2-Methylnaphthalene	7.197	142	201854	6.34 µg/mL	100
34) 1-Methylnaphthalene	7.298	142	151061	4.90 µg/mL	100
35) Hexachlorocyclopentadi...	0.000		0	N.D.	
37) 2,4,6-Trichlorophenol ...	0.000		0	N.D. d	
38) 2,4,5-Trichlorophenol	0.000		0	N.D. d	
40) 2-Chloronaphthalene	0.000		0	N.D. d	
41) 2-Nitroaniline	0.000		0	N.D. d	
42) 1,4-Dinitrobenzene	0.000		0	N.D. d	
43) Dimethylphthalate	0.000		0	N.D. d	
44) 1,3-Dinitrobenzene	0.000		0	N.D. d	
45) 2,6-Dinitrotoluene	0.000		0	N.D.	
46) 1,2-Dinitrobenzene	0.000		0	N.D. d	

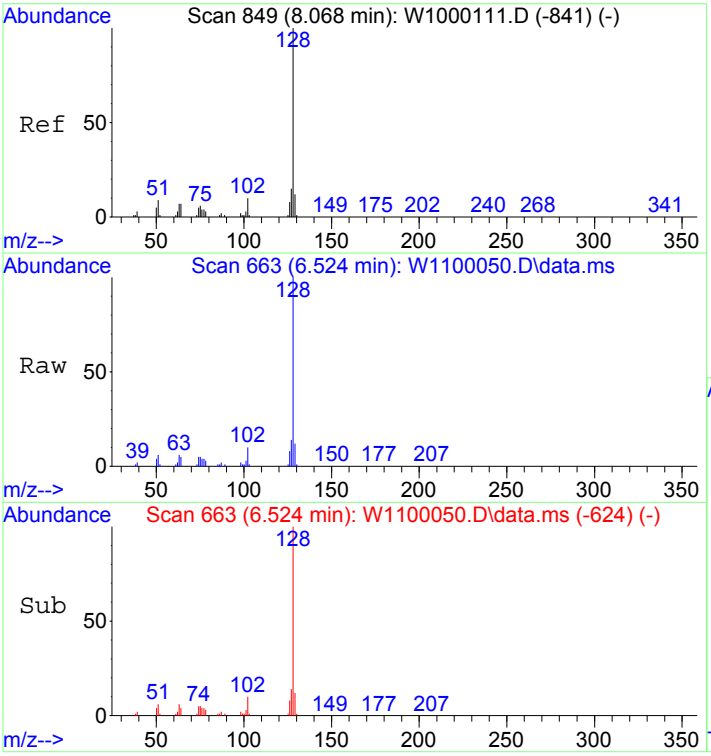
Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\jan11\W012811A\
Data File : W1100050.D
Acq On : 28 Jan 2011 5:25 pm
Operator : tdd
Sample : 0111-13 Run 1
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jan 28 18:27:30 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Jan 04 17:58:34 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
47) Acenaphthylene	8.116	152	595949	12.22 µg/mL#	94
48) 3-Nitroaniline	0.000		0	N.D. d	
49) Acenaphthene (CCC)	8.287	154	21130	0.68 µg/mL#	1
50) 2,4-Dinitrophenol (SPCC)	0.000		0	N.D. d	
51) 4-Nitrophenol (SPCC)	0.000		0	N.D. d	
52) 2,4-Dinitrotoluene	0.000		0	N.D. d	
53) Dibenzofuran	8.458	168	249852	5.88 µg/mL#	87
54) 2,3,5,6-Tetrachlorophenol	0.000		0	N.D.	
55) 2,3,4,6-Tetrachlorophenol	0.000		0	N.D.	
56) Diethylphthalate	0.000		0	N.D. d	
58) 4-Chlorophenyl-phenyle...	0.000		0	N.D.	
59) Fluorene	8.805	166	149347	4.28 µg/mL	99
60) 4-Nitroaniline	0.000		0	N.D. d	
61) 4,6-Dinitro2-methylphenol	0.000		0	N.D.	
62) N-Nitrosodiphenylamine...	0.000		0	N.D. d	
63) Azobenzene	0.000		0	N.D. d	
66) 4-Bromophenyl-phenylether	0.000		0	N.D.	
67) Hexachlorobenzene	0.000		0	N.D.	
68) Pentachlorophenol (CCC)	0.000		0	N.D.	
69) Phenanthrene	9.793	178	756841	15.19 µg/mL	99
70) Anthracene	9.841	178	74643m	1.50 µg/mL	
71) Carbazole	9.986	167	16543	0.38 µg/mL#	69
72) Di-n-butylphthalate	10.258	149	30231	0.55 µg/mL	98
73) Fluoranthene (CCC)	11.006	202	412863	7.97 µg/mL	97
74) Benzidine	0.000		0	N.D. d	
76) Pyrene	11.246	202	367230	6.60 µg/mL#	95
79) Butylbenzylphthalate	11.791	149	22170	0.99 µg/mL#	100
80) 3,3-Dimethylbenzidine	0.000		0	N.D.	
81) bis(2-ethylhexyl)adipate	11.818	129	6164	0.31 µg/mL#	100
82) bis(2-Ethylhexyl)phtha...	12.400	149	63373	2.07 µg/mL#	99
83) 3,3'-Dichlorobenzidine	0.000		0	N.D.	
84) Benzo(a)anthracene	12.545	228	61611	1.26 µg/mL#	1
85) Chrysene	12.593	228	57553	1.25 µg/mL#	64
86) Di-n-octylphthalate (CCC)	0.000		0	N.D. d	
88) Benzo(b)fluoranthene	14.088	252	62551m	1.54 µg/mL	
89) Benzo(k)fluoranthene	14.115	252	24878m	0.63 µg/mL	
90) Benzo(e)pyrene	14.553	252	26025	0.72 µg/mL	97
91) Benzo(a)pyrene (CCC)	14.644	252	36754	0.99 µg/mL	92
92) Perylene	14.794	252	7208	N.D.	
93) Indeno(1,2,3-cd)pyrene	16.760	276	26218	0.71 µg/mL	100
94) Dibenz(a,h)anthracene	0.000		0	N.D. d	
95) Benzo(g,h,i)perylene	17.342	276	28060	0.93 µg/mL	97

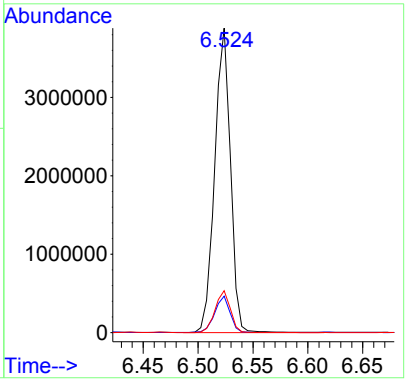
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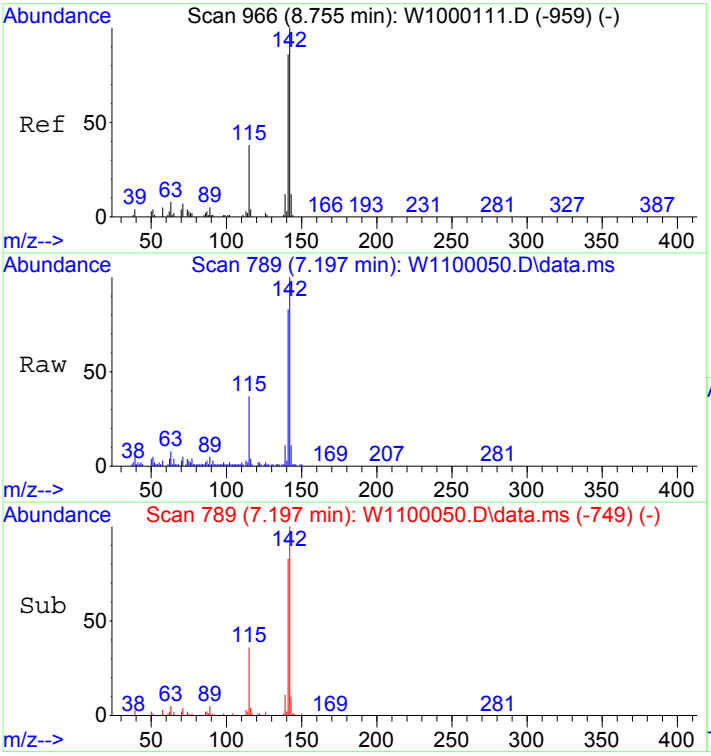


#29
Naphthalene
Concen: 77.80 µg/mL
RT: 6.524 min Scan# 663
Delta R.T. 0.000 min
Lab File: W1100050.D
Acq: 28 Jan 2011 5:25 pm

Tgt Ion:128 Resp: 3869796

Ion	Ratio	Lower	Upper
128	100		
129	11.7	17.0	25.6#
127	13.4	35.1	52.7#

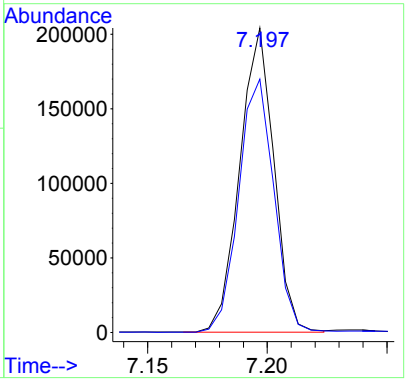


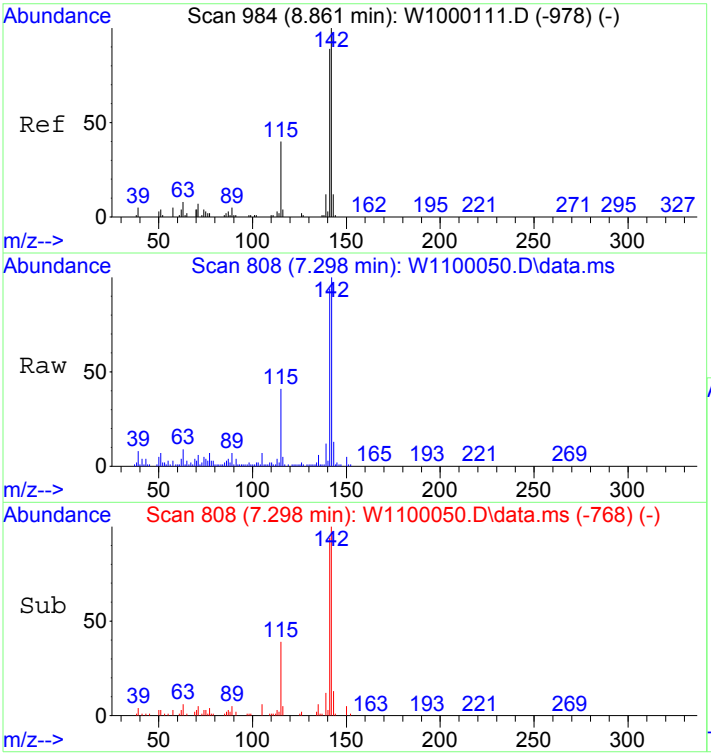


#33
2-Methylnaphthalene
Concen: 6.34 µg/mL
RT: 7.197 min Scan# 789
Delta R.T. 0.004 min
Lab File: W1100050.D
Acq: 28 Jan 2011 5:25 pm

Tgt Ion:142 Resp: 201854

Ion	Ratio	Lower	Upper
142	100		
141	86.6	69.7	104.5

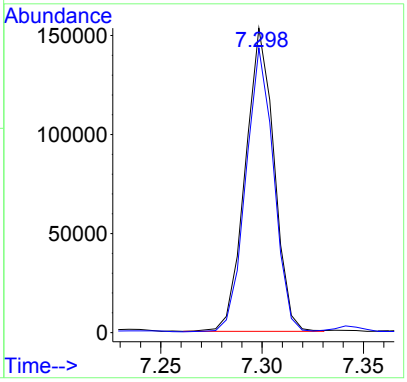


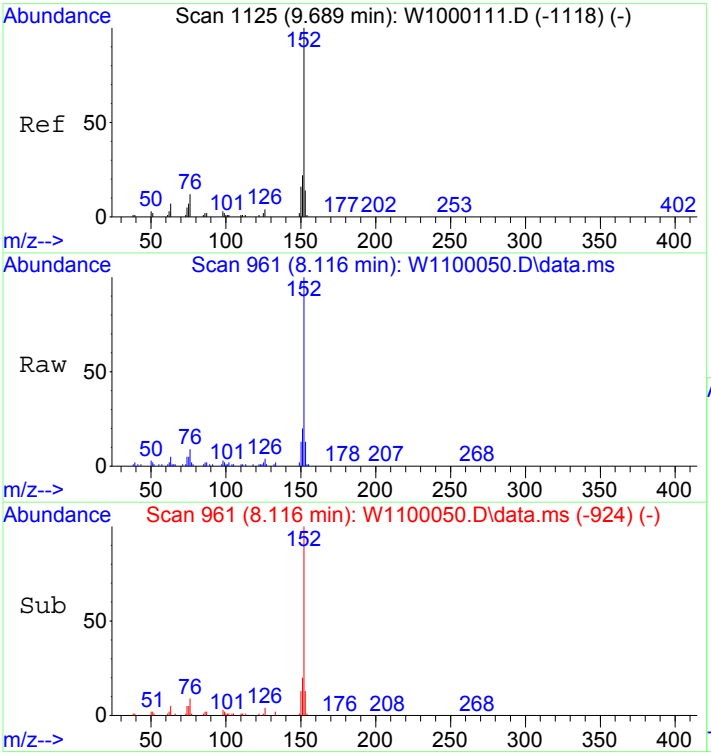


#34
1-Methylnaphthalene
Concen: 4.90 µg/mL
RT: 7.298 min Scan# 808
Delta R.T. 0.005 min
Lab File: W1100050.D
Acq: 28 Jan 2011 5:25 pm

Tgt Ion:142 Resp: 151061

Ion	Ratio	Lower	Upper
142	100		
141	90.8	72.5	108.7

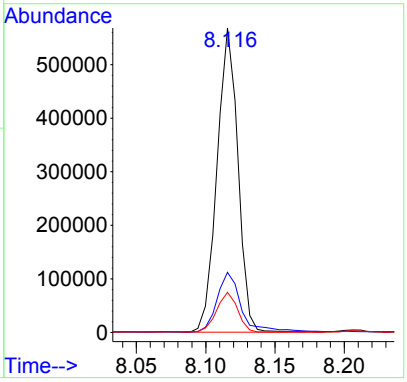


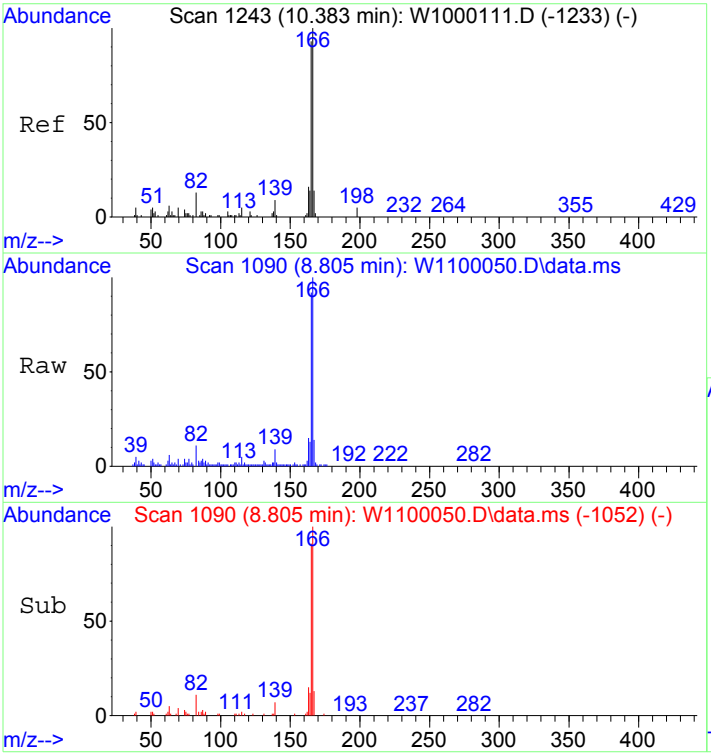


#47
Acenaphthylene
Concen: 12.22 µg/mL
RT: 8.116 min Scan# 961
Delta R.T. -0.012 min
Lab File: W1100050.D
Acq: 28 Jan 2011 5:25 pm

Tgt Ion:152 Resp: 595949

Ion	Ratio	Lower	Upper
152	100		
151	22.8	15.0	22.4#
153	13.3	10.2	15.2

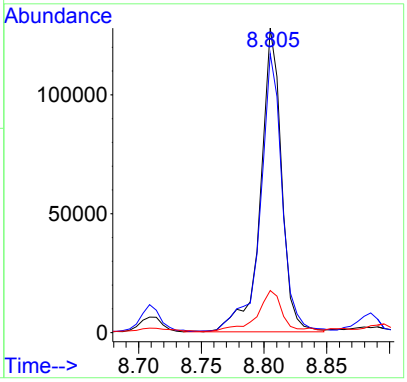


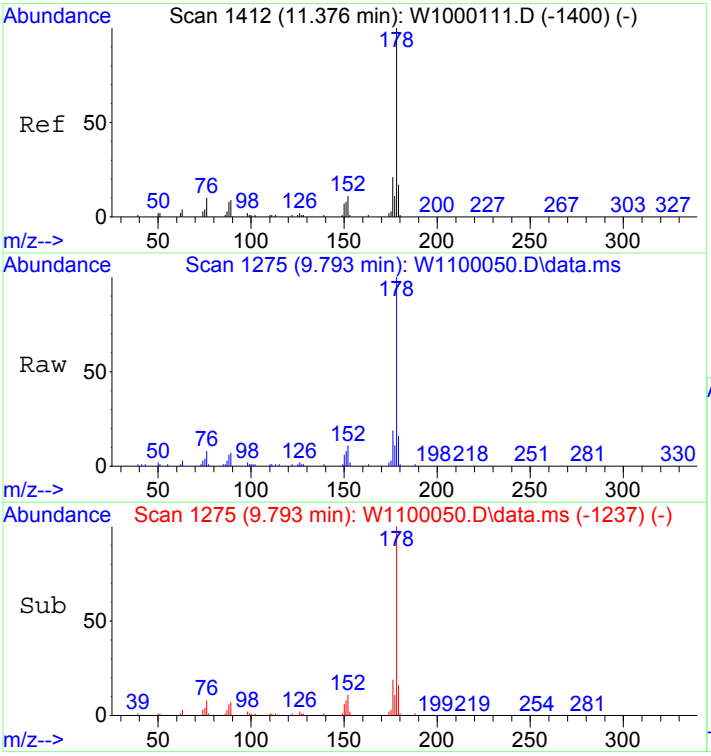


#59
Fluorene
Concen: 4.28 µg/mL
RT: 8.805 min Scan# 1090
Delta R.T. -0.005 min
Lab File: W1100050.D
Acq: 28 Jan 2011 5:25 pm

Tgt Ion:166 Resp: 149347

Ion	Ratio	Lower	Upper
166	100		
165	94.2	75.4	113.0
167	16.1	10.9	16.3

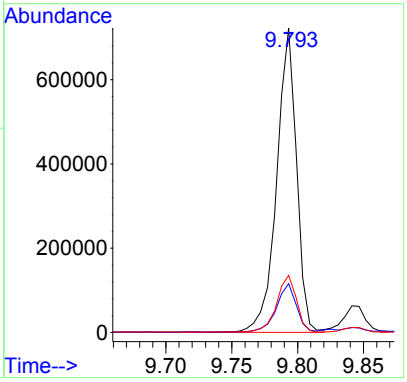


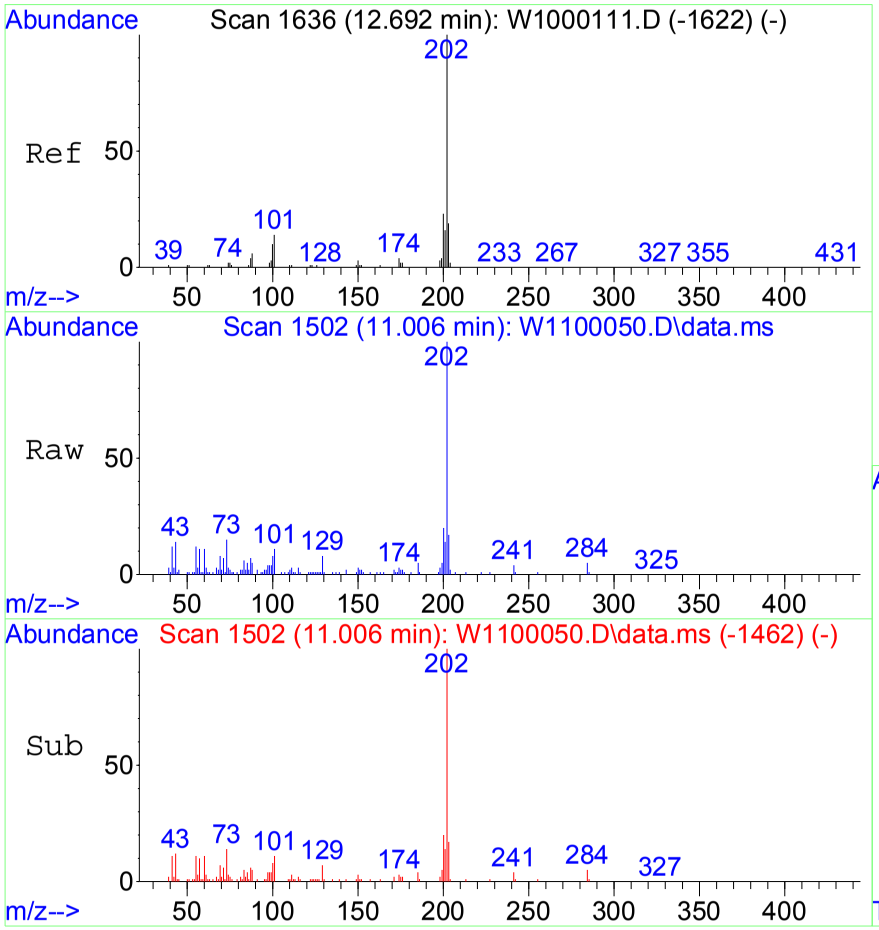


#69
Phenanthrene
Concen: 15.19 µg/mL
RT: 9.793 min Scan# 1275
Delta R.T. -0.005 min
Lab File: W1100050.D
Acq: 28 Jan 2011 5:25 pm

Tgt Ion:178 Resp: 756841

Ion	Ratio	Lower	Upper
178	100		
179	16.2	12.5	18.7
176	18.8	15.0	22.4

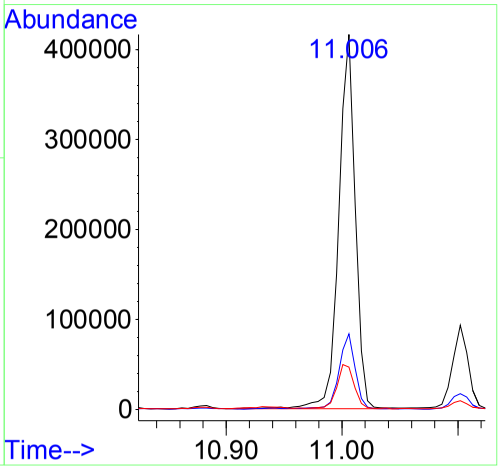


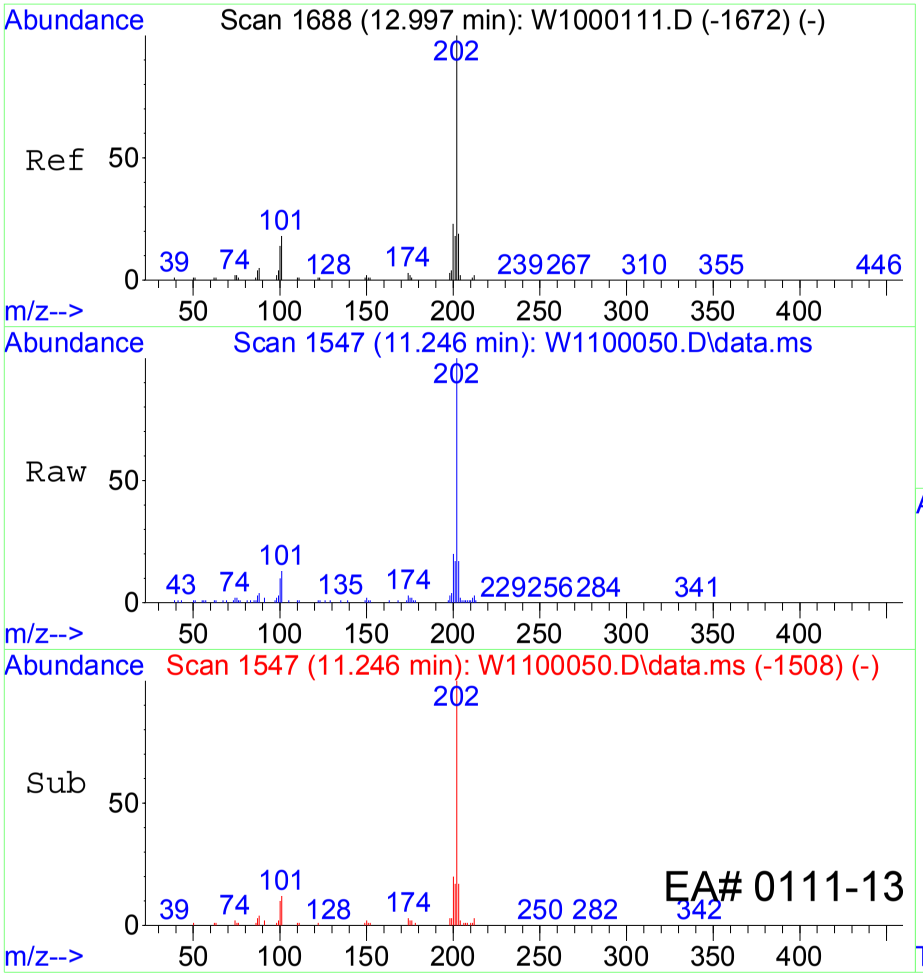


#73
Fluoranthene (CCC)
Concen: 7.97 µg/mL
RT: 11.006 min Scan# 1502
Delta R.T. 0.005 min
Lab File: W1100050.D
Acq: 28 Jan 2011 5:25 pm

Tgt Ion:202 Resp: 412863

Ion	Ratio	Lower	Upper
202	100		
200	19.9	16.5	24.7
101	12.8	8.6	12.8

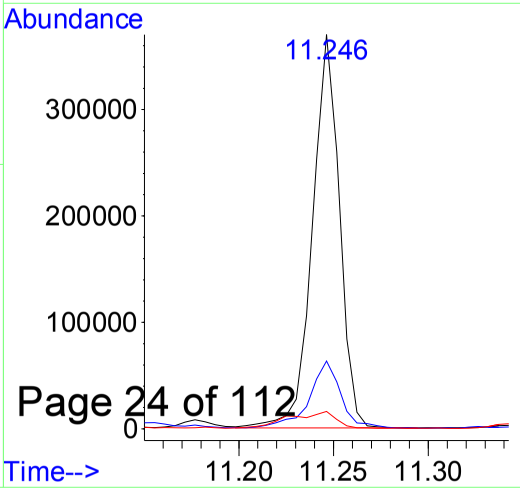


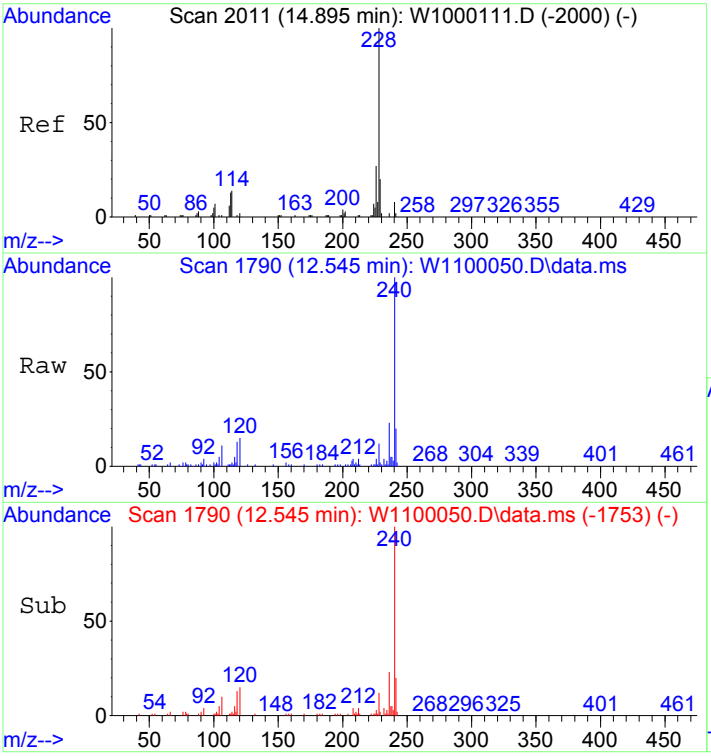


#76
Pyrene
Concen: 6.60 µg/mL
RT: 11.246 min Scan# 1547
Delta R.T. 0.002 min
Lab File: W1100050.D
Acq: 28 Jan 2011 5:25 pm

Tgt Ion:202 Resp: 367230

Ion	Ratio	Lower	Upper
202	100		
203	20.0	14.5	21.7
88	7.5	3.4	5.0#

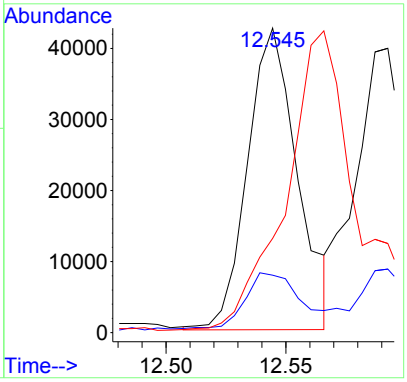


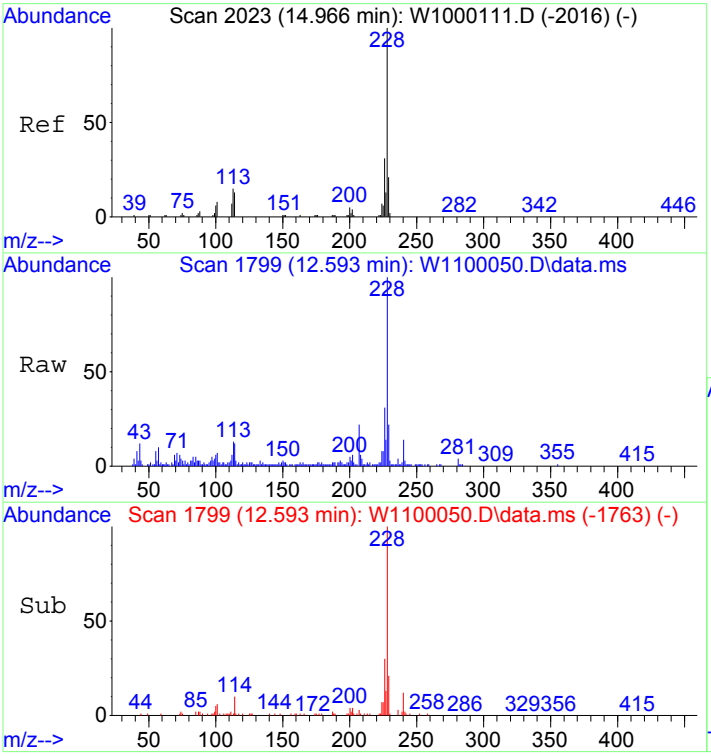


#84
Benzo(a)anthracene
Concen: 1.26 µg/mL
RT: 12.545 min Scan# 1790
Delta R.T. -0.011 min
Lab File: W1100050.D
Acq: 28 Jan 2011 5:25 pm

Tgt Ion:228 Resp: 61611

Ion	Ratio	Lower	Upper
228	100		
229	21.8	14.7	22.1
226	139.1	21.0	31.6#

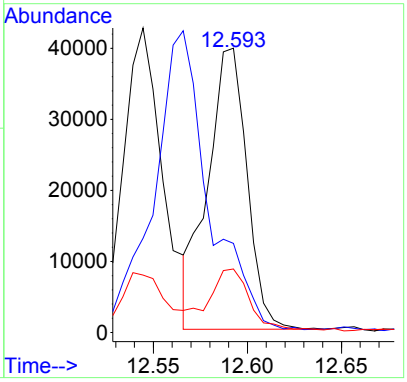


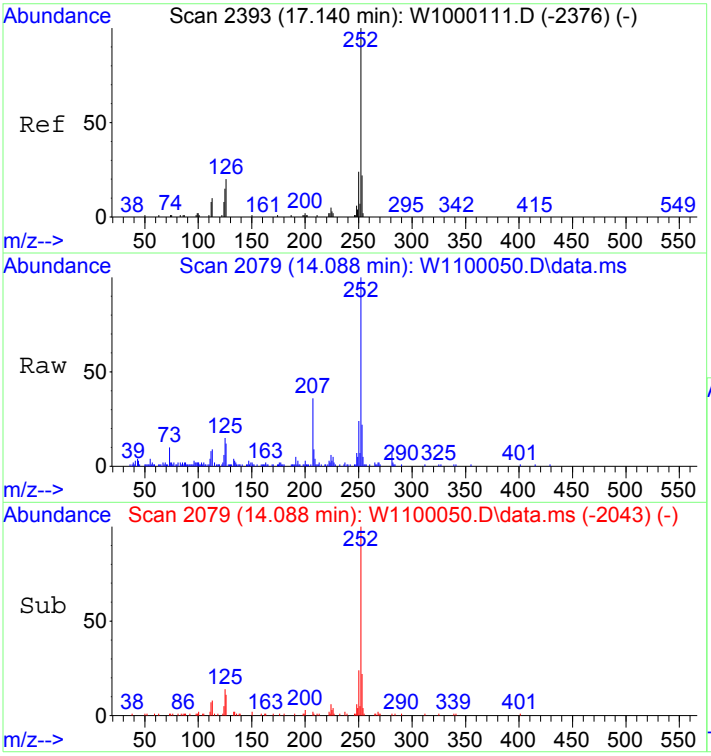


#85
Chrysene
Concen: 1.25 µg/mL
RT: 12.593 min Scan# 1799
Delta R.T. -0.016 min
Lab File: W1100050.D
Acq: 28 Jan 2011 5:25 pm

Tgt Ion:228 Resp: 57553

Ion	Ratio	Lower	Upper
228	100		
226	0.0	23.6	35.4#
229	23.4	15.8	23.6

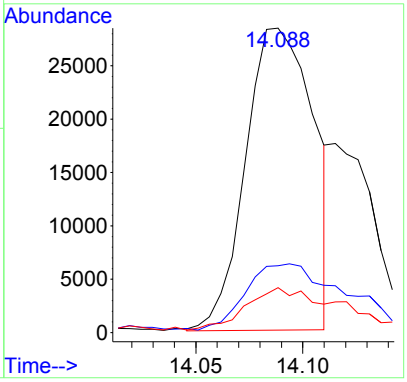


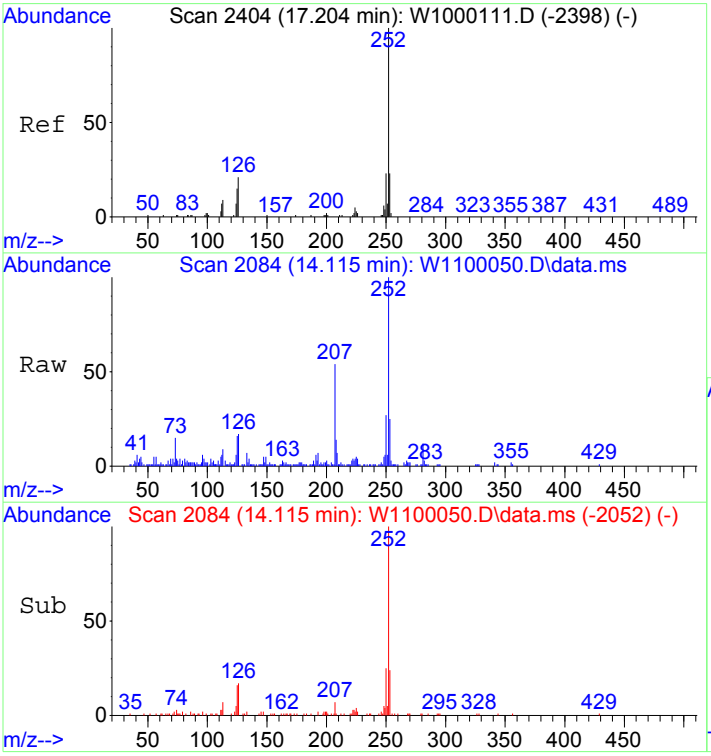


#88
Benzo(b)fluoranthene
Concen: 1.54 µg/mL m
RT: 14.088 min Scan# 2079
Delta R.T. -0.017 min
Lab File: W1100050.D
Acq: 28 Jan 2011 5:25 pm

Tgt Ion:252 Resp: 62551

Ion	Ratio	Lower	Upper
252	100		
253	32.0	17.9	26.9#
125	20.1	7.7	11.5#

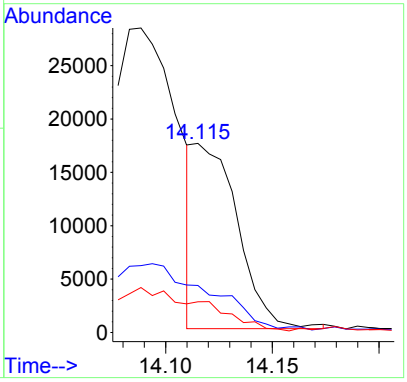


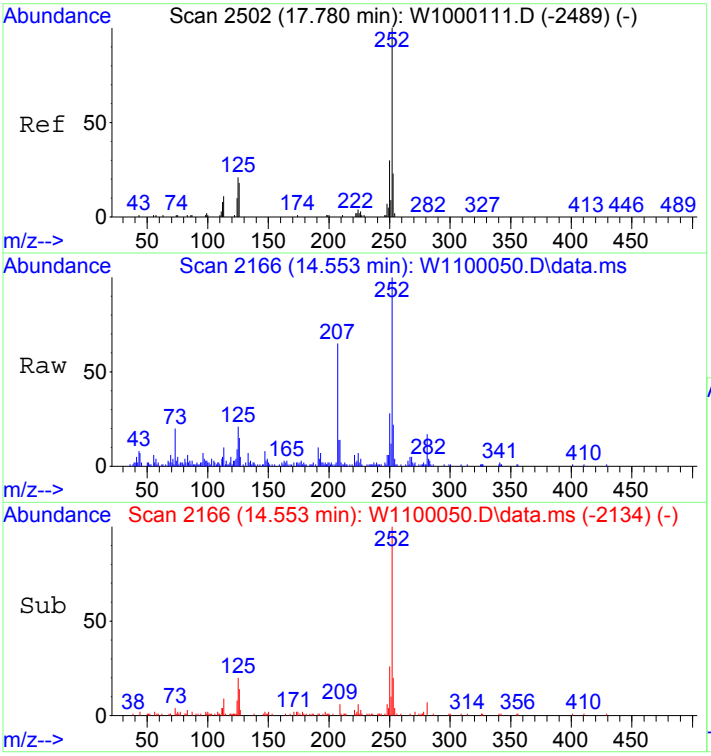


#89
Benzo(k)fluoranthene
Concen: 0.63 µg/mL m
RT: 14.115 min Scan# 2084
Delta R.T. -0.038 min
Lab File: W1100050.D
Acq: 28 Jan 2011 5:25 pm

Tgt Ion:252 Resp: 24878

Ion	Ratio	Lower	Upper
252	100		
253	80.4	14.9	22.3#
125	50.6	8.8	13.2#

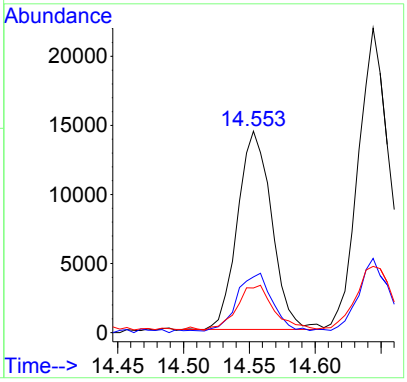


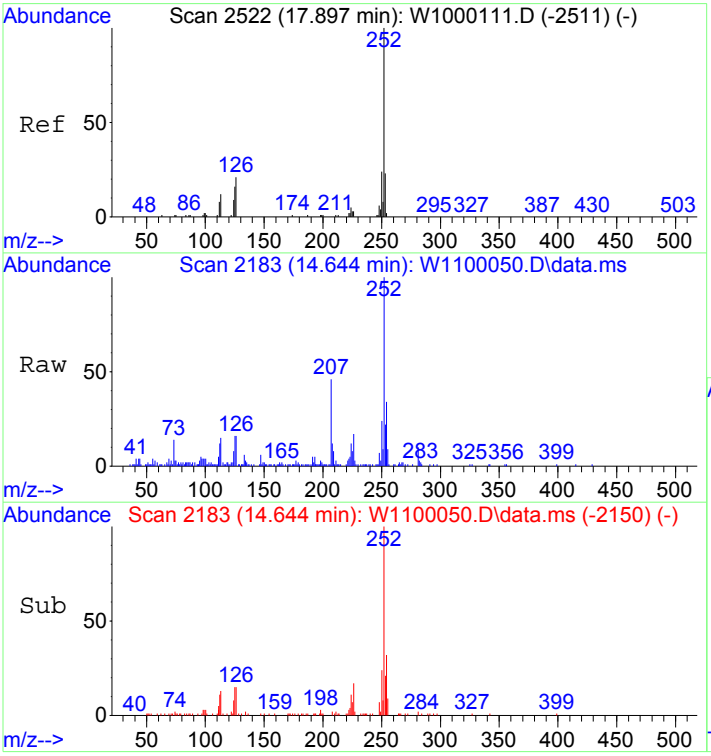


#90
Benzo(e)pyrene
Concen: 0.72 µg/mL
RT: 14.553 min Scan# 2166
Delta R.T. -0.029 min
Lab File: W1100050.D
Acq: 28 Jan 2011 5:25 pm

Tgt Ion:252 Resp: 26025

Ion	Ratio	Lower	Upper
252	100		
250	29.6	23.0	34.4
253	24.4	17.8	26.8

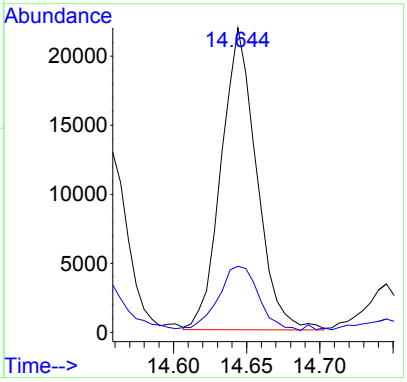


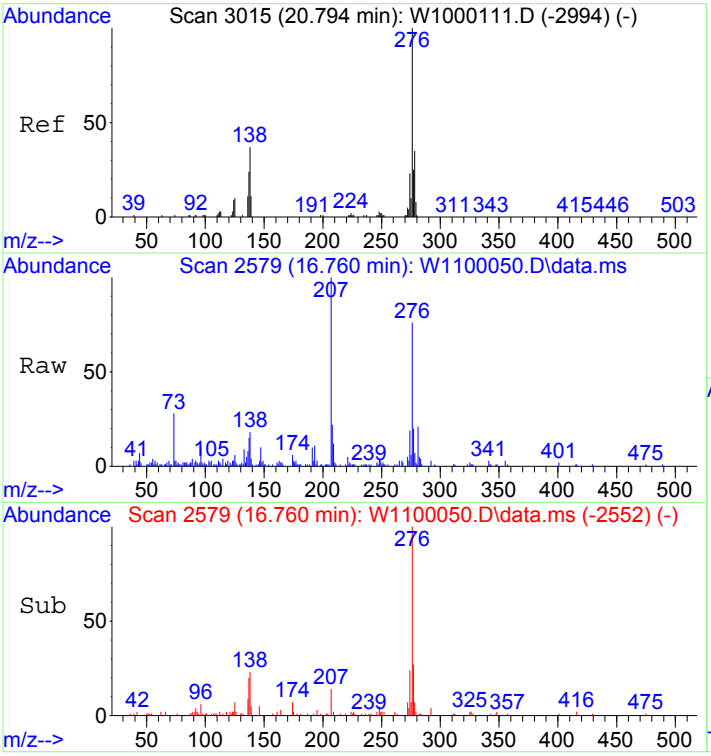


#91
Benzo(a)pyrene (CCC)
Concen: 0.99 µg/mL
RT: 14.644 min Scan# 2183
Delta R.T. -0.033 min
Lab File: W1100050.D
Acq: 28 Jan 2011 5:25 pm

Tgt Ion:252 Resp: 36754

Ion	Ratio	Lower	Upper
252	100		
253	24.4	16.6	25.0

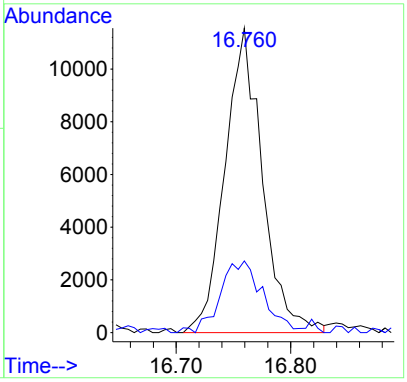


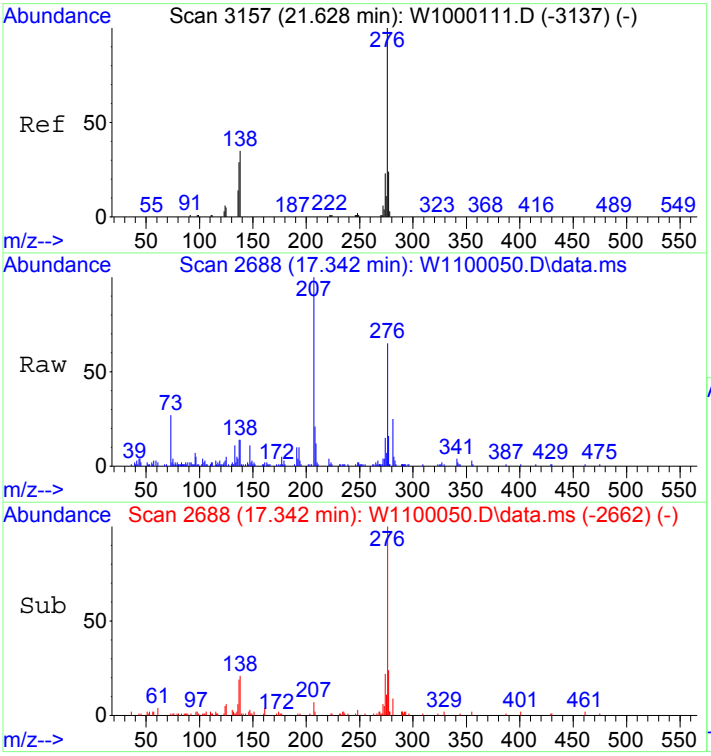


#93
Indeno(1,2,3-cd)pyrene
Concen: 0.71 µg/mL
RT: 16.760 min Scan# 2579
Delta R.T. -0.066 min
Lab File: W1100050.D
Acq: 28 Jan 2011 5:25 pm

Tgt Ion:276 Resp: 26218

Ion	Ratio	Lower	Upper
276	100		
138	26.7	21.4	32.2

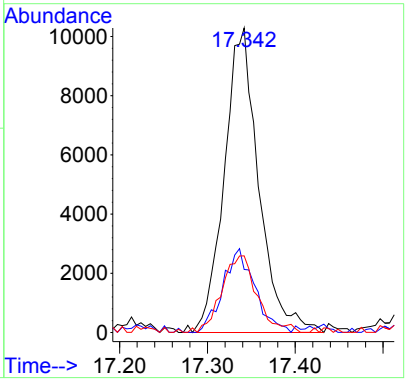




#95
Benzo(g,h,i)perylene
Concen: 0.93 µg/mL
RT: 17.342 min Scan# 2688
Delta R.T. -0.071 min
Lab File: W1100050.D
Acq: 28 Jan 2011 5:25 pm

Tgt Ion:276 Resp: 28060

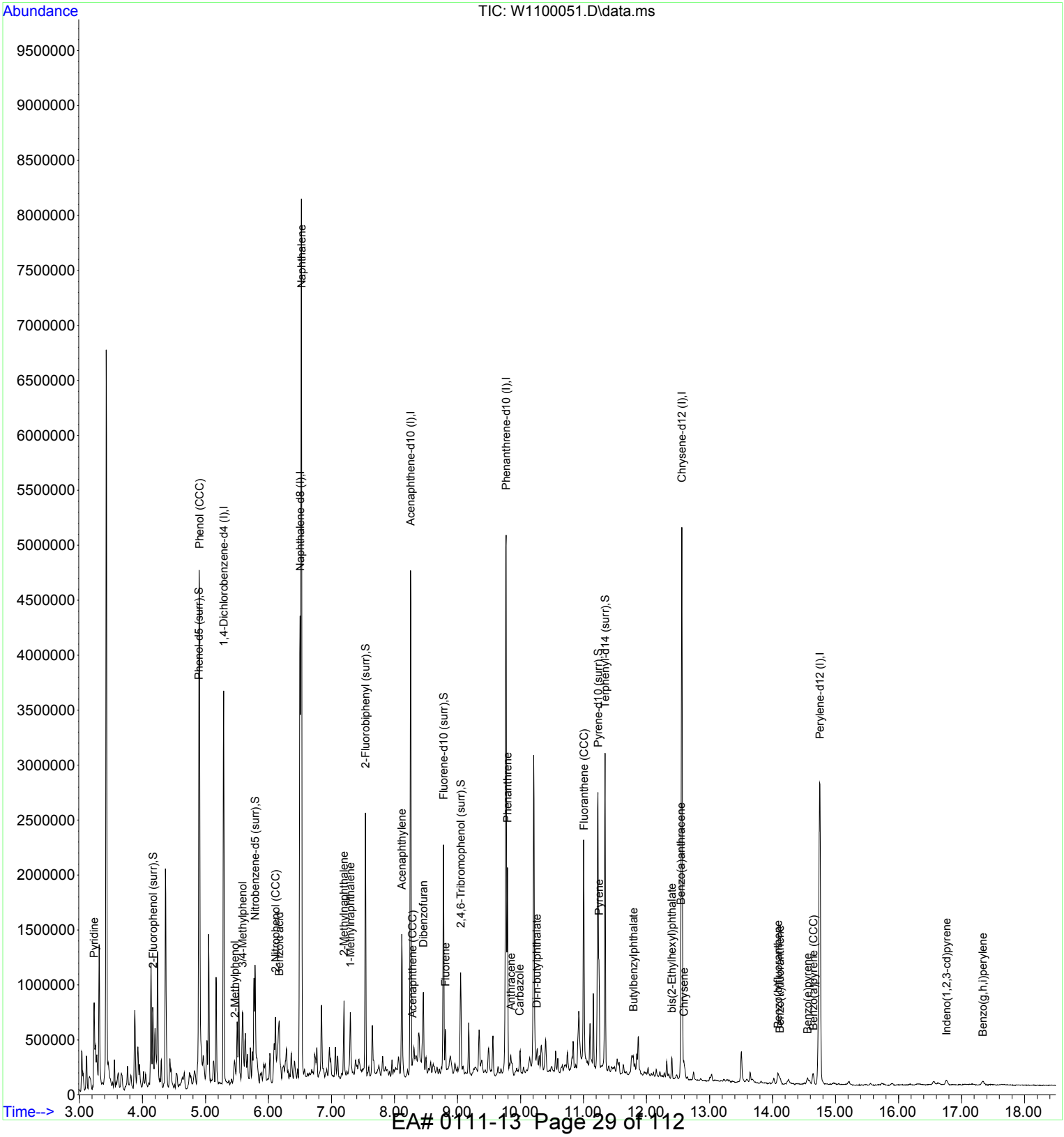
Ion	Ratio	Lower	Upper
276	100		
138	25.5	21.2	31.8
277	25.8	19.3	28.9



Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\jan11\W012811A\
Data File : W1100051.D
Acq On : 28 Jan 2011 5:56 pm
Operator : tdd
Sample : 0111-13 Run 1 LD
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jan 28 18:33:15 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Jan 04 17:58:34 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\jan11\W012811A\
Data File : W1100051.D
Acq On : 28 Jan 2011 5:56 pm
Operator : tdd
Sample : 0111-13 Run 1 LD
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jan 28 18:33:15 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Jan 04 17:58:34 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4...	5.290	152	583750	40.00 µg/mL	0.00
21) Naphthalene-d8 (I)	6.503	136	2045145	40.00 µg/mL	0.00
36) Acenaphthene-d10 (I)	8.255	164	1183673	40.00 µg/mL	0.00
64) Phenanthrene-d10 (I)	9.772	188	2217759	40.00 µg/mL	0.00
78) Chrysene-d12 (I)	12.561	240	2296315	40.00 µg/mL	-0.01
87) Perylene-d12 (I)	14.751	264	1959935	40.00 µg/mL	-0.01
System Monitoring Compounds					
4) 2-Fluorophenol (surr)	4.168	112	280212	17.61 µg/mL	-0.01
5) Phenol-d5 (surr)	4.895	99	315905	17.07 µg/mL	0.00
19) Nitrobenzene-d5 (surr)	5.787	82	341189	18.78 µg/mL	0.00
39) 2-Fluorobiphenyl (surr)	7.539	172	745275	20.36 µg/mL	-0.01
57) Fluorene-d10 (surr)	8.778	176	622954	19.17 µg/mL	0.00
65) 2,4,6-Tribromophenol (...	9.051	330	101331	19.96 µg/mL	-0.01
75) Pyrene-d10 (surr)	11.231	212	989539	21.41 µg/mL	0.00
77) Terphenyl-d14 (surr)	11.343	244	846772	23.01 µg/mL	0.01
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	0.000		0	N.D. d	
3) Pyridine	3.233	79	354381	18.95 µg/mL#	75
6) Phenol (CCC)	4.905	94	1335974	69.14 µg/mL#	92
7) Aniline	0.000		0	N.D. d	
8) bis(2-Chloroethyl)ether	0.000		0	N.D. d	
9) 2-Chlorophenol	0.000		0	N.D. d	
10) 1,3-Dichlorobenzene	0.000		0	N.D.	
11) 1,4-Dichlorobenzene (CCC)	0.000		0	N.D.	
12) Benzyl alcohol	0.000		0	N.D. d	
13) 1,2-Dichlorobenzene	0.000		0	N.D. d	
14) 2-Methylphenol	5.466	107	44622	3.49 µg/mL#	91
15) bis(2-Chloroisopropyl)...	0.000		0	N.D. d	
16) 3/4-Methylphenol	5.589	107	234656	14.01 µg/mL	97
17) N-Nitrso-di-n-propylam...	0.000		0	N.D. d	
18) Hexachloroethane	0.000		0	N.D. d	
20) Nitrobenzene	0.000		0	N.D. d	
22) Isophorone	0.000		0	N.D. d	
23) 2,4-Dimethylphenol	0.000		0	N.D. d	
24) 2-Nitrophenol (CCC)	6.113	139	120970	12.94 µg/mL	95
25) Benzoic acid	6.171	105	303051m	30.58 µg/mL	
26) bis(2-Chloroethoxy)met...	0.000		0	N.D. d	
27) 2,4-Dichlorophenol (CCC)	0.000		0	N.D. d	
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.	
29) Naphthalene	6.524	128	4009940	81.41 µg/mL#	61
30) 4-Chloroaniline	0.000		0	N.D. d	
31) Hexachlorobutadiene (CCC)	0.000		0	N.D.	
32) 4-Chloro-3-methylpheno...	0.000		0	N.D. d	
33) 2-Methylnaphthalene	7.197	142	199158	6.31 µg/mL	100
34) 1-Methylnaphthalene	7.299	142	155319	5.09 µg/mL	99
35) Hexachlorocyclopentadi...	0.000		0	N.D.	
37) 2,4,6-Trichlorophenol ...	0.000		0	N.D. d	
38) 2,4,5-Trichlorophenol	0.000		0	N.D. d	
40) 2-Chloronaphthalene	0.000		0	N.D. d	
41) 2-Nitroaniline	0.000		0	N.D. d	
42) 1,4-Dinitrobenzene	0.000		0	N.D. d	
43) Dimethylphthalate	0.000		0	N.D. d	
44) 1,3-Dinitrobenzene	0.000		0	N.D. d	
45) 2,6-Dinitrotoluene	0.000		0	N.D. d	
46) 1,2-Dinitrobenzene	0.000		0	N.D. d	

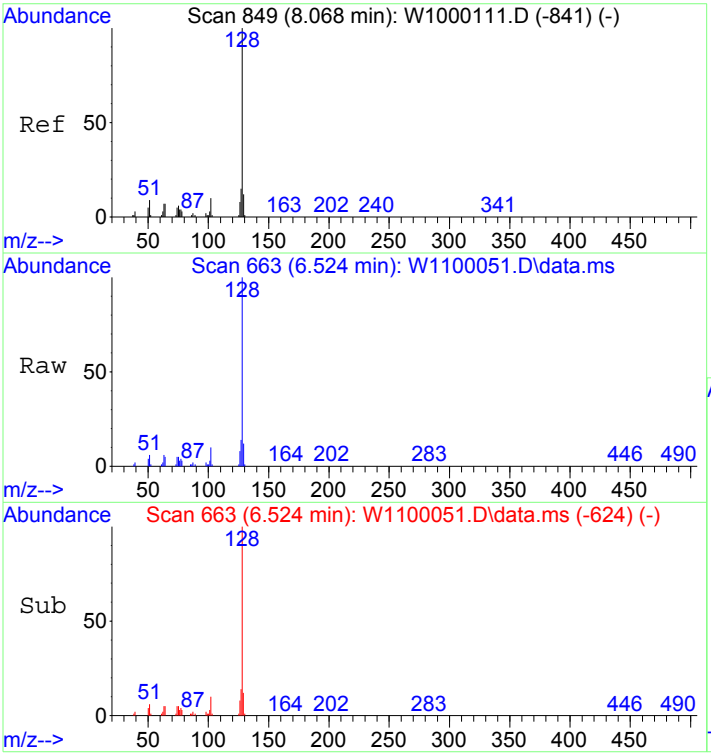
Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\jan11\W012811A\
Data File : W1100051.D
Acq On : 28 Jan 2011 5:56 pm
Operator : tdd
Sample : 0111-13 Run 1 LD
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jan 28 18:33:15 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Jan 04 17:58:34 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
47) Acenaphthylene	8.116	152	612696	12.87 µg/mL#	94
48) 3-Nitroaniline	0.000		0	N.D.	
49) Acenaphthene (CCC)	8.287	154	13274	0.44 µg/mL#	1
50) 2,4-Dinitrophenol (SPCC)	0.000		0	N.D. d	
51) 4-Nitrophenol (SPCC)	0.000		0	N.D. d	
52) 2,4-Dinitrotoluene	0.000		0	N.D. d	
53) Dibenzofuran	8.458	168	254238	6.12 µg/mL#	87
54) 2,3,5,6-Tetrachlorophenol	0.000		0	N.D.	
55) 2,3,4,6-Tetrachlorophenol	0.000		0	N.D.	
56) Diethylphthalate	0.000		0	N.D. d	
58) 4-Chlorophenyl-phenyle...	0.000		0	N.D.	
59) Fluorene	8.811	166	152878	4.48 µg/mL	99
60) 4-Nitroaniline	0.000		0	N.D. d	
61) 4,6-Dinitro2-methylphenol	0.000		0	N.D.	
62) N-Nitrosodiphenylamine...	0.000		0	N.D. d	
63) Azobenzene	0.000		0	N.D. d	
66) 4-Bromophenyl-phenylether	0.000		0	N.D.	
67) Hexachlorobenzene	0.000		0	N.D.	
68) Pentachlorophenol (CCC)	0.000		0	N.D.	
69) Phenanthrene	9.793	178	795360	15.89 µg/mL	100
70) Anthracene	9.847	178	78485m	1.57 µg/mL	
71) Carbazole	9.986	167	18943	0.44 µg/mL#	70
72) Di-n-butylphthalate	10.258	149	33188	0.60 µg/mL#	96
73) Fluoranthene (CCC)	11.006	202	437252	8.39 µg/mL#	97
74) Benzidine	0.000		0	N.D. d	
76) Pyrene	11.247	202	400273	7.15 µg/mL#	93
79) Butylbenzylphthalate	11.791	149	23812	0.94 µg/mL#	100
80) 3,3-Dimethylbenzidine	0.000		0	N.D.	
81) bis(2-ethylhexyl)adipate	0.000		0	N.D. d	
82) bis(2-Ethylhexyl)phtha...	12.400	149	70657	2.03 µg/mL#	99
83) 3,3'-Dichlorobenzidine	0.000		0	N.D. d	
84) Benzo(a)anthracene	12.545	228	73616m	1.33 µg/mL	
85) Chrysene	12.593	228	69071	1.32 µg/mL#	1
86) Di-n-octylphthalate (CCC)	0.000		0	N.D. d	
88) Benzo(b)fluoranthene	14.089	252	87991m	1.80 µg/mL	
89) Benzo(k)fluoranthene	14.115	252	24140m	0.50 µg/mL	
90) Benzo(e)pyrene	14.553	252	33693	0.77 µg/mL	99
91) Benzo(a)pyrene (CCC)	14.650	252	47912	1.06 µg/mL	96
92) Perylene	14.794	252	9078	N.D.	
93) Indeno(1,2,3-cd)pyrene	16.760	276	32792	0.74 µg/mL	99
94) Dibenz(a,h)anthracene	0.000		0	N.D. d	
95) Benzo(g,h,i)perylene	17.337	276	33051	0.91 µg/mL	97

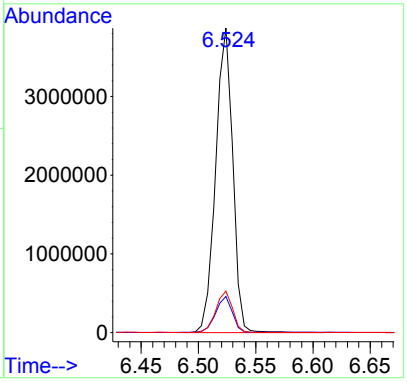
(#) = qualifier out of range (m) = manual integration (+) = signals summed

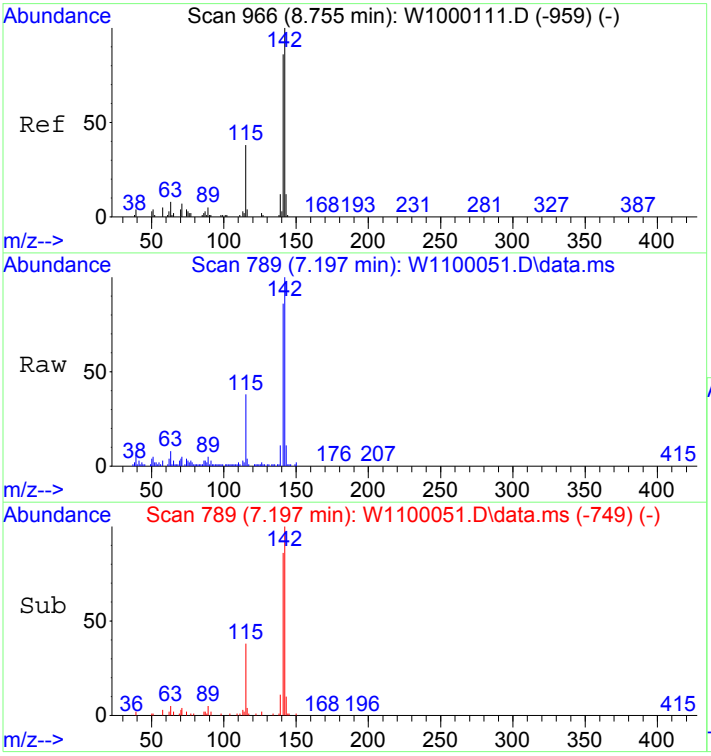


#29
Naphthalene
Concen: 81.41 µg/mL
RT: 6.524 min Scan# 663
Delta R.T. 0.000 min
Lab File: W1100051.D
Acq: 28 Jan 2011 5:56 pm

Tgt Ion:128 Resp: 4009940

Ion	Ratio	Lower	Upper
128	100		
129	11.7	17.0	25.6#
127	13.4	35.1	52.7#

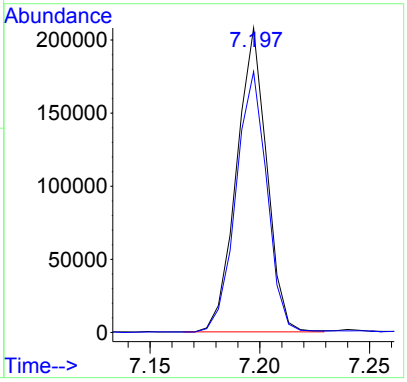


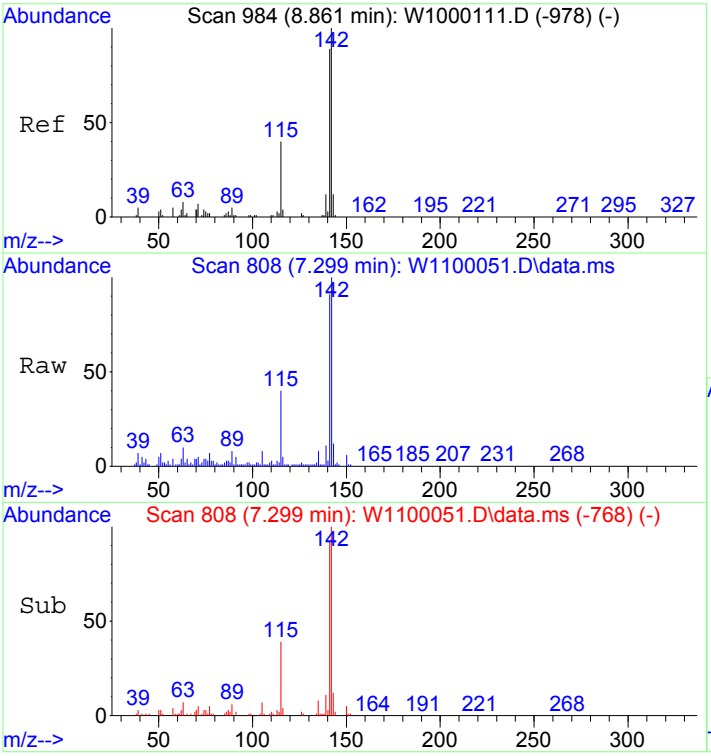


#33
2-Methylnaphthalene
Concen: 6.31 µg/mL
RT: 7.197 min Scan# 789
Delta R.T. 0.004 min
Lab File: W1100051.D
Acq: 28 Jan 2011 5:56 pm

Tgt Ion:142 Resp: 199158

Ion	Ratio	Lower	Upper
142	100		
141	87.5	69.7	104.5

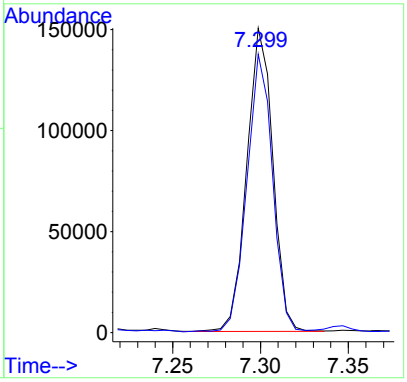


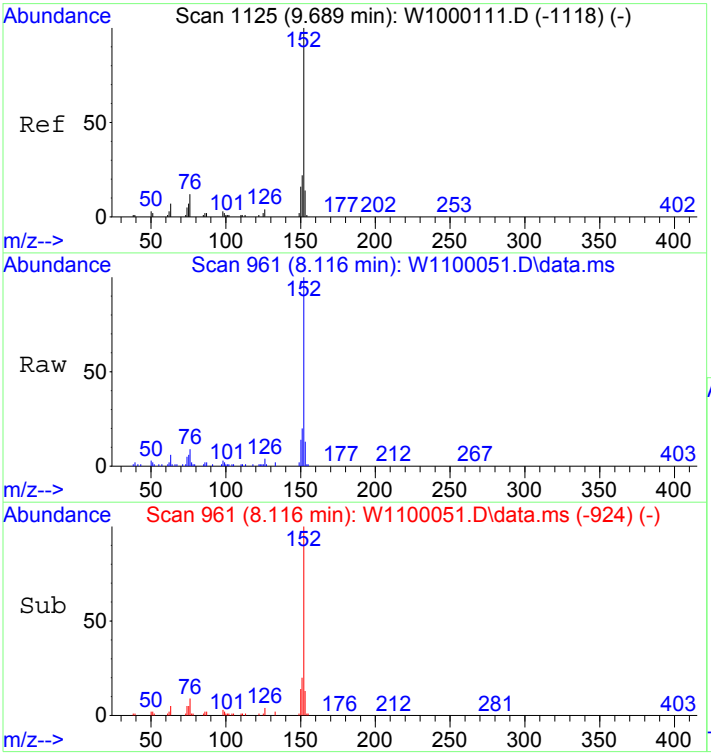


#34
1-Methylnaphthalene
Concen: 5.09 µg/mL
RT: 7.299 min Scan# 808
Delta R.T. 0.005 min
Lab File: W1100051.D
Acq: 28 Jan 2011 5:56 pm

Tgt Ion:142 Resp: 155319

Ion	Ratio	Lower	Upper
142	100		
141	89.9	72.5	108.7

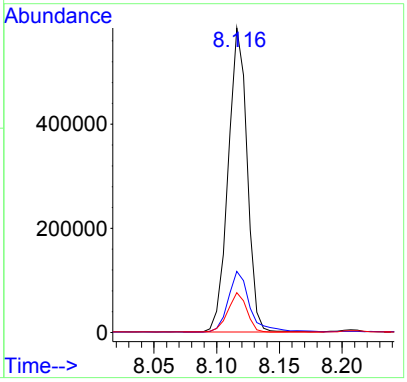


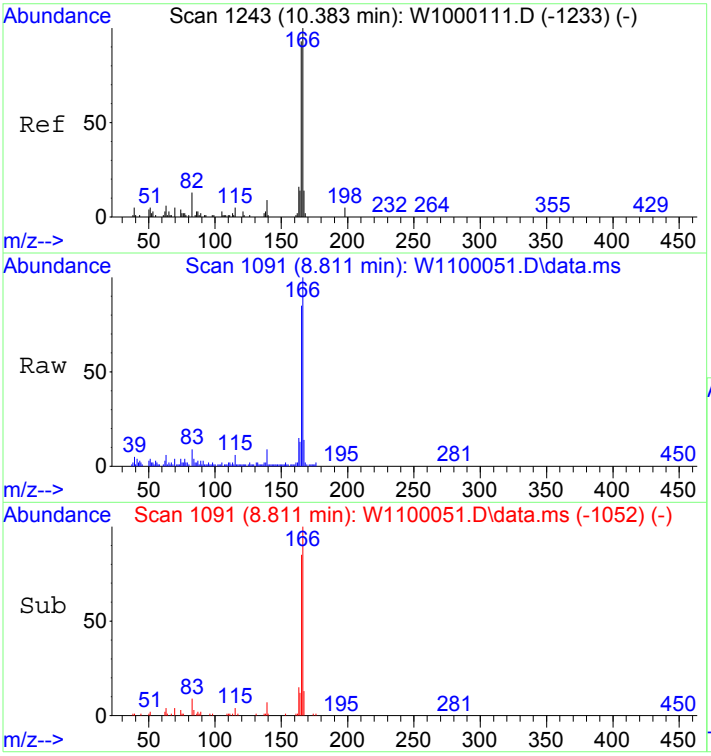


#47
Acenaphthylene
Concen: 12.87 µg/mL
RT: 8.116 min Scan# 961
Delta R.T. -0.012 min
Lab File: W1100051.D
Acq: 28 Jan 2011 5:56 pm

Tgt Ion:152 Resp: 612696

Ion	Ratio	Lower	Upper
152	100		
151	22.7	15.0	22.4#
153	13.1	10.2	15.2

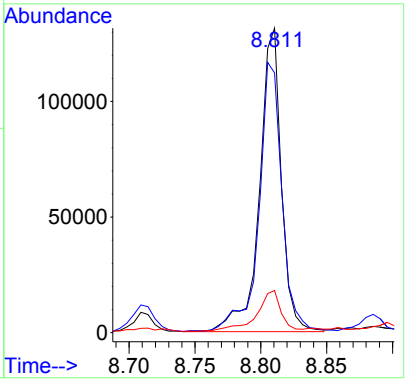


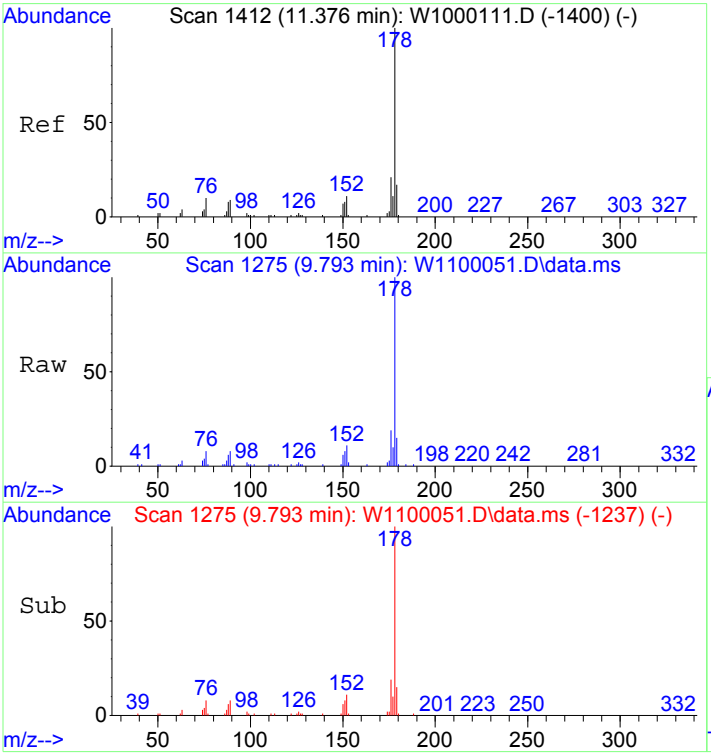


#59
Fluorene
Concen: 4.48 µg/mL
RT: 8.811 min Scan# 1091
Delta R.T. 0.000 min
Lab File: W1100051.D
Acq: 28 Jan 2011 5:56 pm

Tgt Ion:166 Resp: 152878

Ion	Ratio	Lower	Upper
166	100		
165	93.7	75.4	113.0
167	15.2	10.9	16.3

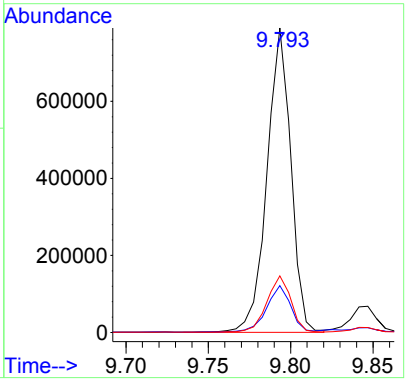


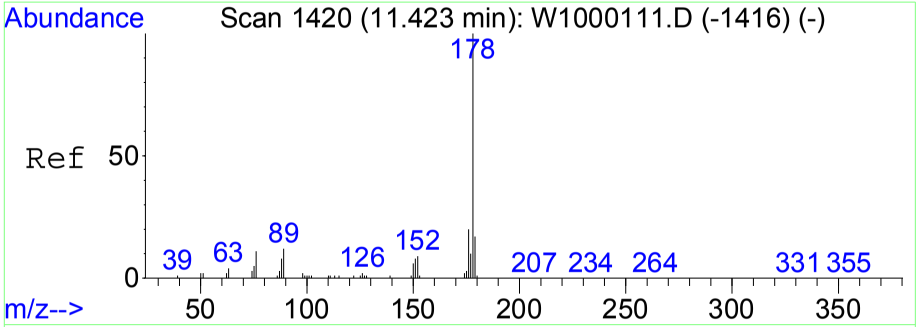


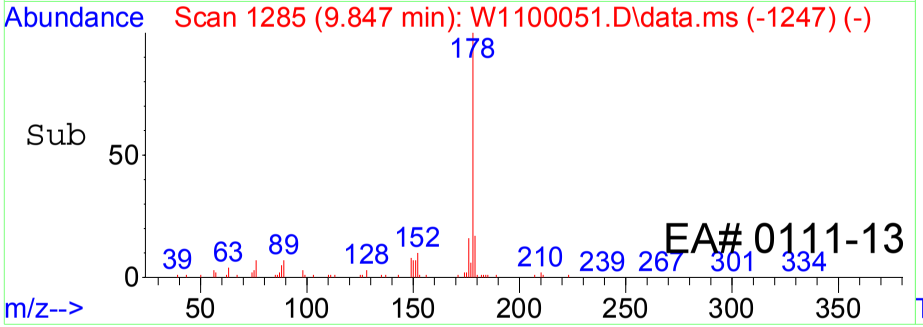
#69
Phenanthrene
Concen: 15.89 µg/mL
RT: 9.793 min Scan# 1275
Delta R.T. -0.005 min
Lab File: W1100051.D
Acq: 28 Jan 2011 5:56 pm

Tgt Ion:178 Resp: 795360

Ion	Ratio	Lower	Upper
178	100		
179	15.7	12.5	18.7
176	18.6	15.0	22.4



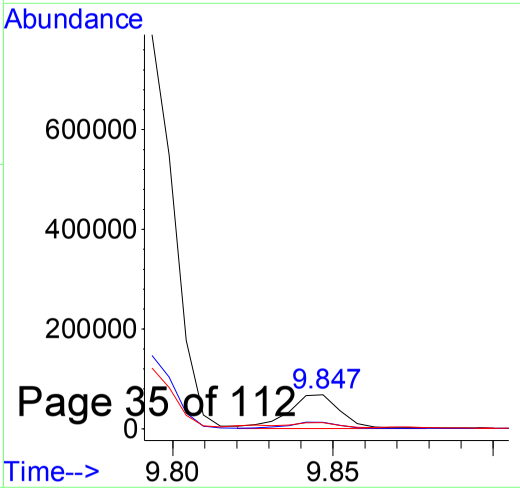


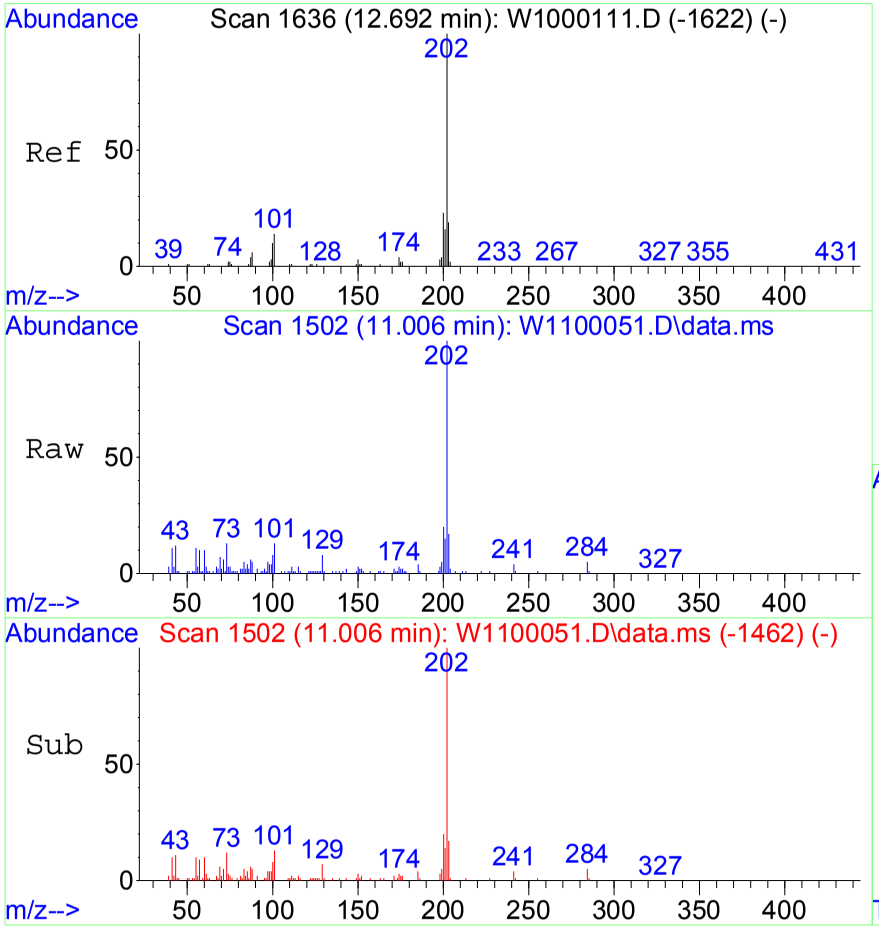


#70
Anthracene
Concen: 1.57 µg/mL m
RT: 9.847 min Scan# 1285
Delta R.T. -0.005 min
Lab File: W1100051.D
Acq: 28 Jan 2011 5:56 pm

Tgt Ion:178 Resp: 78485

Ion	Ratio	Lower	Upper
178	100		
176	188.5	15.0	22.4#
179	158.8	12.8	19.2#

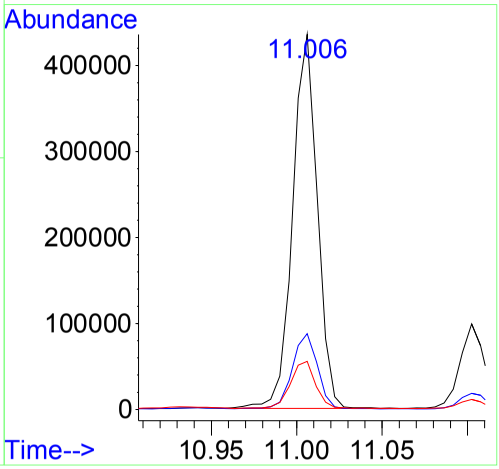


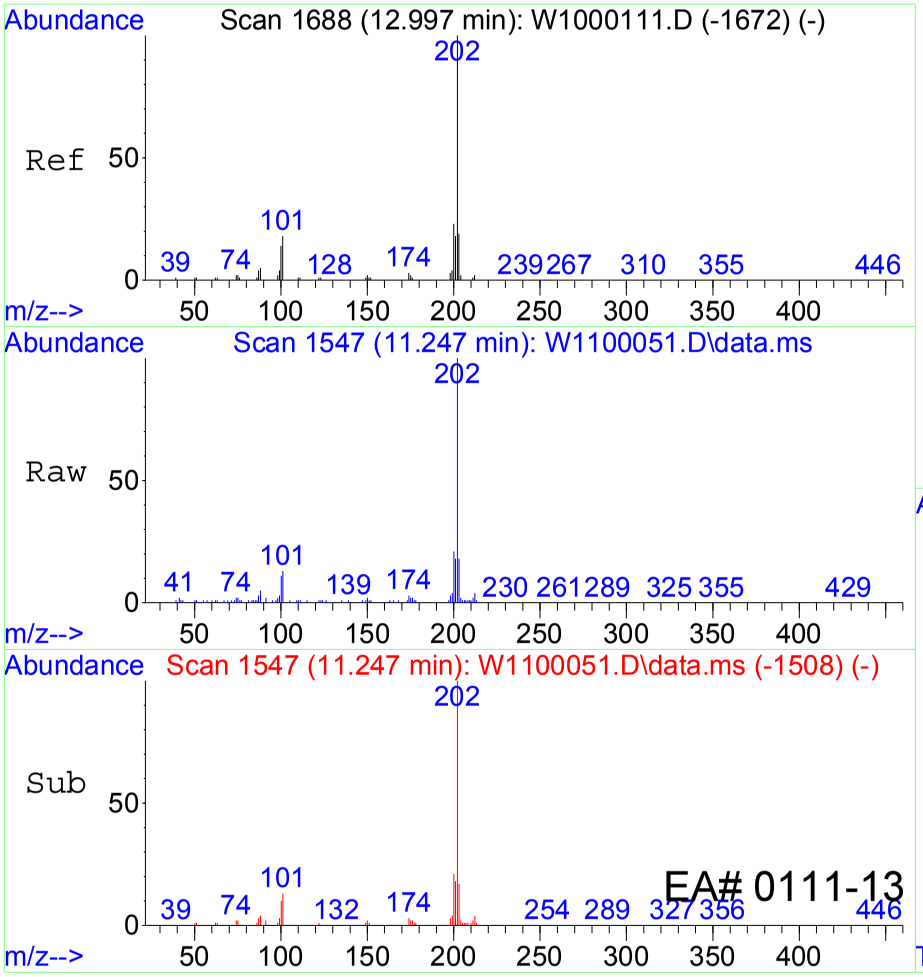


#73
Fluoranthene (CCC)
Concen: 8.39 µg/mL
RT: 11.006 min Scan# 1502
Delta R.T. 0.005 min
Lab File: W1100051.D
Acq: 28 Jan 2011 5:56 pm

Tgt Ion:202 Resp: 437252

Ion	Ratio	Lower	Upper
202	100		
200	20.8	16.5	24.7
101	13.5	8.6	12.8#

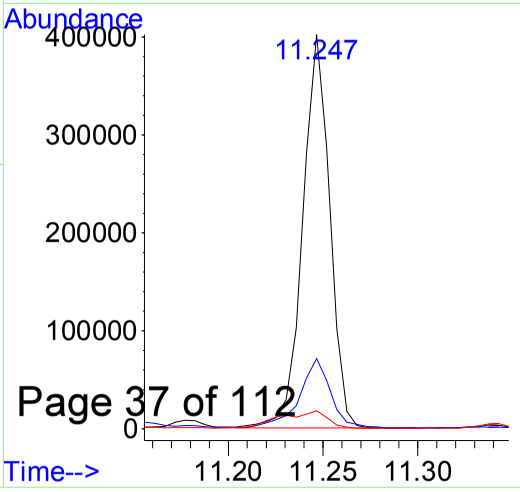


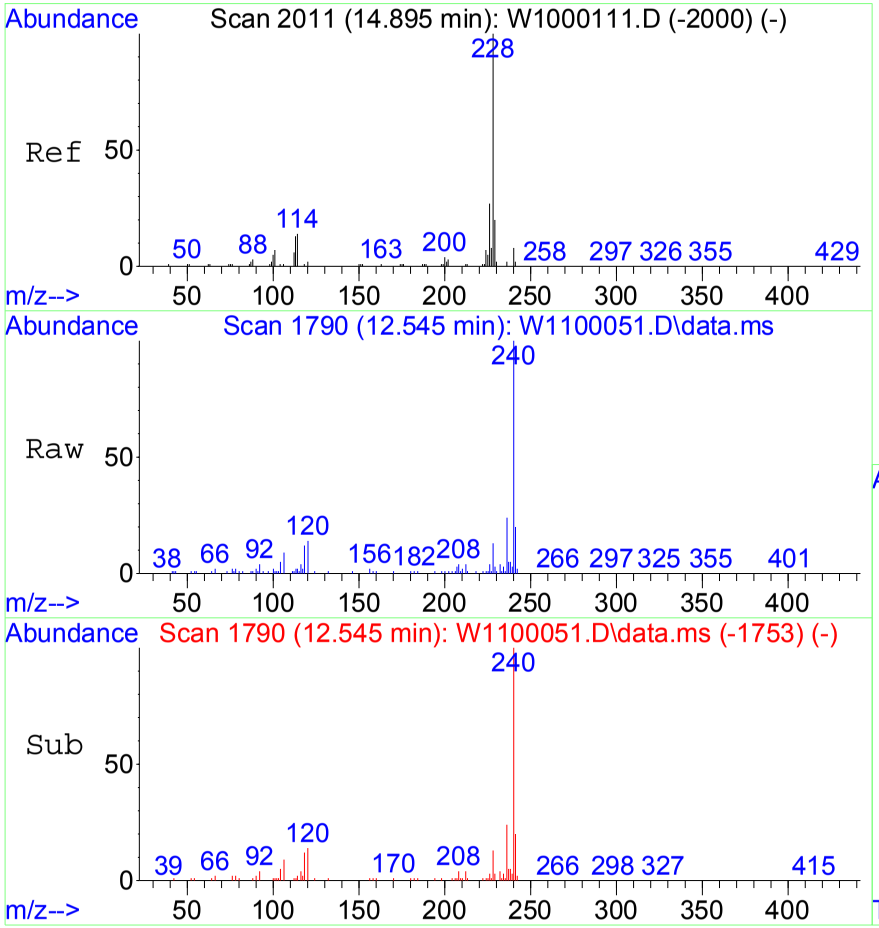


#76
Pyrene
Concen: 7.15 µg/mL
RT: 11.247 min Scan# 1547
Delta R.T. 0.002 min
Lab File: W1100051.D
Acq: 28 Jan 2011 5:56 pm

Tgt Ion:202 Resp: 400273

Ion	Ratio	Lower	Upper
202	100		
203	20.5	14.5	21.7
88	7.7	3.4	5.0#

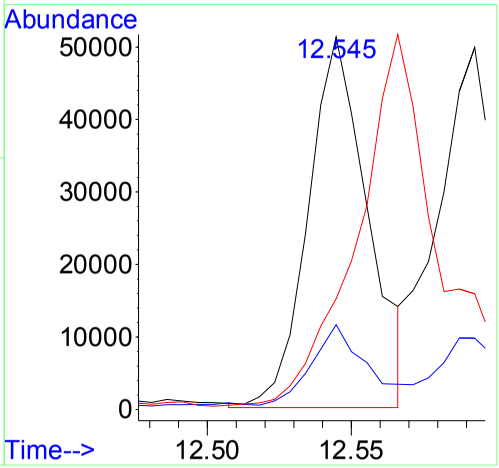


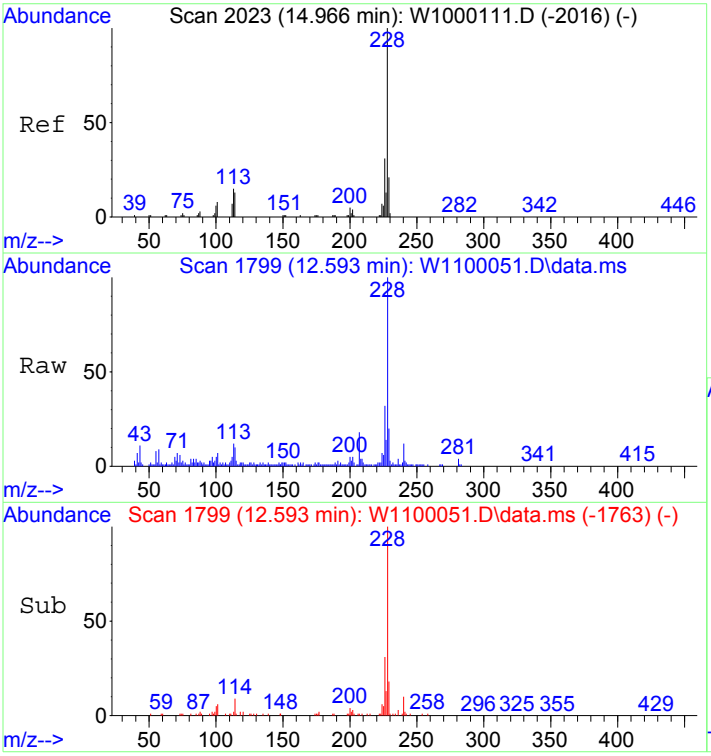


#84
Benzo(a)anthracene
Concen: 1.33 µg/mL m
RT: 12.545 min Scan# 1790
Delta R.T. -0.011 min
Lab File: W1100051.D
Acq: 28 Jan 2011 5:56 pm

Tgt Ion:228 Resp: 73616

Ion	Ratio	Lower	Upper
228	100		
229	18.7	14.7	22.1
226	136.0	21.0	31.6#

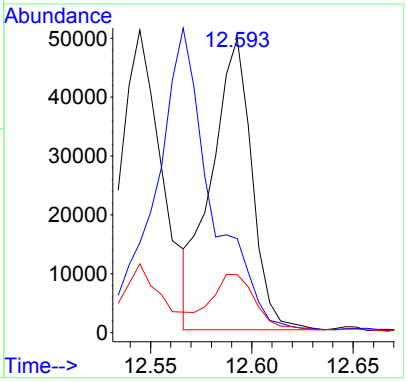


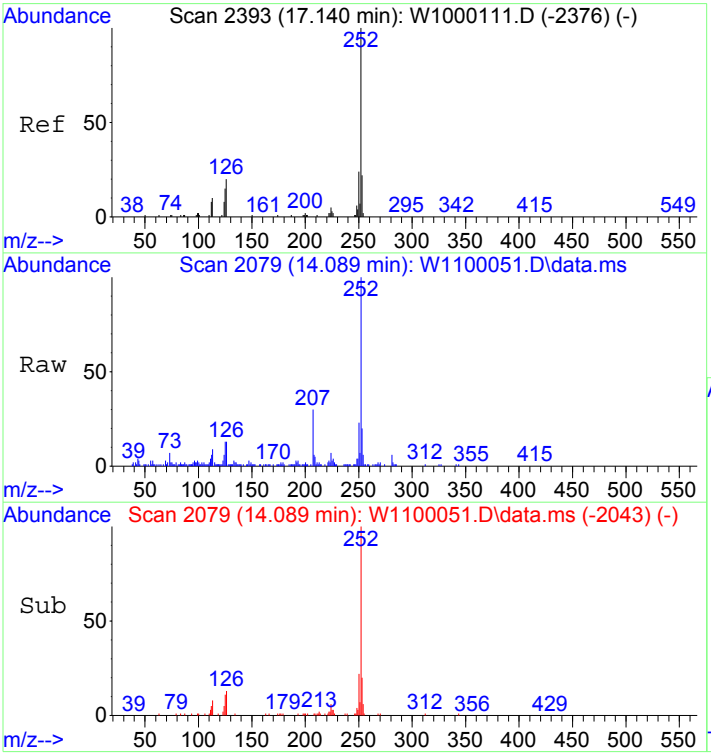


#85
Chrysene
Concen: 1.32 µg/mL
RT: 12.593 min Scan# 1799
Delta R.T. -0.016 min
Lab File: W1100051.D
Acq: 28 Jan 2011 5:56 pm

Tgt Ion:228 Resp: 69071

Ion	Ratio	Lower	Upper
228	100		
226	144.9	23.6	35.4#
229	20.0	15.8	23.6

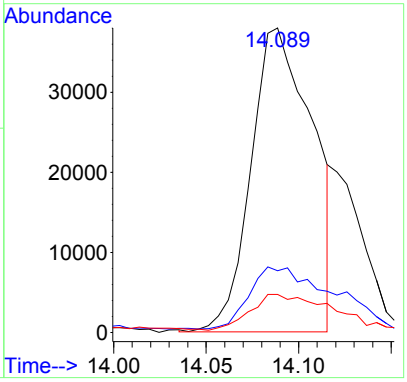


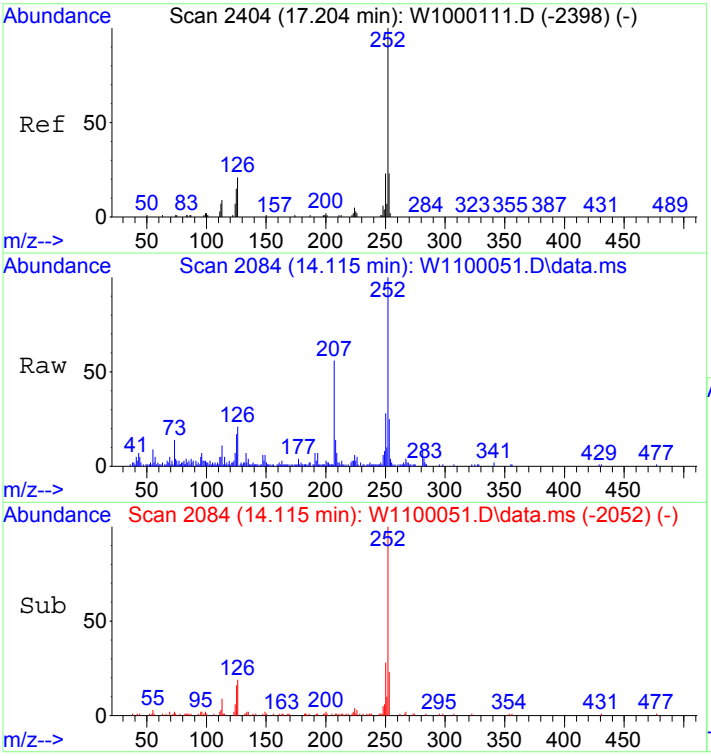


#88
Benzo(b)fluoranthene
Concen: 1.80 µg/mL m
RT: 14.089 min Scan# 2079
Delta R.T. -0.017 min
Lab File: W1100051.D
Acq: 28 Jan 2011 5:56 pm

Tgt Ion:252 Resp: 87991

Ion	Ratio	Lower	Upper
252	100		
253	28.7	17.9	26.9#
125	16.0	7.7	11.5#

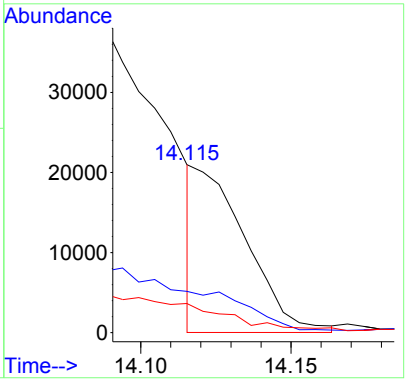


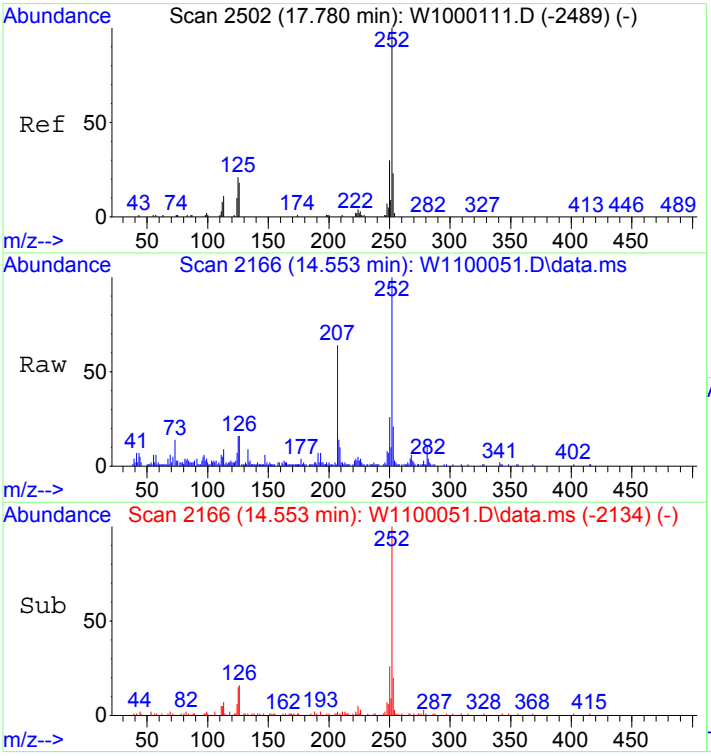


#89
Benzo(k)fluoranthene
Concen: 0.50 µg/mL m
RT: 14.115 min Scan# 2084
Delta R.T. -0.038 min
Lab File: W1100051.D
Acq: 28 Jan 2011 5:56 pm

Tgt Ion:252 Resp: 24140

Ion	Ratio	Lower	Upper
252	100		
253	104.5	14.9	22.3#
125	58.3	8.8	13.2#

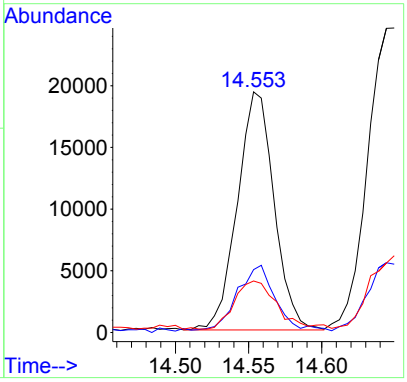


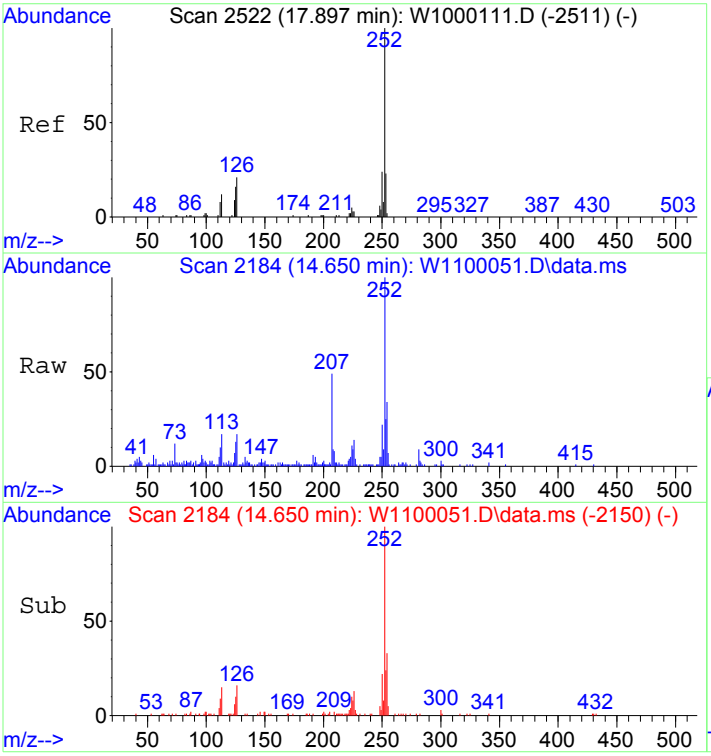


#90
Benzo(e)pyrene
Concen: 0.77 µg/mL
RT: 14.553 min Scan# 2166
Delta R.T. -0.028 min
Lab File: W1100051.D
Acq: 28 Jan 2011 5:56 pm

Tgt Ion:252 Resp: 33693

Ion	Ratio	Lower	Upper
252	100		
250	28.7	23.0	34.4
253	23.4	17.8	26.8

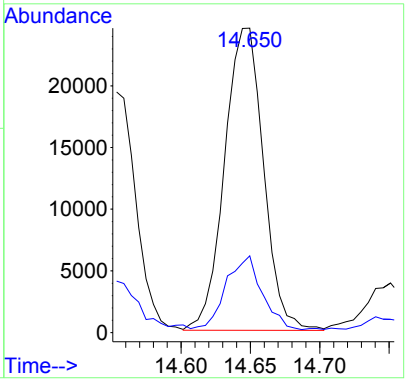


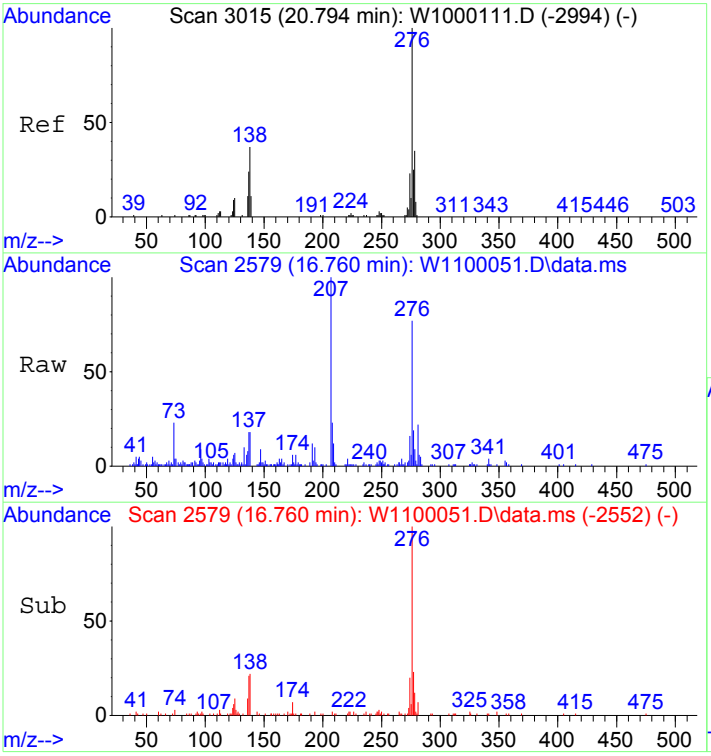


#91
Benzo(a)pyrene (CCC)
Concen: 1.06 µg/mL
RT: 14.650 min Scan# 2184
Delta R.T. -0.027 min
Lab File: W1100051.D
Acq: 28 Jan 2011 5:56 pm

Tgt Ion:252 Resp: 47912

Ion	Ratio	Lower	Upper
252	100		
253	22.7	16.6	25.0

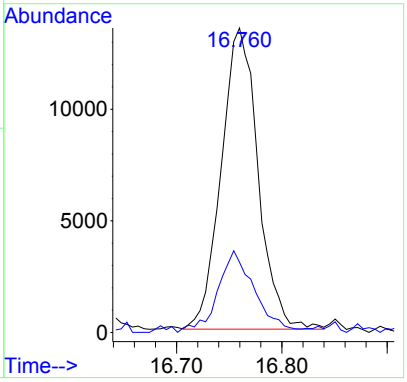


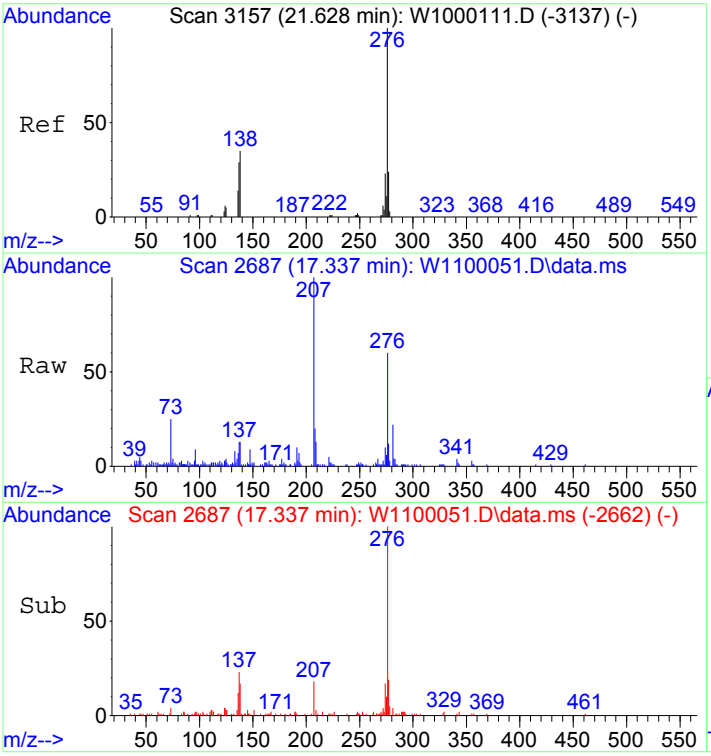


#93
Indeno(1,2,3-cd)pyrene
Concen: 0.74 µg/mL
RT: 16.760 min Scan# 2579
Delta R.T. -0.066 min
Lab File: W1100051.D
Acq: 28 Jan 2011 5:56 pm

Tgt Ion:276 Resp: 32792

Ion	Ratio	Lower	Upper
276	100		
138	27.1	21.4	32.2

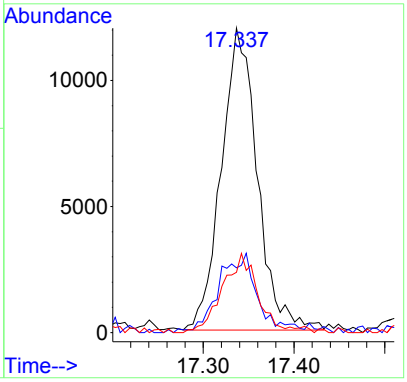




#95
Benzo(g,h,i)perylene
Concen: 0.91 µg/mL
RT: 17.337 min Scan# 2687
Delta R.T. -0.076 min
Lab File: W1100051.D
Acq: 28 Jan 2011 5:56 pm

Tgt Ion:276 Resp: 33051

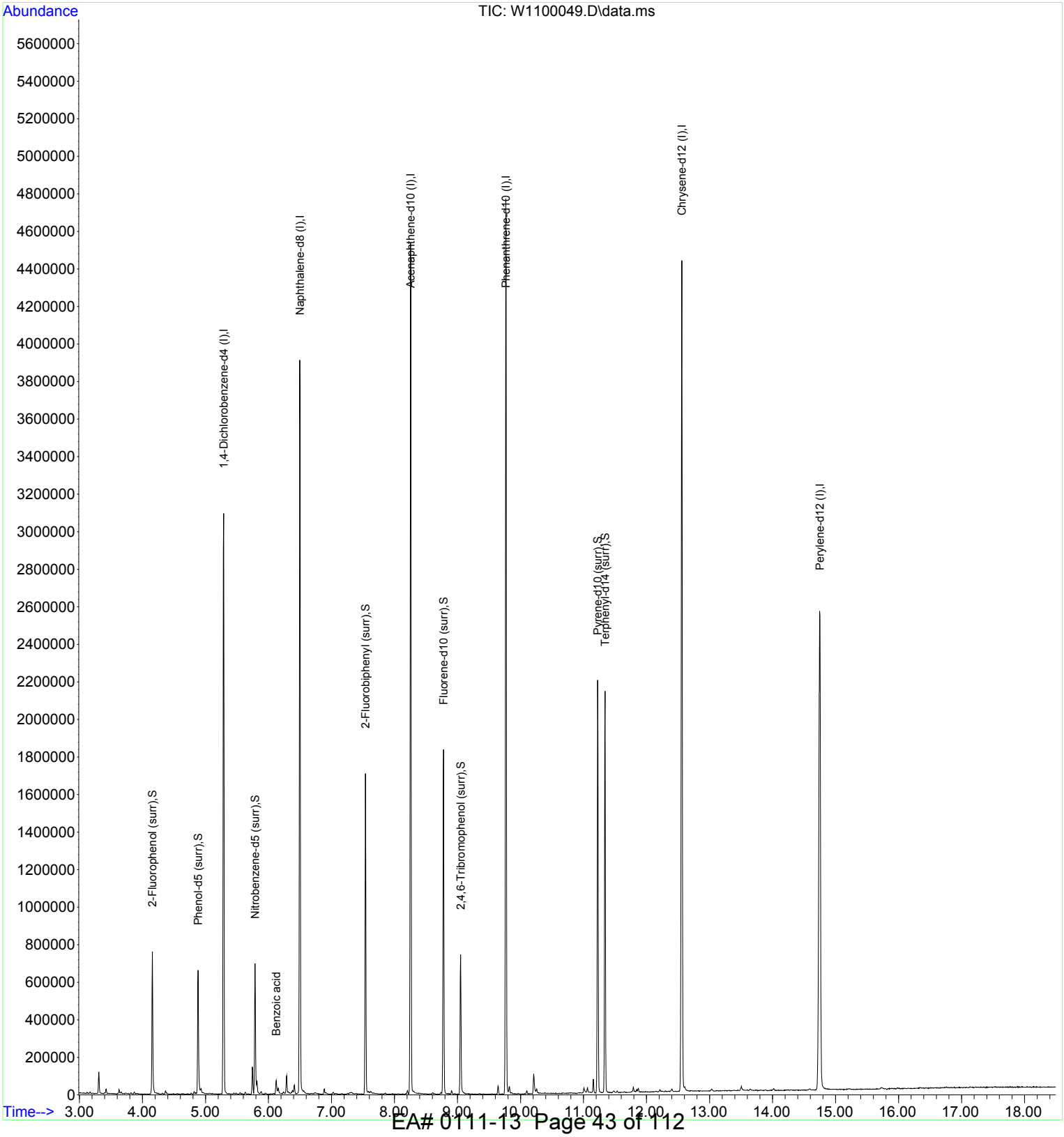
Ion	Ratio	Lower	Upper
276	100		
138	28.3	21.2	31.8
277	25.3	19.3	28.9



Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\jan11\W012811A\
Data File : W1100049.D
Acq On : 28 Jan 2011 4:55 pm
Operator : tdd
Sample : 0111-13 MB
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jan 28 18:39:09 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Jan 04 17:58:34 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\jan11\W012811A\
Data File : W1100049.D
Acq On : 28 Jan 2011 4:55 pm
Operator : tdd
Sample : 0111-13 MB
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jan 28 18:39:09 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Jan 04 17:58:34 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	5.290	152	522090	40.00	µg/mL	0.00
21) Naphthalene-d8 (I)	6.497	136	1845188	40.00	µg/mL	0.00
36) Acenaphthene-d10 (I)	8.255	164	1083822	40.00	µg/mL	0.00
64) Phenanthrene-d10 (I)	9.767	188	1974624	40.00	µg/mL	0.00
78) Chrysene-d12 (I)	12.561	240	1995220	40.00	µg/mL	-0.01
87) Perylene-d12 (I)	14.751	264	1733409	40.00	µg/mL	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol (surr)	4.157	112	218019	15.32	µg/mL	-0.02
5) Phenol-d5 (surr)	4.884	99	261447	15.79	µg/mL	-0.02
19) Nitrobenzene-d5 (surr)	5.787	82	226918	13.96	µg/mL	0.00
39) 2-Fluorobiphenyl (surr)	7.539	172	539767	16.11	µg/mL	-0.01
57) Fluorene-d10 (surr)	8.778	176	514511	17.29	µg/mL	0.00
65) 2,4,6-Tribromophenol (...	9.051	330	80797	17.87	µg/mL	-0.01
75) Pyrene-d10 (surr)	11.225	212	828814	20.14	µg/mL	0.00
77) Terphenyl-d14 (surr)	11.343	244	634438	19.37	µg/mL	0.01
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	0.000		0	N.D.		
3) Pyridine	0.000		0	N.D.		
6) Phenol (CCC)	0.000		0	N.D.	d	
7) Aniline	0.000		0	N.D.		
8) bis(2-Chloroethyl)ether	0.000		0	N.D.		
9) 2-Chlorophenol	0.000		0	N.D.		
10) 1,3-Dichlorobenzene	0.000		0	N.D.		
11) 1,4-Dichlorobenzene (CCC)	0.000		0	N.D.		
12) Benzyl alcohol	0.000		0	N.D.	d	
13) 1,2-Dichlorobenzene	0.000		0	N.D.	d	
14) 2-Methylphenol	0.000		0	N.D.		
15) bis(2-Chloroisopropyl)...	0.000		0	N.D.		
16) 3/4-Methylphenol	0.000		0	N.D.		
17) N-Nitrso-di-n-propylam...	0.000		0	N.D.		
18) Hexachloroethane	0.000		0	N.D.	d	
20) Nitrobenzene	0.000		0	N.D.	d	
22) Isophorone	0.000		0	N.D.		
23) 2,4-Dimethylphenol	0.000		0	N.D.	d	
24) 2-Nitrophenol (CCC)	0.000		0	N.D.		
25) Benzoic acid	6.123	105	22545m	2.52	µg/mL	
26) bis(2-Chloroethoxy)met...	0.000		0	N.D.	d	
27) 2,4-Dichlorophenol (CCC)	0.000		0	N.D.	d	
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.		
29) Naphthalene	0.000		0	N.D.	d	
30) 4-Chloroaniline	0.000		0	N.D.	d	
31) Hexachlorobutadiene (CCC)	0.000		0	N.D.		
32) 4-Chloro-3-methylpheno...	0.000		0	N.D.		
33) 2-Methylnaphthalene	0.000		0	N.D.		
34) 1-Methylnaphthalene	0.000		0	N.D.		
35) Hexachlorocyclopentadi...	0.000		0	N.D.		
37) 2,4,6-Trichlorophenol ...	0.000		0	N.D.		
38) 2,4,5-Trichlorophenol	0.000		0	N.D.		
40) 2-Chloronaphthalene	0.000		0	N.D.		
41) 2-Nitroaniline	0.000		0	N.D.		
42) 1,4-Dinitrobenzene	0.000		0	N.D.		
43) Dimethylphthalate	0.000		0	N.D.		
44) 1,3-Dinitrobenzene	0.000		0	N.D.		
45) 2,6-Dinitrotoluene	0.000		0	N.D.		
46) 1,2-Dinitrobenzene	0.000		0	N.D.		

Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\jan11\W012811A\
Data File : W1100049.D
Acq On : 28 Jan 2011 4:55 pm
Operator : tdd
Sample : 0111-13 MB
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jan 28 18:39:09 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Jan 04 17:58:34 2011
Response via : Initial Calibration

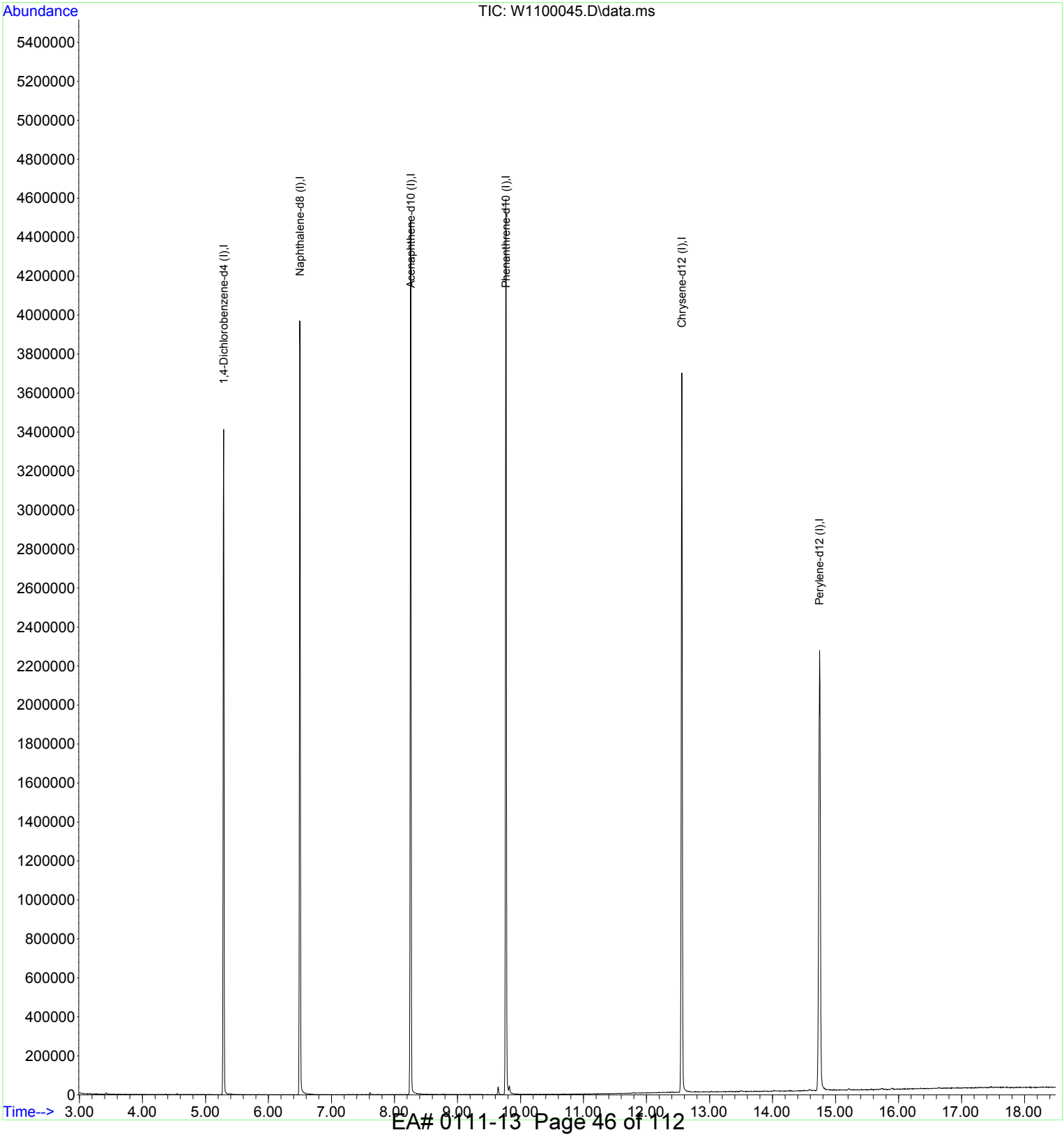
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
47) Acenaphthylene	0.000		0	N.D.	
48) 3-Nitroaniline	0.000		0	N.D.	
49) Acenaphthene (CCC)	0.000		0	N.D.	d
50) 2,4-Dinitrophenol (SPCC)	0.000		0	N.D.	
51) 4-Nitrophenol (SPCC)	0.000		0	N.D.	
52) 2,4-Dinitrotoluene	0.000		0	N.D.	
53) Dibenzofuran	0.000		0	N.D.	
54) 2,3,5,6-Tetrachlorophenol	0.000		0	N.D.	
55) 2,3,4,6-Tetrachlorophenol	0.000		0	N.D.	
56) Diethylphthalate	0.000		0	N.D.	d
58) 4-Chlorophenyl-phenyle...	0.000		0	N.D.	
59) Fluorene	0.000		0	N.D.	d
60) 4-Nitroaniline	0.000		0	N.D.	
61) 4,6-Dinitro2-methylphenol	0.000		0	N.D.	
62) N-Nitrosodiphenylamine...	0.000		0	N.D.	
63) Azobenzene	0.000		0	N.D.	
66) 4-Bromophenyl-phenylether	0.000		0	N.D.	
67) Hexachlorobenzene	0.000		0	N.D.	
68) Pentachlorophenol (CCC)	0.000		0	N.D.	
69) Phenanthrene	0.000		0	N.D.	
70) Anthracene	0.000		0	N.D.	
71) Carbazole	0.000		0	N.D.	
72) Di-n-butylphthalate	0.000		0	N.D.	d
73) Fluoranthene (CCC)	0.000		0	N.D.	
74) Benzidine	0.000		0	N.D.	
76) Pyrene	0.000		0	N.D.	d
79) Butylbenzylphthalate	0.000		0	N.D.	d
80) 3,3-Dimethylbenzidine	0.000		0	N.D.	
81) bis(2-ethylhexyl)adipate	0.000		0	N.D.	d
82) bis(2-Ethylhexyl)phtha...	0.000		0	N.D.	d
83) 3,3'-Dichlorobenzidine	0.000		0	N.D.	
84) Benzo(a)anthracene	0.000		0	N.D.	d
85) Chrysene	0.000		0	N.D.	d
86) Di-n-octylphthalate (CCC)	0.000		0	N.D.	
88) Benzo(b)fluoranthene	0.000		0	N.D.	
89) Benzo(k)fluoranthene	0.000		0	N.D.	
90) Benzo(e)pyrene	0.000		0	N.D.	
91) Benzo(a)pyrene (CCC)	0.000		0	N.D.	d
92) Perylene	0.000		0	N.D.	d
93) Indeno(1,2,3-cd)pyrene	0.000		0	N.D.	
94) Dibenz(a,h)anthracene	0.000		0	N.D.	
95) Benzo(g,h,i)perylene	0.000		0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\jan11\W012811A\
Data File : W1100045.D
Acq On : 28 Jan 2011 2:52 pm
Operator : tdd
Sample : CH2Cl2 System Blank (Scan)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jan 28 18:42:41 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Jan 04 17:58:34 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\jan11\W012811A\
Data File : W1100045.D
Acq On : 28 Jan 2011 2:52 pm
Operator : tdd
Sample : CH2Cl2 System Blank (Scan)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jan 28 18:42:41 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Jan 04 17:58:34 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	5.290	152	554892	40.00	µg/mL	0.00
21) Naphthalene-d8 (I)	6.497	136	1981163	40.00	µg/mL	0.00
36) Acenaphthene-d10 (I)	8.260	164	1122172	40.00	µg/mL	0.00
64) Phenanthrene-d10 (I)	9.767	188	1929188	40.00	µg/mL	0.00
78) Chrysene-d12 (I)	12.561	240	1719405	40.00	µg/mL	-0.01
87) Perylene-d12 (I)	14.746	264	1512053	40.00	µg/mL	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol (surr)	0.000	112	0	0.00	µg/mL	
5) Phenol-d5 (surr)	0.000	99	0	0.00	µg/mL	
19) Nitrobenzene-d5 (surr)	0.000	82	0	0.00	µg/mL	
39) 2-Fluorobiphenyl (surr)	0.000	172	0	0.00	µg/mL	
57) Fluorene-d10 (surr)	0.000	176	0	0.00	µg/mL	
65) 2,4,6-Tribromophenol (...	0.000	330	0	0.00	µg/mL	
75) Pyrene-d10 (surr)	0.000	212	0	0.00	µg/mL	
77) Terphenyl-d14 (surr)	0.000	244	0	0.00	µg/mL	
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	0.000		0	N.D.		
3) Pyridine	0.000		0	N.D.		
6) Phenol (CCC)	0.000		0	N.D.		
7) Aniline	0.000		0	N.D.		
8) bis(2-Chloroethyl)ether	0.000		0	N.D.		
9) 2-Chlorophenol	0.000		0	N.D.		
10) 1,3-Dichlorobenzene	0.000		0	N.D.		
11) 1,4-Dichlorobenzene (CCC)	0.000		0	N.D.		
12) Benzyl alcohol	0.000		0	N.D.	d	
13) 1,2-Dichlorobenzene	0.000		0	N.D.		
14) 2-Methylphenol	0.000		0	N.D.		
15) bis(2-Chloroisopropyl)...	0.000		0	N.D.		
16) 3/4-Methylphenol	0.000		0	N.D.		
17) N-Nitrso-di-n-propylam...	0.000		0	N.D.		
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	0.000		0	N.D.		
22) Isophorone	0.000		0	N.D.		
23) 2,4-Dimethylphenol	0.000		0	N.D.		
24) 2-Nitrophenol (CCC)	0.000		0	N.D.		
25) Benzoic acid	0.000		0	N.D.		
26) bis(2-Chloroethoxy)met...	0.000		0	N.D.		
27) 2,4-Dichlorophenol (CCC)	0.000		0	N.D.		
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.		
29) Naphthalene	0.000		0	N.D.		
30) 4-Chloroaniline	0.000		0	N.D.	d	
31) Hexachlorobutadiene (CCC)	0.000		0	N.D.		
32) 4-Chloro-3-methylpheno...	0.000		0	N.D.		
33) 2-Methylnaphthalene	0.000		0	N.D.		
34) 1-Methylnaphthalene	0.000		0	N.D.		
35) Hexachlorocyclopentadi...	0.000		0	N.D.		
37) 2,4,6-Trichlorophenol ...	0.000		0	N.D.		
38) 2,4,5-Trichlorophenol	0.000		0	N.D.		
40) 2-Chloronaphthalene	0.000		0	N.D.		
41) 2-Nitroaniline	0.000		0	N.D.		
42) 1,4-Dinitrobenzene	0.000		0	N.D.		
43) Dimethylphthalate	0.000		0	N.D.		
44) 1,3-Dinitrobenzene	0.000		0	N.D.		
45) 2,6-Dinitrotoluene	0.000		0	N.D.		
46) 1,2-Dinitrobenzene	0.000		0	N.D.		

Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\jan11\W012811A\
Data File : W1100045.D
Acq On : 28 Jan 2011 2:52 pm
Operator : tdd
Sample : CH2Cl2 System Blank (Scan)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jan 28 18:42:41 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Jan 04 17:58:34 2011
Response via : Initial Calibration

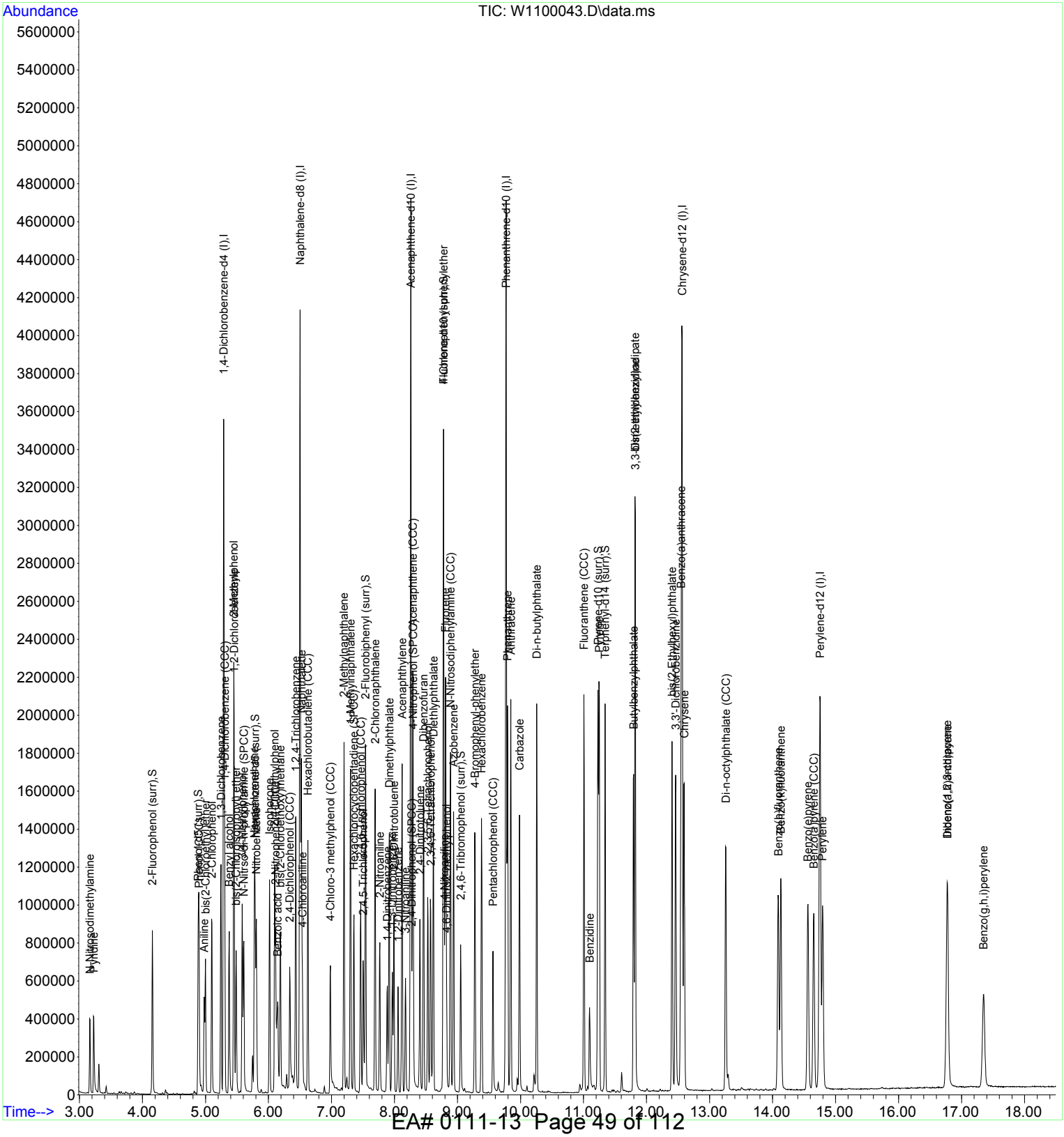
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
47) Acenaphthylene	0.000		0	N.D.	
48) 3-Nitroaniline	0.000		0	N.D.	
49) Acenaphthene (CCC)	0.000		0	N.D.	d
50) 2,4-Dinitrophenol (SPCC)	0.000		0	N.D.	
51) 4-Nitrophenol (SPCC)	0.000		0	N.D.	
52) 2,4-Dinitrotoluene	0.000		0	N.D.	
53) Dibenzofuran	0.000		0	N.D.	
54) 2,3,5,6-Tetrachlorophenol	0.000		0	N.D.	
55) 2,3,4,6-Tetrachlorophenol	0.000		0	N.D.	
56) Diethylphthalate	0.000		0	N.D.	
58) 4-Chlorophenyl-phenyle...	0.000		0	N.D.	
59) Fluorene	0.000		0	N.D.	
60) 4-Nitroaniline	0.000		0	N.D.	
61) 4,6-Dinitro2-methylphenol	0.000		0	N.D.	
62) N-Nitrosodiphenylamine...	0.000		0	N.D.	
63) Azobenzene	0.000		0	N.D.	
66) 4-Bromophenyl-phenylether	0.000		0	N.D.	
67) Hexachlorobenzene	0.000		0	N.D.	
68) Pentachlorophenol (CCC)	0.000		0	N.D.	
69) Phenanthrene	0.000		0	N.D.	
70) Anthracene	0.000		0	N.D.	
71) Carbazole	0.000		0	N.D.	
72) Di-n-butylphthalate	0.000		0	N.D.	
73) Fluoranthene (CCC)	0.000		0	N.D.	
74) Benzidine	0.000		0	N.D.	
76) Pyrene	0.000		0	N.D.	
79) Butylbenzylphthalate	0.000		0	N.D.	
80) 3,3-Dimethylbenzidine	0.000		0	N.D.	
81) bis(2-ethylhexyl)adipate	0.000		0	N.D.	
82) bis(2-Ethylhexyl)phtha...	0.000		0	N.D.	
83) 3,3'-Dichlorobenzidine	0.000		0	N.D.	
84) Benzo(a)anthracene	0.000		0	N.D.	d
85) Chrysene	0.000		0	N.D.	d
86) Di-n-octylphthalate (CCC)	0.000		0	N.D.	
88) Benzo(b)fluoranthene	0.000		0	N.D.	
89) Benzo(k)fluoranthene	0.000		0	N.D.	
90) Benzo(e)pyrene	0.000		0	N.D.	
91) Benzo(a)pyrene (CCC)	0.000		0	N.D.	d
92) Perylene	0.000		0	N.D.	d
93) Indeno(1,2,3-cd)pyrene	0.000		0	N.D.	
94) Dibenz(a,h)anthracene	0.000		0	N.D.	
95) Benzo(g,h,i)perylene	0.000		0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\jan11\W012811A\
Data File : W1100043.D
Acq On : 28 Jan 2011 1:48 pm
Operator : tdd
Sample : 0111-13 LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jan 28 14:10:07 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Jan 04 17:58:34 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\jan11\W012811A\
Data File : W1100043.D
Acq On : 28 Jan 2011 1:48 pm
Operator : tdd
Sample : 0111-13 LCS
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ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jan 28 14:10:07 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Jan 04 17:58:34 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	5.290	152	553789	40.00	µg/mL	0.00
21) Naphthalene-d8 (I)	6.503	136	1980939	40.00	µg/mL	0.00
36) Acenaphthene-d10 (I)	8.260	164	1132651	40.00	µg/mL	0.00
64) Phenanthrene-d10 (I)	9.772	188	1983150	40.00	µg/mL	0.00
78) Chrysene-d12 (I)	12.566	240	1750154	40.00	µg/mL	0.00
87) Perylene-d12 (I)	14.756	264	1422438	40.00	µg/mL	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (surr)	4.157	112	254174	16.83	µg/mL	-0.02
5) Phenol-d5 (surr)	4.884	99	307408	17.51	µg/mL	-0.02
19) Nitrobenzene-d5 (surr)	5.787	82	293850	17.05	µg/mL	0.00
39) 2-Fluorobiphenyl (surr)	7.539	172	602034	17.19	µg/mL	-0.01
57) Fluorene-d10 (surr)	8.778	176	571950	18.39	µg/mL	0.00
65) 2,4,6-Tribromophenol (...	9.051	330	86854	19.13	µg/mL	-0.01
75) Pyrene-d10 (surr)	11.231	212	781120	18.90	µg/mL	0.00
77) Terphenyl-d14 (surr)	11.343	244	587552	17.86	µg/mL	0.01
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.164	74	164906	15.46	µg/mL	93
3) Pyridine	3.228	79	180891	10.20	µg/mL#	82
6) Phenol (CCC)	4.900	94	285772	15.59	µg/mL#	89
7) Aniline	4.980	66	73851	8.91	µg/mL#	65
8) bis(2-Chloroethyl)ether	5.002	63	167610	15.47	µg/mL#	72
9) 2-Chlorophenol	5.103	128	276969	16.74	µg/mL	97
10) 1,3-Dichlorobenzene	5.247	146	309519	16.31	µg/mL	98
11) 1,4-Dichlorobenzene (CCC)	5.306	146	315518	16.39	µg/mL	99
12) Benzyl alcohol	5.375	108	140997	15.79	µg/mL#	80
13) 1,2-Dichlorobenzene	5.456	146	298299	16.48	µg/mL	95
14) 2-Methylphenol	5.450	107	217782	17.95	µg/mL	97
15) bis(2-Chloroisopropyl)...	5.488	45	213035	15.92	µg/mL#	73
16) 3/4-Methylphenol	5.584	107	264171	16.63	µg/mL	93
17) N-Nitrso-di-n-propylam...	5.611	70	184295	16.65	µg/mL#	76
18) Hexachloroethane	5.776	117	112433	15.98	µg/mL	88
20) Nitrobenzene	5.808	77	274097	17.24	µg/mL	87
22) Isophorone	6.017	82	475222	16.43	µg/mL	94
23) 2,4-Dimethylphenol	6.097	107	214724	15.05	µg/mL#	84
24) 2-Nitrophenol (CCC)	6.113	139	160124	17.69	µg/mL	93
25) Benzoic acid	6.145	105	226424	23.59	µg/mL#	1
26) bis(2-Chloroethoxy)met...	6.188	93	281428	15.98	µg/mL	98
27) 2,4-Dichlorophenol (CCC)	6.337	162	201445	15.94	µg/mL	97
28) 1,2,4-Trichlorobenzene	6.433	180	274168	16.47	µg/mL	98
29) Naphthalene	6.524	128	840530	17.62	µg/mL	89
30) 4-Chloroaniline	6.540	65	53742	10.00	µg/mL	99
31) Hexachlorobutadiene (CCC)	6.626	225	162368	16.22	µg/mL	99
32) 4-Chloro-3-methylpheno...	6.983	107	191868	15.87	µg/mL	84
33) 2-Methylnaphthalene	7.197	142	543266	17.78	µg/mL	98
34) 1-Methylnaphthalene	7.304	142	523921	17.73	µg/mL	98
35) Hexachlorocyclopentadi...	7.357	237	161394	15.79	µg/mL#	100
37) 2,4,6-Trichlorophenol ...	7.464	196	153434	14.97	µg/mL	98
38) 2,4,5-Trichlorophenol	7.502	196	159724	15.54	µg/mL#	91
40) 2-Chloronaphthalene	7.694	162	520428	17.33	µg/mL	93
41) 2-Nitroaniline	7.769	65	134523	17.36	µg/mL	86
42) 1,4-Dinitrobenzene	7.886	168	88899	17.99	µg/mL#	86
43) Dimethylphthalate	7.918	163	628667	18.43	µg/mL	99
44) 1,3-Dinitrobenzene	7.966	168	101419	17.85	µg/mL#	74
45) 2,6-Dinitrotoluene	7.993	165	143538	17.42	µg/mL#	80
46) 1,2-Dinitrobenzene	8.057	168	66207	17.16	µg/mL#	90

Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\jan11\W012811A\
Data File : W1100043.D
Acq On : 28 Jan 2011 1:48 pm
Operator : tdd
Sample : 0111-13 LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jan 28 14:10:07 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Jan 04 17:58:34 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
47) Acenaphthylene	8.121	152	828230	18.18	µg/mL	99
48) 3-Nitroaniline	8.175	138	118195	14.58	µg/mL#	78
49) Acenaphthene (CCC)	8.292	154	518942	17.81	µg/mL	95
50) 2,4-Dinitrophenol (SPCC)	8.276	184	54872	14.38	µg/mL#	100
51) 4-Nitrophenol (SPCC)	8.298	139	77340	13.40	µg/mL#	75
52) 2,4-Dinitrotoluene	8.405	165	189414	18.51	µg/mL	94
53) Dibenzofuran	8.463	168	730054	18.38	µg/mL	92
54) 2,3,5,6-Tetrachlorophenol	8.527	232	149224	17.30	µg/mL	97
55) 2,3,4,6-Tetrachlorophenol	8.575	232	146993	16.84	µg/mL#	76
56) Diethylphthalate	8.618	149	636394	19.24	µg/mL	99
58) 4-Chlorophenyl-phenyle...	8.778	204	309847	17.71	µg/mL	93
59) Fluorene	8.811	166	615875	18.88	µg/mL	100
60) 4-Nitroaniline	8.795	138	123663	16.04	µg/mL#	80
61) 4,6-Dinitro2-methylphenol	8.827	198	99823	18.21	µg/mL#	16
62) N-Nitrosodiphenylamine...	8.891	169	521402	18.32	µg/mL	95
63) Azobenzene	8.939	77	552500	18.63	µg/mL#	100
66) 4-Bromophenyl-phenylether	9.275	248	185963	17.90	µg/mL	96
67) Hexachlorobenzene	9.382	284	191523	17.77	µg/mL	97
68) Pentachlorophenol (CCC)	9.564	266	94300	16.44	µg/mL	90
69) Phenanthrene	9.794	178	870089	19.44	µg/mL	100
70) Anthracene	9.847	178	851163	19.04	µg/mL	99
71) Carbazole	9.986	167	668507	17.22	µg/mL	99
72) Di-n-butylphthalate	10.258	149	1051678	21.17	µg/mL	98
73) Fluoranthene (CCC)	11.006	202	913598	19.61	µg/mL	99
74) Benzidine	11.097	184	249767	10.39	µg/mL	100
76) Pyrene	11.252	202	977418	19.53	µg/mL#	99
79) Butylbenzylphthalate	11.797	149	433654	22.42	µg/mL#	100
80) 3,3-Dimethylbenzidine	11.824	212	556023	20.44	µg/mL#	100
81) bis(2-ethylhexyl)adipate	11.818	129	379624	22.00	µg/mL#	100
82) bis(2-Ethylhexyl)phtha...	12.406	149	599389	22.60	µg/mL#	100
83) 3,3'-Dichlorobenzidine	12.465	252	470896	36.43	µg/mL	100
84) Benzo(a)anthracene	12.550	228	809408	19.16	µg/mL	98
85) Chrysene	12.598	228	745983	18.74	µg/mL	99
86) Di-n-octylphthalate (CCC)	13.261	149	935793	22.34	µg/mL#	100
88) Benzo(b)fluoranthene	14.094	252	689771	19.39	µg/mL	98
89) Benzo(k)fluoranthene	14.131	252	698187	20.10	µg/mL	95
90) Benzo(e)pyrene	14.559	252	670300	21.15	µg/mL	99
91) Benzo(a)pyrene (CCC)	14.655	252	634625	19.40	µg/mL	98
92) Perylene	14.794	252	643038	18.84	µg/mL	99
93) Indeno(1,2,3-cd)pyrene	16.770	276	594964	18.39	µg/mL	95
94) Dibenz(a,h)anthracene	16.776	278	498597	18.27	µg/mL	97
95) Benzo(g,h,i)perylene	17.347	276	478483	18.14	µg/mL	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Calibration Curve Chromatograms (Scan)

Response Factor Report

Sample ID	LID	FileName	Acq. Date
SSTD005-SCAN gcms22pg125	5	W1002873.D	10/18/10 17:56
SSTD010-SCAN gcms22pg125	10	W1002874.D	10/18/10 18:26
SSTD020-SCAN gcms22pg125	20	W1002875.D	10/18/10 18:55
SSTD050-SCAN gcms22pg125	50	W1002876.D	10/18/10 19:25
SSTD080-SCAN gcms22pg125	80	W1002877.D	10/18/10 19:54
SSTD120-SCAN gcms22pg125	120	W1002878.D	10/18/10 20:24
SSTD160-SCAN gcms22pg125	160	W1002879.D	10/18/10 20:54

Inst: Wiley

Curve: W101810X-8270.M

PASS

#	Name	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	Average RF	%RSD	Pass/Fail
2)	N-Nitrosodimethylamine	0.765	0.750	0.746	0.776	0.804	0.779	0.771	0.770	2.53%	Pass
3)	Pyridine	1.22	1.27	1.26	1.30	1.34	1.29	1.28	1.28	2.86%	Pass
6)	Phenol (CCC)	1.41	1.40	1.36	1.31	1.30	1.24	1.25	1.32	4.92%	Pass
7)	Aniline	0.610	0.609	0.599	0.603	0.601	0.589	0.581	0.599	1.76%	Pass
8)	bis(2-Chloroethyl)ether	0.802	0.798	0.796	0.794	0.789	0.756	0.741	0.782	3.03%	Pass
9)	2-Chlorophenol	1.21	1.22	1.19	1.20	1.22	1.17	1.16	1.19	2.03%	Pass
10)	1,3-Dichlorobenzene	1.41	1.41	1.35	1.36	1.39	1.35	1.32	1.37	2.39%	Pass
11)	1,4-Dichlorobenzene (CCC)	1.43	1.44	1.37	1.38	1.41	1.37	1.34	1.39	2.74%	Pass
12)	Benzyl alcohol	0.611	0.652	0.658	0.643	0.653	0.644	0.653	0.645	2.46%	Pass
13)	1,2-Dichlorobenzene	1.36	1.36	1.28	1.30	1.32	1.28	1.26	1.31	3.08%	Pass
14)	2-Methylphenol	0.918	0.906	0.897	0.861	0.869	0.829	0.856	0.876	3.59%	Pass
15)	bis(2-Chloroisopropyl) ether	1.02	0.992	0.981	0.982	0.960	0.921	0.913	0.966	3.88%	Pass
16)	3/4-Methylphenol	1.16	1.16	1.14	1.13	1.14	1.15	1.16	1.15	1.08%	Pass
17)	N-Nitrso-di-n-propylamine (SPCC)	0.793	0.809	0.795	0.802	0.806	0.801	0.790	0.799	0.88%	Pass
18)	Hexachloroethane	0.504	0.505	0.493	0.512	0.523	0.514	0.506	0.508	1.83%	Pass
20)	Nitrobenzene	1.21	1.19	1.17	1.15	1.13	1.09	1.10	1.15	3.86%	Pass
22)	Isophorone	0.581	0.598	0.572	0.593	0.593	0.586	0.565	0.584	2.07%	Pass
23)	2,4-Dimethylphenol	0.221	0.233	0.273	0.305	0.328	0.335	0.322	0.288	16.2%	Warning
24)	2-Nitrophenol (CCC)	0.168	0.177	0.178	0.184	0.192	0.190	0.190	0.183	4.80%	Pass
25)	Benzoic acid	0.0945	0.124	0.172	0.216	0.233	0.258	0.258	0.194	33.6%	Warning
26)	bis(2-Chloroethoxy)methane	0.369	0.365	0.353	0.355	0.360	0.350	0.337	0.356	3.01%	Pass
27)	2,4-Dichlorophenol (CCC)	0.214	0.247	0.234	0.262	0.271	0.280	0.277	0.255	9.58%	Pass
28)	1,2,4-Trichlorobenzene	0.344	0.342	0.327	0.328	0.343	0.338	0.331	0.336	2.16%	Pass
29)	Naphthalene	1.04	1.02	0.978	0.957	0.967	0.912	0.868	0.963	6.20%	Pass
30)	4-Chloroaniline	0.106	0.109	0.106	0.109	0.111	0.111	0.107	0.108	1.99%	Pass
31)	Hexachlorobutadiene (CCC)	0.200	0.201	0.193	0.196	0.209	0.209	0.207	0.202	3.13%	Pass
32)	4-Chloro-3 methylphenol (CCC)	0.202	0.218	0.230	0.256	0.260	0.273	0.270	0.244	11.3%	Pass
33)	2-Methylnaphthalene	0.636	0.630	0.610	0.615	0.620	0.618	0.590	0.617	2.43%	Pass
34)	1-Methylnaphthalene	0.619	0.606	0.594	0.594	0.599	0.599	0.566	0.597	2.72%	Pass
35)	Hexachlorocyclopentadiene (SPCC)	0.182	0.177	0.197	0.218	0.217	0.233	0.222	0.206	10.3%	Pass
37)	2,4,6-Trichlorophenol (CCC)	0.333	0.356	0.349	0.364	0.380	0.374	0.378	0.362	4.76%	Pass
38)	2,4,5-Trichlorophenol	0.319	0.352	0.353	0.364	0.382	0.380	0.391	0.363	6.72%	Pass
40)	2-Chloronaphthalene	1.11	1.11	1.05	1.05	1.07	1.03	1.00	1.06	3.77%	Pass
41)	2-Nitroaniline	0.241	0.263	0.268	0.283	0.295	0.282	0.285	0.274	6.61%	Pass
42)	1,4-Dinitrobenzene	0.134	0.154	0.161	0.184	0.194	0.194	0.201	0.175	14.4%	Pass
43)	Dimethylphthalate	1.22	1.24	1.16	1.20	1.25	1.17	1.19	1.20	2.61%	Pass
44)	1,3-Dinitrobenzene	0.168	0.187	0.188	0.206	0.219	0.214	0.221	0.201	9.86%	Pass
45)	2,6-Dinitrotoluene	0.275	0.286	0.276	0.290	0.308	0.296	0.305	0.291	4.50%	Pass
46)	1,2-Dinitrobenzene	0.122	0.131	0.126	0.137	0.149	0.141	0.147	0.136	7.46%	Pass
47)	Acenaphthylene	1.67	1.69	1.64	1.62	1.62	1.52	1.49	1.61	4.55%	Pass
48)	3-Nitroaniline	0.260	0.278	0.270	0.292	0.303	0.297	0.304	0.286	6.00%	Pass
49)	Acenaphthene (CCC)	1.08	1.05	1.00	1.02	1.04	1.01	1.00	1.03	2.83%	Pass
50)	2,4-Dinitrophenol (SPCC)	0.0615	0.0781	0.108	0.150	0.170	0.180	0.195	0.135	38.9%	Warning
51)	4-Nitrophenol (SPCC)	0.140	0.160	0.182	0.222	0.237	0.238	0.248	0.204	21.0%	Warning
52)	2,4-Dinitrotoluene	0.312	0.342	0.342	0.368	0.398	0.375	0.391	0.361	8.45%	Pass
53)	Dibenzofuran	1.49	1.45	1.39	1.40	1.42	1.35	1.33	1.40	3.93%	Pass
54)	2,3,5,6-Tetrachlorophenol	0.253	0.270	0.275	0.310	0.337	0.333	0.354	0.305	12.7%	Pass
55)	2,3,4,6-Tetrachlorophenol	0.268	0.279	0.286	0.312	0.338	0.333	0.341	0.308	9.89%	Pass
56)	Diethlyphthalate	1.20	1.19	1.15	1.18	1.22	1.12	1.12	1.17	3.42%	Pass
58)	4-Chlorophenyl-phenylether	0.615	0.611	0.590	0.608	0.638	0.625	0.637	0.618	2.75%	Pass
59)	Fluorene	1.18	1.17	1.13	1.16	1.18	1.12	1.13	1.15	2.19%	Pass
60)	4-Nitroaniline	0.226	0.238	0.251	0.288	0.305	0.292	0.307	0.272	12.2%	Pass
61)	4,6-Dinitro2-methylphenol	0.117	0.138	0.166	0.210	0.237	0.235	0.253	0.194	27.6%	Warning
62)	N-Nitrosodiphenylamine (CCC)	1.01	1.02	0.970	1.01	1.04	0.982	1.01	1.01	2.42%	Pass
63)	Azobenzene	1.09	1.05	1.05	1.09	1.08	0.993	0.982	1.05	4.20%	Pass
66)	4-Bromophenyl-phenylether	0.203	0.210	0.203	0.203	0.212	0.217	0.218	0.210	3.21%	Pass
67)	Hexachlorobenzene	0.212	0.214	0.205	0.211	0.222	0.229	0.228	0.217	4.23%	Pass
68)	Pentachlorophenol (CCC)	0.0781	0.0932	0.0988	0.121	0.134	0.142	0.144	0.116	22.4%	Pass
69)	Phenanthrene	0.964	0.953	0.898	0.904	0.906	0.861	0.834	0.903	5.10%	Pass
70)	Anthracene	0.936	0.928	0.910	0.915	0.914	0.875	0.833	0.902	3.98%	Pass
71)	Carbazole	0.799	0.795	0.759	0.788	0.812	0.771	0.757	0.783	2.72%	Pass
72)	Di-n-butylphthalate	1.00	1.07	1.01	1.04	1.05	0.947	0.883	1.00	6.64%	Pass
73)	Fluoranthene (CCC)	0.951	0.993	0.905	0.947	0.990	0.914	0.877	0.940	4.61%	Pass
74)	Benzidine	0.402	0.387	0.430	0.496	0.557	0.573	0.549	0.485	16.1%	Warning
76)	Pyrene	1.06	1.08	0.980	1.01	1.06	0.962	0.911	1.01	6.18%	Pass
79)	Butylbenzylphthalate	0.405	0.435	0.438	0.451	0.473	0.444	0.448	0.442	4.65%	Pass
80)	3,3-Dimethylbenzidine	0.536	0.557	0.578	0.639	0.677	0.680	0.686	0.622	10.3%	Pass
81)	bis(2-ethylhexyl)adipate	0.377	0.397	0.397	0.404	0.411	0.382	0.392	0.394	3.06%	Pass
82)	bis(2-Ethylhexyl)phthalate	0.525	0.584	0.609	0.645	0.659	0.610	0.611	0.606	7.17%	Pass
83)	3,3'-Dichlorobenzidine	0.287	0.269	0.276	0.274	0.284	0.331	0.348	0.295	10.5%	Pass
84)	Benzo(a)anthracene	0.987	0.969	0.947	0.963	0.986	0.961	0.947	0.966	1.70%	Pass

Response Factor Report

Sample ID	LID	FileName	Acq. Date		
SSTD005-SCAN gcms22pg125	5	W1002873.D	10/18/10	17:56	
SSTD010-SCAN gcms22pg125	10	W1002874.D	10/18/10	18:26	**Inst:** **Wiley**
SSTD020-SCAN gcms22pg125	20	W1002875.D	10/18/10	18:55	
SSTD050-SCAN gcms22pg125	50	W1002876.D	10/18/10	19:25	**Curve:** **W101810X-8270.M**
SSTD080-SCAN gcms22pg125	80	W1002877.D	10/18/10	19:54	
SSTD120-SCAN gcms22pg125	120	W1002878.D	10/18/10	20:24	
SSTD160-SCAN gcms22pg125	160	W1002879.D	10/18/10	20:54	

PASS

#	Name	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	Average RF	%RSD	Pass/Fail
85)	Chrysene	0.936	0.933	0.887	0.913	0.922	0.892	0.885	0.910	2.40%	Pass
86)	Di-n-octylphthalate (CCC)	0.760	0.888	0.977	1.06	1.06	1.00	0.963	0.957	11.0%	Pass
88)	Benzo(b)fluoranthene	0.943	0.967	0.920	0.973	1.09	1.01	1.10	1.00	7.04%	Pass
89)	Benzo(k)fluoranthene	0.945	0.983	0.952	0.969	1.01	1.00	0.979	0.977	2.46%	Pass
90)	Benzo(e)pyrene	0.864	0.881	0.857	0.874	0.938	0.906	0.918	0.891	3.39%	Pass
91)	Benzo(a)pyrene (CCC)	0.859	0.882	0.882	0.916	0.985	0.951	0.962	0.920	5.17%	Pass
92)	Perylene	0.956	0.966	0.933	0.942	1.00	0.962	0.963	0.960	2.07%	Pass
93)	Indeno(1,2,3-cd)pyrene	0.879	0.842	0.966	0.984	0.937	0.909	0.851	0.910	6.09%	Pass
94)	Dibenz(a,h)anthracene	0.723	0.701	0.808	0.828	0.793	0.781	0.737	0.767	6.15%	Pass
95)	Benzo(g,h,i)perylene	0.744	0.707	0.815	0.812	0.747	0.711	0.657	0.742	7.72%	Pass
									Average %	6.7%	

SPCC Average RF must be > 0.05
CCC %RSD must be <= 30%
Other %RSD <= 15%
Average %RSD <= 15%
No %RSD > 50%

Relative Retention Time Report

Sample ID	LID	FileName	Acq. Date		
SSTD005-SCAN gcms22pg125	5	W1002873.D	10/18/10	17:56	
SSTD010-SCAN gcms22pg125	10	W1002874.D	10/18/10	18:26	**Inst:** **Wiley**
SSTD020-SCAN gcms22pg125	20	W1002875.D	10/18/10	18:55	
SSTD050-SCAN gcms22pg125	50	W1002876.D	10/18/10	19:25	**Curve:** **W101810X-8270.M**
SSTD080-SCAN gcms22pg125	80	W1002877.D	10/18/10	19:54	
SSTD120-SCAN gcms22pg125	120	W1002878.D	10/18/10	20:24	
SSTD160-SCAN gcms22pg125	160	W1002879.D	10/18/10	20:54	

#	Name	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	Average RRT
2)	N-Nitrosodimethylamine	0.60	0.60	0.60	0.60	0.60	0.61	0.61	0.60
3)	Pyridine	0.62	0.62	0.62	0.62	0.61	0.62	0.62	0.62
6)	Phenol (CCC)	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
7)	Aniline	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
8)	bis(2-Chloroethyl)ether	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
9)	2-Chlorophenol	0.96	0.96	0.96	0.97	0.97	0.97	0.97	0.96
10)	1,3-Dichlorobenzene	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
11)	1,4-Dichlorobenzene (CCC)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
12)	Benzyl alcohol	1.01	1.01	1.01	1.02	1.02	1.02	1.02	1.02
13)	1,2-Dichlorobenzene	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
14)	2-Methylphenol	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
15)	bis(2-Chloroisopropyl) ether	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
16)	3/4-Methylphenol	1.05	1.05	1.05	1.05	1.06	1.06	1.06	1.05
17)	N-Nitrso-di-n-propylamine (SPCC)	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
18)	Hexachloroethane	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
20)	Nitrobenzene	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
22)	Isophorone	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
23)	2,4-Dimethylphenol	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
24)	2-Nitrophenol (CCC)	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
25)	Benzoic acid	0.94	0.94	0.94	0.95	0.95	0.95	0.96	0.95
26)	bis(2-Chloroethoxy)methane	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
27)	2,4-Dichlorophenol (CCC)	0.97	0.98	0.98	0.97	0.97	0.98	0.98	0.98
28)	1,2,4-Trichlorobenzene	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
29)	Naphthalene	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
30)	4-Chloroaniline	1.01	1.01	1.01	1.00	1.01	1.01	1.01	1.01
31)	Hexachlorobutadiene (CCC)	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
32)	4-Chloro-3 methylphenol (CCC)	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
33)	2-Methylnaphthalene	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
34)	1-Methylnaphthalene	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
35)	Hexachlorocyclopentadiene (SPCC)	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
37)	2,4,6-Trichlorophenol (CCC)	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
38)	2,4,5-Trichlorophenol	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
40)	2-Chloronaphthalene	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
41)	2-Nitroaniline	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
42)	1,4-Dinitrobenzene	0.95	0.95	0.96	0.95	0.96	0.96	0.96	0.96
43)	Dimethylphthalate	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
44)	1,3-Dinitrobenzene	0.96	0.96	0.96	0.96	0.97	0.97	0.97	0.97
45)	2,6-Dinitrotoluene	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
46)	1,2-Dinitrobenzene	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
47)	Acenaphthylene	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
48)	3-Nitroaniline	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
49)	Acenaphthene (CCC)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
50)	2,4-Dinitrophenol (SPCC)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
51)	4-Nitrophenol (SPCC)	1.00	1.00	1.00	1.00	1.00	1.01	1.01	1.00
52)	2,4-Dinitrotoluene	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
53)	Dibenzofuran	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
54)	2,3,5,6-Tetrachlorophenol	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
55)	2,3,4,6-Tetrachlorophenol	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
56)	Diethlyphthalate	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
58)	4-Chlorophenyl-phenylether	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
59)	Fluorene	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
60)	4-Nitroaniline	1.06	1.06	1.06	1.06	1.06	1.07	1.07	1.06
61)	4,6-Dinitro2-methylphenol	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
62)	N-Nitrosodiphenylamine (CCC)	1.07	1.07	1.08	1.07	1.07	1.08	1.08	1.08
63)	Azobenzene	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
66)	4-Bromophenyl-phenylether	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
67)	Hexachlorobenzene	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
68)	Pentachlorophenol (CCC)	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
69)	Phenanthrene	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
70)	Anthracene	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
71)	Carbazole	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02

Relative Retention Time Report

Sample ID	LID	FileName	Acq. Date
SSTD005-SCAN gcms22pg125	5	W1002873.D	10/18/10 17:56
SSTD010-SCAN gcms22pg125	10	W1002874.D	10/18/10 18:26
SSTD020-SCAN gcms22pg125	20	W1002875.D	10/18/10 18:55
SSTD050-SCAN gcms22pg125	50	W1002876.D	10/18/10 19:25
SSTD080-SCAN gcms22pg125	80	W1002877.D	10/18/10 19:54
SSTD120-SCAN gcms22pg125	120	W1002878.D	10/18/10 20:24
SSTD160-SCAN gcms22pg125	160	W1002879.D	10/18/10 20:54

Inst: Wiley

Curve: W101810X-8270.M

#	Name	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	Average RRT
72)	Di-n-butylphthalate	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
73)	Fluoranthene (CCC)	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
74)	Benzidine	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
76)	Pyrene	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15
79)	Butylbenzylphthalate	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
80)	3,3-Dimethylbenzidine	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
81)	bis(2-ethylhexyl)adipate	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
82)	bis(2-Ethylhexyl)phthalate	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
83)	3,3'-Dichlorobenzidine	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
84)	Benzo(a)anthracene	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
85)	Chrysene	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
86)	Di-n-octylphthalate (CCC)	1.06	1.06	1.06	1.06	1.05	1.05	1.05	1.06
88)	Benzo(b)fluoranthene	0.95	0.95	0.95	0.95	0.96	0.96	0.96	0.96
89)	Benzo(k)fluoranthene	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
90)	Benzo(e)pyrene	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
91)	Benzo(a)pyrene (CCC)	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
92)	Perylene	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
93)	Indeno(1,2,3-cd)pyrene	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
94)	Dibenz(a,h)anthracene	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
95)	Benzo(g,h,i)perylene	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18

= RRT outside 0.06 unit RRT window

Internal Standards Retention Time Report

Sample ID	LID	FileName	Acq. Date
SSTD005-SCAN gcms22pg125	5	W1002873.D	10/18/10 17:56
SSTD010-SCAN gcms22pg125	10	W1002874.D	10/18/10 18:26
SSTD020-SCAN gcms22pg125	20	W1002875.D	10/18/10 18:55
SSTD050-SCAN gcms22pg125	50	W1002876.D	10/18/10 19:25
SSTD080-SCAN gcms22pg125	80	W1002877.D	10/18/10 19:54
SSTD120-SCAN gcms22pg125	120	W1002878.D	10/18/10 20:24
SSTD160-SCAN gcms22pg125	160	W1002879.D	10/18/10 20:54

Inst: **Wiley**

Curve: **W101810X-8270.M**

#	Name	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	Average
1)	1,4-Dichlorobenzene-d4 (I)	5.38	5.38	5.38	5.38	5.38	5.38	5.38	5.38
21)	Naphthalene-d8 (I)	6.58	6.58	6.58	6.59	6.59	6.59	6.59	6.59
36)	Acenaphthene-d10 (I)	8.34	8.34	8.34	8.35	8.35	8.35	8.35	8.34
64)	Phenanthrene-d10 (I)	9.85	9.85	9.85	9.85	9.85	9.86	9.86	9.85
78)	Chrysene-d12 (I)	12.66	12.66	12.66	12.66	12.67	12.67	12.67	12.67
87)	Perylene-d12 (I)	14.89	14.89	14.90	14.90	14.90	14.90	14.90	14.90

= ISTD retention time outside of 20 sec (0.33 min) window

Internal Standards Area Report

Sample ID	LID	FileName	Acq. Date
SSTD005-SCAN gcms22pg125	5	W1002873.D	10/18/10 17:56
SSTD010-SCAN gcms22pg125	10	W1002874.D	10/18/10 18:26
SSTD020-SCAN gcms22pg125	20	W1002875.D	10/18/10 18:55
SSTD050-SCAN gcms22pg125	50	W1002876.D	10/18/10 19:25
SSTD080-SCAN gcms22pg125	80	W1002877.D	10/18/10 19:54
SSTD120-SCAN gcms22pg125	120	W1002878.D	10/18/10 20:24
SSTD160-SCAN gcms22pg125	160	W1002879.D	10/18/10 20:54

Inst: Wiley

Curve: W101810X-8270.M

#	Name	SCAN gcms22pg125	SCAN gcms22pg125	SCAN gcms22pg125	SCAN gcms22pg125	SCAN gcms22pg125	SCAN gcms22pg125	SCAN gcms22pg125	Average
1)	1,4-Dichlorobenzene-d4 (I)	694,978	706,693	720,068	655,591	662,846	708,059	673,532	688,824
21)	Naphthalene-d8 (I)	2,450,968	2,486,145	2,542,711	2,346,284	2,259,727	2,432,537	2,366,580	2,412,136
36)	Acenaphthene-d10 (I)	1,342,042	1,339,110	1,390,154	1,314,587	1,246,926	1,402,728	1,358,679	1,342,032
64)	Phenanthrene-d10 (I)	2,316,172	2,294,140	2,354,525	2,336,676	2,303,538	2,472,354	2,516,253	2,370,523
78)	Chrysene-d12 (I)	2,072,984	2,146,192	2,151,499	2,279,787	2,250,870	2,393,551	2,291,395	2,226,611
87)	Perylene-d12 (I)	1,889,069	1,945,018	2,135,523	2,168,681	1,934,135	2,217,223	1,886,569	2,025,174

= ISTD response outside of 40% window

Response Factor Report Wiley

Method Path : M:\ms2010\methods\wiley\
Method File : W101810X-8270.M
Title : 8270C - Full List
Last Update : Wed Oct 20 14:58:44 2010
Response Via : Initial Calibration

Calibration Files
5 =W1002873.D 10 =W1002874.D 20 =W1002875.D 50 =W1002876.D 80 =W1002877.D 120 =W1002878.D 160 =W1002879.D

		Compound	5	10	20	50	80	120	160	Avg	%RSD
1)	I	1,4-Dichlorobenzen...	----------ISTD----------								
2)		N-Nitrosodimet...	0.765	0.750	0.746	0.776	0.804	0.779	0.771	0.770	2.53
3)		Pyridine	1.222	1.265	1.264	1.297	1.341	1.294	1.285	1.281	2.86
4)	S	2-Fluorophenol...	1.045	1.074	1.070	1.099	1.147	1.110	1.090	1.091	3.01
5)	S	Phenol-d5 (surr)	1.311	1.311	1.309	1.254	1.264	1.206	1.223	1.268	3.47
6)		Phenol (CCC)	1.405	1.396	1.358	1.311	1.305	1.242	1.252	1.324	4.92
7)		Aniline	0.610	0.609	0.599	0.603	0.601	0.589	0.581	0.599	1.76
8)		bis(2-Chloroet...	0.802	0.798	0.796	0.794	0.789	0.756	0.741	0.782	3.03
9)		2-Chlorophenol	1.208	1.222	1.187	1.196	1.221	1.172	1.158	1.195	2.03
10)		1,3-Dichlorobe...	1.410	1.409	1.354	1.362	1.389	1.347	1.325	1.371	2.39
11)		1,4-Dichlorobe...	1.434	1.439	1.366	1.385	1.406	1.367	1.335	1.390	2.74
12)		Benzyl alcohol	0.611	0.652	0.658	0.643	0.653	0.644	0.653	0.645	2.46
13)		1,2-Dichlorobe...	1.361	1.357	1.281	1.300	1.317	1.278	1.255	1.307	3.08
14)		2-Methylphenol	0.918	0.906	0.897	0.861	0.869	0.829	0.856	0.876	3.59
15)		bis(2-Chlorois...	1.016	0.992	0.981	0.982	0.960	0.921	0.913	0.966	3.88
16)		3/4-Methylphenol	1.159	1.159	1.144	1.128	1.137	1.146	1.160	1.148	1.08
17)		N-Nitrso-di-n-...	0.793	0.809	0.795	0.802	0.806	0.801	0.790	0.799	0.88
18)		Hexachloroethane	0.504	0.505	0.493	0.512	0.523	0.514	0.506	0.508	1.83
19)	S	Nitrobenzene-d...	1.270	1.240	1.263	1.260	1.240	1.211	1.232	1.245	1.65
20)		Nitrobenzene	1.211	1.185	1.169	1.153	1.131	1.090	1.101	1.149	3.86
21)	I	Naphthalene-d8 (I)	----------ISTD----------								
22)		Isophorone	0.581	0.598	0.572	0.593	0.593	0.586	0.565	0.584	2.07
23)		2,4-Dimethylph...	0.221	0.233	0.273	0.305	0.328	0.335	0.322	0.288	16.20
24)		2-Nitrophenol ...	0.168	0.177	0.178	0.184	0.192	0.190	0.190	0.183	4.80
25)		Benzoic acid	0.094	0.124	0.172	0.216	0.233	0.258	0.258	0.194	33.64
26)		bis(2-Chloroet...	0.369	0.365	0.353	0.355	0.360	0.350	0.337	0.356	3.01
27)		2,4-Dichloroph...	0.214	0.247	0.234	0.262	0.271	0.280	0.277	0.255	9.58
28)		1,2,4-Trichlor...	0.344	0.342	0.327	0.328	0.343	0.338	0.331	0.336	2.16
29)		Naphthalene	1.040	1.023	0.978	0.957	0.967	0.912	0.868	0.963	6.20
30)		4-Chloroaniline	0.106	0.109	0.106	0.109	0.111	0.111	0.107	0.108	1.99
31)		Hexachlorobuta...	0.200	0.201	0.193	0.196	0.209	0.209	0.207	0.202	3.13
32)		4-Chloro-3 met...	0.202	0.218	0.230	0.256	0.260	0.273	0.270	0.244	11.29
33)		2-Methylnaphth...	0.636	0.630	0.610	0.615	0.620	0.618	0.590	0.617	2.43
34)		1-Methylnaphth...	0.619	0.606	0.594	0.594	0.599	0.599	0.566	0.597	2.72
35)		Hexachlorocycl...	0.182	0.177	0.197	0.218	0.217	0.233	0.222	0.206	10.31
36)	I	Acenaphthene-d10 (I)	----------ISTD----------								
37)		2,4,6-Trichlor...	0.333	0.356	0.349	0.364	0.380	0.374	0.378	0.362	4.76
38)		2,4,5-Trichlor...	0.319	0.352	0.353	0.364	0.382	0.380	0.391	0.363	6.72
39)	S	2-Fluorobiphen...	1.304	1.328	1.239	1.231	1.235	1.177	1.144	1.237	5.23
40)		2-Chloronaphth...	1.111	1.106	1.054	1.052	1.075	1.028	1.000	1.061	3.77
41)		2-Nitroaniline	0.241	0.263	0.268	0.283	0.295	0.282	0.285	0.274	6.61
42)		1,4-Dinitroben...	0.168	0.187	0.188	0.184	0.194	0.214	0.220	0.194	9.27

Method Path : M:\ms2010\methods\wiley\
Method File : W101810X-8270.M

43)		Dimethylphthalate	1.221	1.235	1.164	1.196	1.248	1.173	1.194	1.204	2.61
44)		1,3-Dinitroben...	0.168	0.187	0.188	0.206	0.219	0.214	0.221	0.201	9.86
45)		2,6-Dinitrotol...	0.275	0.286	0.276	0.290	0.308	0.296	0.305	0.291	4.50
46)		1,2-Dinitroben...	0.122	0.131	0.126	0.137	0.149	0.141	0.147	0.136	7.46
47)		Acenaphthylene	1.672	1.689	1.638	1.625	1.621	1.524	1.493	1.609	4.55
48)		3-Nitroaniline	0.260	0.278	0.270	0.292	0.303	0.297	0.304	0.286	6.00
49)		Acenaphthene (...	1.081	1.050	1.001	1.016	1.036	1.014	1.003	1.029	2.83
50)		2,4-Dinitrophe...	0.062	0.078	0.108	0.150	0.170	0.180	0.195	0.135	38.88
51)		4-Nitrophenol ...	0.140	0.160	0.182	0.222	0.237	0.238	0.248	0.204	21.04
52)		2,4-Dinitrotol...	0.312	0.342	0.342	0.368	0.398	0.375	0.391	0.361	8.45
53)		Dibenzofuran	1.487	1.449	1.390	1.398	1.419	1.346	1.330	1.403	3.93
54)		2,3,5,6-Tetrac...	0.253	0.270	0.275	0.310	0.337	0.333	0.354	0.305	12.74
55)		2,3,4,6-Tetrac...	0.268	0.279	0.286	0.312	0.338	0.333	0.341	0.308	9.89
56)		Diethlyphthalate	1.200	1.195	1.145	1.181	1.217	1.121	1.118	1.168	3.42
57)	S	Fluorene-d10 (...	1.116	1.095	1.057	1.106	1.142	1.079	1.094	1.098	2.46
58)		4-Chlorophenyl...	0.615	0.611	0.590	0.608	0.638	0.625	0.637	0.618	2.75
59)		Fluorene	1.179	1.168	1.134	1.163	1.176	1.118	1.126	1.152	2.19
60)		4-Nitroaniline	0.226	0.238	0.251	0.288	0.305	0.292	0.307	0.272	12.19
61)		4,6-Dinitro2-m...	0.117	0.138	0.166	0.210	0.237	0.235	0.253	0.194	27.59
62)		N-Nitrosodiphe...	1.007	1.023	0.970	1.005	1.044	0.982	1.005	1.005	2.42
63)		Azobenzene	1.086	1.047	1.052	1.086	1.084	0.993	0.982	1.047	4.20
64)	I	Phenanthrene-d10 (I)	----------	----------	----------	ISTD	----------	----------	----------	----------	
65)	S	2,4,6-Tribromo...	0.077	0.084	0.084	0.090	0.098	0.103	0.106	0.092	11.84
66)		4-Bromophenyl-...	0.203	0.210	0.203	0.203	0.212	0.217	0.218	0.210	3.21
67)		Hexachlorobenzene	0.212	0.214	0.205	0.211	0.222	0.229	0.228	0.217	4.23
68)		Pentachlorophe...	0.078	0.093	0.099	0.121	0.134	0.142	0.144	0.116	22.41
69)		Phenanthrene	0.964	0.953	0.898	0.904	0.906	0.861	0.834	0.903	5.10
70)		Anthracene	0.936	0.928	0.910	0.915	0.914	0.875	0.833	0.902	3.98
71)		Carbazole	0.799	0.795	0.759	0.788	0.812	0.771	0.757	0.783	2.72
72)		Di-n-butylphth...	1.003	1.072	1.014	1.042	1.052	0.947	0.883	1.002	6.64
73)		Fluoranthene (...	0.951	0.993	0.905	0.947	0.990	0.914	0.877	0.940	4.61
74)		Benzidine	0.402	0.387	0.430	0.496	0.557	0.573	0.549	0.485	16.12
75)	S	Pyrene-d10 (surr)	0.839	0.867	0.797	0.836	0.875	0.823	0.799	0.834	3.62
76)		Pyrene	1.059	1.084	0.980	1.010	1.060	0.962	0.911	1.009	6.18
77)	S	Terphenyl-d14 ...	0.659	0.687	0.613	0.662	0.712	0.669	0.644	0.664	4.70
78)	I	Chrysene-d12 (I)	----------	----------	----------	ISTD	----------	----------	----------	----------	
79)		Butylbenzylpht...	0.405	0.435	0.438	0.451	0.473	0.444	0.448	0.442	4.65
80)		3,3-Dimethylbe...	0.536	0.557	0.578	0.639	0.677	0.680	0.686	0.622	10.25
81)		bis(2-ethylhex...	0.377	0.397	0.397	0.404	0.411	0.382	0.392	0.394	3.06
82)		bis(2-Ethylhex...	0.525	0.584	0.609	0.645	0.659	0.610	0.611	0.606	7.17
83)		3,3'-Dichlorob...	0.287	0.269	0.276	0.274	0.284	0.331	0.348	0.295	10.53
84)		Benzo(a)anthra...	0.987	0.969	0.947	0.963	0.986	0.961	0.947	0.966	1.70
85)		Chrysene	0.936	0.933	0.887	0.913	0.922	0.892	0.885	0.910	2.40
86)		Di-n-octylphth...	0.760	0.888	0.977	1.058	1.060	0.996	0.963	0.957	10.97
87)	I	Perylene-d12 (I)	----------	----------	----------	ISTD	----------	----------	----------	----------	
88)		Benzo(b)fluora...	0.943	0.967	0.920	0.973	1.090	1.010	1.100	1.000	7.04
89)		Benzo(k)fluora...	0.945	0.983	0.952	0.969	1.014	0.996	0.979	0.977	2.46
90)		Benzo(e)pyrene	0.864	0.881	0.857	0.874	0.938	0.906	0.918	0.891	3.39
91)		Benzo(a)pyrene...	0.859	0.882	0.882	0.916	0.985	0.951	0.962	0.920	5.17
92)		Perylene	0.956	0.966	0.933	0.942	0.996	0.962	0.963	0.960	2.07
93)		Indeno(1,2,3-c...	0.744	0.707	0.815	0.984	0.937	0.711	0.657	0.794	15.66

Method Path : M:\ms2010\methods\wiley\
Method File : W101810X-8270.M

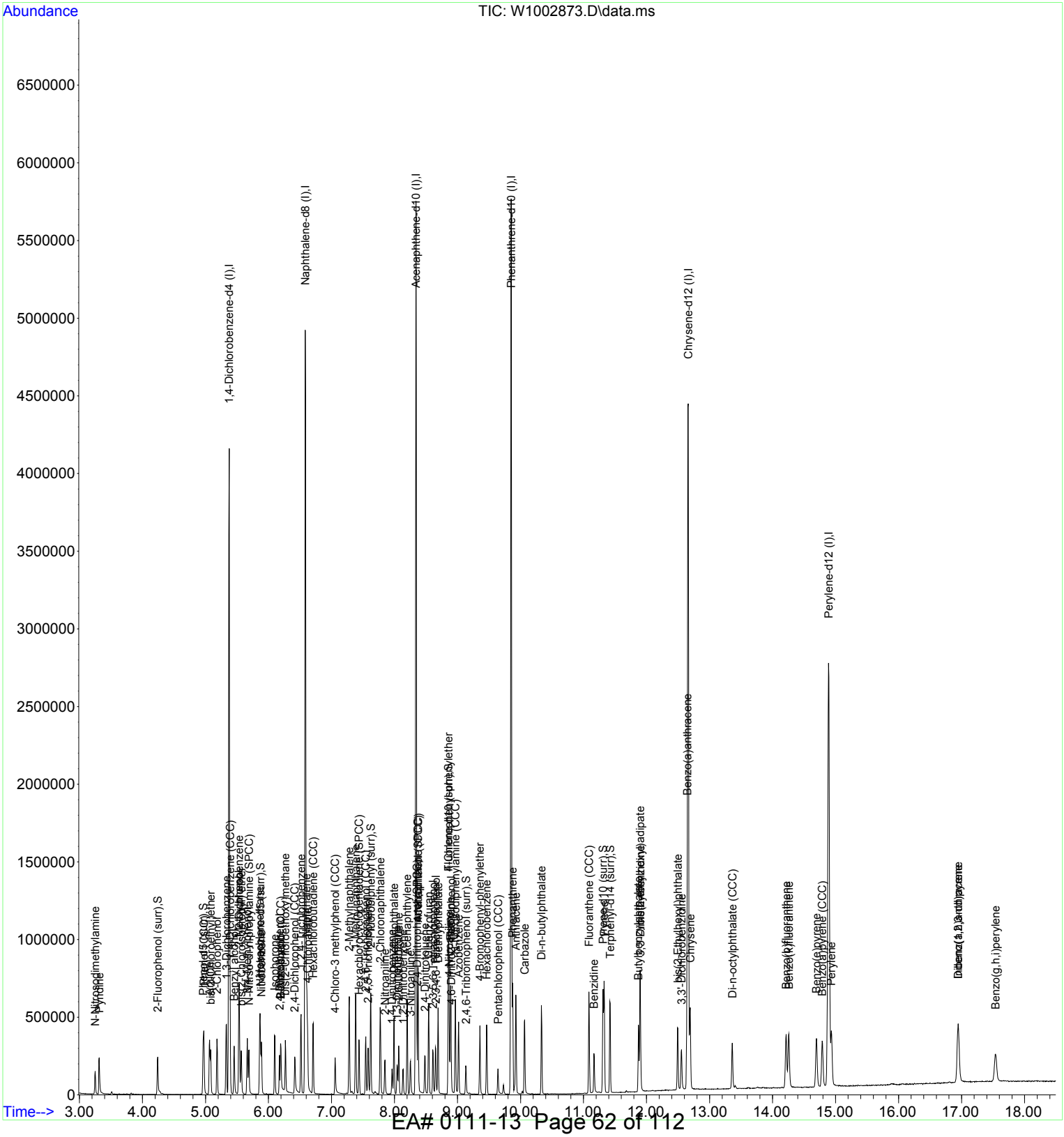
94)	Dibenz(a,h)ant...	0.723	0.701	0.808	0.828	0.793	0.781	0.737	0.767	6.15
95)	Benzo(g,h,i)pe...	0.744	0.707	0.815	0.812	0.747	0.711	0.657	0.742	7.72

(#) = Out of Range

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002873.D
Acq On : 18 Oct 2010 5:56 pm
Operator : dda
Sample : SSTD005-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 20 12:12:33 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 10:41:33 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002873.D
Acq On : 18 Oct 2010 5:56 pm
Operator : dda
Sample : SSTD005-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 20 12:12:33 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 10:41:33 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) 1,4-Dichlorobenzene-d4...	5.375	152	694978	40.00	µg/mL	0.00	
21) Naphthalene-d8 (I)	6.583	136	2450968	40.00	µg/mL	0.00	
36) Acenaphthene-d10 (I)	8.340	164	1342042	40.00	µg/mL	0.00	
64) Phenanthrene-d10 (I)	9.852	188	2316172	40.00	µg/mL	0.00	
78) Chrysene-d12 (I)	12.662	240	2072984	40.00	µg/mL	0.00	
87) Perylene-d12 (I)	14.890	264	1889069	40.00	µg/mL	0.00	
System Monitoring Compounds							
4) 2-Fluorophenol (surr)	4.243	112	90746	4.79	µg/mL	0.00	
5) Phenol-d5 (surr)	4.964	99	113905	5.17	µg/mL	-0.02	
19) Nitrobenzene-d5 (surr)	5.872	82	110324	5.10	µg/mL	-0.01	
39) 2-Fluorobiphenyl (surr)	7.624	172	218740	5.27	µg/mL	0.00	
57) Fluorene-d10 (surr)	8.858	176	187221	5.08	µg/mL	-0.01	
65) 2,4,6-Tribromophenol (...	9.136	330	22208	4.19	µg/mL	0.00	
75) Pyrene-d10 (surr)	11.311	212	242828	5.03	µg/mL	0.00	
77) Terphenyl-d14 (surr)	11.423	244	190827	4.97	µg/mL	0.00	
Target Compounds						Qvalue	
2) N-Nitrosodimethylamine	3.249	74	66491	4.97	µg/mL	91	
3) Pyridine	3.313	79	106190	4.77	µg/mL#	83	
6) Phenol (CCC)	4.975	94	122087	5.31	µg/mL#	91	
7) Aniline	5.065	66	53017	5.10	µg/mL	91	
8) bis(2-Chloroethyl)ether	5.082	63	69681	5.13	µg/mL	88	
9) 2-Chlorophenol	5.183	128	104979	5.06	µg/mL	96	
10) 1,3-Dichlorobenzene	5.333	146	122495	5.14	µg/mL	99	
11) 1,4-Dichlorobenzene (CCC)	5.391	146	124574	5.16	µg/mL	96	
12) Benzyl alcohol	5.455	108	53085	4.74	µg/mL	85	
13) 1,2-Dichlorobenzene	5.536	146	118211	5.21	µg/mL#	95	
14) 2-Methylphenol	5.530	107	79720	5.24	µg/mL	98	
15) bis(2-Chloroisopropyl)...	5.568	45	88243	5.26	µg/mL#	81	
16) 3/4-Methylphenol	5.664	107	100657	5.05	µg/mL	94	
17) N-Nitrso-di-n-propylam...	5.691	70	68876	4.96	µg/mL#	67	
18) Hexachloroethane	5.861	117	43746	4.95	µg/mL	87	
20) Nitrobenzene	5.888	77	105233	5.27	µg/mL#	85	
22) Isophorone	6.097	82	177985	4.97	µg/mL	97	
23) 2,4-Dimethylphenol	6.177	107	67707m	3.72	µg/mL		**Manual Int. "II" (EDE)**
24) 2-Nitrophenol (CCC)	6.193	139	51599	4.61	µg/mL	92	
25) Benzoic acid	6.193	105	28941	2.44	µg/mL#	1	
26) bis(2-Chloroethoxy)met...	6.267	93	112965	5.18	µg/mL	96	
27) 2,4-Dichlorophenol (CCC)	6.417	162	65593	4.16	µg/mL#	95	
28) 1,2,4-Trichlorobenzene	6.519	180	105411	5.12	µg/mL	98	
29) Naphthalene	6.604	128	318534	5.40	µg/mL	93	
30) 4-Chloroaniline	6.620	65	32494	4.89	µg/mL	77	
31) Hexachlorobutadiene (CCC)	6.711	225	61216	4.94	µg/mL	98	
32) 4-Chloro-3 methylpheno...	7.058	107	61911	4.14	µg/mL	89	
33) 2-Methylnaphthalene	7.283	142	194818	5.15	µg/mL	100	
34) 1-Methylnaphthalene	7.384	142	189695	5.19	µg/mL	97	
35) Hexachlorocyclopentadi...	7.437	237	55760	4.41	µg/mL#	100	
37) 2,4,6-Trichlorophenol ...	7.544	196	55851	4.60	µg/mL	98	
38) 2,4,5-Trichlorophenol	7.582	196	53497	4.39	µg/mL#	90	
40) 2-Chloronaphthalene	7.774	162	186345	5.24	µg/mL	95	
41) 2-Nitroaniline	7.849	65	40358	4.40	µg/mL#	83	
42) 1,4-Dinitrobenzene	7.961	168	22517m	3.85	µg/mL		**Manual Int. "WP" (EDE)**
43) Dimethylphthalate	7.993	163	204773	5.07	µg/mL	99	
44) 1,3-Dinitrobenzene	8.041	168	28240	4.20	µg/mL#	62	
45) 2,6-Dinitrotoluene	8.068	165	46163	4.73	µg/mL#	84	
46) 1,2-Dinitrobenzene	8.137	168	20495	4.48	µg/mL	89	

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002873.D
Acq On : 18 Oct 2010 5:56 pm
Operator : dda
Sample : SSTD005-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 20 12:12:33 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 10:41:33 2010
Response via : Initial Calibration

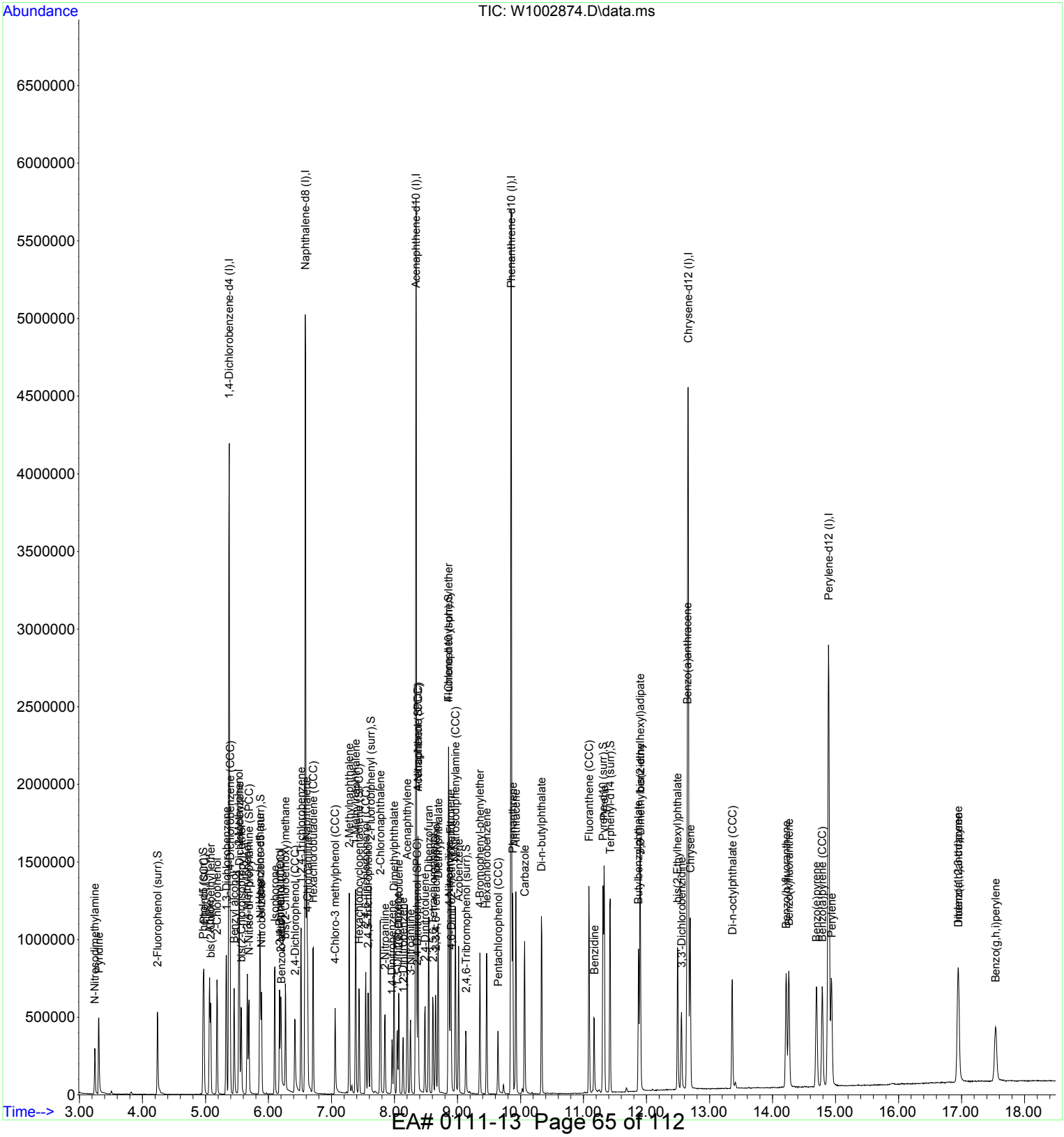
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
47) Acenaphthylene	8.201	152	280459	5.20 µg/mL	98
48) 3-Nitroaniline	8.255	138	43562	4.54 µg/mL#	74
49) Acenaphthene (CCC)	8.372	154	181422	5.26 µg/mL	94
50) 2,4-Dinitrophenol (SPCC)	8.356	184	10321	2.28 µg/mL#	100
51) 4-Nitrophenol (SPCC)	8.372	139	23474	3.45 µg/mL#	81
52) 2,4-Dinitrotoluene	8.485	165	52380	4.32 µg/mL	92
53) Dibenzofuran	8.543	168	249463	5.30 µg/mL	95
54) 2,3,5,6-Tetrachlorophenol	8.613	232	42498	4.16 µg/mL	97
55) 2,3,4,6-Tetrachlorophenol	8.655	232	44942	4.32 µg/mL#	75
56) Diethlyphthalate	8.693	149	201374	5.14 µg/mL	100
58) 4-Chlorophenyl-phenyle...	8.858	204	103250	4.98 µg/mL	95
59) Fluorene	8.891	166	197862	5.12 µg/mL	100
60) 4-Nitroaniline	8.869	138	37898	4.15 µg/mL#	81
61) 4,6-Dinitro2-methylphenol	8.901	198	19583	3.03 µg/mL#	17
62) N-Nitrosodiphenylamine...	8.965	169	168974	5.01 µg/mL	95
63) Azobenzene	9.019	77	182189	5.19 µg/mL#	100
66) 4-Bromophenyl-phenylether	9.355	248	58744	4.84 µg/mL	98
67) Hexachlorobenzene	9.462	284	61475	4.88 µg/mL	94
68) Pentachlorophenol (CCC)	9.644	266	22599	3.37 µg/mL	92
69) Phenanthrene	9.873	178	279098	5.34 µg/mL	98
70) Anthracene	9.927	178	270861	5.19 µg/mL	99
71) Carbazole	10.066	167	231460	5.10 µg/mL	98
72) Di-n-butylphthalate	10.333	149	290388	5.01 µg/mL	97
73) Fluoranthene (CCC)	11.086	202	275456	5.06 µg/mL	98
74) Benzidine	11.166	184	116352	4.15 µg/mL#	92
76) Pyrene	11.327	202	306508	5.25 µg/mL#	99
79) Butylbenzylphthalate	11.871	149	104995	4.58 µg/mL#	100
80) 3,3-Dimethylbenzidine	11.904	212	138785	4.31 µg/mL#	100
81) bis(2-ethylhexyl)adipate	11.898	129	97568	4.77 µg/mL#	100
82) bis(2-Ethylhexyl)phtha...	12.497	149	136132	4.33 µg/mL#	100
83) 3,3'-Dichlorobenzidine	12.555	252	74279	4.85 µg/mL#	95
84) Benzo(a)anthracene	12.646	228	255683	5.10 µg/mL	98
85) Chrysene	12.694	228	242579	5.15 µg/mL	99
86) Di-n-octylphthalate (CCC)	13.362	149	196874	3.97 µg/mL#	100
88) Benzo(b)fluoranthene	14.217	252	222593	4.71 µg/mL	99
89) Benzo(k)fluoranthene	14.259	252	223219	4.85 µg/mL	94
90) Benzo(e)pyrene	14.698	252	204034	4.85 µg/mL	99
91) Benzo(a)pyrene (CCC)	14.788	252	202852	4.66 µg/mL	98
92) Perylene	14.933	252	225687	4.99 µg/mL	99
93) Indeno(1,2,3-cd)pyrene	16.947	276	207540m	5.92 µg/mL	**Manual Int. "WP" (EDE)**
94) Dibenz(a,h)anthracene	16.947	278	170747	4.71 µg/mL#	96
95) Benzo(g,h,i)perylene	17.540	276	175572	5.01 µg/mL	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002874.D
Acq On : 18 Oct 2010 6:26 pm
Operator : dda
Sample : SSTD010-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 20 12:13:17 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:24:37 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002874.D
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Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:24:37 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	5.375	152	706693	40.00	µg/mL	0.00
21) Naphthalene-d8 (I)	6.583	136	2486145	40.00	µg/mL	0.00
36) Acenaphthene-d10 (I)	8.340	164	1339110	40.00	µg/mL	0.00
64) Phenanthrene-d10 (I)	9.852	188	2294140	40.00	µg/mL	0.00
78) Chrysene-d12 (I)	12.662	240	2146192	40.00	µg/mL	0.00
87) Perylene-d12 (I)	14.890	264	1945018	40.00	µg/mL	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (surr)	4.238	112	189663	9.84	µg/mL	0.00
5) Phenol-d5 (surr)	4.964	99	231671	10.34	µg/mL	0.00
19) Nitrobenzene-d5 (surr)	5.872	82	219110	9.96	µg/mL	0.00
39) 2-Fluorobiphenyl (surr)	7.625	172	444619	10.74	µg/mL	0.00
57) Fluorene-d10 (surr)	8.859	176	366528	9.97	µg/mL	0.00
65) 2,4,6-Tribromophenol (...	9.136	330	48270	9.19	µg/mL	0.00
75) Pyrene-d10 (surr)	11.311	212	497272	10.40	µg/mL	0.00
77) Terphenyl-d14 (surr)	11.423	244	393732	10.34	µg/mL	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.244	74	132455	9.73	µg/mL	91
3) Pyridine	3.308	79	223500	9.87	µg/mL#	86
6) Phenol (CCC)	4.975	94	246658	10.54	µg/mL#	91
7) Aniline	5.066	66	107534	10.16	µg/mL	91
8) bis(2-Chloroethyl)ether	5.082	63	141015	10.20	µg/mL	87
9) 2-Chlorophenol	5.183	128	215831	10.22	µg/mL	96
10) 1,3-Dichlorobenzene	5.333	146	248947	10.28	µg/mL	98
11) 1,4-Dichlorobenzene (CCC)	5.392	146	254240	10.35	µg/mL	98
12) Benzyl alcohol	5.456	108	115259	10.12	µg/mL	84
13) 1,2-Dichlorobenzene	5.541	146	239817	10.38	µg/mL	96
14) 2-Methylphenol	5.530	107	160017	10.34	µg/mL	95
15) bis(2-Chloroisopropyl)...	5.568	45	175237	10.26	µg/mL#	83
16) 3/4-Methylphenol	5.664	107	204756	10.10	µg/mL	96
17) N-Nitrso-di-n-propylam...	5.691	70	142924	10.12	µg/mL#	71
18) Hexachloroethane	5.862	117	89308	9.95	µg/mL	87
20) Nitrobenzene	5.888	77	209432	10.32	µg/mL	86
22) Isophorone	6.102	82	371720	10.24	µg/mL	97
23) 2,4-Dimethylphenol	6.177	107	144581m	7.95	µg/mL	
24) 2-Nitrophenol (CCC)	6.193	139	109870	9.67	µg/mL	94
25) Benzoic acid	6.204	105	77311	6.42	µg/mL#	1
26) bis(2-Chloroethoxy)met...	6.268	93	227084	10.27	µg/mL	97
27) 2,4-Dichlorophenol (CCC)	6.423	162	153620	9.69	µg/mL	97
28) 1,2,4-Trichlorobenzene	6.519	180	212317	10.16	µg/mL	98
29) Naphthalene	6.604	128	635629	10.62	µg/mL	91
30) 4-Chloroaniline	6.620	65	67758	10.05	µg/mL	75
31) Hexachlorobutadiene (CCC)	6.711	225	124967	9.95	µg/mL	99
32) 4-Chloro-3 methylpheno...	7.058	107	135411	8.93	µg/mL	91
33) 2-Methylnaphthalene	7.283	142	391569	10.21	µg/mL	99
34) 1-Methylnaphthalene	7.384	142	376496	10.15	µg/mL	100
35) Hexachlorocyclopentadi...	7.438	237	109877	8.56	µg/mL#	100
37) 2,4,6-Trichlorophenol ...	7.544	196	119287	9.84	µg/mL	99
38) 2,4,5-Trichlorophenol	7.582	196	117762	9.69	µg/mL#	92
40) 2-Chloronaphthalene	7.774	162	370284	10.43	µg/mL	96
41) 2-Nitroaniline	7.849	65	87885	9.59	µg/mL	84
42) 1,4-Dinitrobenzene	7.961	168	51444m	8.57	µg/mL	
43) Dimethylphthalate	7.993	163	413512	10.26	µg/mL	99
44) 1,3-Dinitrobenzene	8.047	168	62670	9.33	µg/mL#	74
45) 2,6-Dinitrotoluene	8.068	165	95709	9.82	µg/mL#	84
46) 1,2-Dinitrobenzene	8.137	168	43995	9.64	µg/mL	89

Manual Int. "II" (EDE)

Manual Int. "WP" (EDE)

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002874.D
Acq On : 18 Oct 2010 6:26 pm
Operator : dda
Sample : SSTD010-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 20 12:13:17 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:24:37 2010
Response via : Initial Calibration

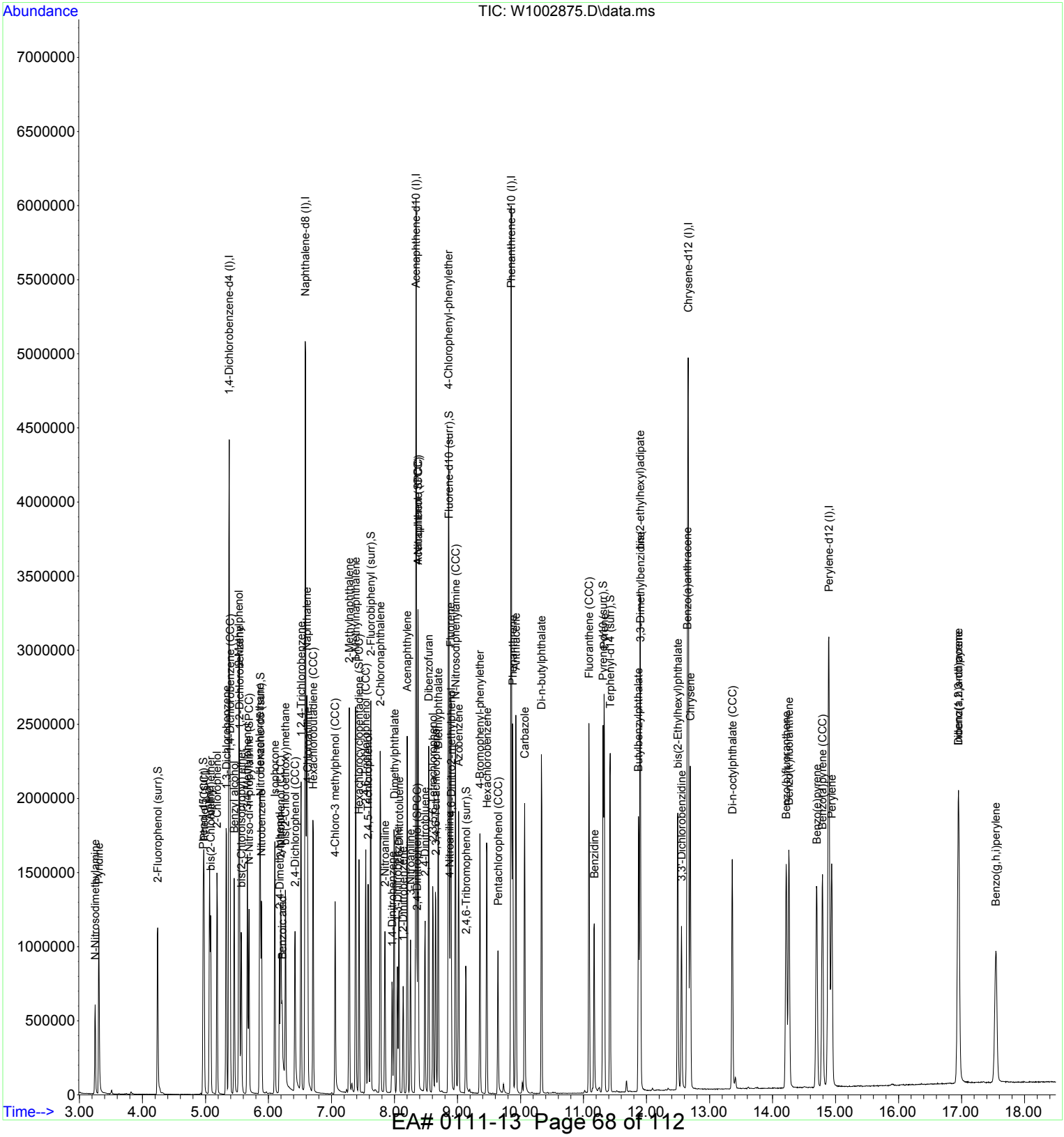
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
47) Acenaphthylene	8.202	152	565311	10.50 µg/mL	98	
48) 3-Nitroaniline	8.255	138	93155	9.72 µg/mL#	76	
49) Acenaphthene (CCC)	8.373	154	351625	10.21 µg/mL	96	
50) 2,4-Dinitrophenol (SPCC)	8.356	184	26144	5.80 µg/mL#	100	
51) 4-Nitrophenol (SPCC)	8.373	139	53475	7.87 µg/mL#	69	
52) 2,4-Dinitrotoluene	8.485	165	114585	9.47 µg/mL	90	
53) Dibenzofuran	8.543	168	485032	10.33 µg/mL	96	
54) 2,3,5,6-Tetrachlorophenol	8.613	232	90233	8.85 µg/mL	98	
55) 2,3,4,6-Tetrachlorophenol	8.656	232	93540	9.06 µg/mL#	78	
56) Diethlyphthalate	8.693	149	399969	10.23 µg/mL	99	
58) 4-Chlorophenyl-phenyle...	8.859	204	204672	9.90 µg/mL	96	
59) Fluorene	8.891	166	391149	10.14 µg/mL	99	
60) 4-Nitroaniline	8.869	138	79786	8.75 µg/mL#	83	
61) 4,6-Dinitro2-methylphenol	8.901	198	46162	7.12 µg/mL#	12	
62) N-Nitrosodiphenylamine...	8.965	169	342496	10.18 µg/mL	95	
63) Azobenzene	9.019	77	350420	10.00 µg/mL#	100	
66) 4-Bromophenyl-phenylether	9.355	248	120530	10.03 µg/mL	97	
67) Hexachlorobenzene	9.462	284	123010	9.87 µg/mL	95	
68) Pentachlorophenol (CCC)	9.644	266	53464	8.05 µg/mL	91	
69) Phenanthrene	9.879	178	546524	10.55 µg/mL	100	
70) Anthracene	9.927	178	532469	10.30 µg/mL	100	
71) Carbazole	10.066	167	455826	10.15 µg/mL	99	
72) Di-n-butylphthalate	10.333	149	614998	10.70 µg/mL	97	
73) Fluoranthene (CCC)	11.086	202	569316	10.56 µg/mL	98	
74) Benzidine	11.172	184	221945	7.98 µg/mL	100	
76) Pyrene	11.327	202	621484	10.74 µg/mL#	99	
79) Butylbenzylphthalate	11.872	149	233209	9.83 µg/mL#	100	
80) 3,3-Dimethylbenzidine	11.904	212	298947	8.96 µg/mL#	100	
81) bis(2-ethylhexyl)adipate	11.898	129	213098	10.07 µg/mL#	100	
82) bis(2-Ethylhexyl)phtha...	12.491	149	313443	9.64 µg/mL#	99	
83) 3,3'-Dichlorobenzidine	12.555	252	144361	9.11 µg/mL	100	
84) Benzo(a)anthracene	12.646	228	519832	10.03 µg/mL	98	
85) Chrysene	12.694	228	500412	10.25 µg/mL	99	
86) Di-n-octylphthalate (CCC)	13.362	149	476626	9.28 µg/mL#	100	
88) Benzo(b)fluoranthene	14.217	252	470026m	9.66 µg/mL		Manual Int. "WP" (EDE)
89) Benzo(k)fluoranthene	14.260	252	478117	10.06 µg/mL	96	
90) Benzo(e)pyrene	14.698	252	428593	9.89 µg/mL	99	
91) Benzo(a)pyrene (CCC)	14.789	252	429107	9.60 µg/mL	98	
92) Perylene	14.938	252	469953	10.07 µg/mL	98	
93) Indeno(1,2,3-cd)pyrene	16.947	276	409345m	11.35 µg/mL		Manual Int. "WP" (EDE)
94) Dibenz(a,h)anthracene	16.952	278	341073	9.14 µg/mL#	96	
95) Benzo(g,h,i)perylene	17.540	276	343597	9.52 µg/mL	99	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002875.D
Acq On : 18 Oct 2010 6:55 pm
Operator : dda
Sample : SSTD020-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Oct 20 12:13:56 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:28:56 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002875.D
Acq On : 18 Oct 2010 6:55 pm
Operator : dda
Sample : SSTD020-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 8 Sample Multiplier: 1

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Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:28:56 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	5.375	152	720068	40.00	µg/mL	0.00
21) Naphthalene-d8 (I)	6.583	136	2542711	40.00	µg/mL	0.00
36) Acenaphthene-d10 (I)	8.340	164	1390154	40.00	µg/mL	0.00
64) Phenanthrene-d10 (I)	9.852	188	2354525	40.00	µg/mL	0.00
78) Chrysene-d12 (I)	12.662	240	2151499	40.00	µg/mL	0.00
87) Perylene-d12 (I)	14.895	264	2135523	40.00	µg/mL	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (surr)	4.243	112	385102	19.62	µg/mL	0.00
5) Phenol-d5 (surr)	4.964	99	471390	20.65	µg/mL	0.00
19) Nitrobenzene-d5 (surr)	5.872	82	454648	20.28	µg/mL	0.00
39) 2-Fluorobiphenyl (surr)	7.624	172	861131	20.03	µg/mL	0.00
57) Fluorene-d10 (surr)	8.864	176	734622	19.24	µg/mL	0.00
65) 2,4,6-Tribromophenol (...	9.136	330	98664	18.30	µg/mL	0.00
75) Pyrene-d10 (surr)	11.311	212	938517	19.12	µg/mL	0.00
77) Terphenyl-d14 (surr)	11.423	244	721401	18.47	µg/mL	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.249	74	268662	19.38	µg/mL	93
3) Pyridine	3.308	79	454960	19.73	µg/mL#	82
6) Phenol (CCC)	4.980	94	488820	20.51	µg/mL#	92
7) Aniline	5.066	66	215533	19.99	µg/mL	91
8) bis(2-Chloroethyl)ether	5.082	63	286491	20.34	µg/mL	89
9) 2-Chlorophenol	5.183	128	427306	19.87	µg/mL	95
10) 1,3-Dichlorobenzene	5.333	146	487385	19.75	µg/mL	99
11) 1,4-Dichlorobenzene (CCC)	5.391	146	491902	19.65	µg/mL	99
12) Benzyl alcohol	5.456	108	236968	20.41	µg/mL	84
13) 1,2-Dichlorobenzene	5.541	146	461266	19.60	µg/mL#	94
14) 2-Methylphenol	5.530	107	322944	20.47	µg/mL	96
15) bis(2-Chloroisopropyl)...	5.568	45	353103	20.30	µg/mL#	82
16) 3/4-Methylphenol	5.664	107	412029	19.95	µg/mL	96
17) N-Nitrso-di-n-propylam...	5.691	70	286292	19.90	µg/mL#	71
18) Hexachloroethane	5.862	117	177593	19.41	µg/mL	87
20) Nitrobenzene	5.888	77	420879	20.36	µg/mL#	86
22) Isophorone	6.102	82	727219	19.59	µg/mL	97
23) 2,4-Dimethylphenol	6.177	107	346769m	18.90	µg/mL	**Manual Int. "II" (EDE)**
24) 2-Nitrophenol (CCC)	6.193	139	226482	19.49	µg/mL	92
25) Benzoic acid	6.219	105	218584	17.74	µg/mL#	1
26) bis(2-Chloroethoxy)met...	6.268	93	448403	19.84	µg/mL	97
27) 2,4-Dichlorophenol (CCC)	6.422	162	298031	18.38	µg/mL#	95
28) 1,2,4-Trichlorobenzene	6.519	180	415380	19.44	µg/mL	98
29) Naphthalene	6.609	128	1242897	20.30	µg/mL#	89
30) 4-Chloroaniline	6.620	65	135275	19.62	µg/mL	77
31) Hexachlorobutadiene (CCC)	6.711	225	245812	19.13	µg/mL	99
32) 4-Chloro-3 methylpheno...	7.058	107	292277	18.84	µg/mL	90
33) 2-Methylnaphthalene	7.283	142	775011	19.76	µg/mL	99
34) 1-Methylnaphthalene	7.384	142	755442	19.92	µg/mL	99
35) Hexachlorocyclopentadi...	7.438	237	250781	19.11	µg/mL#	100
37) 2,4,6-Trichlorophenol ...	7.544	196	242401	19.27	µg/mL	98
38) 2,4,5-Trichlorophenol	7.582	196	245683	19.48	µg/mL#	94
40) 2-Chloronaphthalene	7.774	162	732264	19.86	µg/mL	94
41) 2-Nitroaniline	7.849	65	186464	19.61	µg/mL	84
42) 1,4-Dinitrobenzene	7.966	168	111999m	17.50	µg/mL	**Manual Int. "WP" (EDE)**
43) Dimethylphthalate	7.998	163	808845	19.32	µg/mL	99
44) 1,3-Dinitrobenzene	8.047	168	130890	18.77	µg/mL#	76
45) 2,6-Dinitrotoluene	8.073	165	191913	18.98	µg/mL#	87
46) 1,2-Dinitrobenzene	8.137	168	87855	18.55	µg/mL	89

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002875.D
Acq On : 18 Oct 2010 6:55 pm
Operator : dda
Sample : SSTD020-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Oct 20 12:13:56 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:28:56 2010
Response via : Initial Calibration

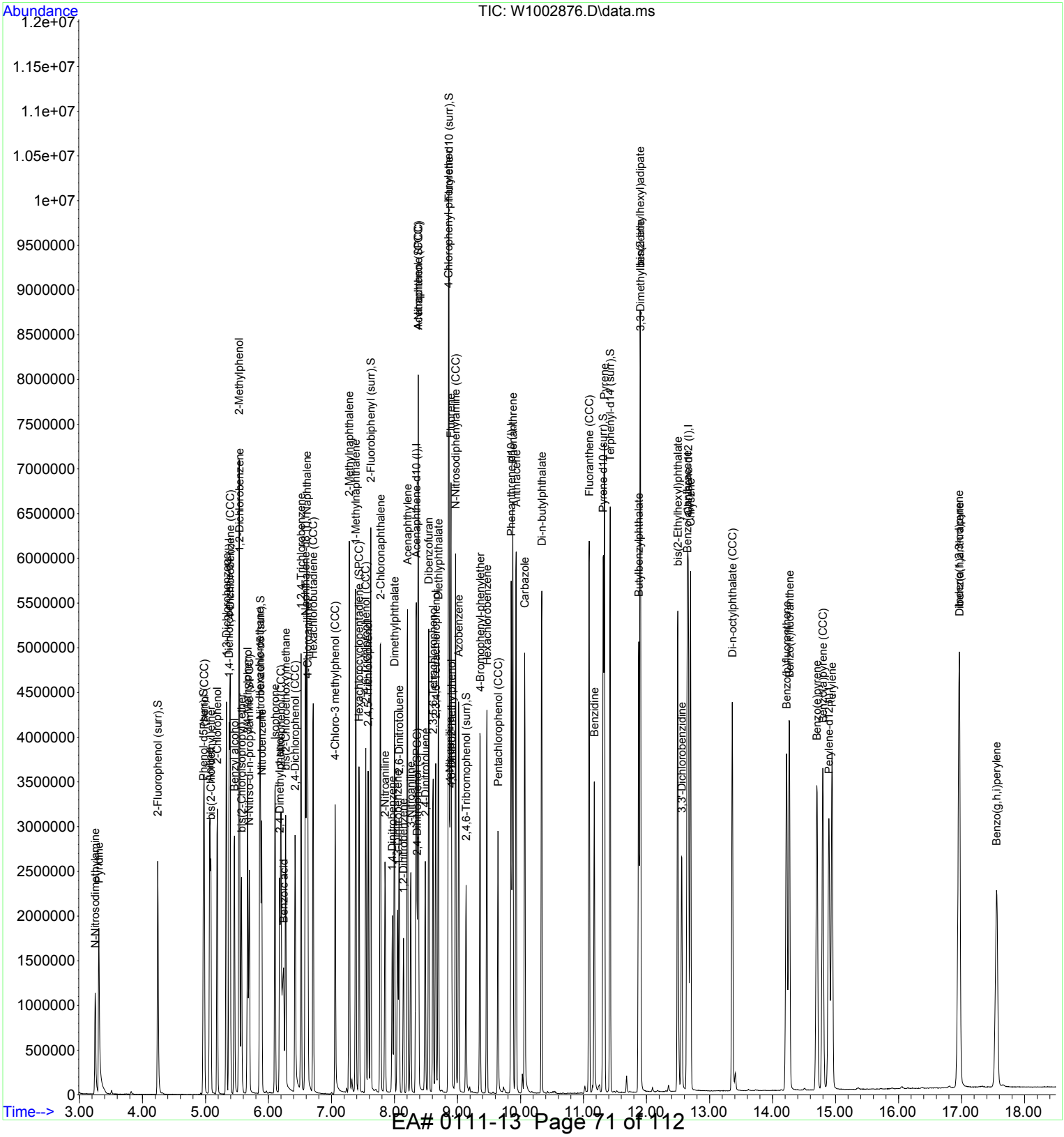
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
47) Acenaphthylene	8.201	152	1138687	20.37 µg/mL	98	
48) 3-Nitroaniline	8.255	138	187783	18.87 µg/mL#	72	
49) Acenaphthene (CCC)	8.372	154	696007	19.46 µg/mL	95	
50) 2,4-Dinitrophenol (SPCC)	8.356	184	75132	16.05 µg/mL#	100	
51) 4-Nitrophenol (SPCC)	8.372	139	126824	17.99 µg/mL#	70	
52) 2,4-Dinitrotoluene	8.485	165	237923	18.95 µg/mL	90	
53) Dibenzofuran	8.543	168	966279	19.82 µg/mL	94	
54) 2,3,5,6-Tetrachlorophenol	8.607	232	191404	18.08 µg/mL	97	
55) 2,3,4,6-Tetrachlorophenol	8.656	232	198571	18.54 µg/mL#	81	
56) Diethlyphthalate	8.693	149	796177	19.61 µg/mL	99	
58) 4-Chlorophenyl-phenyle...	8.859	204	410164	19.10 µg/mL	96	
59) Fluorene	8.891	166	788273	19.69 µg/mL	99	
60) 4-Nitroaniline	8.875	138	174390	18.43 µg/mL#	81	
61) 4,6-Dinitro2-methylphenol	8.901	198	115410	17.15 µg/mL#	11	
62) N-Nitrosodiphenylamine...	8.971	169	674512	19.31 µg/mL	95	
63) Azobenzene	9.019	77	731513	20.10 µg/mL#	100	
66) 4-Bromophenyl-phenylether	9.355	248	238946	19.37 µg/mL	100	
67) Hexachlorobenzene	9.468	284	241102	18.84 µg/mL	95	
68) Pentachlorophenol (CCC)	9.644	266	116269	17.07 µg/mL	90	
69) Phenanthrene	9.879	178	1057464	19.89 µg/mL	100	
70) Anthracene	9.927	178	1071540	20.19 µg/mL	99	
71) Carbazole	10.066	167	893014	19.37 µg/mL	99	
72) Di-n-butylphthalate	10.333	149	1194294	20.25 µg/mL	98	
73) Fluoranthene (CCC)	11.086	202	1065299	19.26 µg/mL	97	
74) Benzidine	11.172	184	506627	17.75 µg/mL	99	
76) Pyrene	11.327	202	1153486	19.41 µg/mL#	99	
79) Butylbenzylphthalate	11.872	149	471590	19.83 µg/mL#	100	
80) 3,3-Dimethylbenzidine	11.904	212	621800	18.59 µg/mL#	100	
81) bis(2-ethylhexyl)adipate	11.898	129	427604	20.16 µg/mL#	100	
82) bis(2-Ethylhexyl)phtha...	12.497	149	655163	20.10 µg/mL#	99	
83) 3,3'-Dichlorobenzidine	12.555	252	296700	18.67 µg/mL	99	
84) Benzo(a)anthracene	12.646	228	1018235	19.61 µg/mL	98	
85) Chrysene	12.694	228	954008	19.50 µg/mL	99	
86) Di-n-octylphthalate (CCC)	13.362	149	1050503	20.40 µg/mL#	100	
88) Benzo(b)fluoranthene	14.217	252	981816	18.39 µg/mL#	97	
89) Benzo(k)fluoranthene	14.260	252	1016689	19.49 µg/mL	95	
90) Benzo(e)pyrene	14.703	252	914623	19.22 µg/mL	99	
91) Benzo(a)pyrene (CCC)	14.794	252	942058	19.19 µg/mL	97	
92) Perylene	14.938	252	996589	19.45 µg/mL	98	
93) Indeno(1,2,3-cd)pyrene	16.952	276	1031781m	26.05 µg/mL		**Manual Int. "WP" (EDE)**
94) Dibenz(a,h)anthracene	16.952	278	863105	21.07 µg/mL#	96	
95) Benzo(g,h,i)perylene	17.545	276	870239	21.97 µg/mL	99	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002876.D
Acq On : 18 Oct 2010 7:25 pm
Operator : dda
Sample : SSTD050-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 20 10:47:01 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:30:55 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002876.D
Acq On : 18 Oct 2010 7:25 pm
Operator : dda
Sample : SSTD050-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 20 10:47:01 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:30:55 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	5.375	152	655591	40.00	µg/mL	0.00
21) Naphthalene-d8 (I)	6.588	136	2346284	40.00	µg/mL	0.00
36) Acenaphthene-d10 (I)	8.346	164	1314587	40.00	µg/mL	0.00
64) Phenanthrene-d10 (I)	9.852	188	2336676	40.00	µg/mL	0.00
78) Chrysene-d12 (I)	12.662	240	2279787	40.00	µg/mL	0.00
87) Perylene-d12 (I)	14.895	264	2168681	40.00	µg/mL	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (surr)	4.243	112	900585	50.39	µg/mL	0.00
5) Phenol-d5 (surr)	4.969	99	1027693	49.44	µg/mL	0.00
19) Nitrobenzene-d5 (surr)	5.872	82	1032667	50.60	µg/mL	0.00
39) 2-Fluorobiphenyl (surr)	7.625	172	2022693	49.76	µg/mL	0.00
57) Fluorene-d10 (surr)	8.864	176	1817663	50.35	µg/mL	0.00
65) 2,4,6-Tribromophenol (...	9.136	330	262774	49.12	µg/mL	0.00
75) Pyrene-d10 (surr)	11.311	212	2440734	50.11	µg/mL	0.00
77) Terphenyl-d14 (surr)	11.423	244	1933841	49.88	µg/mL	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.249	74	635596	50.35	µg/mL	91
3) Pyridine	3.308	79	1062640	50.61	µg/mL#	82
6) Phenol (CCC)	4.980	94	1074210	49.50	µg/mL#	91
7) Aniline	5.066	66	494387	50.37	µg/mL	89
8) bis(2-Chloroethyl)ether	5.087	63	650353	50.72	µg/mL	89
9) 2-Chlorophenol	5.188	128	979940	50.04	µg/mL	96
10) 1,3-Dichlorobenzene	5.333	146	1116124	49.68	µg/mL	98
11) 1,4-Dichlorobenzene (CCC)	5.391	146	1134699	49.79	µg/mL	99
12) Benzyl alcohol	5.461	108	526916	49.86	µg/mL	85
13) 1,2-Dichlorobenzene	5.541	146	1065553	49.74	µg/mL#	95
14) 2-Methylphenol	5.536	107	705677	49.14	µg/mL	97
15) bis(2-Chloroisopropyl)...	5.573	45	804523	50.80	µg/mL#	82
16) 3/4-Methylphenol	5.669	107	924560	49.16	µg/mL	94
17) N-Nitrso-di-n-propylam...	5.696	70	656842	50.14	µg/mL#	72
18) Hexachloroethane	5.862	117	419458	50.36	µg/mL	87
20) Nitrobenzene	5.894	77	944597	50.18	µg/mL	87
22) Isophorone	6.107	82	1738085	50.74	µg/mL	96
23) 2,4-Dimethylphenol	6.177	107	895507	52.91	µg/mL#	61
24) 2-Nitrophenol (CCC)	6.198	139	539145	50.28	µg/mL	93
25) Benzoic acid	6.241	105	634258	55.80	µg/mL#	1
26) bis(2-Chloroethoxy)met...	6.273	93	1042176	49.96	µg/mL	97
27) 2,4-Dichlorophenol (CCC)	6.423	162	767304	51.28	µg/mL	96
28) 1,2,4-Trichlorobenzene	6.519	180	963119	48.84	µg/mL	98
29) Naphthalene	6.610	128	2807524	49.68	µg/mL#	86
30) 4-Chloroaniline	6.620	65	320545	50.38	µg/mL	75
31) Hexachlorobutadiene (CCC)	6.711	225	574376	48.44	µg/mL	99
32) 4-Chloro-3 methylpheno...	7.058	107	750985	52.45	µg/mL	91
33) 2-Methylnaphthalene	7.283	142	1804232	49.86	µg/mL	99
34) 1-Methylnaphthalene	7.384	142	1742830	49.79	µg/mL	99
35) Hexachlorocyclopentadi...	7.438	237	638121	52.70	µg/mL#	100
37) 2,4,6-Trichlorophenol ...	7.544	196	597498	50.23	µg/mL	99
38) 2,4,5-Trichlorophenol	7.582	196	598687	50.19	µg/mL#	90
40) 2-Chloronaphthalene	7.779	162	1729488	49.61	µg/mL	94
41) 2-Nitroaniline	7.849	65	465188	51.72	µg/mL	85
42) 1,4-Dinitrobenzene	7.966	168	301749m	48.86	µg/mL	
43) Dimethylphthalate	7.998	163	1964791	49.64	µg/mL	99
44) 1,3-Dinitrobenzene	8.052	168	339018	51.42	µg/mL#	71
45) 2,6-Dinitrotoluene	8.073	165	477324	49.91	µg/mL#	72
46) 1,2-Dinitrobenzene	8.143	168	225093	50.25	µg/mL	89

Manual Int. "WP" (EDE)

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002876.D
Acq On : 18 Oct 2010 7:25 pm
Operator : dda
Sample : SSTD050-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 20 10:47:01 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:30:55 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
47) Acenaphthylene	8.207	152	2670061	50.50 µg/mL	97
48) 3-Nitroaniline	8.260	138	479906	51.01 µg/mL#	72
49) Acenaphthene (CCC)	8.378	154	1669970	49.38 µg/mL	94
50) 2,4-Dinitrophenol (SPCC)	8.356	184	247053	55.80 µg/mL#	100
51) 4-Nitrophenol (SPCC)	8.378	139	363991	54.59 µg/mL#	70
52) 2,4-Dinitrotoluene	8.490	165	605293	50.97 µg/mL	90
53) Dibenzofuran	8.543	168	2297357	49.83 µg/mL	94
54) 2,3,5,6-Tetrachlorophenol	8.613	232	508913	50.84 µg/mL	97
55) 2,3,4,6-Tetrachlorophenol	8.656	232	513321	50.67 µg/mL#	81
56) Diethlyphthalate	8.698	149	1941442	50.56 µg/mL	99
58) 4-Chlorophenyl-phenyle...	8.859	204	999101	49.21 µg/mL	96
59) Fluorene	8.896	166	1910816	50.46 µg/mL	99
60) 4-Nitroaniline	8.880	138	472667	52.83 µg/mL	85
61) 4,6-Dinitro2-methylphenol	8.907	198	345178	54.25 µg/mL#	12
62) N-Nitrosodiphenylamine...	8.971	169	1651904	50.00 µg/mL	96
63) Azobenzene	9.019	77	1784554	51.85 µg/mL#	100
66) 4-Bromophenyl-phenylether	9.361	248	593204	48.45 µg/mL	99
67) Hexachlorobenzene	9.468	284	615677	48.49 µg/mL	94
68) Pentachlorophenol (CCC)	9.644	266	352570	52.15 µg/mL	90
69) Phenanthrene	9.879	178	2640876	50.06 µg/mL	99
70) Anthracene	9.932	178	2674012	50.77 µg/mL	100
71) Carbazole	10.066	167	2302237	50.33 µg/mL	99
72) Di-n-butylphthalate	10.338	149	3044317	52.01 µg/mL	99
73) Fluoranthene (CCC)	11.092	202	2764843	50.37 µg/mL#	98
74) Benzidine	11.172	184	1448854	51.15 µg/mL	99
76) Pyrene	11.332	202	2949812	50.03 µg/mL#	98
79) Butylbenzylphthalate	11.877	149	1286236	51.04 µg/mL#	100
80) 3,3-Dimethylbenzidine	11.904	212	1821139	51.38 µg/mL#	100
81) bis(2-ethylhexyl)adipate	11.898	129	1151877	51.25 µg/mL#	100
82) bis(2-Ethylhexyl)phtha...	12.497	149	1837456	53.19 µg/mL#	100
83) 3,3'-Dichlorobenzidine	12.561	252	779586	46.30 µg/mL	99
84) Benzo(a)anthracene	12.646	228	2743401	49.85 µg/mL	99
85) Chrysene	12.700	228	2601527	50.18 µg/mL	99
86) Di-n-octylphthalate (CCC)	13.362	149	3014003	55.25 µg/mL#	100
88) Benzo(b)fluoranthene	14.222	252	2638192	48.65 µg/mL#	98
89) Benzo(k)fluoranthene	14.270	252	2627687	49.60 µg/mL	95
90) Benzo(e)pyrene	14.703	252	2368320	49.02 µg/mL	99
91) Benzo(a)pyrene (CCC)	14.799	252	2483685	49.83 µg/mL	97
92) Perylene	14.943	252	2553222	49.07 µg/mL	100
93) Indeno(1,2,3-cd)pyrene	16.963	276	2666636m	66.30 µg/mL	
94) Dibenz(a,h)anthracene	16.968	278	2243251	53.92 µg/mL	96
95) Benzo(g,h,i)perylene	17.556	276	2201757	54.74 µg/mL	99

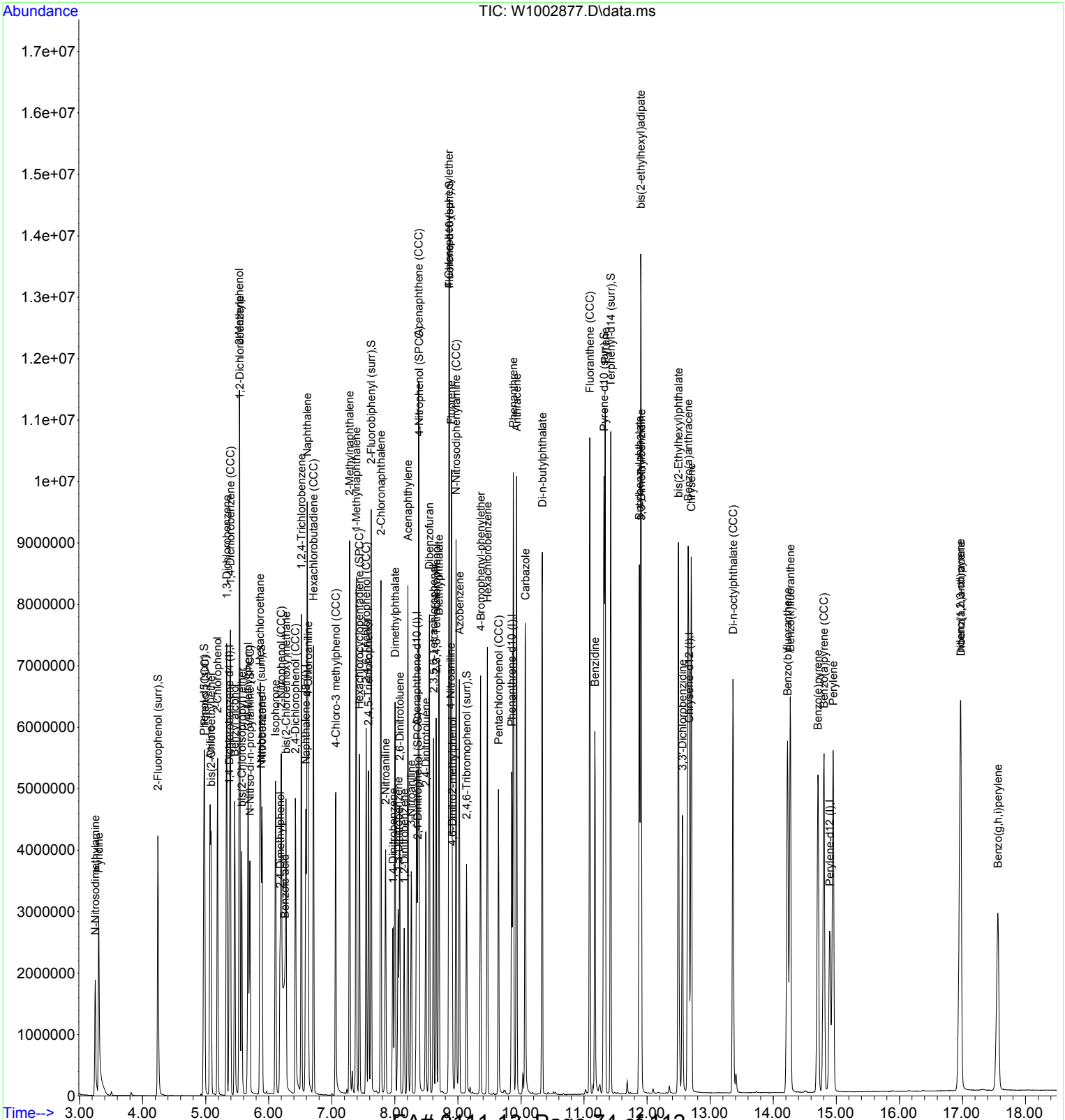
Manual Int. "WP" (EDE)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002877.D
Acq On : 18 Oct 2010 7:54 pm
Operator : dda
Sample : SSTD080-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 20 10:45:38 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:32:38 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002877.D
Acq On : 18 Oct 2010 7:54 pm
Operator : dda
Sample : SSTD080-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 20 10:45:38 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:32:38 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	5.375	152	662846	40.00	µg/mL	0.00
21) Naphthalene-d8 (I)	6.588	136	2259727	40.00	µg/mL	0.00
36) Acenaphthene-d10 (I)	8.346	164	1246926	40.00	µg/mL	0.00
64) Phenanthrene-d10 (I)	9.852	188	2303538	40.00	µg/mL	0.00
78) Chrysene-d12 (I)	12.667	240	2250870	40.00	µg/mL	0.00
87) Perylene-d12 (I)	14.895	264	1934135	40.00	µg/mL	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (surr)	4.243	112	1520406	84.13	µg/mL	0.00
5) Phenol-d5 (surr)	4.975	99	1676087	79.75	µg/mL	0.00
19) Nitrobenzene-d5 (surr)	5.877	82	1643568	79.65	µg/mL	0.00
39) 2-Fluorobiphenyl (surr)	7.624	172	3079250	79.87	µg/mL	0.00
57) Fluorene-d10 (surr)	8.864	176	2847479	83.16	µg/mL	0.00
65) 2,4,6-Tribromophenol (...	9.136	330	450730	85.46	µg/mL	0.00
75) Pyrene-d10 (surr)	11.316	212	4032039	83.98	µg/mL	0.00
77) Terphenyl-d14 (surr)	11.423	244	3278436	85.79	µg/mL	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.249	74	1065824	83.51	µg/mL	90
3) Pyridine	3.302	79	1777926	83.75	µg/mL#	83
6) Phenol (CCC)	4.985	94	1729656	78.83	µg/mL#	92
7) Aniline	5.071	66	797205	80.33	µg/mL	88
8) bis(2-Chloroethyl)ether	5.087	63	1046624	80.73	µg/mL	91
9) 2-Chlorophenol	5.188	128	1618701	81.75	µg/mL	95
10) 1,3-Dichlorobenzene	5.333	146	1841092	81.06	µg/mL	99
11) 1,4-Dichlorobenzene (CCC)	5.391	146	1864578	80.93	µg/mL	99
12) Benzyl alcohol	5.461	108	865190	80.97	µg/mL	86
13) 1,2-Dichlorobenzene	5.541	146	1745698	80.59	µg/mL#	95
14) 2-Methylphenol	5.536	107	1151734	79.32	µg/mL	97
15) bis(2-Chloroisopropyl)...	5.573	45	1272195	79.45	µg/mL#	82
16) 3/4-Methylphenol	5.674	107	1506894	79.24	µg/mL	95
17) N-Nitrso-di-n-propylam...	5.701	70	1068651	80.68	µg/mL#	71
18) Hexachloroethane	5.861	117	693404	82.34	µg/mL	89
20) Nitrobenzene	5.893	77	1499787	78.80	µg/mL#	86
22) Isophorone	6.107	82	2678725	81.20	µg/mL	96
23) 2,4-Dimethylphenol	6.182	107	1483117	90.99	µg/mL#	79
24) 2-Nitrophenol (CCC)	6.198	139	868327	84.08	µg/mL	91
25) Benzoic acid	6.257	105	1054266	96.30	µg/mL#	1
26) bis(2-Chloroethoxy)met...	6.273	93	1628238	81.05	µg/mL	97
27) 2,4-Dichlorophenol (CCC)	6.422	162	1226169	85.09	µg/mL#	96
28) 1,2,4-Trichlorobenzene	6.518	180	1550822	81.66	µg/mL	99
29) Naphthalene	6.609	128	4368870	80.28	µg/mL#	86
30) 4-Chloroaniline	6.625	65	501374	81.81	µg/mL	75
31) Hexachlorobutadiene (CCC)	6.711	225	942468	82.53	µg/mL	99
32) 4-Chloro-3 methylpheno...	7.063	107	1175601	85.26	µg/mL	93
33) 2-Methylnaphthalene	7.282	142	2802443	80.41	µg/mL	100
34) 1-Methylnaphthalene	7.389	142	2709029	80.37	µg/mL	99
35) Hexachlorocyclopentadi...	7.437	237	979053	83.96	µg/mL#	100
37) 2,4,6-Trichlorophenol ...	7.544	196	948267	84.04	µg/mL	99
38) 2,4,5-Trichlorophenol	7.582	196	952771	84.20	µg/mL#	89
40) 2-Chloronaphthalene	7.779	162	2680042	81.04	µg/mL	94
41) 2-Nitroaniline	7.854	65	734512	86.10	µg/mL	86
42) 1,4-Dinitrobenzene	7.972	168	484493m	81.29	µg/mL	
43) Dimethylphthalate	8.004	163	3112785	82.91	µg/mL	95
44) 1,3-Dinitrobenzene	8.057	168	546881	87.44	µg/mL#	68
45) 2,6-Dinitrotoluene	8.078	165	769244	84.80	µg/mL#	74
46) 1,2-Dinitrobenzene	8.148	168	370447	87.19	µg/mL	88

Manual Int. "WP" (EDE)

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002877.D
Acq On : 18 Oct 2010 7:54 pm
Operator : dda
Sample : SSTD080-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 20 10:45:38 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:32:38 2010
Response via : Initial Calibration

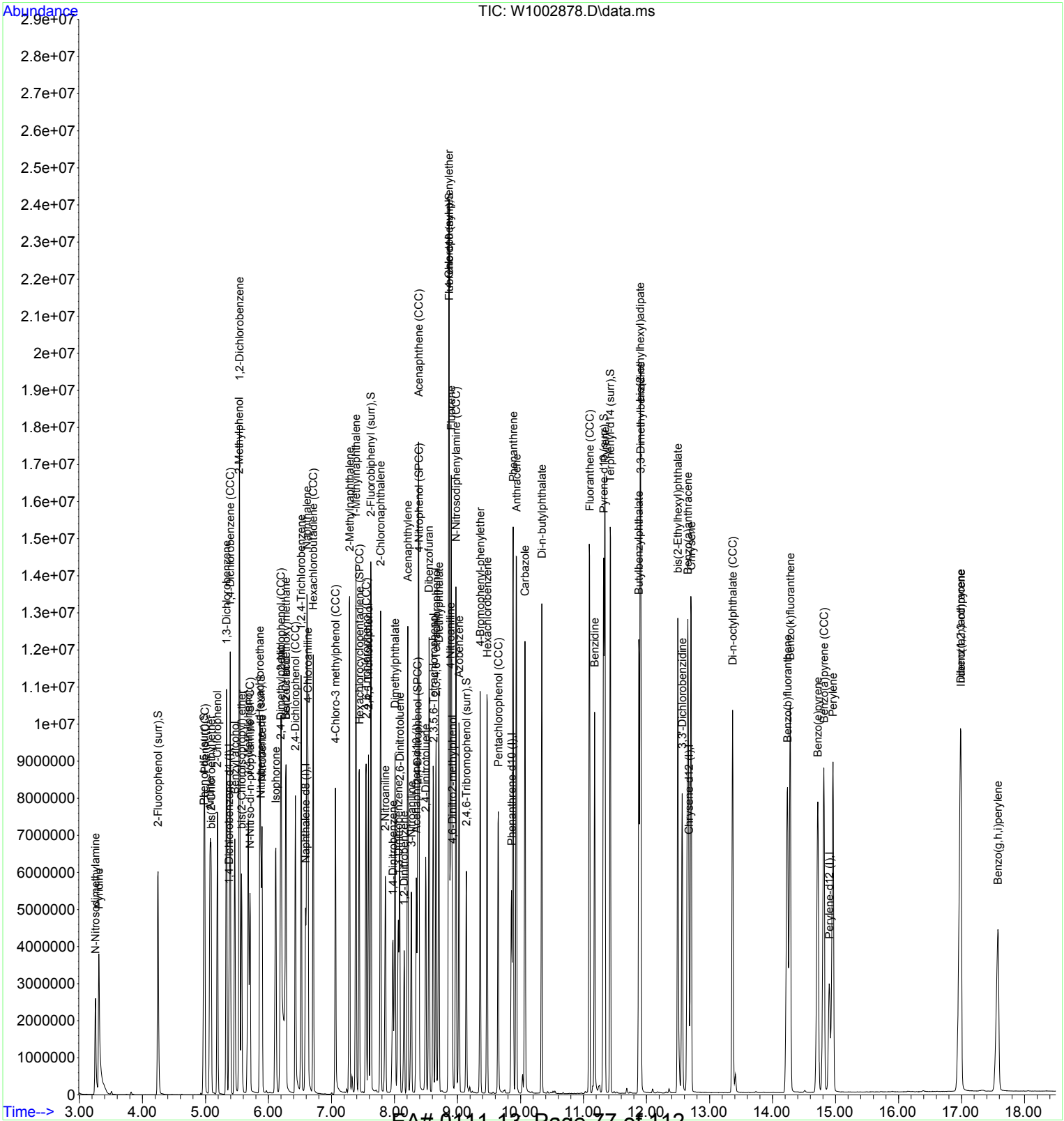
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
47) Acenaphthylene	8.207	152	4042909	80.61 µg/mL	96	
48) 3-Nitroaniline	8.260	138	756365	84.76 µg/mL#	74	
49) Acenaphthene (CCC)	8.378	154	2583448	80.54 µg/mL	94	
50) 2,4-Dinitrophenol (SPCC)	8.362	184	422751	100.67 µg/mL#	100	
51) 4-Nitrophenol (SPCC)	8.383	139	590584	92.94 µg/mL#	72	
52) 2,4-Dinitrotoluene	8.490	165	991694	88.05 µg/mL	88	
53) Dibenzofuran	8.549	168	3539646	80.95 µg/mL	93	
54) 2,3,5,6-Tetrachlorophenol	8.613	232	841349	88.61 µg/mL	98	
55) 2,3,4,6-Tetrachlorophenol	8.655	232	843608	87.79 µg/mL#	82	
56) Diethlyphthalate	8.698	149	3035443	83.34 µg/mL	98	
58) 4-Chlorophenyl-phenyle...	8.858	204	1590412	82.58 µg/mL	97	
59) Fluorene	8.896	166	2932322	81.64 µg/mL	100	
60) 4-Nitroaniline	8.885	138	759570	89.50 µg/mL	85	
61) 4,6-Dinitro2-methylphenol	8.912	198	591276	97.97 µg/mL#	10	
62) N-Nitrosodiphenylamine...	8.971	169	2602966	83.06 µg/mL	96	
63) Azobenzene	9.024	77	2703666	82.82 µg/mL#	100	
66) 4-Bromophenyl-phenylether	9.361	248	978655	81.09 µg/mL	98	
67) Hexachlorobenzene	9.467	284	1022518	81.69 µg/mL	92	
68) Pentachlorophenol (CCC)	9.644	266	615106	92.29 µg/mL	89	
69) Phenanthrene	9.879	178	4174914	80.28 µg/mL	99	
70) Anthracene	9.932	178	4211925	81.12 µg/mL	99	
71) Carbazole	10.071	167	3742990	83.00 µg/mL	99	
72) Di-n-butylphthalate	10.338	149	4846729	84.00 µg/mL	99	
73) Fluoranthene (CCC)	11.091	202	4561098	84.29 µg/mL#	97	
74) Benzidine	11.172	184	2566248	91.90 µg/mL	99	
76) Pyrene	11.337	202	4884640	84.04 µg/mL#	97	
79) Butylbenzylphthalate	11.877	149	2130889	85.64 µg/mL#	100	
80) 3,3-Dimethylbenzidine	11.909	212	3049279	87.14 µg/mL#	100	
81) bis(2-ethylhexyl)adipate	11.898	129	1851064	83.42 µg/mL#	100	
82) bis(2-Ethylhexyl)phtha...	12.496	149	2966387	86.97 µg/mL#	99	
83) 3,3'-Dichlorobenzidine	12.561	252	1278774	76.92 µg/mL	98	
84) Benzo(a)anthracene	12.651	228	4440131	81.72 µg/mL	98	
85) Chrysene	12.699	228	4151696	81.11 µg/mL	100	
86) Di-n-octylphthalate (CCC)	13.362	149	4770907	88.58 µg/mL#	100	
88) Benzo(b)fluoranthene	14.227	252	4214544	87.14 µg/mL#	98	
89) Benzo(k)fluoranthene	14.270	252	3922979m	83.03 µg/mL		Manual Int. "WP" (EDE)
90) Benzo(e)pyrene	14.708	252	3629102	84.22 µg/mL	100	
91) Benzo(a)pyrene (CCC)	14.804	252	3812109	85.76 µg/mL	97	
92) Perylene	14.949	252	3851179	82.99 µg/mL	100	
93) Indeno(1,2,3-cd)pyrene	16.968	276	3625684m	101.07 µg/mL		Manual Int. "WP" (EDE)
94) Dibenz(a,h)anthracene	16.973	278	3067089	82.66 µg/mL	97	
95) Benzo(g,h,i)perylene	17.561	276	2891515	80.60 µg/mL	100	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002878.D
Acq On : 18 Oct 2010 8:24 pm
Operator : dda
Sample : SSTD120-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 20 12:14:38 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:34:25 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002878.D
Acq On : 18 Oct 2010 8:24 pm
Operator : dda
Sample : SSTD120-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 20 12:14:38 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:34:25 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	5.375	152	708059	40.00	µg/mL	# 0.00
21) Naphthalene-d8 (I)	6.588	136	2432537	40.00	µg/mL	0.00
36) Acenaphthene-d10 (I)	8.346	164	1402728	40.00	µg/mL	0.00
64) Phenanthrene-d10 (I)	9.857	188	2472354	40.00	µg/mL	0.00
78) Chrysene-d12 (I)	12.673	240	2393551	40.00	µg/mL	0.00
87) Perylene-d12 (I)	14.901	264	2217223	40.00	µg/mL	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (surr)	4.248	112	2357516	122.13	µg/mL	0.00
5) Phenol-d5 (surr)	4.975	99	2560855	114.06	µg/mL	0.00
19) Nitrobenzene-d5 (surr)	5.878	82	2572034	116.69	µg/mL	0.00
39) 2-Fluorobiphenyl (surr)	7.624	172	4954156	114.22	µg/mL	0.00
57) Fluorene-d10 (surr)	8.869	176	4539684	117.86	µg/mL	0.00
65) 2,4,6-Tribromophenol (...	9.142	330	763894	134.95	µg/mL	0.00
75) Pyrene-d10 (surr)	11.321	212	6105122	118.47	µg/mL	0.00
77) Terphenyl-d14 (surr)	11.423	244	4961073	120.95	µg/mL	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.254	74	1655479	121.42	µg/mL	89
3) Pyridine	3.308	79	2748558	121.20	µg/mL#	83
6) Phenol (CCC)	4.991	94	2638757	112.58	µg/mL#	92
7) Aniline	5.071	66	1250650	117.97	µg/mL	85
8) bis(2-Chloroethyl)ether	5.092	63	1606548	116.01	µg/mL	90
9) 2-Chlorophenol	5.188	128	2488942	117.68	µg/mL	95
10) 1,3-Dichlorobenzene	5.333	146	2860266	117.89	µg/mL	99
11) 1,4-Dichlorobenzene (CCC)	5.391	146	2903770	117.98	µg/mL	99
12) Benzyl alcohol	5.466	108	1367289	119.78	µg/mL	86
13) 1,2-Dichlorobenzene	5.541	146	2714894	117.33	µg/mL#	95
14) 2-Methylphenol	5.536	107	1761446	113.57	µg/mL	97
15) bis(2-Chloroisopropyl)...	5.573	45	1956537	114.38	µg/mL#	81
16) 3/4-Methylphenol	5.680	107	2433885	119.82	µg/mL	95
17) N-Nitrso-di-n-propylam...	5.707	70	1701666	120.26	µg/mL#	71
18) Hexachloroethane	5.862	117	1091581	121.34	µg/mL	91
20) Nitrobenzene	5.899	77	2314661	113.84	µg/mL	89
22) Isophorone	6.118	82	4279898	120.52	µg/mL	95
23) 2,4-Dimethylphenol	6.193	107	2442858	139.42	µg/mL	95
24) 2-Nitrophenol (CCC)	6.198	139	1390088	125.04	µg/mL	92
25) Benzoic acid	6.278	105	1884010	159.86	µg/mL#	1
26) bis(2-Chloroethoxy)met...	6.278	93	2556990	118.23	µg/mL	97
27) 2,4-Dichlorophenol (CCC)	6.428	162	2045970	131.90	µg/mL#	96
28) 1,2,4-Trichlorobenzene	6.519	180	2465876	120.61	µg/mL	98
29) Naphthalene	6.609	128	6652351	113.55	µg/mL#	82
30) 4-Chloroaniline	6.625	65	810900	122.92	µg/mL	73
31) Hexachlorobutadiene (CCC)	6.711	225	1526411	124.17	µg/mL	99
32) 4-Chloro-3 methylpheno...	7.064	107	1993072	134.27	µg/mL	91
33) 2-Methylnaphthalene	7.288	142	4510862	120.24	µg/mL	100
34) 1-Methylnaphthalene	7.389	142	4367649	120.36	µg/mL	99
35) Hexachlorocyclopentadi...	7.443	237	1697507	135.23	µg/mL#	100
37) 2,4,6-Trichlorophenol ...	7.550	196	1575736	124.13	µg/mL	100
38) 2,4,5-Trichlorophenol	7.587	196	1597090	125.47	µg/mL#	89
40) 2-Chloronaphthalene	7.779	162	4326768	116.31	µg/mL	93
41) 2-Nitroaniline	7.854	65	1185450	123.53	µg/mL	87
42) 1,4-Dinitrobenzene	7.977	168	816936m	119.66	µg/mL	
43) Dimethylphthalate	8.009	163	4936719	116.89	µg/mL	98
44) 1,3-Dinitrobenzene	8.063	168	900830	128.04	µg/mL#	72
45) 2,6-Dinitrotoluene	8.084	165	1243711	121.87	µg/mL#	76
46) 1,2-Dinitrobenzene	8.153	168	593585	124.19	µg/mL	88

Manual Int. "WP" (EDE)

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002878.D
Acq On : 18 Oct 2010 8:24 pm
Operator : dda
Sample : SSTD120-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 20 12:14:38 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:34:25 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
47) Acenaphthylene	8.212	152	6412169	113.65 µg/mL	95
48) 3-Nitroaniline	8.271	138	1247776	124.30 µg/mL#	76
49) Acenaphthene (CCC)	8.383	154	4267963	118.28 µg/mL	92
50) 2,4-Dinitrophenol (SPCC)	8.367	184	758110	160.48 µg/mL#	100
51) 4-Nitrophenol (SPCC)	8.388	139	1003648	140.40 µg/mL#	74
52) 2,4-Dinitrotoluene	8.495	165	1578371	124.57 µg/mL	87
53) Dibenzofuran	8.549	168	5664751	115.15 µg/mL	92
54) 2,3,5,6-Tetrachlorophenol	8.618	232	1400720	131.14 µg/mL	98
55) 2,3,4,6-Tetrachlorophenol	8.661	232	1402198	129.71 µg/mL#	82
56) Diethlyphthalate	8.704	149	4716072	115.11 µg/mL	97
58) 4-Chlorophenyl-phenyle...	8.864	204	2628420	121.32 µg/mL	98
59) Fluorene	8.901	166	4706583	116.49 µg/mL	99
60) 4-Nitroaniline	8.891	138	1227582	128.57 µg/mL	88
61) 4,6-Dinitro2-methylphenol	8.917	198	987659	145.47 µg/mL#	10
62) N-Nitrosodiphenylamine...	8.976	169	4133249	117.24 µg/mL	97
63) Azobenzene	9.024	77	4180139	113.83 µg/mL#	100
66) 4-Bromophenyl-phenylether	9.361	248	1612330	124.47 µg/mL	97
67) Hexachlorobenzene	9.473	284	1701383	126.64 µg/mL#	90
68) Pentachlorophenol (CCC)	9.649	266	1052185	147.10 µg/mL	89
69) Phenanthrene	9.884	178	6387152	114.44 µg/mL	97
70) Anthracene	9.938	178	6488275	116.42 µg/mL	98
71) Carbazole	10.071	167	5721649	118.21 µg/mL	99
72) Di-n-butylphthalate	10.338	149	7022165	113.39 µg/mL	99
73) Fluoranthene (CCC)	11.097	202	6782097	116.78 µg/mL#	96
74) Benzidine	11.177	184	4250745	141.82 µg/mL	98
76) Pyrene	11.343	202	7136986	114.40 µg/mL#	96
79) Butylbenzylphthalate	11.877	149	3186427	120.43 µg/mL#	100
80) 3,3-Dimethylbenzidine	11.909	212	4879382	131.13 µg/mL#	100
81) bis(2-ethylhexyl)adipate	11.898	129	2743784	116.28 µg/mL#	100
82) bis(2-Ethylhexyl)phtha...	12.497	149	4377746	120.70 µg/mL#	98
83) 3,3'-Dichlorobenzidine	12.566	252	2373255	134.24 µg/mL	99
84) Benzo(a)anthracene	12.657	228	6897657	119.38 µg/mL	97
85) Chrysene	12.710	228	6402828	117.64 µg/mL	99
86) Di-n-octylphthalate (CCC)	13.367	149	7148627	124.81 µg/mL#	100
88) Benzo(b)fluoranthene	14.238	252	6718692	121.18 µg/mL#	98
89) Benzo(k)fluoranthene	14.281	252	6627053	122.38 µg/mL#	94
90) Benzo(e)pyrene	14.719	252	6027853	122.03 µg/mL	100
91) Benzo(a)pyrene (CCC)	14.815	252	6326927	124.14 µg/mL	96
92) Perylene	14.959	252	6400912	120.33 µg/mL	99
93) Indeno(1,2,3-cd)pyrene	16.989	276	6045974m	147.02 µg/mL	
94) Dibenz(a,h)anthracene	16.984	278	5197283	122.19 µg/mL	97
95) Benzo(g,h,i)perylene	17.577	276	4731566	115.06 µg/mL	100

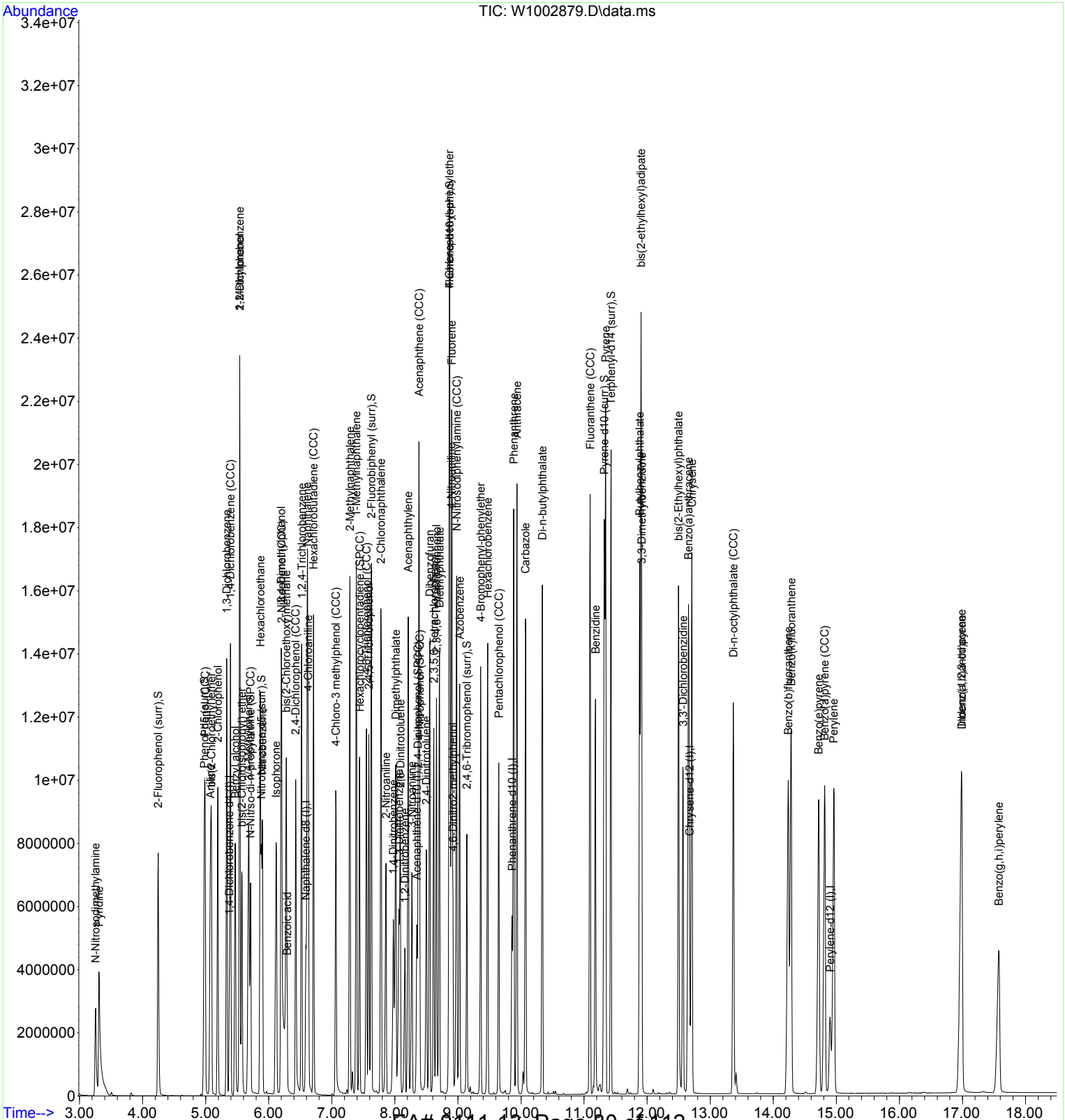
Manual Int. "WP" (EDE)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002879.D
Acq On : 18 Oct 2010 8:54 pm
Operator : dda
Sample : SSTD160-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 20 12:15:17 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:36:17 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002879.D
Acq On : 18 Oct 2010 8:54 pm
Operator : dda
Sample : SSTD160-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 20 12:15:17 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:36:17 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	5.375	152	673532	40.00	µg/mL	# 0.00
21) Naphthalene-d8 (I)	6.588	136	2366580	40.00	µg/mL	0.00
36) Acenaphthene-d10 (I)	8.346	164	1358679	40.00	µg/mL	0.00
64) Phenanthrene-d10 (I)	9.858	188	2516253	40.00	µg/mL	0.00
78) Chrysene-d12 (I)	12.673	240	2291395	40.00	µg/mL	0.00
87) Perylene-d12 (I)	14.901	264	1886569	40.00	µg/mL	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (surr)	4.248	112	2937218	159.96	µg/mL	0.00
5) Phenol-d5 (surr)	4.980	99	3293639	154.22	µg/mL	0.00
19) Nitrobenzene-d5 (surr)	5.883	82	3320235	158.36	µg/mL	0.00
39) 2-Fluorobiphenyl (surr)	7.630	172	6215938	147.96	µg/mL	0.00
57) Fluorene-d10 (surr)	8.869	176	5946373	159.38	µg/mL	0.00
65) 2,4,6-Tribromophenol (...	9.142	330	1063166	184.54	µg/mL	0.00
75) Pyrene-d10 (surr)	11.321	212	8046097	153.41	µg/mL	0.00
77) Terphenyl-d14 (surr)	11.428	244	6485723	155.36	µg/mL	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.255	74	2078189	160.24	µg/mL	89
3) Pyridine	3.308	79	3461744	160.48	µg/mL#	83
6) Phenol (CCC)	4.991	94	3371914	151.24	µg/mL#	92
7) Aniline	5.076	66	1566019	155.29	µg/mL	82
8) bis(2-Chloroethyl)ether	5.092	63	1996432	151.55	µg/mL	91
9) 2-Chlorophenol	5.194	128	3120918	155.12	µg/mL	95
10) 1,3-Dichlorobenzene	5.333	146	3568480	154.62	µg/mL	99
11) 1,4-Dichlorobenzene (CCC)	5.391	146	3597095	153.65	µg/mL	99
12) Benzyl alcohol	5.472	108	1759118	162.01	µg/mL	86
13) 1,2-Dichlorobenzene	5.541	146	3382190	153.67	µg/mL#	94
14) 2-Methylphenol	5.541	107	2305638	156.25	µg/mL	96
15) bis(2-Chloroisopropyl)...	5.573	45	2460461	151.22	µg/mL#	80
16) 3/4-Methylphenol	5.680	107	3125251	161.74	µg/mL	95
17) N-Nitrso-di-n-propylam...	5.712	70	2127745	158.08	µg/mL#	71
18) Hexachloroethane	5.867	117	1364287	159.43	µg/mL	93
20) Nitrobenzene	5.899	77	2965421	153.33	µg/mL	88
22) Isophorone	6.118	82	5347160	154.77	µg/mL	94
23) 2,4-Dimethylphenol	6.198	107	3051656	179.01	µg/mL	97
24) 2-Nitrophenol (CCC)	6.203	139	1796992	166.15	µg/mL	93
25) Benzoic acid	6.294	105	2443160	213.08	µg/mL#	1
26) bis(2-Chloroethoxy)met...	6.278	93	3186218	151.43	µg/mL#	97
27) 2,4-Dichlorophenol (CCC)	6.428	162	2620544	173.64	µg/mL#	96
28) 1,2,4-Trichlorobenzene	6.524	180	3137769	157.75	µg/mL	98
29) Naphthalene	6.609	128	8215827	144.15	µg/mL#	81
30) 4-Chloroaniline	6.625	65	1008461	157.13	µg/mL	75
31) Hexachlorobutadiene (CCC)	6.711	225	1961876	164.04	µg/mL	99
32) 4-Chloro-3 methylpheno...	7.064	107	2554086	176.83	µg/mL	93
33) 2-Methylnaphthalene	7.288	142	5580915	152.90	µg/mL	99
34) 1-Methylnaphthalene	7.389	142	5353707	151.65	µg/mL	100
35) Hexachlorocyclopentadi...	7.443	237	2101657	172.10	µg/mL#	100
37) 2,4,6-Trichlorophenol ...	7.550	196	2051735	166.87	µg/mL	99
38) 2,4,5-Trichlorophenol	7.587	196	2123898	172.27	µg/mL#	90
40) 2-Chloronaphthalene	7.779	162	5435141	150.84	µg/mL#	92
41) 2-Nitroaniline	7.860	65	1548645	166.60	µg/mL	87
42) 1,4-Dinitrobenzene	7.977	168	1091043m	162.60	µg/mL	
43) Dimethylphthalate	8.014	163	6489698	158.64	µg/mL	95
44) 1,3-Dinitrobenzene	8.068	168	1200737	176.20	µg/mL#	75
45) 2,6-Dinitrotoluene	8.089	165	1659543	167.89	µg/mL#	78
46) 1,2-Dinitrobenzene	8.159	168	801577	173.15	µg/mL	88

Manual Int. "WP" (EDE)

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002879.D
Acq On : 18 Oct 2010 8:54 pm
Operator : dda
Sample : SSTD160-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 20 12:15:17 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:36:17 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
47) Acenaphthylene	8.212	152	8115474	148.51 µg/mL	94
48) 3-Nitroaniline	8.271	138	1651596	169.86 µg/mL#	76
49) Acenaphthene (CCC)	8.383	154	5451356	155.98 µg/mL	93
50) 2,4-Dinitrophenol (SPCC)	8.367	184	1061235	231.92 µg/mL#	100
51) 4-Nitrophenol (SPCC)	8.394	139	1347780	194.65 µg/mL#	74
52) 2,4-Dinitrotoluene	8.501	165	2126518	173.27 µg/mL	87
53) Dibenzofuran	8.554	168	7226840	151.67 µg/mL	91
54) 2,3,5,6-Tetrachlorophenol	8.618	232	1923007	185.88 µg/mL	98
55) 2,3,4,6-Tetrachlorophenol	8.661	232	1852921	176.96 µg/mL#	81
56) Diethlyphthalate	8.709	149	6077894	153.16 µg/mL	96
58) 4-Chlorophenyl-phenyle...	8.864	204	3463398	165.04 µg/mL	99
59) Fluorene	8.901	166	6120247	156.39 µg/mL	99
60) 4-Nitroaniline	8.896	138	1667054	180.27 µg/mL	91
61) 4,6-Dinitro2-methylphenol	8.923	198	1373367	208.84 µg/mL#	8
62) N-Nitrosodiphenylamine...	8.981	169	5463024	159.98 µg/mL	98
63) Azobenzene	9.030	77	5335363	149.99 µg/mL#	100
66) 4-Bromophenyl-phenylether	9.361	248	2194998	166.50 µg/mL	96
67) Hexachlorobenzene	9.473	284	2292317	167.65 µg/mL#	90
68) Pentachlorophenol (CCC)	9.649	266	1449126	199.06 µg/mL	89
69) Phenanthrene	9.884	178	8396637	147.82 µg/mL	96
70) Anthracene	9.938	178	8383752	147.81 µg/mL	96
71) Carbazole	10.071	167	7617280	154.63 µg/mL	97
72) Di-n-butylphthalate	10.338	149	8883374	140.95 µg/mL	98
73) Fluoranthene (CCC)	11.097	202	8829464	149.38 µg/mL#	95
74) Benzidine	11.182	184	5525908	181.15 µg/mL	98
76) Pyrene	11.343	202	9167949	144.39 µg/mL#	94
79) Butylbenzylphthalate	11.882	149	4110291	162.28 µg/mL#	100
80) 3,3-Dimethylbenzidine	11.914	212	6289525	176.56 µg/mL#	100
81) bis(2-ethylhexyl)adipate	11.904	129	3588752	158.87 µg/mL#	100
82) bis(2-Ethylhexyl)phtha...	12.497	149	5599108	161.26 µg/mL#	96
83) 3,3'-Dichlorobenzidine	12.571	252	3194173	188.73 µg/mL	98
84) Benzo(a)anthracene	12.657	228	8682401	156.97 µg/mL	96
85) Chrysene	12.710	228	8108075	155.61 µg/mL	97
86) Di-n-octylphthalate (CCC)	13.367	149	8822468	160.90 µg/mL#	100
88) Benzo(b)fluoranthene	14.238	252	8302487	175.99 µg/mL	98
89) Benzo(k)fluoranthene	14.286	252	7385841	160.30 µg/mL#	93
90) Benzo(e)pyrene	14.719	252	6925339	164.78 µg/mL	100
91) Benzo(a)pyrene (CCC)	14.815	252	7257690	167.35 µg/mL	96
92) Perylene	14.959	252	7263792	160.48 µg/mL	98
93) Indeno(1,2,3-cd)pyrene	16.984	276	6422568m	183.55 µg/mL	
94) Dibenz(a,h)anthracene	16.989	278	5561636	153.67 µg/mL	97
95) Benzo(g,h,i)perylene	17.577	276	4959425	141.74 µg/mL	100

Manual Int. "WP" (EDE)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Evaluate Continuing Calibration Report

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002880.D
Acq On : 18 Oct 2010 9:22 pm
Operator : dda
Sample : SSTD050-SCAN (ICV) gcms22pg14
Misc : gcmsprep2pg14
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 20 12:15:59 2010
Quant Method : M:\ms2010\methods\wiley\W101810Xjunk-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 10:23:46 2010
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4 (I)	1.000	1.000	0.0	105	0.00
2		N-Nitrosodimethylamine	0.770	0.756	1.8	102	0.00
3		Pyridine	1.281	1.260	1.6	102	0.00
4	S	2-Fluorophenol (surr)	1.091	1.096	-0.5	105	0.00
5	S	Phenol-d5 (surr)	1.268	1.246	1.7	104	0.00
6		Phenol (CCC)	1.324	1.264	4.5	101	0.00
7		Aniline	0.599	0.579	3.3	101	0.00
8		bis(2-Chloroethyl)ether	0.782	0.760	2.8	100	0.00
9		2-Chlorophenol	1.195	1.165	2.5	102	0.00
10		1,3-Dichlorobenzene	1.371	1.319	3.8	102	0.00
11		1,4-Dichlorobenzene (CCC)	1.390	1.349	2.9	102	0.00
12		Benzyl alcohol	0.645	0.639	0.9	104	0.00
13		1,2-Dichlorobenzene	1.307	1.246	4.7	101	0.00
14		2-Methylphenol	0.876	0.830	5.3	101	0.00
15		bis(2-Chloroisopropyl) ethe	0.966	0.942	2.5	101	0.00
16		3/4-Methylphenol	1.148	1.097	4.4	102	0.00
17		N-Nitrso-di-n-propylamine (	0.799	0.773	3.3	101	0.00
18		Hexachloroethane	0.508	0.496	2.4	102	0.00
19	S	Nitrobenzene-d5 (surr)	1.245	1.221	1.9	102	0.00
20		Nitrobenzene	1.149	1.107	3.7	101	0.00
21	I	Naphthalene-d8 (I)	1.000	1.000	0.0	102	0.00
22		Isophorone	0.584	0.587	-0.5	101	0.00
23		2,4-Dimethylphenol	0.288	0.310	-7.6	104	0.00
24		2-Nitrophenol (CCC)	0.183	0.182	0.5	102	0.00
25		Benzoic acid	0.194	0.218	-12.4	103	0.00
26		bis(2-Chloroethoxy)methane	0.356	0.352	1.1	101	0.00
27		2,4-Dichlorophenol (CCC)	0.255	0.258	-1.2	101	0.00
28		1,2,4-Trichlorobenzene	0.336	0.317	5.7	99	0.00
29		Naphthalene	0.963	0.944	2.0	101	0.00
30		4-Chloroaniline	0.108	0.109	-0.9	102	0.00
31		Hexachlorobutadiene (CCC)	0.202	0.196	3.0	102	0.00
32		4-Chloro-3 methylphenol (CC	0.244	0.253	-3.7	101	0.00
33		2-Methylnaphthalene	0.617	0.575	6.8	96	0.00
34		1-Methylnaphthalene	0.597	0.587	1.7	101	0.00
35		Hexachlorocyclopentadiene (	0.206	0.207	-0.5	98	0.00
36	I	Acenaphthene-d10 (I)	1.000	1.000	0.0	102	0.00
37		2,4,6-Trichlorophenol (CCC)	0.362	0.355	1.9	100	0.00
38		2,4,5-Trichlorophenol	0.363	0.366	-0.8	103	0.00
39	S	2-Fluorobiphenyl (surr)	1.237	1.213	1.9	101	0.00
40		2-Chloronaphthalene	1.061	1.040	2.0	101	0.00
41		2-Nitroaniline	0.274	0.277	-1.1	100	0.00
42		1,4-Dinitrobenzene	0.194	0.179	7.7	100	0.00
43		Dimethylphthalate	1.204	1.182	1.8	101	0.00
44		1,3-Dinitrobenzene	0.201	0.202	-0.5	100	0.00
45		2,6-Dinitrotoluene	0.291	0.289	0.7	102	0.00
46		1,2-Dinitrobenzene	0.136	0.136	0.0	102	0.00
47		Acenaphthylene	1.609	1.602	0.4	101	0.00
48		3-Nitroaniline	0.286	0.282	1.4	99	0.00
49		Acenaphthene (CCC)	1.029	0.994	3.4	100	0.00
50		2,4-Dinitrophenol (SPCC)	0.135	0.144	-6.7	98	0.00
51		4-Nitrophenol (SPCC)	0.204	0.208	-2.0	96	0.00
52		2,4-Dinitrotoluene	0.361	0.362	-0.3	101	0.00

Evaluate Continuing Calibration Report

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002880.D
Acq On : 18 Oct 2010 9:22 pm
Operator : dda
Sample : SSTD050-SCAN (ICV) gcms22pg14
Misc : gcmsprep2pg14
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 20 12:15:59 2010
Quant Method : M:\ms2010\methods\wiley\W101810Xjunk-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 10:23:46 2010
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

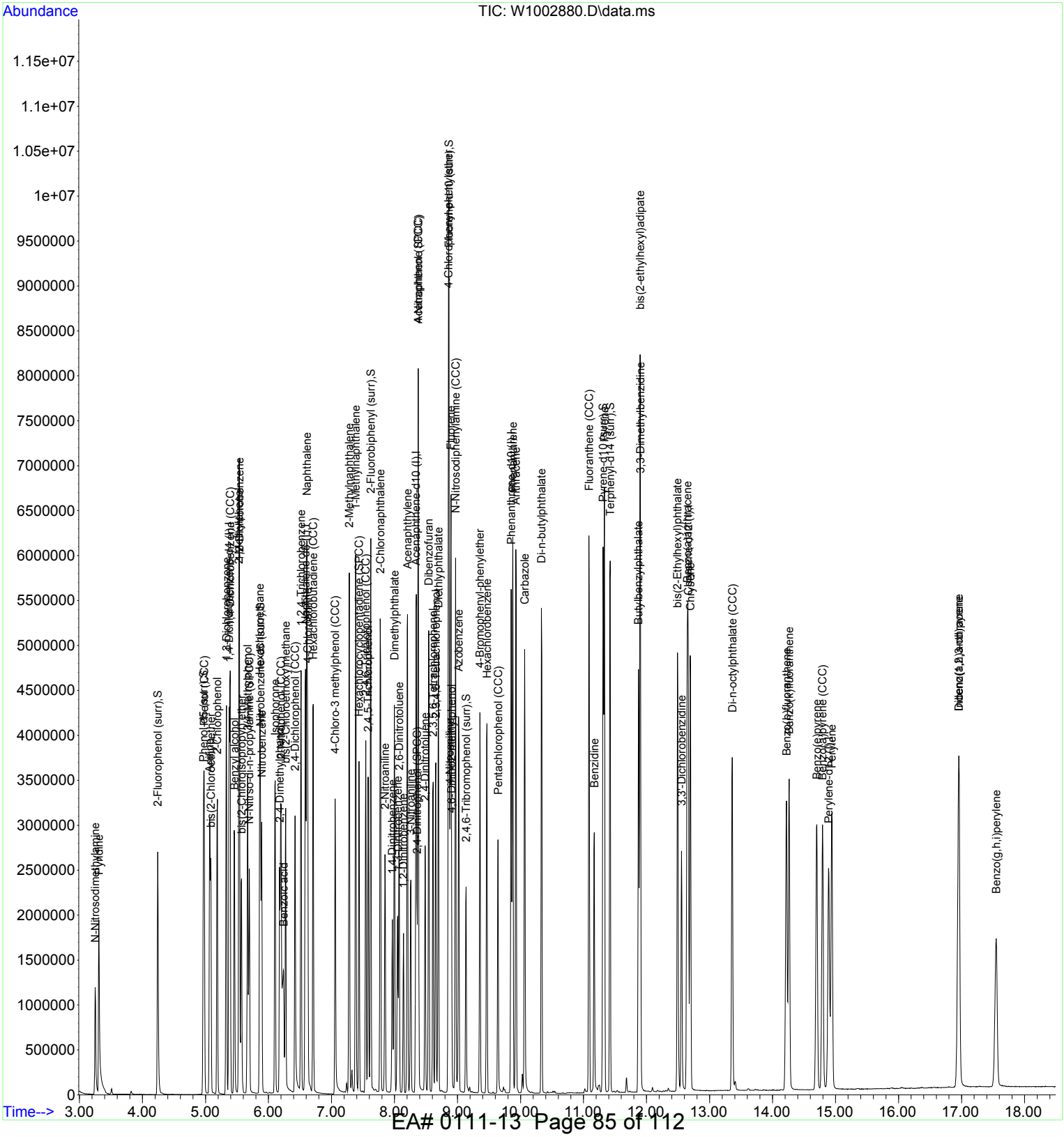
		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
53		Dibenzofuran	1.403	1.338	4.6	98	0.00
54		2,3,5,6-Tetrachlorophenol	0.305	0.304	0.3	100	0.00
55		2,3,4,6-Tetrachlorophenol	0.308	0.308	0.0	101	0.00
56		Diethlyphthalate	1.168	1.145	2.0	99	0.00
57	S	Fluorene-d10 (surr)	1.098	0.983	10.5	91	0.00
58		4-Chlorophenyl-phenylether	0.618	0.594	3.9	100	0.00
59		Fluorene	1.152	1.105	4.1	97	0.00
60		4-Nitroaniline	0.272	0.272	0.0	97	0.00
61		4,6-Dinitro2-methylphenol	0.194	0.200	-3.1	98	0.00
62		N-Nitrosodiphenylamine (CCC	1.005	0.983	2.2	100	0.00
63		Azobenzene	1.047	1.020	2.6	96	0.00
64	I	Phenanthrene-d10 (I)	1.000	1.000	0.0	99	0.00
65	S	2,4,6-Tribromophenol (surr)	0.092	0.097	-5.4	107	0.00
66		4-Bromophenyl-phenylether	0.210	0.207	1.4	101	0.00
67		Hexachlorobenzene	0.217	0.215	0.9	101	0.00
68		Pentachlorophenol (CCC)	0.116	0.122	-5.2	101	0.00
69		Phenanthrene	0.903	0.885	2.0	97	0.00
70		Anthracene	0.902	0.899	0.3	98	0.00
71		Carbazole	0.783	0.792	-1.1	100	0.00
72		Di-n-butylphthalate	1.002	1.013	-1.1	97	0.00
73		Fluoranthene (CCC)	0.940	0.907	3.5	95	0.00
74		Benzidine	0.485	0.438	9.7	88	0.00
75	S	Pyrene-d10 (surr)	0.834	0.890	-6.7	106	0.00
76		Pyrene	1.009	0.970	3.9	95	0.00
77	S	Terphenyl-d14 (surr)	0.664	0.654	1.5	98	0.00
78	I	Chrysene-d12 (I)	1.000	1.000	0.0	88	0.00
79		Butylbenzylphthalate	0.442	0.477	-7.9	94	0.00
80		3,3-Dimethylbenzidine	0.622	0.625	-0.5	87	0.00
81		bis(2-ethylhexyl)adipate	0.394	0.423	-7.4	93	0.00
82		bis(2-Ethylhexyl)phthalate	0.606	0.664	-9.6	91	0.00
83		3,3'-Dichlorobenzidine	0.295	0.294	0.3	95	0.00
84		Benzo(a)anthracene	0.966	0.956	1.0	88	0.00
85		Chrysene	0.910	0.894	1.8	87	0.00
86		Di-n-octylphthalate (CCC)	0.957	1.048	-9.5	88	0.00
87	I	Perylene-d12 (I)	1.000	1.000	0.0	82	0.00
88		Benzo(b)fluoranthene	1.000	1.014	-1.4	85	0.00
89		Benzo(k)fluoranthene	0.977	0.940	3.8	79	0.00
90		Benzo(e)pyrene	0.891	0.916	-2.8	86	0.00
91		Benzo(a)pyrene (CCC)	0.920	0.911	1.0	81	0.00
92		Perylene	0.960	0.928	3.3	80	0.00
93		Indeno(1,2,3-cd)pyrene	0.794	0.901	-13.5	75	0.00
94		Dibenz(a,h)anthracene	0.767	0.757	1.3	75	-0.01
95		Benzo(g,h,i)perylene	0.742	0.738	0.5	74	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002880.D
Acq On : 18 Oct 2010 9:22 pm
Operator : dda
Sample : SSTD050-SCAN (ICV) gcms22pg14
Misc : gcmsprep2pg14
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 20 12:15:59 2010
Quant Method : M:\ms2010\methods\wiley\W101810Xjunk-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 10:23:46 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002880.D
Acq On : 18 Oct 2010 9:22 pm
Operator : dda
Sample : SSTD050-SCAN (ICV) gcms22pg14
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Quant Time: Oct 20 12:15:59 2010
Quant Method : M:\ms2010\methods\wiley\W101810Xjunk-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 10:23:46 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	5.375	152	688226	40.00	µg/mL	0.00
21) Naphthalene-d8 (I)	6.588	136	2399400	40.00	µg/mL	0.00
36) Acenaphthene-d10 (I)	8.340	164	1346787	40.00	µg/mL	0.00
64) Phenanthrene-d10 (I)	9.852	188	2321939	40.00	µg/mL	0.00
78) Chrysene-d12 (I)	12.662	240	2016217	40.00	µg/mL	-0.01
87) Perylene-d12 (I)	14.890	264	1770087	40.00	µg/mL	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol (surr)	4.243	112	942676	50.24	µg/mL	0.00
5) Phenol-d5 (surr)	4.969	99	1072314	49.14	µg/mL	-0.01
19) Nitrobenzene-d5 (surr)	5.872	82	1050722	49.04	µg/mL	-0.01
39) 2-Fluorobiphenyl (surr)	7.624	172	2042041	49.04	µg/mL	0.00
57) Fluorene-d10 (surr)	8.864	176	1654743	44.74	µg/mL	0.00
65) 2,4,6-Tribromophenol (...	9.136	330	282026	53.05	µg/mL	0.00
75) Pyrene-d10 (surr)	11.311	212	2584320	53.40	µg/mL	-0.01
77) Terphenyl-d14 (surr)	11.423	244	1897215	49.25	µg/mL	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.249	74	650462	49.08	µg/mL	89
3) Pyridine	3.308	79	1084039	49.18	µg/mL#	83
6) Phenol (CCC)	4.980	94	1087452	47.73	µg/mL#	92
7) Aniline	5.065	66	497934	48.32	µg/mL	90
8) bis(2-Chloroethyl)ether	5.087	63	653516	48.55	µg/mL	89
9) 2-Chlorophenol	5.188	128	1002204	48.75	µg/mL	95
10) 1,3-Dichlorobenzene	5.333	146	1134739	48.12	µg/mL	99
11) 1,4-Dichlorobenzene (CCC)	5.391	146	1160863	48.53	µg/mL	99
12) Benzyl alcohol	5.461	108	550127	49.58	µg/mL	88
13) 1,2-Dichlorobenzene	5.541	146	1071979	47.66	µg/mL	95
14) 2-Methylphenol	5.530	107	713985	47.36	µg/mL	96
15) bis(2-Chloroisopropyl)...	5.573	45	810431	48.75	µg/mL#	82
16) 3/4-Methylphenol	5.669	107	943342	47.78	µg/mL	95
17) N-Nitrso-di-n-propylam...	5.696	70	665016	48.35	µg/mL#	71
18) Hexachloroethane	5.861	117	427064	48.84	µg/mL	88
20) Nitrobenzene	5.894	77	952529	48.20	µg/mL	87
22) Isophorone	6.107	82	1759588	50.23	µg/mL	96
23) 2,4-Dimethylphenol	6.177	107	930823	52.23	µg/mL#	67
24) 2-Nitrophenol (CCC)	6.198	139	547329	49.91	µg/mL	90
25) Benzoic acid	6.241	105	653741	56.24	µg/mL#	1
26) bis(2-Chloroethoxy)met...	6.273	93	1054912	49.45	µg/mL	97
27) 2,4-Dichlorophenol (CCC)	6.422	162	773012	50.07	µg/mL#	96
28) 1,2,4-Trichlorobenzene	6.519	180	949915	47.10	µg/mL	97
29) Naphthalene	6.609	128	2831328	49.00	µg/mL#	87
30) 4-Chloroaniline	6.620	65	326892	50.24	µg/mL	73
31) Hexachlorobutadiene (CCC)	6.711	225	588090	48.50	µg/mL	99
32) 4-Chloro-3 methylpheno...	7.058	107	757761	51.75	µg/mL	93
33) 2-Methylnaphthalene	7.282	142	1723519	46.57	µg/mL	100
34) 1-Methylnaphthalene	7.384	142	1760290	49.18	µg/mL	99
35) Hexachlorocyclopentadi...	7.437	237	622246	50.26	µg/mL#	100
37) 2,4,6-Trichlorophenol ...	7.544	196	598454	49.12	µg/mL	99
38) 2,4,5-Trichlorophenol	7.582	196	616336	50.43	µg/mL#	92
40) 2-Chloronaphthalene	7.774	162	1750104	49.00	µg/mL	94
41) 2-Nitroaniline	7.849	65	466776	50.66	µg/mL	86
42) 1,4-Dinitrobenzene	7.966	168	301474	51.31	µg/mL#	85
43) Dimethylphthalate	7.998	163	1989983	49.07	µg/mL	99
44) 1,3-Dinitrobenzene	8.052	168	339326	50.23	µg/mL#	77
45) 2,6-Dinitrotoluene	8.073	165	486482	49.65	µg/mL#	75
46) 1,2-Dinitrobenzene	8.143	168	229329	49.97	µg/mL	88

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002880.D
Acq On : 18 Oct 2010 9:22 pm
Operator : dda
Sample : SSTD050-SCAN (ICV) gcms22pg14
Misc : gcmsprep2pg14
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 20 12:15:59 2010
Quant Method : M:\ms2010\methods\wiley\W101810Xjunk-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 10:23:46 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
47) Acenaphthylene	8.207	152	2697323	49.80	µg/mL	97
48) 3-Nitroaniline	8.260	138	475207	49.30	µg/mL#	72
49) Acenaphthene (CCC)	8.378	154	1672802	48.29	µg/mL	94
50) 2,4-Dinitrophenol (SPCC)	8.356	184	243039	53.58	µg/mL#	100
51) 4-Nitrophenol (SPCC)	8.378	139	349836	51.21	µg/mL#	71
52) 2,4-Dinitrotoluene	8.484	165	609727	50.12	µg/mL	89
53) Dibenzofuran	8.543	168	2253212	47.71	µg/mL	94
54) 2,3,5,6-Tetrachlorophenol	8.613	232	511289	49.86	µg/mL	97
55) 2,3,4,6-Tetrachlorophenol	8.655	232	518904	49.75	µg/mL#	81
56) Diethlyphthalate	8.698	149	1926868	48.98	µg/mL	99
58) 4-Chlorophenyl-phenyle...	8.858	204	1000592	48.10	µg/mL	97
59) Fluorene	8.896	166	1860174	47.95	µg/mL	100
60) 4-Nitroaniline	8.880	138	457380	49.90	µg/mL	86
61) 4,6-Dinitro2-methylphenol	8.907	198	336568	51.84	µg/mL#	11
62) N-Nitrosodiphenylamine...	8.971	169	1654790	48.89	µg/mL	95
63) Azobenzene	9.019	77	1717854	48.72	µg/mL#	100
66) 4-Bromophenyl-phenylether	9.355	248	601962	49.48	µg/mL	97
67) Hexachlorobenzene	9.467	284	623183	49.39	µg/mL	92
68) Pentachlorophenol (CCC)	9.644	266	354702	52.80	µg/mL	90
69) Phenanthrene	9.879	178	2568324	49.01	µg/mL	99
70) Anthracene	9.927	178	2608767	49.84	µg/mL	100
71) Carbazole	10.066	167	2298332	50.56	µg/mL	99
72) Di-n-butylphthalate	10.333	149	2940310	50.57	µg/mL	99
73) Fluoranthene (CCC)	11.086	202	2633790	48.29	µg/mL#	98
74) Benzidine	11.172	184	1271135	45.17	µg/mL	99
76) Pyrene	11.332	202	2814190	48.06	µg/mL#	98
79) Butylbenzylphthalate	11.871	149	1202690	53.98	µg/mL#	100
80) 3,3-Dimethylbenzidine	11.904	212	1576400	50.30	µg/mL#	100
81) bis(2-ethylhexyl)adipate	11.898	129	1066265	53.63	µg/mL#	100
82) bis(2-Ethylhexyl)phtha...	12.491	149	1673071	54.74	µg/mL#	100
83) 3,3'-Dichlorobenzidine	12.555	252	741563	49.83	µg/mL	99
84) Benzo(a)anthracene	12.646	228	2409352	49.40	µg/mL	98
85) Chrysene	12.694	228	2253864	49.18	µg/mL	99
86) Di-n-octylphthalate (CCC)	13.362	149	2642075	54.74	µg/mL#	100
88) Benzo(b)fluoranthene	14.222	252	2244455	50.68	µg/mL	98
89) Benzo(k)fluoranthene	14.265	252	2079980	48.24	µg/mL	94
90) Benzo(e)pyrene	14.703	252	2027457	51.39	µg/mL	99
91) Benzo(a)pyrene (CCC)	14.794	252	2014918	49.42	µg/mL	97
92) Perylene	14.938	252	2052550	48.42	µg/mL	99
93) Indeno(1,2,3-cd)pyrene	16.957	276	1993996m	60.71	µg/mL	
94) Dibenz(a,h)anthracene	16.957	278	1674843	49.32	µg/mL#	96
95) Benzo(g,h,i)perylene	17.550	276	1633341	49.73	µg/mL	99

Manual Int. "WP" (EDE)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Evaluate Continuing Calibration Report

Data Path : M:\ms2011q1\wiley\data\jan11\W012811A\
Data File : W1100042.D
Acq On : 28 Jan 2011 12:57 pm
Operator : tdd
Sample : sstd050 M8270 Std
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 28 13:26:07 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Jan 04 17:58:34 2011
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4 (I)	1.000	1.000	0.0	86	0.00
2		N-Nitrosodimethylamine	0.770	0.672	12.7	74	-0.03
3		Pyridine	1.281	1.219	4.8	81	-0.03
4	S	2-Fluorophenol (surr)	1.091	1.040	4.7	81	-0.02
5	S	Phenol-d5 (surr)	1.268	1.250	1.4	86	-0.01
6		Phenol (CCC)	1.324	1.275	3.7	84	-0.01
7		Aniline	0.599	0.571	4.7	81	-0.01
8		bis(2-Chloroethyl)ether	0.782	0.759	2.9	82	-0.01
9		2-Chlorophenol	1.195	1.172	1.9	84	0.00
10		1,3-Dichlorobenzene	1.371	1.350	1.5	85	0.00
11		1,4-Dichlorobenzene (CCC)	1.390	1.389	0.1	86	0.00
12		Benzyl alcohol	0.645	0.646	-0.2	86	0.00
13		1,2-Dichlorobenzene	1.307	1.338	-2.4	88	0.00
14		2-Methylphenol	0.876	0.901	-2.9	90	0.00
15		bis(2-Chloroisopropyl) ethe	0.966	0.908	6.0	79	0.00
16		3/4-Methylphenol	1.148	1.104	3.8	84	0.00
17		N-Nitrso-di-n-propylamine (	0.799	0.733	8.3	79	0.00
18		Hexachloroethane	0.508	0.516	-1.6	87	0.00
19	S	Nitrobenzene-d5 (surr)	1.245	1.242	0.2	85	0.00
20		Nitrobenzene	1.149	1.098	4.4	82	0.00
21	I	Naphthalene-d8 (I)	1.000	1.000	0.0	84	0.00
22		Isophorone	0.584	0.550	5.8	78	-0.02
23		2,4-Dimethylphenol	0.288	0.251	12.8	69	-0.02
24		2-Nitrophenol (CCC)	0.183	0.187	-2.2	85	-0.01
25		Benzoic acid	0.194	0.183	5.7	71	-0.05
26		bis(2-Chloroethoxy)methane	0.356	0.320	10.1	76	0.00
27		2,4-Dichlorophenol (CCC)	0.255	0.246	3.5	79	0.00
28		1,2,4-Trichlorobenzene	0.336	0.329	2.1	84	0.00
29		Naphthalene	0.963	0.993	-3.1	87	0.00
30		4-Chloroaniline	0.108	0.102	5.6	79	0.00
31		Hexachlorobutadiene (CCC)	0.202	0.201	0.5	86	0.00
32		4-Chloro-3 methylphenol (CC	0.244	0.234	4.1	77	0.01
33		2-Methylnaphthalene	0.617	0.617	0.0	84	0.00
34		1-Methylnaphthalene	0.597	0.599	-0.3	85	0.01
35		Hexachlorocyclopentadiene (	0.206	0.210	-1.9	81	0.01
36	I	Acenaphthene-d10 (I)	1.000	1.000	0.0	82	0.00
37		2,4,6-Trichlorophenol (CCC)	0.362	0.355	1.9	80	0.00
38		2,4,5-Trichlorophenol	0.363	0.334	8.0	75	0.00
39	S	2-Fluorobiphenyl (surr)	1.237	1.253	-1.3	84	0.00
40		2-Chloronaphthalene	1.061	1.061	0.0	83	0.00
41		2-Nitroaniline	0.274	0.262	4.4	76	-0.01
42		1,4-Dinitrobenzene	0.175	0.172	1.7	77	0.00
43		Dimethylphthalate	1.204	1.195	0.7	82	0.00
44		1,3-Dinitrobenzene	0.201	0.196	2.5	78	-0.01
45		2,6-Dinitrotoluene	0.291	0.286	1.7	81	0.00
46		1,2-Dinitrobenzene	0.136	0.129	5.1	77	-0.01
47		Acenaphthylene	1.609	1.659	-3.1	84	0.00
48		3-Nitroaniline	0.286	0.251	12.2	71	0.00
49		Acenaphthene (CCC)	1.029	1.068	-3.8	86	0.00
50		2,4-Dinitrophenol (SPCC)	0.135	0.139	-3.0	76	0.00
51		4-Nitrophenol (SPCC)	0.204	0.186	8.8	69	0.00
52		2,4-Dinitrotoluene	0.361	0.366	-1.4	81	0.00

Evaluate Continuing Calibration Report

Data Path : M:\ms2011q1\wiley\data\jan11\W012811A\
Data File : W1100042.D
Acq On : 28 Jan 2011 12:57 pm
Operator : tdd
Sample : sstd050 M8270 Std
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 28 13:26:07 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Jan 04 17:58:34 2011
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

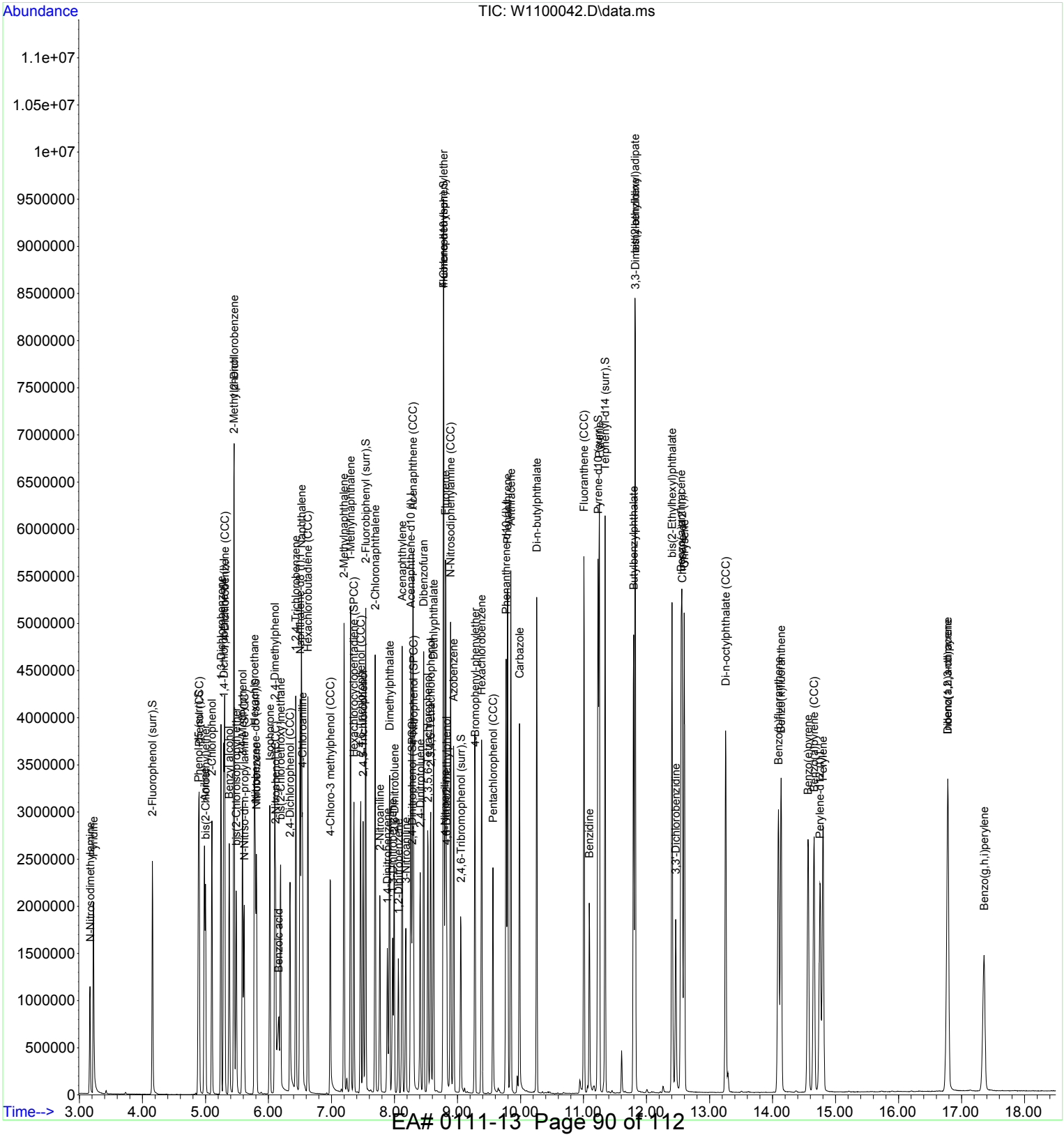
		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
53		Dibenzofuran	1.403	1.425	-1.6	84	0.00
54		2,3,5,6-Tetrachlorophenol	0.305	0.307	-0.7	82	0.00
55		2,3,4,6-Tetrachlorophenol	0.308	0.304	1.3	80	0.00
56		Diethlyphthalate	1.168	1.221	-4.5	85	0.00
57	S	Fluorene-d10 (surr)	1.098	1.179	-7.4	88	0.00
58		4-Chlorophenyl-phenylether	0.618	0.643	-4.0	87	0.00
59		Fluorene	1.152	1.197	-3.9	85	0.00
60		4-Nitroaniline	0.272	0.246	9.6	70	0.00
61		4,6-Dinitro2-methylphenol	0.194	0.217	-11.9	85	0.00
62		N-Nitrosodiphenylamine (CCC	1.005	0.998	0.7	82	0.00
63		Azobenzene	1.047	1.048	-0.1	79	0.00
64	I	Phenanthrene-d10 (I)	1.000	1.000	0.0	82	0.00
65	S	2,4,6-Tribromophenol (surr)	0.092	0.091	1.1	83	0.00
66		4-Bromophenyl-phenylether	0.210	0.210	0.0	85	0.00
67		Hexachlorobenzene	0.217	0.216	0.5	85	0.00
68		Pentachlorophenol (CCC)	0.116	0.119	-2.6	81	0.00
69		Phenanthrene	0.903	0.945	-4.7	86	0.00
70		Anthracene	0.902	0.940	-4.2	85	0.00
71		Carbazole	0.783	0.754	3.7	79	0.00
72		Di-n-butylphthalate	1.002	1.137	-13.5	90	0.00
73		Fluoranthene (CCC)	0.940	1.011	-7.6	88	0.00
74		Benzidine	0.485	0.358	26.2#	59	0.00
75	S	Pyrene-d10 (surr)	0.834	0.909	-9.0	90	0.00
76		Pyrene	1.009	1.122	-11.2	92	0.00
77	S	Terphenyl-d14 (surr)	0.664	0.718	-8.1	89	0.01
78	I	Chrysene-d12 (I)	1.000	1.000	0.0	85	0.00
79		Butylbenzylphthalate	0.442	0.504	-14.0	95	0.00
80		3,3-Dimethylbenzidine	0.622	0.555	10.8	74	0.00
81		bis(2-ethylhexyl)adipate	0.394	0.440	-11.7	93	0.00
82		bis(2-Ethylhexyl)phthalate	0.606	0.695	-14.7	92	0.00
83		3,3'-Dichlorobenzidine	0.295	0.212	28.1#	66	0.00
84		Benzo(a)anthracene	0.966	0.958	0.8	85	0.00
85		Chrysene	0.910	0.897	1.4	83	-0.01
86		Di-n-octylphthalate (CCC)	0.957	1.133	-18.4	91	0.00
87	I	Perylene-d12 (I)	1.000	1.000	0.0	73	-0.01
88		Benzo(b)fluoranthene	1.000	1.067	-6.7	80	-0.01
89		Benzo(k)fluoranthene	0.977	1.013	-3.7	76	-0.02
90		Benzo(e)pyrene	0.891	0.926	-3.9	77	-0.02
91		Benzo(a)pyrene (CCC)	0.920	0.959	-4.2	76	-0.02
92		Perylene	0.960	0.963	-0.3	75	-0.02
93		Indeno(1,2,3-cd)pyrene	0.910	0.892	2.0	66	-0.04
94		Dibenz(a,h)anthracene	0.767	0.748	2.5	66	-0.05
95		Benzo(g,h,i)perylene	0.742	0.697	6.1	63	-0.06

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\jan11\W012811A\
Data File : W1100042.D
Acq On : 28 Jan 2011 12:57 pm
Operator : tdd
Sample : sstd050 M8270 Std
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 28 13:26:07 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Jan 04 17:58:34 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\jan11\W012811A\
Data File : W1100042.D
Acq On : 28 Jan 2011 12:57 pm
Operator : tdd
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Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Jan 04 17:58:34 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	5.290	152	563777	40.00	µg/mL	0.00
21) Naphthalene-d8 (I)	6.503	136	1972475	40.00	µg/mL	0.00
36) Acenaphthene-d10 (I)	8.260	164	1079691	40.00	µg/mL	0.00
64) Phenanthrene-d10 (I)	9.772	188	1925531	40.00	µg/mL	0.00
78) Chrysene-d12 (I)	12.566	240	1937140	40.00	µg/mL	0.00
87) Perylene-d12 (I)	14.751	264	1582057	40.00	µg/mL	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol (surr)	4.157	112	733218	47.70	µg/mL	-0.02
5) Phenol-d5 (surr)	4.889	99	880550	49.26	µg/mL	-0.01
19) Nitrobenzene-d5 (surr)	5.792	82	875414	49.88	µg/mL	0.00
39) 2-Fluorobiphenyl (surr)	7.544	172	1690743	50.65	µg/mL	0.00
57) Fluorene-d10 (surr)	8.778	176	1590688	53.65	µg/mL	0.00
65) 2,4,6-Tribromophenol (...	9.056	330	218199	49.49	µg/mL	0.00
75) Pyrene-d10 (surr)	11.230	212	2187302	54.50	µg/mL	0.00
77) Terphenyl-d14 (surr)	11.343	244	1728860	54.12	µg/mL	0.01
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.169	74	473442	43.61	µg/mL	93
3) Pyridine	3.222	79	859015	47.57	µg/mL#	81
6) Phenol (CCC)	4.900	94	898482	48.14	µg/mL#	89
7) Aniline	4.985	66	402191	47.65	µg/mL	87
8) bis(2-Chloroethyl)ether	5.001	63	535064	48.52	µg/mL	94
9) 2-Chlorophenol	5.103	128	826138	49.06	µg/mL	96
10) 1,3-Dichlorobenzene	5.247	146	951419	49.25	µg/mL	100
11) 1,4-Dichlorobenzene (CCC)	5.306	146	978962	49.96	µg/mL	99
12) Benzyl alcohol	5.375	108	455397	50.11	µg/mL	85
13) 1,2-Dichlorobenzene	5.455	146	942868	51.18	µg/mL	95
14) 2-Methylphenol	5.450	107	634770	51.38	µg/mL	97
15) bis(2-Chloroisopropyl)...	5.488	45	639561	46.96	µg/mL#	74
16) 3/4-Methylphenol	5.589	107	778064	48.11	µg/mL	94
17) N-Nitrso-di-n-propylam...	5.616	70	516773	45.87	µg/mL#	76
18) Hexachloroethane	5.776	117	363894	50.80	µg/mL	88
20) Nitrobenzene	5.808	77	773521	47.78	µg/mL	87
22) Isophorone	6.022	82	1355248	47.06	µg/mL	94
23) 2,4-Dimethylphenol	6.102	107	619019	43.57	µg/mL	89
24) 2-Nitrophenol (CCC)	6.113	139	460894	51.13	µg/mL	91
25) Benzoic acid	6.161	105	449985m	47.09	µg/mL	
26) bis(2-Chloroethoxy)met...	6.193	93	789198	45.00	µg/mL	99
27) 2,4-Dichlorophenol (CCC)	6.342	162	607162	48.26	µg/mL	96
28) 1,2,4-Trichlorobenzene	6.433	180	811004	48.92	µg/mL	96
29) Naphthalene	6.524	128	2447550	51.52	µg/mL	91
30) 4-Chloroaniline	6.540	65	252327	47.17	µg/mL	80
31) Hexachlorobutadiene (CCC)	6.625	225	494375	49.60	µg/mL	98
32) 4-Chloro-3 methylpheno...	6.983	107	576031	47.85	µg/mL	93
33) 2-Methylnaphthalene	7.197	142	1520281	49.97	µg/mL	100
34) 1-Methylnaphthalene	7.304	142	1477407	50.21	µg/mL	99
35) Hexachlorocyclopentadi...	7.357	237	517427	50.84	µg/mL#	100
37) 2,4,6-Trichlorophenol ...	7.464	196	479358	49.06	µg/mL	98
38) 2,4,5-Trichlorophenol	7.502	196	451111	46.04	µg/mL#	85
40) 2-Chloronaphthalene	7.694	162	1431810	50.00	µg/mL	93
41) 2-Nitroaniline	7.769	65	353341	47.83	µg/mL	86
42) 1,4-Dinitrobenzene	7.886	168	231691	49.18	µg/mL#	87
43) Dimethylphthalate	7.924	163	1613246	49.62	µg/mL	99
44) 1,3-Dinitrobenzene	7.972	168	263871	48.72	µg/mL#	74
45) 2,6-Dinitrotoluene	7.998	165	386556	49.21	µg/mL#	66
46) 1,2-Dinitrobenzene	8.062	168	173697	47.21	µg/mL#	90

Manual Int. "II" (TDD)

Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\jan11\W012811A\
Data File : W1100042.D
Acq On : 28 Jan 2011 12:57 pm
Operator : tdd
Sample : sstd050 M8270 Std
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 28 13:26:07 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Jan 04 17:58:34 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
47) Acenaphthylene	8.121	152	2239230	51.56 µg/mL	98
48) 3-Nitroaniline	8.180	138	338471	43.80 µg/mL#	76
49) Acenaphthene (CCC)	8.292	154	1440750	51.88 µg/mL	94
50) 2,4-Dinitrophenol (SPCC)	8.282	184	188016	51.71 µg/mL#	100
51) 4-Nitrophenol (SPCC)	8.303	139	251478	45.70 µg/mL#	67
52) 2,4-Dinitrotoluene	8.410	165	493308	50.58 µg/mL	94
53) Dibenzofuran	8.463	168	1922916	50.79 µg/mL	91
54) 2,3,5,6-Tetrachlorophenol	8.533	232	414923	50.47 µg/mL	98
55) 2,3,4,6-Tetrachlorophenol	8.575	232	410576	49.34 µg/mL#	79
56) Diethlyphthalate	8.618	149	1648045	52.26 µg/mL	100
58) 4-Chlorophenyl-phenyle...	8.778	204	867904	52.05 µg/mL	94
59) Fluorene	8.810	166	1615698	51.95 µg/mL	100
60) 4-Nitroaniline	8.800	138	332051	45.18 µg/mL#	78
61) 4,6-Dinitro2-methylphenol	8.826	198	293246	56.12 µg/mL#	15
62) N-Nitrosodiphenylamine...	8.891	169	1346400	49.62 µg/mL	96
63) Azobenzene	8.939	77	1414821	50.05 µg/mL#	100
66) 4-Bromophenyl-phenylether	9.281	248	505116	50.07 µg/mL	98
67) Hexachlorobenzene	9.382	284	520785	49.77 µg/mL	96
68) Pentachlorophenol (CCC)	9.564	266	285738	51.29 µg/mL	88
69) Phenanthrene	9.793	178	2273544	52.30 µg/mL	99
70) Anthracene	9.847	178	2263562	52.15 µg/mL	100
71) Carbazole	9.986	167	1815118	48.15 µg/mL	99
72) Di-n-butylphthalate	10.258	149	2735969	56.73 µg/mL	99
73) Fluoranthene (CCC)	11.006	202	2432995	53.79 µg/mL	99
74) Benzidine	11.092	184	860835	36.88 µg/mL	99
76) Pyrene	11.252	202	2701125	55.59 µg/mL#	98
79) Butylbenzylphthalate	11.797	149	1219243	56.94 µg/mL#	100
80) 3,3-Dimethylbenzidine	11.823	212	1344289	44.64 µg/mL#	100
81) bis(2-ethylhexyl)adipate	11.818	129	1066599	55.85 µg/mL#	100
82) bis(2-Ethylhexyl)phtha...	12.406	149	1683290	57.35 µg/mL#	98
83) 3,3'-Dichlorobenzidine	12.464	252	513035	35.86 µg/mL	98
84) Benzo(a)anthracene	12.550	228	2320211	49.62 µg/mL	98
85) Chrysene	12.598	228	2172223	49.31 µg/mL	99
86) Di-n-octylphthalate (CCC)	13.255	149	2743655	59.19 µg/mL#	100
88) Benzo(b)fluoranthene	14.094	252	2110628	53.35 µg/mL	98
89) Benzo(k)fluoranthene	14.137	252	2002353m	51.82 µg/mL	
90) Benzo(e)pyrene	14.564	252	1830304	51.93 µg/mL	99
91) Benzo(a)pyrene (CCC)	14.660	252	1896855	52.14 µg/mL	98
92) Perylene	14.799	252	1903897	50.16 µg/mL	99
93) Indeno(1,2,3-cd)pyrene	16.781	276	1763578	49.01 µg/mL	95
94) Dibenz(a,h)anthracene	16.781	278	1478831	48.72 µg/mL	98
95) Benzo(g,h,i)perylene	17.358	276	1377411	46.94 µg/mL	99

Manual Int. "WP" (TDD)

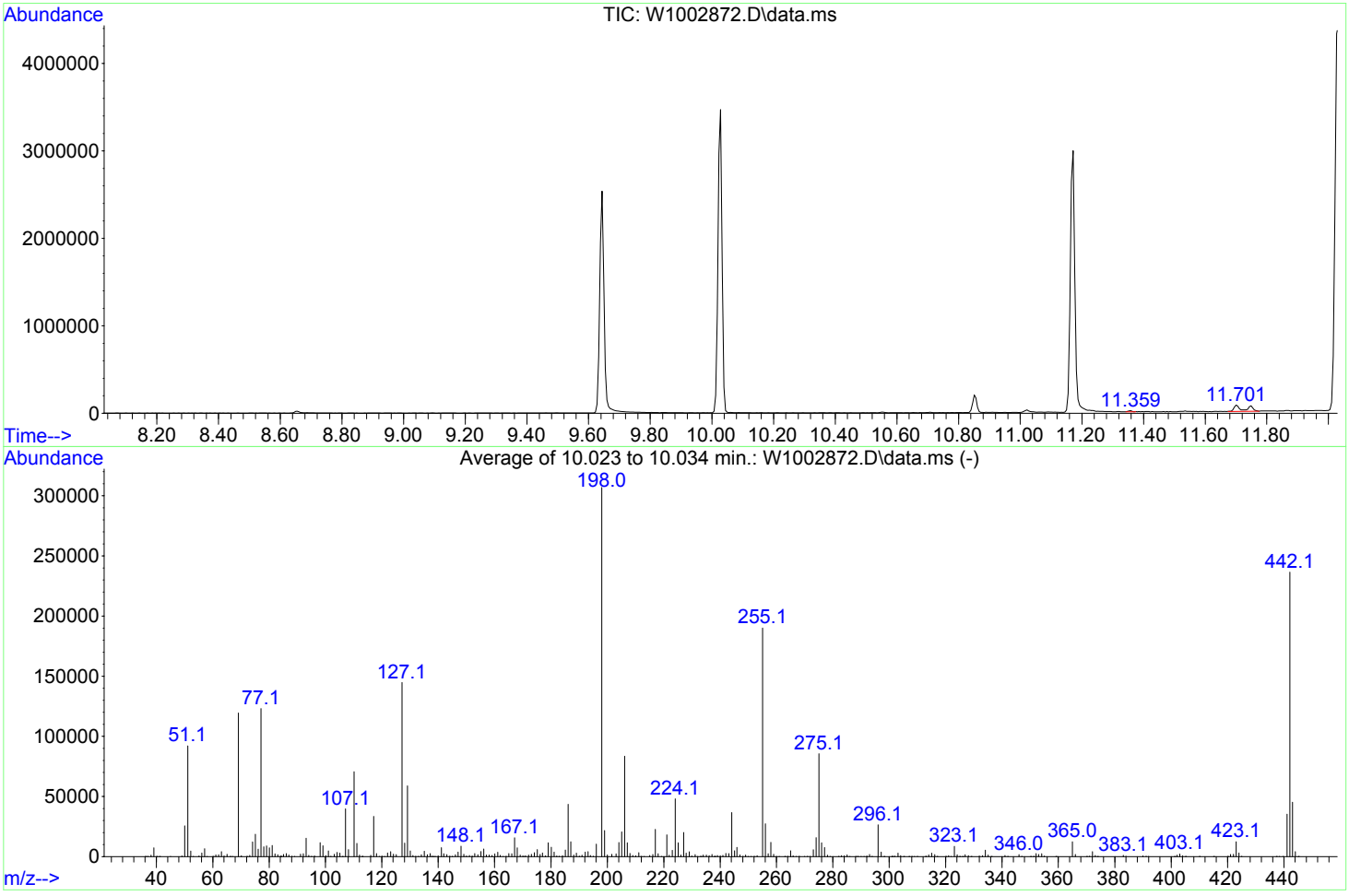
(#) = qualifier out of range (m) = manual integration (+) = signals summed

DFTPP

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002872.D
Acq On : 18 Oct 2010 5:33 pm
Operator : dda
Sample : DFTPP
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : M:\ms2010\methods\wiley\W101810X-8270.M
Title : 8270C - Full List
Last Update : Wed Oct 20 14:58:44 2010



AutoFind: Scans 1318, 1319, 1320; Background Corrected with Scan 1312

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	30.0	92083	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	38.9	119435	PASS
70	69	0.00	2	0.6	751	PASS
127	198	40	60	47.2	144776	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	306901	PASS
199	198	5	9	7.1	21658	PASS
275	198	10	30	27.9	85621	PASS
365	198	1	100	4.1	12456	PASS
441	443	0.01	100	77.9	35283	PASS
442	198	40	100	77.1	236523	PASS
443	442	17	23	19.1	45283	PASS

Average of 10.023 to 10.034 min.: W1002872.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.10	71	50.10	25623	62.10	1589	73.10	1095
36.05	140	51.10	92083	63.10	4232	74.10	12303
37.00	389	52.15	4613	64.05	599	75.10	18631
38.10	1201	53.10	249	65.10	2029	76.15	6251
39.15	7406	55.10	668	65.80	55	77.10	123147
40.10	153	56.10	3048	66.15	120	78.10	8219
41.15	124	57.10	6631	67.10	204	79.10	8921
45.00	193	58.10	250	69.10	119435	80.10	7354
45.20	44	58.90	78	70.10	751	81.10	9291
48.10	47	60.00	124	71.10	58	82.10	2334
49.10	588	61.10	1482	72.00	114	83.10	1632

Average of 10.023 to 10.034 min.: W1002872.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
83.85	99	92.10	2468	104.10	3541	115.00	47
84.10	126	93.10	15303	105.10	2975	116.10	1081
84.30	116	94.05	1071	106.00	177	117.10	33520
85.10	1840	95.05	347	107.10	39725	118.10	2531
86.10	2620	96.15	586	108.10	5856	119.10	243
87.05	1311	98.10	11724	110.10	70621	120.05	477
88.05	367	99.10	9039	111.10	11083	121.00	228
89.00	278	100.10	873	112.10	1404	122.05	3061
89.90	35	101.05	4787	113.00	177	123.10	4126
90.30	47	101.90	341	113.15	216	124.10	2074
91.10	2159	103.10	1964	114.80	78	125.10	1728

Average of 10.023 to 10.034 min.: W1002872.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
127.10	144776	137.80	464	148.10	8660	158.05	1390
128.10	11349	138.20	83	149.10	1984	159.05	1023
129.10	58907	139.00	289	150.05	661	160.05	2349
130.05	4828	140.00	732	151.10	997	161.10	3680
131.05	930	141.10	7532	151.90	313	162.00	1057
132.00	396	142.00	2457	152.20	399	163.10	254
133.05	394	143.05	1791	153.00	2621	164.10	412
134.05	1606	144.15	470	154.10	1608	165.05	2639
135.10	4589	145.00	328	155.10	4353	166.10	2444
136.10	1650	146.05	1588	156.10	6416	167.10	15701
137.10	2650	147.05	3771	157.05	1396	168.05	7359

Average of 10.023 to 10.034 min.: W1002872.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
169.10	1368	179.00	11587	190.10	527	203.05	2362
170.05	566	180.10	7881	191.05	1274	204.10	11774
170.40	216	181.10	3852	192.10	3773	205.10	20593
171.00	688	182.00	592	193.10	4234	206.10	83491
172.10	1354	182.90	349	194.00	954	207.10	11545
173.10	2000	184.05	828	195.00	402	208.05	2714
174.05	3320	185.10	5521	196.10	10417	209.05	934
175.10	5899	186.10	43536	198.00	306901	210.05	806
176.10	1852	187.05	12341	199.00	21658	211.10	3361
177.00	3035	188.05	1310	200.00	1542	211.90	95
178.05	753	189.05	2902	201.55	1992	213.05	233

Average of 10.023 to 10.034 min.: W1002872.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
214.20	58	226.10	1311	235.10	1361	245.10	4908
215.00	938	227.05	20096	236.10	924	246.00	7769
216.10	1914	228.00	2934	237.10	1915	247.05	1547
217.00	22667	229.05	4092	237.90	146	248.05	339
218.00	2506	229.95	612	238.10	116	249.00	1384
219.20	250	231.10	1744	239.00	965	250.00	235
221.10	18122	231.90	74	240.05	723	251.05	299
221.90	1255	232.10	288	241.00	1150	252.10	358
223.00	5264	233.00	246	242.05	2715	253.10	876
224.10	48035	233.20	173	243.10	2626	255.10	190088
225.10	11551	234.05	1356	244.10	36661	256.10	27339

Average of 10.023 to 10.034 min.: W1002872.D\data.ms

DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
257.10	2400	267.90	132	278.05	1203	291.05	291
258.00	11841	268.90	37	279.05	284	291.90	117
259.00	2008	269.70	68	281.00	36	292.10	257
260.00	312	269.95	225	282.10	361	293.05	1842
260.95	301	271.00	445	283.05	899	294.00	360
262.20	50	272.00	304	284.05	699	296.05	26536
262.90	120	273.10	5792	285.10	1520	297.10	3759
264.05	363	274.05	15820	286.00	314	298.10	176
265.00	4967	275.10	85621	288.10	116	299.70	38
265.90	720	276.05	11521	288.95	342	300.85	165
267.00	247	277.05	7677	290.05	214	301.10	147

Average of 10.023 to 10.034 min.: W1002872.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
302.00	466	310.05	370	321.05	880	332.00	593
303.10	2920	311.10	49	321.95	225	333.05	840
304.05	898	312.00	47	323.10	8598	334.05	5405
304.90	75	312.20	42	324.10	1553	335.05	1336
305.15	99	312.90	81	324.90	84	335.90	42
306.00	48	313.05	244	325.20	55	336.20	127
306.95	100	314.00	1443	325.95	97	339.10	45
308.05	391	315.05	2901	326.20	62	339.80	67
308.70	39	316.10	1693	326.95	1558	340.20	61
309.00	254	317.10	366	328.10	913	341.10	1038
309.20	58	320.00	144	329.00	132	342.10	351

Average of 10.023 to 10.034 min.: W1002872.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
343.00	55	358.90	57	373.90	90	395.00	45
343.30	43	359.15	117	374.30	57	395.20	43
346.00	1783	360.80	45	376.90	63	396.70	34
347.05	370	363.70	51	377.10	35	400.90	75
350.10	123	365.00	12456	383.05	1081	401.15	140
351.15	93	366.05	1888	383.95	400	402.05	1261
352.05	2544	367.10	40	385.00	48	403.05	2245
353.00	1802	370.05	184	389.95	614	404.05	743
354.10	2480	371.10	558	391.10	389	405.05	159
355.00	455	372.05	4186	392.00	311	410.00	82
358.00	50	373.10	1033	393.30	41	410.20	38

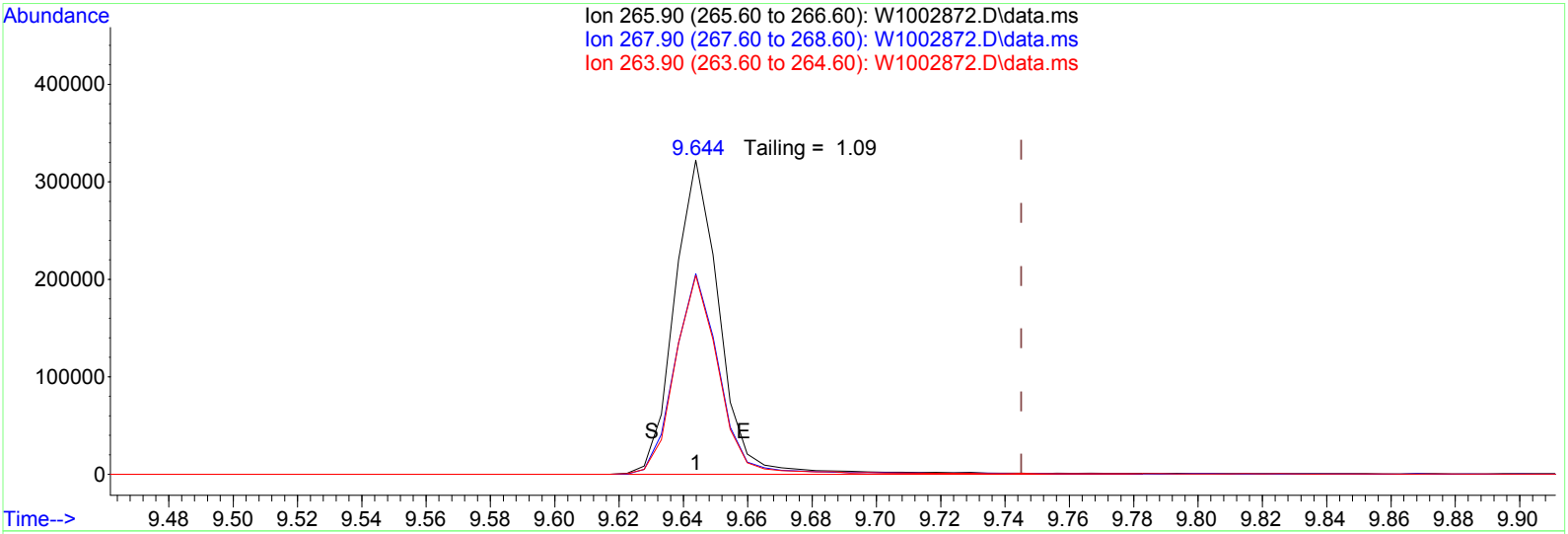
Average of 10.023 to 10.034 min.: W1002872.D\data.ms
DFTPP
Modified:subtracted

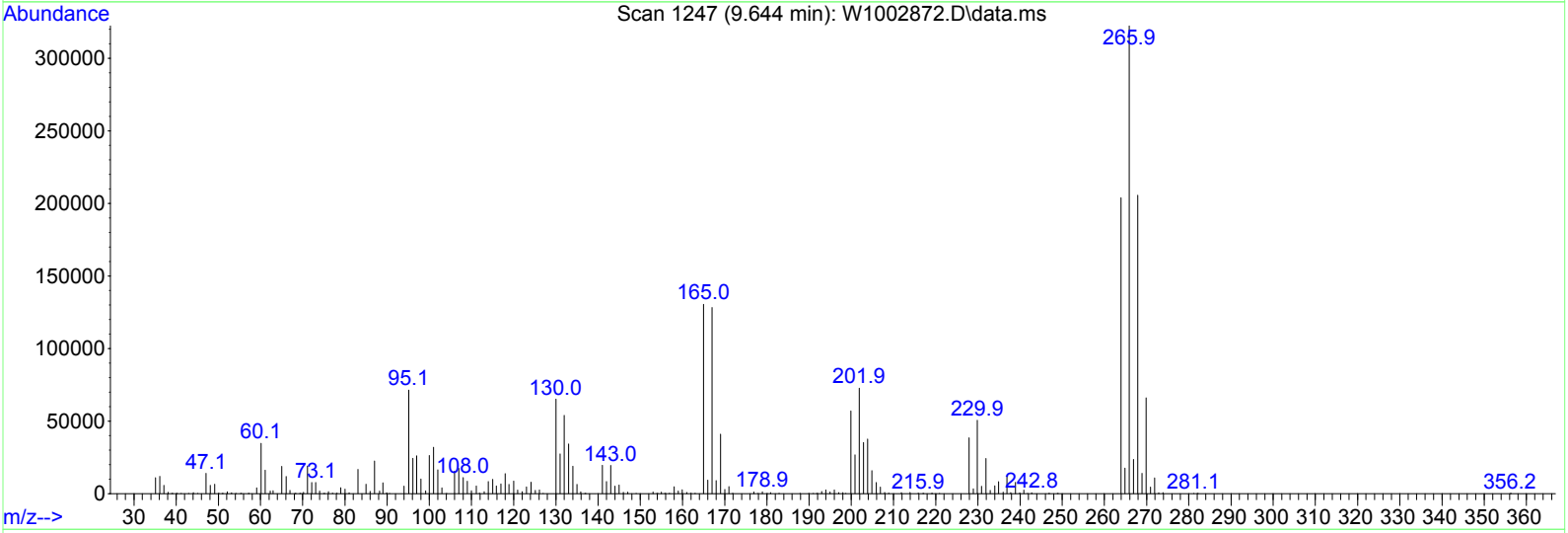
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
415.05	141	434.10	40	444.10	4210		
416.90	38	434.40	37	444.80	61		
420.00	95	436.80	73	445.10	190		
421.05	1802	437.30	83	445.30	34		
422.10	1923	437.80	52				
423.10	12408	438.45	262				
424.05	3115	439.20	61				
425.05	396	439.70	231				
426.10	39	441.10	35283				
427.10	53	442.10	236523				
431.70	60	443.10	45283				

Quantitation Report (Qedit)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002872.D
Acq On : 18 Oct 2010 5:33 pm
Operator : dda
Sample : DFTPP
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 25 10:14:04 2010
Quant Method : M:\ms2010\methods\wiley\DFTPP-4-EA.M
Quant Title : DFTPP
QLast Update : Fri Sep 17 17:54:07 2010
Response via : Initial Calibration





TIC: W1002872.D\data.ms

(1) Pentachlorophenol

9.644min (-0.101) 51.44 ug/mL

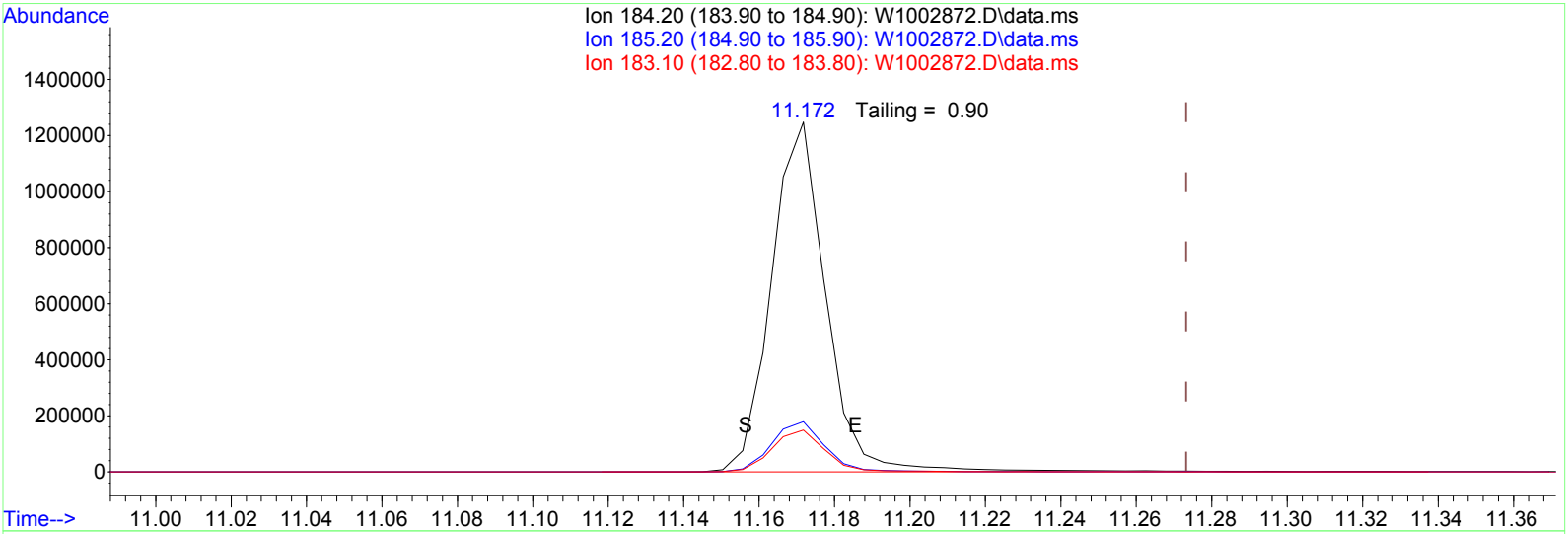
response 314663

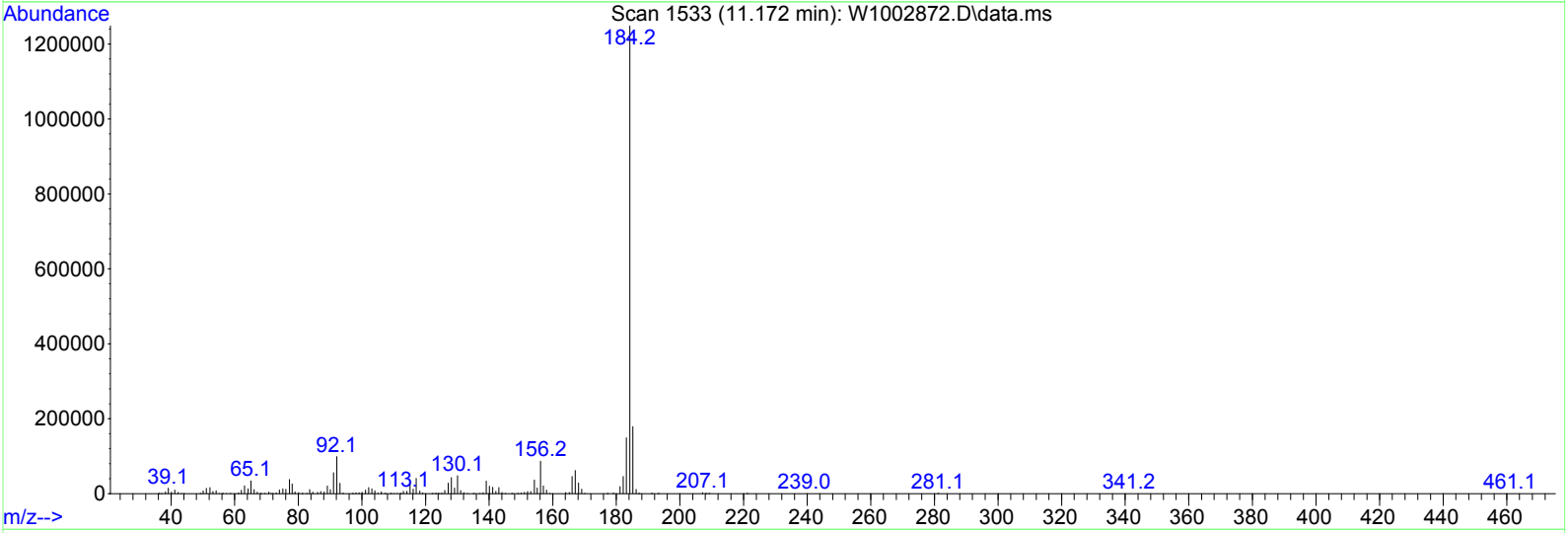
Ion	Exp%	Act%
265.90	100	100
267.90	65.10	62.69
263.90	65.90	61.44
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002872.D
Acq On : 18 Oct 2010 5:33 pm
Operator : dda
Sample : DFTPP
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 25 10:14:04 2010
Quant Method : M:\ms2010\methods\wiley\DFTPP-4-EA.M
Quant Title : DFTPP
QLast Update : Fri Sep 17 17:54:07 2010
Response via : Initial Calibration





TIC: W1002872.D\data.ms

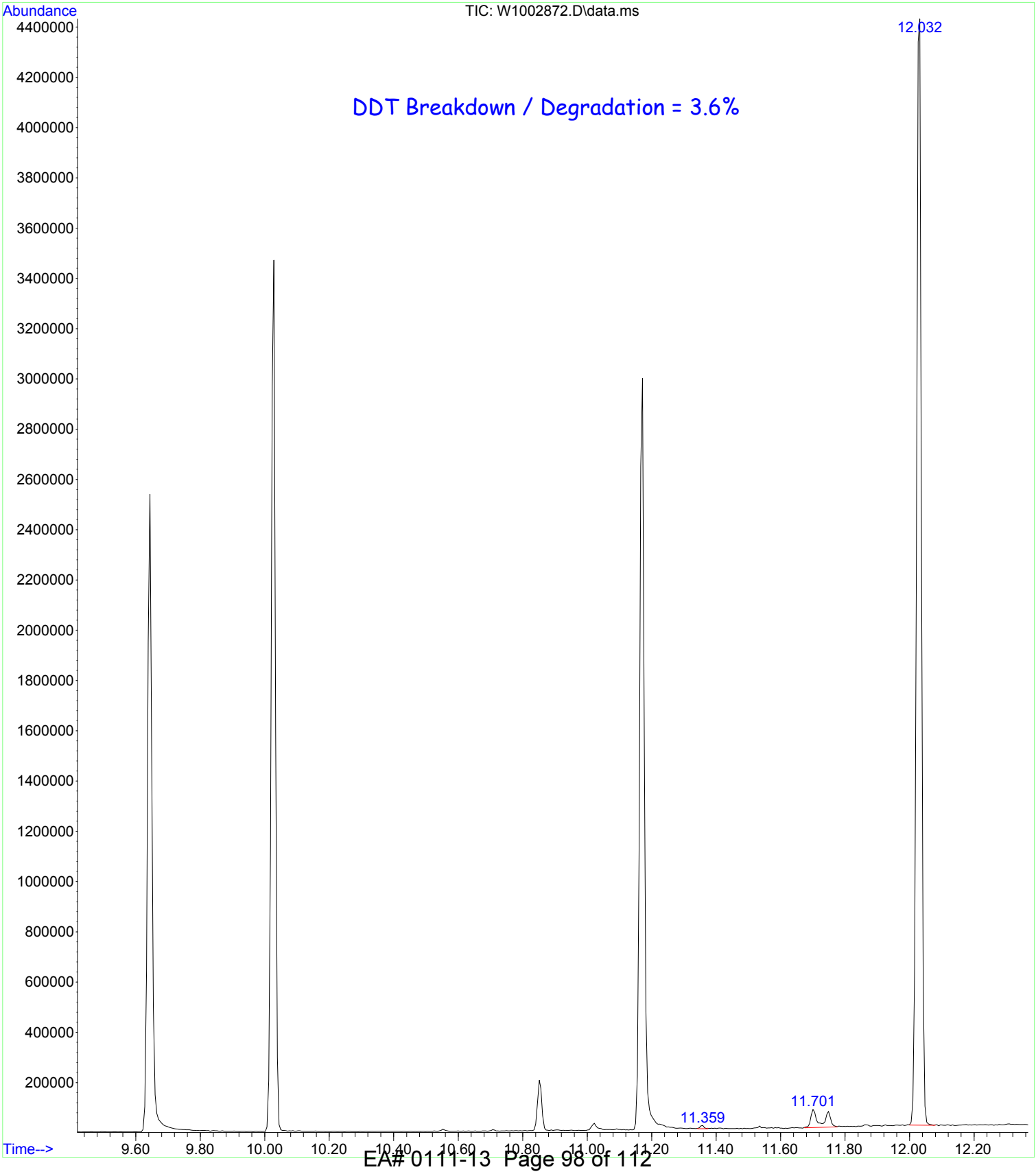
(3) Benzidine

11.172min (-0.101) 48.65 ug/mL

response 1263024

Ion	Exp%	Act%
184.20	100	100
185.20	13.60	14.18
183.10	12.20	11.72
0.00	0.00	0.00

File :M:\ms2010Q4\wiley\data\oct10\W101810A\W1002872.D
Operator : dda
Acquired : 18 Oct 2010 5:33 pm using AcqMethod RXI-2A-EA.M
Instrument : Wiley
Sample Name: DFTPP
Misc Info :
Vial Number: 1



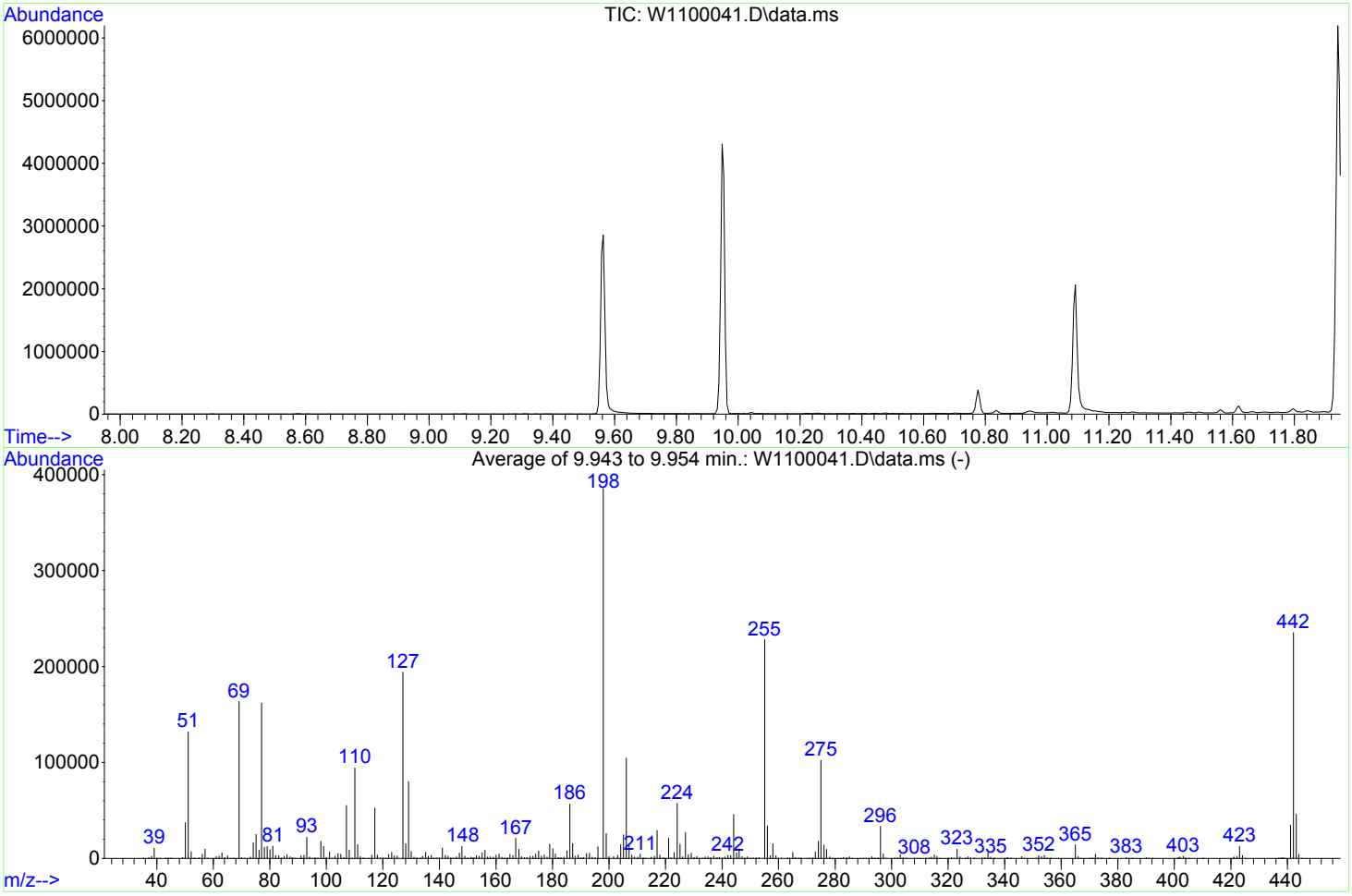
TIC: W1002872.D\data.ms
DFTPP

Peak #	Ret Time	Type	Width	Area	Start Time	End Time
1	11.359	rm	0.032	11072	11.343	11.375
2	11.701	rm	0.102	161495	11.674	11.775
3	12.032	rm	0.080	4671955	12.000	12.080

Data Path : M:\ms2011q1\wiley\data\jan11\W012811A\
Data File : W1100041.D
Acq On : 28 Jan 2011 12:33 pm
Operator : tdd
Sample : DFTPP
Misc : gcmsprep2pg41 exp 9/22/11
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : M:\ms2011\methods\wiley\W101810X-8270.M
Title : 8270C - Full List
Last Update : Wed Oct 20 14:58:44 2010



AutoFind: Scans 1303, 1304, 1305; Background Corrected with Scan 1296

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	34.2	131919	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	42.4	163562	PASS
70	69	0.00	2	0.6	949	PASS
127	198	40	60	50.4	194133	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	385515	PASS
199	198	5	9	6.7	25901	PASS
275	198	10	30	26.5	102325	PASS
365	198	1	100	3.7	14242	PASS
441	443	0.01	100	75.3	34712	PASS
442	198	40	100	61.1	235435	PASS
443	442	17	23	19.6	46108	PASS

Average of 9.943 to 9.954 min.: W1100041.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.10	100	45.05	195	58.10	462	69.10	163562
35.95	44	48.10	41	59.10	86	70.05	949
37.15	859	49.15	1034	59.90	38	71.15	291
38.15	2210	50.10	37277	60.20	74	71.90	39
39.10	10720	51.10	131919	61.10	1821	72.10	59
40.05	499	52.15	6883	62.10	2247	73.10	1505
41.10	383	52.90	39	63.10	5868	74.10	16555
42.20	36	53.20	204	64.10	906	75.10	25037
43.10	167	55.15	750	65.10	2807	76.20	8495
44.00	149	56.10	4310	66.10	368	77.10	161843
44.90	72	57.10	9762	67.05	186	78.10	11721

Average of 9.943 to 9.954 min.: W1100041.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
79.10	12475	89.05	278	100.05	1215	110.10	94275
80.10	9184	90.10	47	101.10	6676	111.10	14476
81.10	12767	91.00	2805	102.00	67	112.05	1912
82.10	3108	92.10	3357	102.15	254	113.15	662
83.10	2853	93.10	22087	103.05	2283	114.10	49
84.00	118	94.05	1531	104.10	4994	115.10	317
85.05	2006	95.15	456	105.10	4304	116.10	3619
86.05	3815	96.00	931	106.15	1144	117.10	52416
87.15	1770	97.05	482	107.10	55165	118.05	3463
87.90	184	98.10	17922	108.10	8772	119.05	585
88.10	554	99.05	12714	109.10	520	120.10	820

Average of 9.943 to 9.954 min.: W1100041.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
121.00	212	132.10	601	142.05	3313	152.00	233
121.30	82	133.05	223	143.05	2360	152.30	176
122.05	4160	134.05	2338	144.05	775	153.05	3298
123.10	6369	135.10	6558	145.05	568	154.05	2224
124.05	2774	136.05	2369	146.05	1759	155.10	5803
125.10	2405	137.10	3219	147.10	5601	156.10	8436
127.10	194133	138.00	440	148.00	12518	157.05	1558
128.10	15438	138.90	247	149.05	2516	157.90	357
129.10	80136	139.10	105	150.05	641	158.05	1675
130.05	7286	140.05	1006	151.10	1361	159.10	1353
131.05	1469	141.05	10917	151.70	423	160.05	3420

Average of 9.943 to 9.954 min.: W1100041.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
161.10	4623	172.05	2188	182.10	721	190.90	295
162.10	1406	173.10	2526	182.60	121	191.05	1113
163.15	431	174.05	4580	183.15	520	192.05	5072
164.10	625	175.10	7901	184.05	1378	193.05	5609
165.00	4264	176.05	2491	185.10	7675	194.00	1316
166.05	3167	177.05	3608	186.10	56691	195.05	739
167.05	20988	178.05	1549	187.10	15409	196.05	12249
168.10	9407	179.00	14963	188.05	2128	198.00	385515
169.05	1916	180.10	10164	189.05	3752	199.00	25901
170.05	744	181.00	4648	189.90	155	200.00	1958
171.00	1043	181.90	173	190.05	496	201.60	2013

Average of 9.943 to 9.954 min.: W1100041.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
203.05	3211	213.05	349	221.90	778	232.05	282
204.10	14289	213.70	36	223.00	6147	233.05	524
205.10	24612	214.10	46	224.10	57403	234.05	1676
206.10	104600	215.00	1279	225.10	14877	235.05	1700
207.10	13382	216.10	2384	226.10	1699	236.00	1004
208.05	3562	217.00	29152	227.00	26979	237.05	2322
209.00	1492	218.05	3586	228.00	3905	237.90	174
210.15	1565	219.05	435	229.05	5560	238.15	143
211.05	4503	219.40	145	229.90	132	239.05	1043
212.00	541	219.70	51	230.10	545	240.15	908
212.20	117	221.05	21062	231.05	2012	241.05	1523

Average of 9.943 to 9.954 min.: W1100041.D\data.ms

DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
242.05	3256	252.20	281	263.90	408	276.05	13798
243.05	3137	253.05	1001	265.00	6320	277.00	9335
244.10	45864	255.05	228117	265.95	1049	278.05	1601
245.10	5789	256.05	33875	266.95	140	279.00	447
246.00	9668	257.05	2792	267.80	189	281.00	255
247.05	1851	258.00	15322	270.00	284	282.00	261
248.05	476	259.05	2767	270.95	473	283.00	1095
249.00	1679	260.00	441	272.05	676	284.15	872
250.00	425	260.95	405	273.00	6776	285.10	1693
251.05	619	262.00	44	274.05	18067	286.10	382
252.00	207	263.00	124	275.00	102325	288.00	44

Average of 9.943 to 9.954 min.: W1100041.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
288.20	49	301.05	535	311.95	152	324.10	1773
288.95	306	302.10	612	312.90	83	325.00	47
290.05	364	303.10	4075	313.10	165	325.30	83
291.05	284	304.05	1034	314.00	1344	326.10	167
292.10	532	304.70	50	315.05	3791	327.05	1755
293.05	1881	305.05	155	316.05	2211	328.00	990
294.05	608	308.00	491	317.05	388	329.00	153
295.00	104	308.95	294	320.00	142	330.10	40
296.00	33421	309.90	81	321.15	993	330.40	34
297.00	4696	310.05	368	322.10	320	332.00	765
297.95	264	311.10	77	323.10	9626	333.05	987

Average of 9.943 to 9.954 min.: W1100041.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
334.10	6027	347.00	389	358.10	58	372.10	4398
335.05	1548	347.90	46	359.05	309	373.00	985
335.90	65	350.00	45	360.20	51	374.05	171
336.25	192	351.05	125	361.15	68	377.00	127
338.90	91	352.05	2784	363.70	53	383.05	1017
339.20	58	353.05	1850	364.00	48	383.80	41
339.95	133	354.05	3029	365.00	14242	384.10	252
340.90	156	354.90	342	366.00	1910	385.05	126
341.05	892	355.10	244	367.00	243	385.90	38
342.05	220	356.10	99	370.10	341	390.05	665
346.00	1924	356.90	37	371.05	641	390.95	424

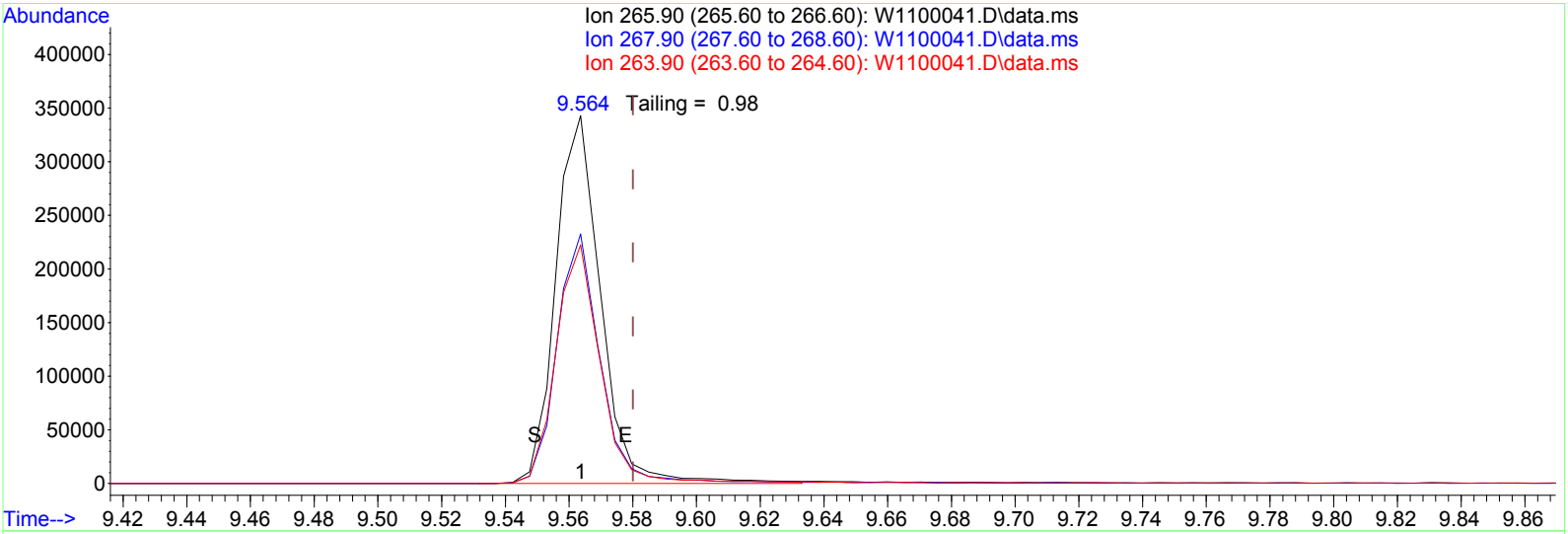
Average of 9.943 to 9.954 min.: W1100041.D\data.ms
DFTPP
Modified:subtracted

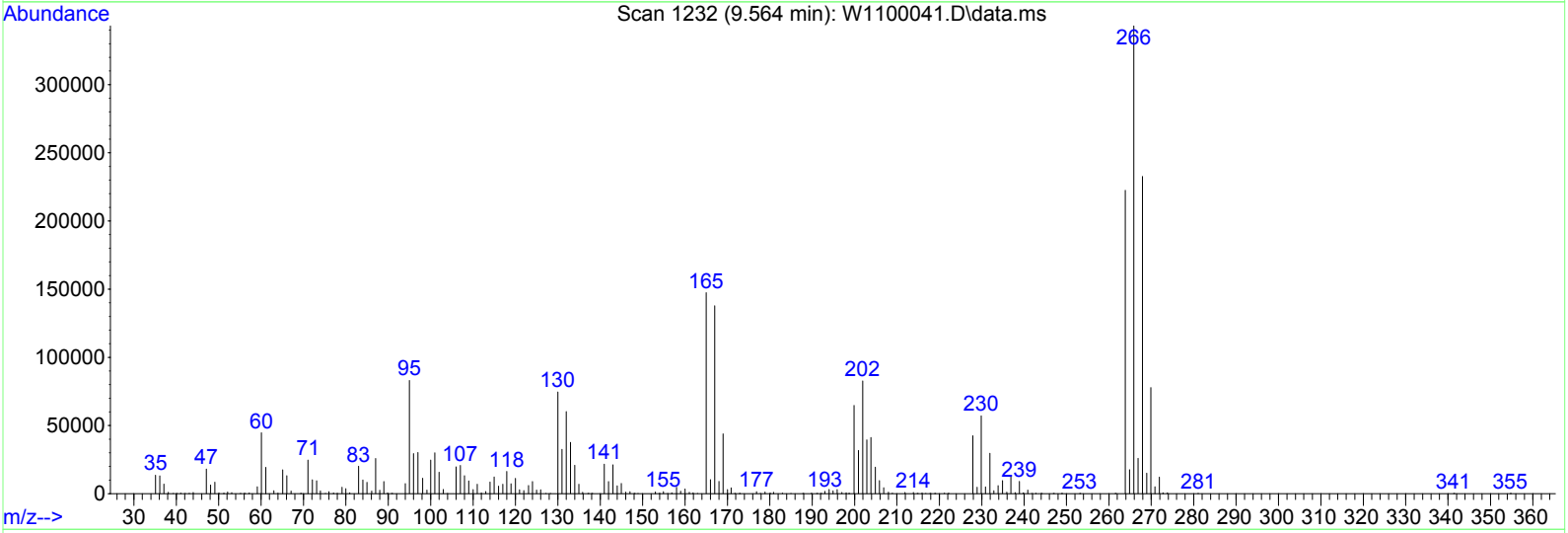
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
392.10	214	406.70	51	427.20	46	438.60	57
392.90	41	410.10	116	429.10	42	438.85	509
395.00	74	413.40	40	431.20	45	439.20	85
397.20	44	415.00	77	432.30	51	439.90	51
401.00	185	419.00	35	435.00	42	441.10	34712
401.20	137	420.90	293	435.40	49	442.10	235435
402.00	1584	421.05	1529	436.00	36	443.10	46108
403.10	2259	422.10	1917	436.75	136	444.05	4102
404.05	729	423.10	12525	437.55	216	445.05	268
405.05	206	424.05	3075	437.90	131		
406.00	47	425.05	384	438.30	119		

Quantitation Report (Qedit)

Data Path : M:\ms2011q1\wiley\data\jan11\W012811A\
Data File : W1100041.D
Acq On : 28 Jan 2011 12:33 pm
Operator : tdd
Sample : DFTPP
Misc : gcmsprep2pg41 exp 9/22/11
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 28 12:50:30 2011
Quant Method : M:\ms2011\methods\wiley\DFTPP-4-EA.M
Quant Title : DFTPP
QLast Update : Thu Dec 30 11:51:21 2010
Response via : Initial Calibration





TIC: W1100041.D\data.ms

(1) Pentachlorophenol

9.564min (-0.016) 67.69 ug/mL

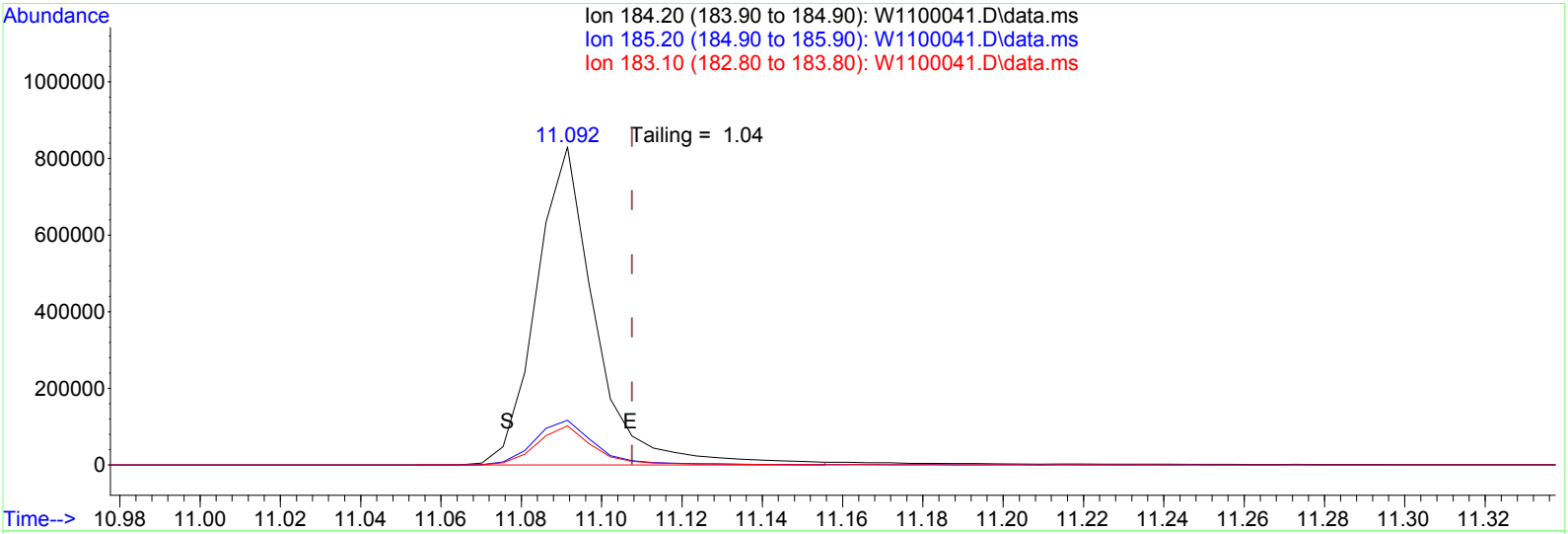
response 342184

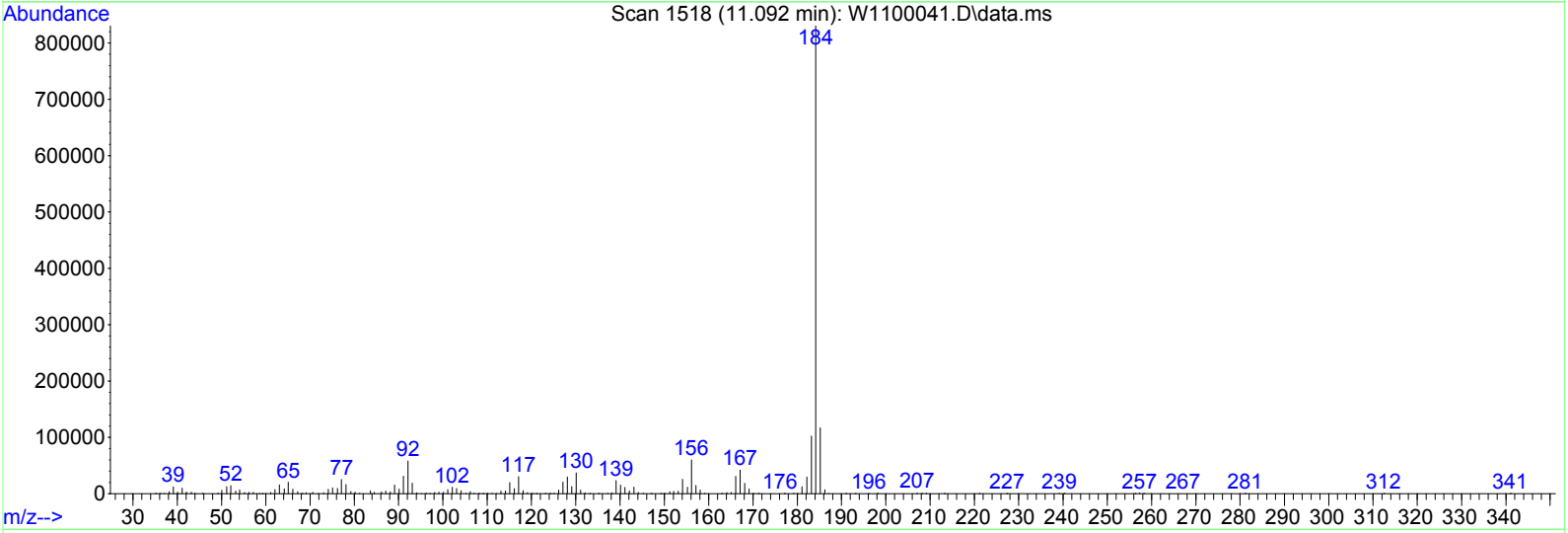
Ion	Exp%	Act%
265.90	100	100
267.90	65.10	64.50
263.90	65.90	63.41
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : M:\ms2011q1\wiley\data\jan11\W012811A\
Data File : W1100041.D
Acq On : 28 Jan 2011 12:33 pm
Operator : tdd
Sample : DFTPP
Misc : gcmsprep2pg41 exp 9/22/11
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 28 12:50:30 2011
Quant Method : M:\ms2011\methods\wiley\DFTPP-4-EA.M
Quant Title : DFTPP
QLast Update : Thu Dec 30 11:51:21 2010
Response via : Initial Calibration





TIC: W1100041.D\data.ms

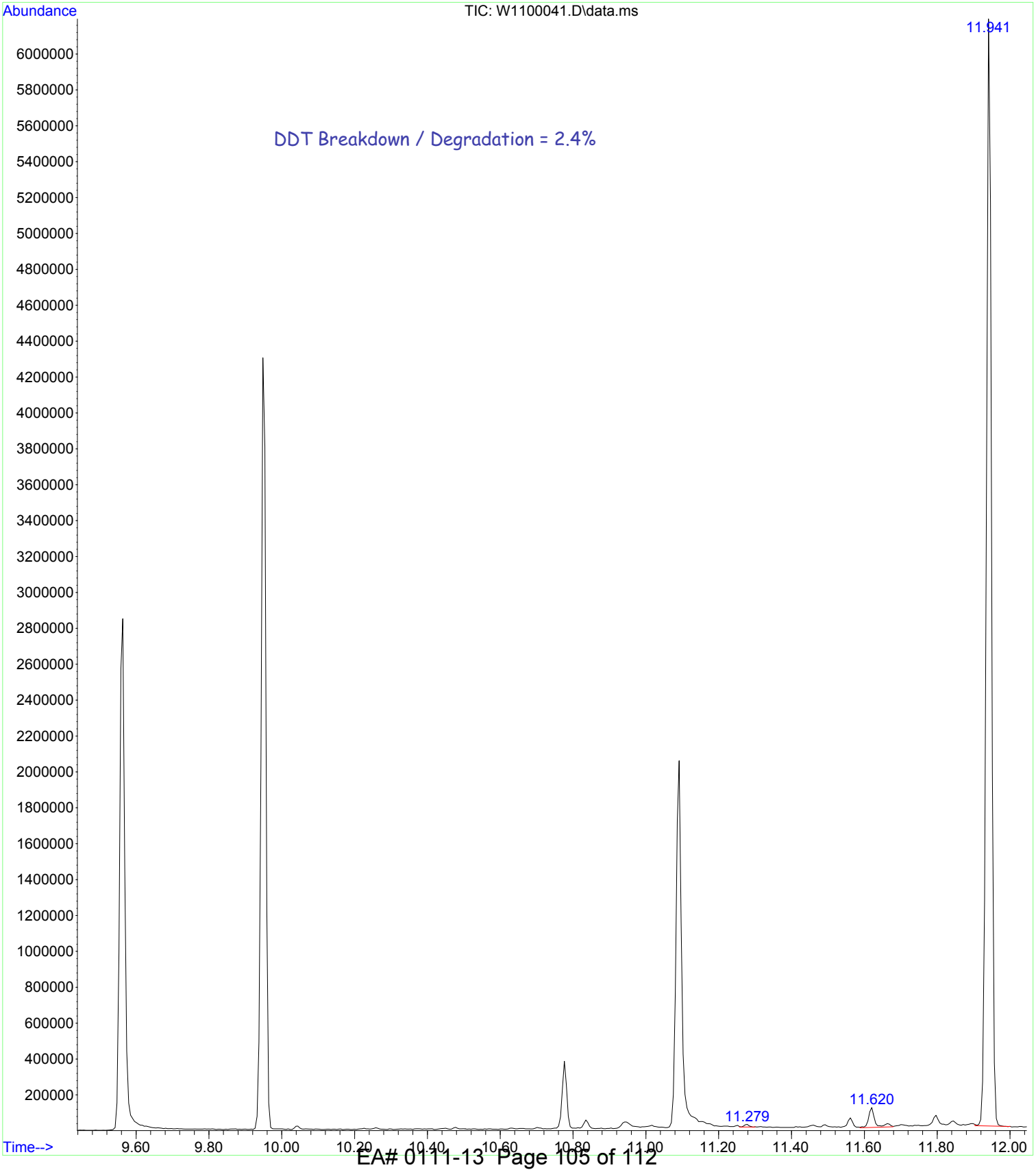
(3) Benzidine

11.092min (-0.016) 52.16 ug/mL m

response 848824

Ion	Exp%	Act%
184.20	100	100
185.20	13.60	14.78
183.10	12.20	12.26
0.00	0.00	0.00

```
File       :M:\ms2011q1\wiley\data\jan11\W012811A\W1100041.D
Operator   : tdd
Acquired   : 28 Jan 2011  12:33 pm using AcqMethod RXI-2A-EA.M
Instrument :   Wiley
Sample Name: DFTPP
Misc Info  : gcmsprep2pg41  exp 9/22/11
Vial Number: 1
```



TIC: W1100041.D\data.ms
DFTPP

Peak #	Ret Time	Type	Width	Area	Start Time	End Time
1	11.279	rm	0.043	14444	11.257	11.300
2	11.620	rm	0.091	137342	11.588	11.679
3	11.941	rm	0.096	6055343	11.904	12.000

Sequence Name: M:\ms2010q4\wiley\sequence\w101810a
Operator: ede
Datapath: C:\ms2010q4\wiley\data\oct10\w101810a

Line	Type	Vial	DataFile	Method	Sample Name	Additional Info	Comments
1	DFTPP	1	W1002863	RXI-2A-EA	DFTPP		
2	DFTPP	1	W1002864	RXI-2A-EA	DFTPP		
3	DFTPP	1	W1002865	RXI-2A-EA	DFTPP		
4	Calibration	2	W1002866	RXI-2A-EA	SSTD005-SCAN	gcmsprep2pg30	
5	Sample	4	W1002867	RXI-2A-EA	High Conc Mega Mix		
6	Blank	5	W1002868	RXI-2A-EA	CH2Cl2 System Blank		
7	Calibration	2	W1002869	RXI-2A-EA	SSTD005-SCAN	gcmsprep2pg30	
8	Calibration	2	W1002870	RXI-2A-EA	SSTD005-SCAN	gcmsprep2pg30	
9	Calibration	2	W1002871	RXI-2A-EA	SSTD005-SCAN	gcmsprep2pg30	
10	DFTPP	1	W1002872	RXI-2A-EA	DFTPP		
11	Calibration	6	W1002873	RXI-2A-EA	SSTD005-SCAN	gcmsprep2pg30	
12	Calibration	7	W1002874	RXI-2A-EA	SSTD010-SCAN	gcmsprep2pg30	
13	Calibration	8	W1002875	RXI-2A-EA	SSTD020-SCAN	gcmsprep2pg30	
14	Calibration	9	W1002876	RXI-2A-EA	SSTD050-SCAN	gcmsprep2pg30	
15	Calibration	10	W1002877	RXI-2A-EA	SSTD080-SCAN	gcmsprep2pg30	
16	Calibration	11	W1002878	RXI-2A-EA	SSTD120-SCAN	gcmsprep2pg30	
17	Calibration	12	W1002879	RXI-2A-EA	SSTD160-SCAN	gcmsprep2pg30	
18	Calibration	13	W1002880	RXI-2A-EA	SSTD050-SCAN (ICV)	gcmsprep2pg14	
19	Blank	2	W1002881	RXI-2A-EA	CH2Cl2 System Blank		
20	Sample	16	W1002882	RXI-2A-EA	IDOC EDE "A"	QA-BS-1pg72 M8270-BS "A"	
21	Sample	17	W1002883	RXI-2A-EA	IDOC EDE "B"	QA-BS-1pg72 M8270-BS "B"	
22	Sample	18	W1002884	RXI-2A-EA	IDOC EDE "C"	QA-BS-1pg72 M8270-BS "C"	
23	Sample	19	W1002885	RXI-2A-EA	IDOC EDE "D"	QA-BS-1pg72 M8270-BS "D"	

Sequence Name: M:\ms2011q1\wiley\sequence\w012811a
Operator: tdd
Datapath: C:\ms2011q1\wiley\data\jan11\w012811a

Line	Type	Vial	DataFile	Method	Sample Name	Additional Info
1	DFTPP	1	W1100040	RXI-2A-EA	DFTPP	gcmsprep2pg41 exp 9/22/11
2	DFTPP	1	W1100041	RXI-2A-EA	DFTPP	gcmsprep2pg41 exp 9/22/11
3	DailyCal	2	W1100042	RXI-2A-EA	sstd050 M8270 Std	
4	Spike	3	W1100043	RXI-2A-EA	0111-13 LCS	
5	Spike	4	W1100044	RXI-2A-EA	0111-13 LCS (Conf)	
6	Blank	5	W1100045	RXI-2A-EA	CH2Cl2 System Blank (Scan)	
7	Blank	6	W1100046	RXI-2A-EA	SVAOPrep1Pg179A Xad Blk	Scan Blank Check
8	Blank	7	W1100047	RXISIM2A-EA	CH2Cl2 System Blank (SIM)	
9	Blank	8	W1100048	RXISIM2A-EA	SVAOPrep1Pg179A Xad Blk	SIM Blank Check
10	Sample	9	W1100049	RXI-2A-EA	0111-13 MB	
11	Sample	10	W1100050	RXI-2A-EA	0111-13 Run 1	
12	Sample	11	W1100051	RXI-2A-EA	0111-13 Run 1 LD	
13						

INSTRUMENT CONTROL PARAMETERS: Wiley

M:\MS2010\METHODS\WILEY-EA\RXI-2A-EA.M
Thu Jun 10 12:52:48 2010

Control Information

Sample Inlet : GC
Injection Source : GC ALS
Mass Spectrometer : Enabled

6890 GC METHOD

OVEN
- Initial temp: 35 'C (On)
- Initial time: 0.50 min
- Maximum temp: 450 'C
- Equilibration time: 0.20 min
- Ramps:

#	Rate	Final temp	Final time
1	25.00	310	0.00
2	4.00	330	2.00
3	0.0(Off)		

- Post temp: 0 'C
- Post time: 0.00 min
- Run time: 18.50 min

FRONT INLET (SPLIT/SPLITLESS)
- Mode: Pulsed Splitless
- Initial temp: 250 'C (On)
- Pressure: 7.91 psi (On)
- Pulse pressure: 30.0 psi
- Pulse time: 0.40 min
- Purge flow: 50.0 mL/min
- Purge time: 0.30 min
- Total flow: 54.0 mL/min
- Gas saver: On
- Saver flow: 20.0 mL/min
- Saver time: 1.00 min
- Gas type: Helium

BACK INLET (SPLIT/SPLITLESS)
- Mode: Split
- Initial temp: 50 'C (Off)
- Pressure: 11.25 psi (On)
- Split ratio: 50:1
- Split flow: 43.6 mL/min
- Total flow: 51.9 mL/min
- Gas saver: On
- Saver flow: 20.0 mL/min
- Saver time: 2.00 min
- Gas type: Hydrogen

COLUMN 1
- Capillary Column
- Model Number: Restek 13638
- Rxi-5Sil MS, 30m x 0.25mm x 0.5µm
- Max temperature: 350 'C
- Nominal length: 30.0 m
- Nominal diameter: 250.00 um
- Nominal film thickness: 0.50 um
- Mode: constant flow
- Initial flow: 1.1 mL/min
- Nominal init pressure: 7.92 psi
- Average velocity: 38 cm/sec
- Inlet: Front Inlet
- Outlet: MSD
- Outlet pressure: vacuum

COLUMN 2
- Capillary Column
- Model Number: Restek 40111
- Rtx-1 20m x 0.18mm x 0.4µm
- Max temperature: 340 'C
- Nominal length: 20.0 m
- Nominal diameter: 180.00 um
- Nominal film thickness: 0.40 um
- Mode: constant flow
- Initial flow: 0.9 mL/min
- Nominal init pressure: 11.25 psi
- Average velocity: 42 cm/sec
- Inlet: Back Inlet
- Outlet: Back Detector
- Outlet pressure: ambient

FRONT DETECTOR (NO DET)

BACK DETECTOR (FID)
- Temperature: 250 'C (On)
- Hydrogen flow: 40.0 mL/min (Off)
- Air flow: 450.0 mL/min (Off)
- Mode: Constant makeup flow
- Makeup flow: 45.0 mL/min (Off)
- Makeup Gas Type: Nitrogen
- Flame: Off
- Electrometer: On
- Lit offset: 2.0

SIGNAL 1
   Data rate: 50 Hz
   Type: mux'ed adc offset
   Save Data: Off
   Zero: 0.0 (Off)
   Range: 0
   Fast Peaks: Off
   Attenuation: 0

SIGNAL 2
   Data rate: 50 Hz
   Type: mux'ed adc offset
   Save Data: Off
   Zero: 0.0 (Off)
   Range: 0
   Fast Peaks: Off
   Attenuation: 0

COLUMN COMP 1
   Derive from back detector

COLUMN COMP 2
   Derive from back detector

THERMAL AUX 2
   Use: MSD Transfer Line Heater
   Description:
   Initial temp: 280 'C (On)
   Initial time: 0.00 min
      # Rate Final temp Final time
      1   0.0(Off)

POST RUN
   Post Time: 0.00 min

TIME TABLE
   Time   Specifier   Parameter & Setpoint

GC Injector

Front Injector:

Sample Washes	1
Sample Pumps	3
Injection Volume	0.20 microliters
Syringe Size	10.0 microliters
PreInj Solvent A Washes	0
PreInj Solvent B Washes	0
PostInj Solvent A Washes	5
PostInj Solvent B Washes	5
Viscosity Delay	2 seconds
Plunger Speed	Fast
PreInjection Dwell	0.00 minutes
PostInjection Dwell	0.00 minutes
Sampling Depth	2.0 mm

Back Injector:
No parameters specified

Column 1 Inventory Number : 13638
Column 2 Inventory Number : 40111

MS ACQUISITION PARAMETERS

General Information
------- -----------

Tune File   : dftpp060710d.u
Acquistion Mode   : Scan

MS Information
-- -----------

Solvent Delay   : 2.90 min

EMV Mode   : Gain Factor
Gain Factor   : 1.00
Resulting EM Voltage   : 1588

[Scan Parameters]

Low Mass : 35.0
High Mass : 500.0
Threshold : 100
Sample # : 2 A/D Samples 4

[MSZones]

MS Source : 230 C maximum 250 C
MS Quad : 150 C maximum 200 C

END OF MS ACQUISITION PARAMETERS

TUNE PARAMETERS for SN: US21844806

Trace Ion Detection is OFF.

EMISSION : 34.610
ENERGY : 69.922
REPELLER : 34.814
IONFOCUS : 90.157
ENTRANCE LE : 0.000
EMVOLTS : 1541.176
Actual EMV : 1588.23
GAIN FACTOR : 1.02
AMUGAIN : 2060.000
AMUOFFSET : 132.000
FILAMENT : 1.000
DCPOLARITY : 0.000
ENTLENSOFFS : 12.800@ 3 12.800@ 50 16.314@ 69 16.816@131 20.831@219 14.306@414
14.306@502 14.306@799
MASSGAIN : 69.000
MASSOFFSET : -10.000

END OF TUNE PARAMETERS

END OF INSTRUMENT CONTROL PARAMETERS

This Is The Last Page Of This Report.



ARCADIS-US: Durham

4915 Prospectus Drive, Suite F
Durham, NC 27713

ACB Outlet Duct

Project# RN990271.0002

Analytical Report
(0111-20)

EPA SW-846 Method 8270C

20 Polyaromatic Hydrocarbons - SCAN Mode

Enthalpy Analytical, Inc.

Phone: (919) 850 - 4392 / Fax: (919) 850 - 9012 / www.enthalpy.com
2202 Ellis Road Durham, NC 27703 - 5518

I certify that to the best of my knowledge all analytical data presented in this report:

- Have been checked for completeness
- Are accurate, error-free, and legible
- Have been conducted in accordance with approved protocol, and that all deviations and analytical problems are summarized in the appropriate narrative(s)

This analytical report was prepared in Portable Document Format (.PDF) and contains 126 pages.

Valgena Respass

QA Review Performed by – Valgena Respass

Report Issued: 03/03/2011

Results



Company	ARCADIS-US: Durham
Analyst	TDD
Parameters	EPA Method 8270C
# Samples	1 Run & 1 FB

Client #	RN990271.0002
Job #	0111-20
PO #	RB68316
Report Date	2/21/2011

Sample ID: **0111-20 1R-ACB-M0010-02**
Data File: W1100171.D
Tank/Misc ID:

DF: 1.00
Aliquot Factor: 1.00
Extraction Vol (mL): 10.0
ConCal 1

Compound	Quant	Ret. Time (min)	Area	Conc. (ug/mL)	Catch Weight (ug)	Flags
Naphthalene	128	6.48	6,646,853	114	1,139	
2-Methylnaphthalene	142	7.15	529,527	14.2	142	
1-Methylnaphthalene	142	7.26	410,185	11.4	114	
Acenaphthylene	152	8.07	1,597,473	28.7	287	
Acenaphthene (CCC)	154	8.24	49,789	1.40	14.0	J
Fluorene	166	8.76	366,177	9.18	91.8	
Phenanthrene	178	9.75	1,296,702	21.9	219	
Anthracene	178	9.80	285,592	4.83	48.3	J
Fluoranthene (CCC)	202	11.0	639,953	10.4	104	
Pyrene	202	11.2	555,852	8.40	84.0	
Benzo(a)anthracene	228	12.5	132,322	2.06	20.6	J
Chrysene	228	12.5	118,034	1.95	19.5	J
Benzo(b)fluoranthene	252	14.0	118,581	2.14	21.4	J
Benzo(k)fluoranthene	252	14.0	42,266	0.780	7.80	J
Benzo(e)pyrene	252	14.5	43,800	0.886	8.86	J
Benzo(a)pyrene (CCC)	252	14.6	76,972	1.51	15.1	J
Perylene	252	NA	0	0.340	3.40	ND
Indeno(1,2,3-cd)pyrene	276	16.6	40,344	0.800	8.00	J
Dibenz(a,h)anthracene	278	NA	0	0.425	4.25	ND
Benzo(g,h,i)perylene	276	17.2	35,945	0.874	8.74	J

					Rec. (%)	Spk Amt	Flags
1,4-Dichlorobenzene-d4 (I)	152	5.25	685,096	40.0	N/A		
Naphthalene-d8 (I)	136	6.45	2,422,513	40.0	N/A		
Acenaphthene-d10 (I)	164	8.21	1,384,296	40.0	N/A		
Phenanthrene-d10 (I)	188	9.72	2,621,296	40.0	N/A		
Chrysene-d12 (I)	240	12.5	2,655,817	40.0	N/A		
Perylene-d12 (I)	264	14.7	2,218,030	40.0	N/A		
2-Fluorophenol (surr)	112	4.13	160,531	8.59	85.9	100	PASS
Phenol-d5 (surr)	99	4.86	217,752	10.0	100	100	PASS
Nitrobenzene-d5 (surr)	82	5.74	229,008	10.7	107	100	PASS
2-Fluorobiphenyl (surr)	172	7.50	429,091	10.0	100	100	PASS
Fluorene-d10 (surr)	176	8.73	312,299	8.22	82.2	100	PASS
2,4,6-Tribromophenol (surr)	330	9.01	61,385	10.2	102	100	PASS
Pyrene-d10 (surr)	212	11.2	612,630	11.0	110	100	PASS
Terphenyl-d14 (surr)	244	11.3	494,933	11.4	114	100	PASS

Internal Standard Acceptance Criteria (Area -50%/+100%, RT +/- 30 sec.)

Internal Standard Name	Concal RT	Sample RT	Concal IS Area	Sample IS Area	Flag
1,4-Dichlorobenzene-d4 (I)	5.25	5.25	768,718	685,096	Pass
Naphthalene-d8 (I)	6.46	6.45	2,761,610	2,422,513	Pass
Acenaphthene-d10 (I)	8.21	8.21	1,657,156	1,384,296	Pass
Phenanthrene-d10 (I)	9.72	9.72	3,022,233	2,621,296	Pass
Chrysene-d12 (I)	12.50	12.50	2,979,857	2,655,817	Pass
Perylene-d12 (I)	14.66	14.66	2,352,403	2,218,030	Pass

Company	ARCADIS-US: Durham
Analyst	TDD
Parameters	EPA Method 8270C
# Samples	1 Run & 1 FB

Client #	RN990271.0002
Job #	0111-20
PO #	RB68316
Report Date	2/21/2011

Sample ID: **0111-20 1R-ACB-M0010-02 LD**
Data File: W1100172.D
Tank/Misc ID:

DF: 1.00
Aliquot Factor: 1.00
Extraction Vol (mL): 10.0
ConCal 1

Compound	Quant	Ret. Time (min)	Area	Conc. (ug/mL)	Catch Weight (ug)	Flags	% Diff
Naphthalene	128	6.48	8,221,858	106	1,063		6.7
2-Methylnaphthalene	142	7.15	690,477	13.9	139		1.6
1-Methylnaphthalene	142	7.26	546,423	11.4	114		0.5
Acenaphthylene	152	8.07	2,093,917	27.5	275		4.1
Acenaphthene (CCC)	154	8.24	62,647	1.29	12.9	J	8.0
Fluorene	166	8.76	483,637	8.87	88.7		3.4
Phenanthrene	178	9.75	1,686,639	21.5	215		1.9
Anthracene	178	9.80	371,108	4.74	47.4	J	2.0
Fluoranthene (CCC)	202	11.0	804,904	9.86	98.6		5.1
Pyrene	202	11.2	691,504	7.88	78.8		6.2
Benzo(a)anthracene	228	12.5	155,187	1.97	19.7	J	4.6
Chrysene	228	12.5	138,276	1.86	18.6	J	4.7
Benzo(b)fluoranthene	252	14.0	138,735	2.14	21.4	J	0.1
Benzo(k)fluoranthene	252	14.0	41,874	0.660	6.60	J	15.4
Benzo(e)pyrene	252	14.5	50,794	0.878	8.78	J	1.0
Benzo(a)pyrene (CCC)	252	14.6	86,534	1.45	14.5	J	4.0
Perylene	252	NA	0	0.340	3.40	ND	0.0
Indeno(1,2,3-cd)pyrene	276	16.6	43,017	0.728	7.28	J	8.9
Dibenz(a,h)anthracene	278	NA	0	0.425	4.25	ND	0.0
Benzo(g,h,i)perylene	276	17.2	38,236	0.794	7.94	J	9.2

					Rec. (%)	Spk Amt	Flags
1,4-Dichlorobenzene-d4 (I)	152	5.25	897,371	40.0	N/A		
Naphthalene-d8 (I)	136	6.45	3,211,606	40.0	N/A		
Acenaphthene-d10 (I)	164	8.21	1,892,982	40.0	N/A		
Phenanthrene-d10 (I)	188	9.72	3,475,619	40.0	N/A		
Chrysene-d12 (I)	240	12.5	3,264,792	40.0	N/A		
Perylene-d12 (I)	264	14.7	2,597,182	40.0	N/A		
2-Fluorophenol (surr)	112	4.13	209,295	8.55	85.5	100	PASS
Phenol-d5 (surr)	99	4.87	272,058	9.56	95.6	100	PASS
Nitrobenzene-d5 (surr)	82	5.74	287,163	10.3	103	100	PASS
2-Fluorobiphenyl (surr)	172	7.50	566,923	9.69	96.9	100	PASS
Fluorene-d10 (surr)	176	8.73	413,838	7.96	79.6	100	PASS
2,4,6-Tribromophenol (surr)	330	9.01	81,678	10.3	103	100	PASS
Pyrene-d10 (surr)	212	11.2	752,659	10.4	104	100	PASS
Terphenyl-d14 (surr)	244	11.3	621,747	10.8	108	100	PASS

Internal Standard Acceptance Criteria (Area -50%/+100%, RT +/- 30 sec.)

Internal Standard Name	Concal RT	Sample RT	Concal IS Area	Sample IS Area	Flag
1,4-Dichlorobenzene-d4 (I)	5.25	5.25	768,718	897,371	Pass
Naphthalene-d8 (I)	6.46	6.45	2,761,610	3,211,606	Pass
Acenaphthene-d10 (I)	8.21	8.21	1,657,156	1,892,982	Pass
Phenanthrene-d10 (I)	9.72	9.72	3,022,233	3,475,619	Pass
Chrysene-d12 (I)	12.50	12.50	2,979,857	3,264,792	Pass
Perylene-d12 (I)	14.66	14.66	2,352,403	2,597,182	Pass

Company	ARCADIS-US: Durham
Analyst	TDD
Parameters	EPA Method 8270C
# Samples	1 Run & 1 FB

Client #	RN990271.0002
Job #	0111-20
PO #	RB68316
Report Date	2/21/2011

Sample ID: **0111-20 ACB-M0010-FB**
Data File: W1100167.D
Tank/Misc ID:

DF: 1.00
Aliquot Factor: 1.00
Extraction Vol (mL): 5.00
ConCal 1

Compound	Quant	Ret. Time (min)	Area	Conc. (ug/mL)	Catch Weight (ug)	Flags
Naphthalene	128	NA	0	0.665	3.33	ND
2-Methylnaphthalene	142	NA	0	0.618	3.09	ND
1-Methylnaphthalene	142	NA	0	0.613	3.07	ND
Acenaphthylene	152	NA	0	0.675	3.37	ND
Acenaphthene (CCC)	154	NA	0	0.934	4.67	ND
Fluorene	166	NA	0	0.783	3.92	ND
Phenanthrene	178	NA	0	0.771	3.86	ND
Anthracene	178	NA	0	0.760	3.80	ND
Fluoranthene (CCC)	202	NA	0	0.919	4.60	ND
Pyrene	202	NA	0	0.937	4.69	ND
Benzo(a)anthracene	228	NA	0	0.550	2.75	ND
Chrysene	228	NA	0	0.556	2.78	ND
Benzo(b)fluoranthene	252	NA	0	0.300	1.50	ND
Benzo(k)fluoranthene	252	NA	0	0.356	1.78	ND
Benzo(e)pyrene	252	NA	0	0.340	1.70	ND
Benzo(a)pyrene (CCC)	252	NA	0	0.340	1.70	ND
Perylene	252	NA	0	0.340	1.70	ND
Indeno(1,2,3-cd)pyrene	276	NA	0	0.300	1.50	ND
Dibenz(a,h)anthracene	278	NA	0	0.425	2.13	ND
Benzo(g,h,i)perylene	276	NA	0	0.352	1.76	ND

					Rec. (%)	Spk Amt	Flags
1,4-Dichlorobenzene-d4 (I)	152	5.24	725,663	40.0	N/A		
Naphthalene-d8 (I)	136	6.45	2,519,480	40.0	N/A		
Acenaphthene-d10 (I)	164	8.21	1,421,101	40.0	N/A		
Phenanthrene-d10 (I)	188	9.72	2,538,416	40.0	N/A		
Chrysene-d12 (I)	240	12.5	2,681,283	40.0	N/A		
Perylene-d12 (I)	264	14.7	2,484,829	40.0	N/A		
2-Fluorophenol (surr)	112	4.11	300,841	15.2	76.0	100	PASS
Phenol-d5 (surr)	99	4.84	346,781	15.1	75.4	100	PASS
Nitrobenzene-d5 (surr)	82	5.74	353,511	15.6	78.2	100	PASS
2-Fluorobiphenyl (surr)	172	7.50	825,474	18.8	93.9	100	PASS
Fluorene-d10 (surr)	176	8.73	614,909	15.8	78.8	100	PASS
2,4,6-Tribromophenol (surr)	330	9.00	91,293	15.7	78.5	100	PASS
Pyrene-d10 (surr)	212	11.2	1,152,403	21.8	109	100	PASS
Terphenyl-d14 (surr)	244	11.3	918,194	21.8	109	100	PASS

Internal Standard Acceptance Criteria (Area -50%/+100%, RT +/- 30 sec.)

Internal Standard Name	Concal RT	Sample RT	Concal IS Area	Sample IS Area	Flag
1,4-Dichlorobenzene-d4 (I)	5.25	5.24	768,718	725,663	Pass
Naphthalene-d8 (I)	6.46	6.45	2,761,610	2,519,480	Pass
Acenaphthene-d10 (I)	8.21	8.21	1,657,156	1,421,101	Pass
Phenanthrene-d10 (I)	9.72	9.72	3,022,233	2,538,416	Pass
Chrysene-d12 (I)	12.50	12.50	2,979,857	2,681,283	Pass
Perylene-d12 (I)	14.66	14.65	2,352,403	2,484,829	Pass

Company	ARCADIS-US: Durham
Analyst	TDD
Parameters	EPA Method 8270C
# Samples	1 Run & 1 FB

Client #	RN990271.0002
Job #	0111-20
PO #	RB68316
Report Date	2/21/2011

Sample ID: **0111-20 MB**
Data File: W1100166.D
Tank/Misc ID:

DF: 1.00
Aliquot Factor: 1.00
Extraction Vol (mL): 5.00
ConCal 1

Compound	Quant	Ret. Time (min)	Area	Conc. (ug/mL)	Catch Weight (ug)	Flags
Naphthalene	128	NA	0	0.665	3.33	ND
2-Methylnaphthalene	142	NA	0	0.618	3.09	ND
1-Methylnaphthalene	142	NA	0	0.613	3.07	ND
Acenaphthylene	152	NA	0	0.675	3.37	ND
Acenaphthene (CCC)	154	NA	0	0.934	4.67	ND
Fluorene	166	NA	0	0.783	3.92	ND
Phenanthrene	178	NA	0	0.771	3.86	ND
Anthracene	178	NA	0	0.760	3.80	ND
Fluoranthene (CCC)	202	NA	0	0.919	4.60	ND
Pyrene	202	NA	0	0.937	4.69	ND
Benzo(a)anthracene	228	NA	0	0.550	2.75	ND
Chrysene	228	NA	0	0.556	2.78	ND
Benzo(b)fluoranthene	252	NA	0	0.300	1.50	ND
Benzo(k)fluoranthene	252	NA	0	0.356	1.78	ND
Benzo(e)pyrene	252	NA	0	0.340	1.70	ND
Benzo(a)pyrene (CCC)	252	NA	0	0.340	1.70	ND
Perylene	252	NA	0	0.340	1.70	ND
Indeno(1,2,3-cd)pyrene	276	NA	0	0.300	1.50	ND
Dibenz(a,h)anthracene	278	NA	0	0.425	2.13	ND
Benzo(g,h,i)perylene	276	NA	0	0.352	1.76	ND

					Rec. (%)	Spk Amt	Flags
1,4-Dichlorobenzene-d4 (I)	152	5.24	670,592	40.0	N/A		
Naphthalene-d8 (I)	136	6.45	2,325,282	40.0	N/A		
Acenaphthene-d10 (I)	164	8.21	1,339,713	40.0	N/A		
Phenanthrene-d10 (I)	188	9.72	2,297,128	40.0	N/A		
Chrysene-d12 (I)	240	12.5	2,342,775	40.0	N/A		
Perylene-d12 (I)	264	14.7	2,147,243	40.0	N/A		
2-Fluorophenol (surr)	112	4.11	250,857	13.7	68.6	100	PASS
Phenol-d5 (surr)	99	4.84	308,078	14.5	72.4	100	PASS
Nitrobenzene-d5 (surr)	82	5.74	275,269	13.2	65.9	100	PASS
2-Fluorobiphenyl (surr)	172	7.50	679,603	16.4	82.0	100	PASS
Fluorene-d10 (surr)	176	8.73	540,343	14.7	73.4	100	PASS
2,4,6-Tribromophenol (surr)	330	9.00	81,848	15.6	77.8	100	PASS
Pyrene-d10 (surr)	212	11.2	991,551	20.7	104	100	PASS
Terphenyl-d14 (surr)	244	11.3	770,215	20.2	101	100	PASS

Internal Standard Acceptance Criteria (Area -50%/+100%, RT +/- 30 sec.)

Internal Standard Name	Concal RT	Sample RT	Concal IS Area	Sample IS Area	Flag
1,4-Dichlorobenzene-d4 (I)	5.25	5.24	768,718	670,592	Pass
Naphthalene-d8 (I)	6.46	6.45	2,761,610	2,325,282	Pass
Acenaphthene-d10 (I)	8.21	8.21	1,657,156	1,339,713	Pass
Phenanthrene-d10 (I)	9.72	9.72	3,022,233	2,297,128	Pass
Chrysene-d12 (I)	12.50	12.50	2,979,857	2,342,775	Pass
Perylene-d12 (I)	14.66	14.66	2,352,403	2,147,243	Pass

Company	ARCADIS-US: Durham
Analyst	TDD
Parameters	EPA Method 8270C
# Samples	1 Run & 1 FB

Client #	RN990271.0002
Job #	0111-20
PO #	RB68316
Report Date	2/21/2011

Sample ID: **CH2Cl2 System Blank**
Data File: W1100164.D
Tank/Misc ID:

DF: 1.00
Aliquot Factor: 1.00
Extraction Vol (mL): 1.00
ConCal 1

Compound	Quant	Ret. Time (min)	Area	Conc. (ug/mL)	Catch Weight (ug)	Flags
Naphthalene	128	NA	0	0.665	0.665	ND
2-Methylnaphthalene	142	NA	0	0.618	0.618	ND
1-Methylnaphthalene	142	NA	0	0.613	0.613	ND
Acenaphthylene	152	NA	0	0.675	0.675	ND
Acenaphthene (CCC)	154	NA	0	0.934	0.934	ND
Fluorene	166	NA	0	0.783	0.783	ND
Phenanthrene	178	NA	0	0.771	0.771	ND
Anthracene	178	NA	0	0.760	0.760	ND
Fluoranthene (CCC)	202	NA	0	0.919	0.919	ND
Pyrene	202	NA	0	0.937	0.937	ND
Benzo(a)anthracene	228	NA	0	0.550	0.550	ND
Chrysene	228	NA	0	0.556	0.556	ND
Benzo(b)fluoranthene	252	NA	0	0.300	0.300	ND
Benzo(k)fluoranthene	252	NA	0	0.356	0.356	ND
Benzo(e)pyrene	252	NA	0	0.340	0.340	ND
Benzo(a)pyrene (CCC)	252	NA	0	0.340	0.340	ND
Perylene	252	NA	0	0.340	0.340	ND
Indeno(1,2,3-cd)pyrene	276	NA	0	0.300	0.300	ND
Dibenz(a,h)anthracene	278	NA	0	0.425	0.425	ND
Benzo(g,h,i)perylene	276	NA	0	0.352	0.352	ND

					Rec. (%)	Spk Amt
1,4-Dichlorobenzene-d4 (I)	152	5.24	723,138	40.0	N/A	
Naphthalene-d8 (I)	136	6.45	2,495,204	40.0	N/A	
Acenaphthene-d10 (I)	164	8.21	1,439,095	40.0	N/A	
Phenanthrene-d10 (I)	188	9.72	2,532,591	40.0	N/A	
Chrysene-d12 (I)	240	12.5	2,447,876	40.0	N/A	
Perylene-d12 (I)	264	14.7	2,164,661	40.0	N/A	

Internal Standard Acceptance Criteria (Area -50%/+100%, RT +/- 30 sec.)

Internal Standard Name	Concal RT	Sample RT	Concal IS Area	Sample IS Area	Flag
1,4-Dichlorobenzene-d4 (I)	5.25	5.24	768,718	723,138	Pass
Naphthalene-d8 (I)	6.46	6.45	2,761,610	2,495,204	Pass
Acenaphthene-d10 (I)	8.21	8.21	1,657,156	1,439,095	Pass
Phenanthrene-d10 (I)	9.72	9.72	3,022,233	2,532,591	Pass
Chrysene-d12 (I)	12.50	12.50	2,979,857	2,447,876	Pass
Perylene-d12 (I)	14.66	14.66	2,352,403	2,164,661	Pass

Company	ARCADIS-US: Durham
Analyst	TDD
Parameters	EPA Method 8270C
# Samples	1 Run & 1 FB

Client #	RN990271.0002
Job #	0111-20
PO #	RB68316
Report Date	2/21/2011

Sample ID: **0111-20 LCS**
Data File: W1100158.D
Tank/Misc ID:

DF: 1.00
Aliquot Factor: 1.00
Extraction Vol (mL): 5.00
ConCal 1

Compound	Quant	Ret. Time (min)	Area	Conc. (ug/mL)	Catch Weight (ug)	Flags	Tag Value	% Diff. From Tag	%Rec
Naphthalene	128	6.48	1,174,237	17.5	87.3		100	12.7	87.3
2-Methylnaphthalene	142	7.15	780,660	18.1	90.7		100	9.3	90.7
1-Methylnaphthalene	142	7.26	756,707	18.2	90.9		100	9.1	90.9
Acenaphthylene	152	8.07	1,228,078	18.5	92.5		100	7.5	92.5
Acenaphthene (CCC)	154	8.24	795,545	18.7	93.7		100	6.3	93.7
Fluorene	166	8.76	894,472	18.8	94.1		100	5.9	94.1
Phenanthrene	178	9.75	1,327,957	19.6	98.1		100	1.9	98.1
Anthracene	178	9.80	1,308,700	19.4	96.9		100	3.1	96.9
Fluoranthene (CCC)	202	11.0	1,441,230	20.5	102		100	2.4	102.4
Pyrene	202	11.2	1,563,122	20.7	103		100	3.4	103.4
Benzo(a)anthracene	228	12.5	1,460,297	19.8	98.9		100	1.1	98.9
Chrysene	228	12.5	1,377,168	19.8	99.0		100	1.0	99.0
Benzo(b)fluoranthene	252	14.0	1,307,149	19.3	96.3		100	3.7	96.3
Benzo(k)fluoranthene	252	14.0	1,346,723	20.3	102		100	1.6	101.6
Benzo(e)pyrene	252	14.5	1,295,478	21.4	107		100	7.1	107.1
Benzo(a)pyrene (CCC)	252	14.6	1,262,471	20.2	101		100	1.1	101.1
Perylene	252	14.7	1,324,734	20.3	102		100	1.7	101.7
Indeno(1,2,3-cd)pyrene	276	16.7	1,264,804	20.5	102		100	2.4	102.4
Dibenz(a,h)anthracene	278	16.7	1,052,808	20.2	101		100	1.1	101.1
Benzo(g,h,i)perylene	276	17.2	1,021,882	20.3	101		100	1.5	101.5

					Rec. (%)	Spk Amt	Flags
1,4-Dichlorobenzene-d4 (I)	152	5.25	807,525	40.0	N/A		
Naphthalene-d8 (I)	136	6.45	2,791,269	40.0	N/A		
Acenaphthene-d10 (I)	164	8.21	1,650,724	40.0	N/A		
Phenanthrene-d10 (I)	188	9.72	2,996,877	40.0	N/A		
Chrysene-d12 (I)	240	12.5	3,059,085	40.0	N/A		
Perylene-d12 (I)	264	14.7	2,714,151	40.0	N/A		
2-Fluorophenol (surr)	112	4.11	323,591	14.7	73.5	100	PASS
Phenol-d5 (surr)	99	4.84	407,923	15.9	79.7	100	PASS
Nitrobenzene-d5 (surr)	82	5.74	427,798	17.0	85.1	100	PASS
2-Fluorobiphenyl (surr)	172	7.50	974,679	19.1	95.5	100	PASS
Fluorene-d10 (surr)	176	8.73	779,205	17.2	86.0	100	PASS
2,4,6-Tribromophenol (surr)	330	9.00	135,784	19.8	98.9	100	PASS
Pyrene-d10 (surr)	212	11.2	1,363,687	21.8	109	100	PASS
Terphenyl-d14 (surr)	244	11.3	1,114,833	22.4	112	100	PASS

Internal Standard Acceptance Criteria (Area -50%/+100%, RT +/- 30 sec.)

Internal Standard Name	Concal RT	Sample RT	Concal IS Area	Sample IS Area	Flag
1,4-Dichlorobenzene-d4 (I)	5.25	5.25	768,718	807,525	Pass
Naphthalene-d8 (I)	6.46	6.45	2,761,610	2,791,269	Pass
Acenaphthene-d10 (I)	8.21	8.21	1,657,156	1,650,724	Pass
Phenanthrene-d10 (I)	9.72	9.72	3,022,233	2,996,877	Pass
Chrysene-d12 (I)	12.50	12.50	2,979,857	3,059,085	Pass
Perylene-d12 (I)	14.66	14.66	2,352,403	2,714,151	Pass

Company	ARCADIS-US: Durham
Analyst	TDD
Parameters	EPA Method 8270C
# Samples	1 Run & 1 FB

Client #	RN990271.0002
Job #	0111-20
PO #	RB68316
Report Date	2/21/2011

Sample ID: **0111-20 LCSD**
Data File: W1100160.D
Tank/Misc ID: Reprep

DF: 1.00
Aliquot Factor: 1.00
Extraction Vol (mL): 5.00
ConCal 1

Compound	Quant	Ret. Time (min)	Area	Conc. (ug/mL)	Catch Weight (ug)	Flags	Tag Value	% Diff. From Tag	%Rec
Naphthalene	128	6.48	1,019,040	16.8	83.8		100	16.2	83.8
2-Methylnaphthalene	142	7.15	699,687	18.0	89.9		100	10.1	89.9
1-Methylnaphthalene	142	7.26	681,128	18.1	90.5		100	9.5	90.5
Acenaphthylene	152	8.07	1,105,850	18.6	92.9		100	7.1	92.9
Acenaphthene (CCC)	154	8.24	695,387	18.3	91.4		100	8.6	91.4
Fluorene	166	8.76	809,596	19.0	95.0		100	5.0	95.0
Phenanthrene	178	9.75	1,152,513	19.4	97.0		100	3.0	97.0
Anthracene	178	9.80	1,158,166	19.5	97.6		100	2.4	97.6
Fluoranthene (CCC)	202	11.0	1,203,866	19.5	97.3		100	2.7	97.3
Pyrene	202	11.2	1,302,584	19.6	98.1		100	1.9	98.1
Benzo(a)anthracene	228	12.5	1,140,788	18.7	93.4		100	6.6	93.4
Chrysene	228	12.5	1,079,996	18.8	93.9		100	6.1	93.9
Benzo(b)fluoranthene	252	14.0	1,070,422	19.2	95.9		100	4.1	95.9
Benzo(k)fluoranthene	252	14.0	1,028,663	18.9	94.4		100	5.6	94.4
Benzo(e)pyrene	252	14.5	1,009,827	20.3	102		100	1.6	101.6
Benzo(a)pyrene (CCC)	252	14.6	985,394	19.2	96.0		100	4.0	96.0
Perylene	252	14.7	944,939	17.7	88.3		100	11.7	88.3
Indeno(1,2,3-cd)pyrene	276	16.7	918,701	18.1	90.5		100	9.5	90.5
Dibenz(a,h)anthracene	278	16.7	770,875	18.0	90.0		100	10.0	90.0
Benzo(g,h,i)perylene	276	17.2	746,659	18.0	90.2		100	9.8	90.2

					Rec. (%)	Spk Amt	Flags
1,4-Dichlorobenzene-d4 (I)	152	5.25	730,272	40.0	N/A		
Naphthalene-d8 (I)	136	6.45	2,523,281	40.0	N/A		
Acenaphthene-d10 (I)	164	8.21	1,479,378	40.0	N/A		
Phenanthrene-d10 (I)	188	9.72	2,632,375	40.0	N/A		
Chrysene-d12 (I)	240	12.5	2,529,691	40.0	N/A		
Perylene-d12 (I)	264	14.7	2,231,292	40.0	N/A		
2-Fluorophenol (surr)	112	4.11	266,783	13.4	67.0	100	PASS
Phenol-d5 (surr)	99	4.84	355,702	15.4	76.8	100	PASS
Nitrobenzene-d5 (surr)	82	5.74	371,886	16.4	81.8	100	PASS
2-Fluorobiphenyl (surr)	172	7.50	866,000	18.9	94.7	100	PASS
Fluorene-d10 (surr)	176	8.73	710,080	17.5	87.4	100	PASS
2,4,6-Tribromophenol (surr)	330	9.00	112,897	18.7	93.7	100	PASS
Pyrene-d10 (surr)	212	11.2	1,125,850	20.5	103	100	PASS
Terphenyl-d14 (surr)	244	11.3	911,997	20.9	104	100	PASS

Internal Standard Acceptance Criteria (Area -50%/+100%, RT +/- 30 sec.)

Internal Standard Name	Concal RT	Sample RT	Concal IS Area	Sample IS Area	Flag
1,4-Dichlorobenzene-d4 (I)	5.25	5.25	768,718	730,272	Pass
Naphthalene-d8 (I)	6.46	6.45	2,761,610	2,523,281	Pass
Acenaphthene-d10 (I)	8.21	8.21	1,657,156	1,479,378	Pass
Phenanthrene-d10 (I)	9.72	9.72	3,022,233	2,632,375	Pass
Chrysene-d12 (I)	12.50	12.50	2,979,857	2,529,691	Pass
Perylene-d12 (I)	14.66	14.66	2,352,403	2,231,292	Pass

Narrative Summary



Enthalpy Analytical Narrative Summary

Company	ARCADIS-US: Durham
Analyst	TDD
Parameters	EPA SW-846 Method 8270C (semi-volatile)
# Samples	2

Client #	RN990271.0002
Job #	0111-20
PO #	RB68316
Report Date	February 22, 2011

Custody

Heather Tarjeft received the samples on 2/17/11 after being relinquished by ARCADIS-US: Durham. The samples were received at 18.3°C and in good condition. Prior to, during, and after analysis, the sample was kept under lock with access only to authorized personnel by Enthalpy Analytical, Inc.

Analysis

The samples were analyzed for SW-846 Method 8270C Polyaromatic Hydrocarbons (PAHs) using the analytical procedures in *EPA SW-846 Method 8270C, Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)*.

Prior to sample collection, the XAD-2 traps were spiked with a BN Surrogate Mix (100 µg of nitrobenzene-d_5, 2-fluorobiphenyl, and terphenyl-d_{14}).

Each sample train consisted of five fractions: Filter, XAD Trap, FH Rinse, BH Rinse, and Condensate. All rinse fractions were methanol/methylene chloride.

Prior to extraction, each Filter/XAD fraction was spiked with acid extraction surrogates (100 µg of 2-fluorophenol, phenol-d_5, and 2, 4, 6-tribromophenol) and PAH extraction surrogates (fluorene-d_{10} and pyrene-d_{10}).

The filter and XAD-2 fractions for each sample were Soxhlet extracted for 18 hours. The rinse and condensate fractions were combined and Separatory funnel extracted using methylene chloride.

The Condensate/Rinse and Filter/XAD-2 extracts for each sample (including QC samples) were combined and concentrated to a final volume of 5mL, with expectation of ***1R-ACB-M0010-02***, which was concentrated to a final volume 10mL.

A 100µL aliquot of each sample extract was spiked with SVOA internal standard spiking solution, before analyses.

The Agilent Technologies Model 6890N, Gas Chromatograph "Wiley" (S/N CN10244010) was equipped with a 5973 Mass Selective Detector and a Restek rxi-5Sil MS, 30m x 0.25mm x 0.5µm capillary column (SN 982029) for these analyses.

Enthalpy Analytical Narrative Summary
(continued)

Calibration	The RSD of all target compounds in the initial calibration were within the 20% acceptance limit. All continuing calibration criteria were met in the analysis of these samples. The calibration curve is included in the Calibration Curve Chromatograms section of this report.
Chromatographic Conditions	A copy of the acquisition method RXI-2A-EA is included in the Calibration Curve Chromatograms section of this report.
QC Notes	All internal standard criteria were met in the analyses of these samples. The sample ***1R-ACB-M0010-02*** was analyzed in duplicate and met all duplicate criteria. The analyses of the LCS and LCDS exhibited recovery values of 80-120% for all reported compounds. All sample preparation and analytical holding times specified in the method were met.
Reporting Notes	The results presented in this report are representative of the samples as provided to the laboratory.

General Reporting Notes

The following are general reporting notes that are applicable to all Enthalpy Analytical, Inc. data reports, unless specifically noted otherwise.

- The acronym ***MDL*** represents the Minimum Detection Limit. Below this value the laboratory cannot determine the presence of the analyte of interest reliably.
- The acronym ***LOQ*** represents the Limit of Quantification. Below this value the laboratory cannot quantitate the analyte of interest within the criteria of the method.
- The acronym ***ND*** following a value indicates a non-detect or analytical result below the MDL.
- The letter ***J*** following a value indicates an analytical result between the MDL and the LOQ. A J flag indicates that the laboratory can positively identify the analyte of interest as present, but the value should be considered an estimate.
- The letter ***E*** following a value indicates an analytical result exceeding 100% of the highest calibration point. The associated value should be considered as an estimate.
- The acronym ***DF*** represents Dilution Factor. This number represents dilution of the sample during the preparation and/or analysis process. The analytical result taken from a laboratory instrument is multiplied by the DF to determine the final undiluted sample results.
- The addition of ***MS*** to the Sample ID represents a Matrix Spike. An aliquot of an actual sample is spiked with a known amount of analyte so that a percent recovery value can be determined. This shows what effect the sample matrix may have on the target analyte, i.e. whether or not anything in the sample matrix interferes with the analysis of the analyte(s).
- The addition of ***MSD*** to the Sample ID represents a Matrix Spike Duplicate. Prepared in the same manner as an MS, the use of duplicate matrix spikes allows further confirmation of laboratory quality by showing the consistency of results gained by performing the same steps multiple times.
- The addition of ***LD*** to the Sample ID represents a Laboratory Duplicate. The analyst prepares an additional aliquot of sample for testing and the results of the duplicate analysis are compared to the initial result. The result should have a difference value of within 10% of the initial result (if the results of the original analysis are greater than the LOQ).
- The addition of ***AD*** to the Sample ID represents an Alternate Dilution. The analyst prepares an additional aliquot at a different dilution factor (usually double the initial factor). This analysis helps confirm that no additional compound is present and coeluting or sharing absorbance with the analyte of interest, as they would have a different response/absorbance than the analyte of interest.
- The Sample ID ***LCS*** represents a Laboratory Control Sample. Clean matrix, similar to the client sample matrix, prepared and analyzed by the laboratory using the same reagents, spiking standards and procedures used for the client samples. The LCS is used to assess the control of the laboratory's analytical system. Whenever spikes are prepared for our client projects, two extra spikes are prepared. The extras (randomly chosen) are labeled with the associated project number and kept in-house at the appropriate temperature conditions. When the project samples are received for analysis, the LCSs are analyzed to confirm that the analyte could be recovered from the media, separate from the samples which were used on the project and which may have been affected by source matrix, sample collection and/or sample transport.

General Reporting Notes

(continued)

- **Significant Figures**: Where the reported value is much greater than unity (1.00) in the units expressed, the number is rounded to a whole number of units, rather than to 3 significant figures. For example, a value of 10,456.45 ug catch is rounded to 10,456 ug. There are five significant digits displayed, but no confidence should be placed on more than two significant digits.
- **Manual Integration**: The data systems used for processing will flag manually integrated peaks with an "M". There are several reasons a peak may be manually integrated. These reasons will be identified by the following two letter designations. The peak was ***not integrated*** by the software **"NI"**, the peak was ***integrated incorrectly*** by the software **"II"** or the ***wrong peak*** was integrated by the software **"WP"**. These codes will accompany the analyst's manual integration stamp placed next to the compound name.

Sample Custody



CHAIN OF CUSTODY RECORD

Project Name	US EPA
Project Location	RTP, NC
Sampling Location	ACB Outlet Duct
Project Number	RN990271.0002
Laboratory	Enthalpy
Laboratory P.O. #	

Sample ID	Sample Matrix	Analysis Requested
1R-ACB-M0010-02	Dry filter	SVOC
	Front Half MeOH/$MeCl_2$ Rinse	SVOC
	Impinger DI H_2O	SVOC
	Back Half MeOH/$MeCl_2$ Rinse	SVOC
	XAD trap	SVOC
ACB-M0010-FB	Dry filter	SVOC
	Front Half MeOH/$MeCl_2$ Rinse	SVOC
	Impinger DI H_2O	SVOC
	Back Half MeOH/$MeCl_2$ Rinse	SVOC
	XAD trap	SVOC

Relinq. by: Erica Shepherd
Date/Time: 2/17/11 12:05
Received by: Gregg Tatum
Date/Time: 2.17.11 / 12:05

Notes/Comments:
Field blank collected 2/9/11. Emission sample collected 2/16/11. Refrigerator temp. 38 deg. F.

Relinquished By:	John Nash	Relinquished By:	[illegible] 10:46
Date/Time:	2/17/11 10:20	Date/Time:	2-17-11 10:46
Received By:	[illegible]	Received By:	Brent W. Hall
Date/Time:	2/17/11 10:20	Date/Time:	2-17-11 10:46

Rec'd Heather Nagel 2/17/11 1:50pm

ARCADIS U.S., Inc.
4915 Prospectus Drive, Suite F
Durham, North Carolina 27713

Phone Number: (919) 544-4535
Fax Number: (919) 544-5690

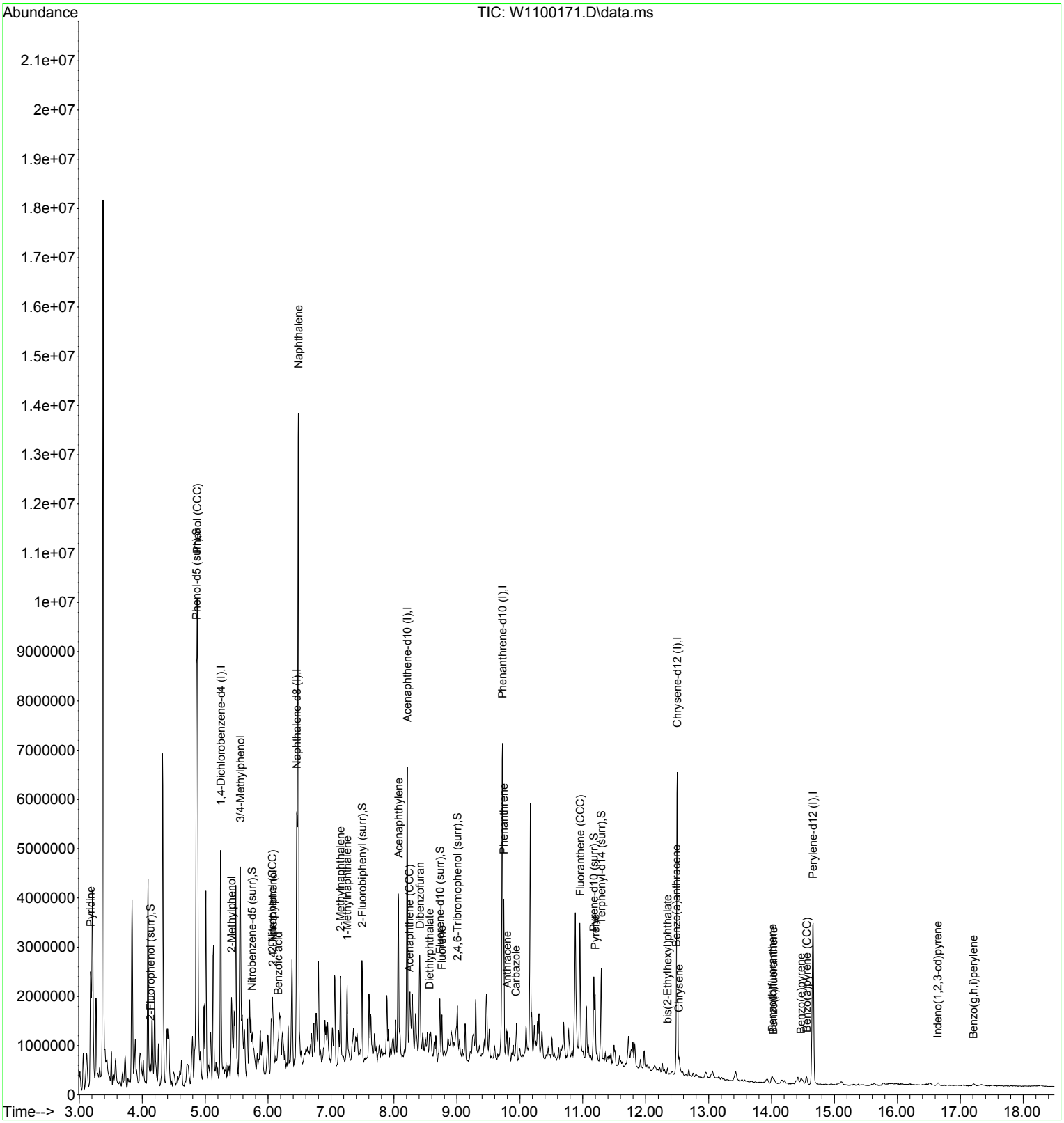
Temp = 18.3°C Raytek gun #2

Sample Chromatograms (Scan)



Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100171.D
Acq On : 21 Feb 2011 5:31 pm
Operator : tdd
Sample : 0111-20 1R-ACB-M0010-02
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 21 19:38:06 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Mon Feb 21 10:04:38 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100171.D
Acq On : 21 Feb 2011 5:31 pm
Operator : tdd
Sample : 0111-20 1R-ACB-M0010-02
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 21 19:38:06 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Mon Feb 21 10:04:38 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) 1,4-Dichlorobenzene-d4...	5.247	152	685096	40.00	µg/mL	0.00	
21) Naphthalene-d8 (I)	6.455	136	2422513	40.00	µg/mL	0.00	
36) Acenaphthene-d10 (I)	8.212	164	1384296	40.00	µg/mL	0.00	
64) Phenanthrene-d10 (I)	9.724	188	2621296	40.00	µg/mL	0.00	
78) Chrysene-d12 (I)	12.502	240	2655817	40.00	µg/mL	0.00	
87) Perylene-d12 (I)	14.660	264	2218030	40.00	µg/mL	0.00	
System Monitoring Compounds							
4) 2-Fluorophenol (surr)	4.131	112	160531	8.59	µg/mL	-0.02	
5) Phenol-d5 (surr)	4.863	99	217752	10.02	µg/mL	0.00	
19) Nitrobenzene-d5 (surr)	5.744	82	229008	10.74	µg/mL	0.00	
39) 2-Fluorobiphenyl (surr)	7.496	172	429091	10.02	µg/mL	-0.01	
57) Fluorene-d10 (surr)	8.730	176	312299	8.22	µg/mL	0.00	
65) 2,4,6-Tribromophenol (...	9.008	330	61385	10.23	µg/mL	0.00	
75) Pyrene-d10 (surr)	11.177	212	598696m	10.96	µg/mL	0.00	**Manual Int. "II" (TDD)**
77) Terphenyl-d14 (surr)	11.295	244	494933	11.38	µg/mL	0.02	
Target Compounds							Qvalue
2) N-Nitrosodimethylamine	0.000		0	N.D.	d		
3) Pyridine	3.180	79	1304834	59.47	µg/mL#		68
6) Phenol (CCC)	4.873	94	4429956	195.34	µg/mL#		92
7) Aniline	0.000		0	N.D.	d		
8) bis(2-Chloroethyl)ether	0.000		0	N.D.	d		
9) 2-Chlorophenol	0.000		0	N.D.	d		
10) 1,3-Dichlorobenzene	0.000		0	N.D.			
11) 1,4-Dichlorobenzene (CCC)	0.000		0	N.D.			
12) Benzyl alcohol	0.000		0	N.D.	d		
13) 1,2-Dichlorobenzene	0.000		0	N.D.			
14) 2-Methylphenol	5.418	107	382286	25.47	µg/mL		99
15) bis(2-Chloroisopropyl)...	0.000		0	N.D.	d		
16) 3/4-Methylphenol	5.557	107	1574760	80.12	µg/mL		96
17) N-Nitrso-di-n-propylam...	0.000		0	N.D.	d		
18) Hexachloroethane	0.000		0	N.D.	d		
20) Nitrobenzene	0.000		0	N.D.	d		
22) Isophorone	0.000		0	N.D.	d		
23) 2,4-Dimethylphenol	6.075	107	254329	14.57	µg/mL		90
24) 2-Nitrophenol (CCC)	6.070	139	170292	15.38	µg/mL#		73
25) Benzoic acid	6.161	105	250963	21.38	µg/mL#		1
26) bis(2-Chloroethoxy)met...	0.000		0	N.D.	d		
27) 2,4-Dichlorophenol (CCC)	0.000		0	N.D.	d		
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.	d		
29) Naphthalene	6.481	128	6646853	113.93	µg/mL#		63
30) 4-Chloroaniline	0.000		0	N.D.	d		
31) Hexachlorobutadiene (CCC)	0.000		0	N.D.			
32) 4-Chloro-3-methylpheno...	0.000		0	N.D.	d		
33) 2-Methylnaphthalene	7.149	142	529527	14.17	µg/mL		100
34) 1-Methylnaphthalene	7.256	142	410185	11.35	µg/mL		98
35) Hexachlorocyclopentadi...	0.000		0	N.D.			
37) 2,4,6-Trichlorophenol ...	0.000		0	N.D.	d		
38) 2,4,5-Trichlorophenol	0.000		0	N.D.	d		
40) 2-Chloronaphthalene	0.000		0	N.D.	d		
41) 2-Nitroaniline	0.000		0	N.D.	d		
42) 1,4-Dinitrobenzene	0.000		0	N.D.	d		
43) Dimethylphthalate	0.000		0	N.D.	d		
44) 1,3-Dinitrobenzene	0.000		0	N.D.	d		
45) 2,6-Dinitrotoluene	0.000		0	N.D.	d		
46) 1,2-Dinitrobenzene	0.000		0	N.D.	d		

Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100171.D
Acq On : 21 Feb 2011 5:31 pm
Operator : tdd
Sample : 0111-20 1R-ACB-M0010-02
Misc :
ALS Vial : 14 Sample Multiplier: 1

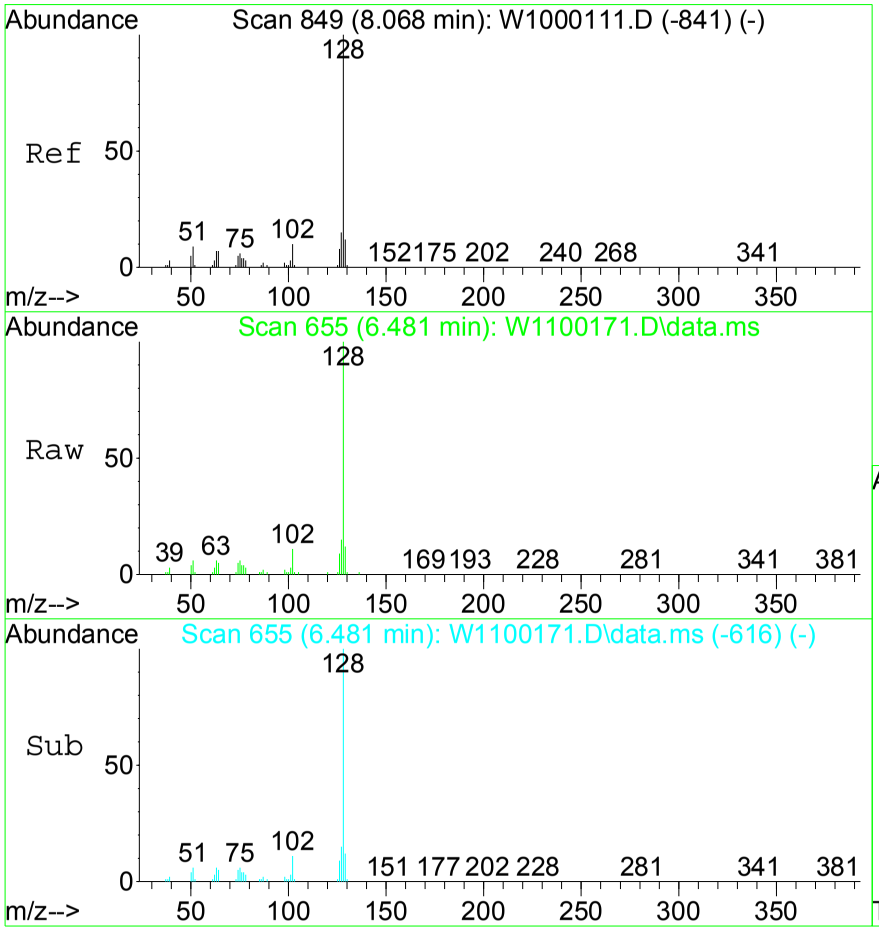
Quant Time: Feb 21 19:38:06 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Mon Feb 21 10:04:38 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
47) Acenaphthylene	8.073	152	1597473	28.69 µg/mL	94
48) 3-Nitroaniline	0.000		0	N.D. d	
49) Acenaphthene (CCC)	8.244	154	49789	1.40 µg/mL#	20
50) 2,4-Dinitrophenol (SPCC)	0.000		0	N.D. d	
51) 4-Nitrophenol (SPCC)	0.000		0	N.D. d	
52) 2,4-Dinitrotoluene	0.000		0	N.D. d	
53) Dibenzofuran	8.415	168	483907	9.97 µg/mL#	81
54) 2,3,5,6-Tetrachlorophenol	0.000		0	N.D.	
55) 2,3,4,6-Tetrachlorophenol	0.000		0	N.D.	
56) Diethylphthalate	8.565	149	92064	2.28 µg/mL#	89
58) 4-Chlorophenyl-phenyle...	0.000		0	N.D.	
59) Fluorene	8.762	166	366177	9.18 µg/mL	95
60) 4-Nitroaniline	0.000		0	N.D. d	
61) 4,6-Dinitro2-methylphenol	0.000		0	N.D.	
62) N-Nitrosodiphenylamine...	0.000		0	N.D. d	
63) Azobenzene	0.000		0	N.D. d	
66) 4-Bromophenyl-phenylether	0.000		0	N.D.	
67) Hexachlorobenzene	0.000		0	N.D.	
68) Pentachlorophenol (CCC)	0.000		0	N.D.	
69) Phenanthrene	9.745	178	1296702	21.91 µg/mL	99
70) Anthracene	9.799	178	285592m	4.83 µg/mL	
71) Carbazole	9.938	167	80433	1.57 µg/mL#	82
72) Di-n-butylphthalate	0.000		0	N.D. d	
73) Fluoranthene (CCC)	10.958	202	639953	10.39 µg/mL	98
74) Benzidine	0.000		0	N.D. d	
76) Pyrene	11.198	202	555852	8.40 µg/mL#	88
79) Butylbenzylphthalate	0.000		0	N.D. d	
80) 3,3-Dimethylbenzidine	0.000		0	N.D. d	
81) bis(2-ethylhexyl)adipate	0.000		0	N.D. d	
82) bis(2-Ethylhexyl)phtha...	12.347	149	48358	1.20 µg/mL#	95
83) 3,3'-Dichlorobenzidine	0.000		0	N.D. d	
84) Benzo(a)anthracene	12.486	228	132322	2.06 µg/mL#	63
85) Chrysene	12.529	228	118034	1.95 µg/mL#	1
86) Di-n-octylphthalate (CCC)	0.000		0	N.D. d	
88) Benzo(b)fluoranthene	14.014	252	118581m	2.14 µg/mL	
89) Benzo(k)fluoranthene	14.030	252	42266m	0.78 µg/mL	
90) Benzo(e)pyrene	14.468	252	43800	0.89 µg/mL	96
91) Benzo(a)pyrene (CCC)	14.559	252	76972	1.51 µg/mL	92
92) Perylene	14.703	252	13088	N.D.	
93) Indeno(1,2,3-cd)pyrene	16.642	276	40344	0.80 µg/mL	97
94) Dibenz(a,h)anthracene	0.000		0	N.D. d	
95) Benzo(g,h,i)perylene	17.208	276	35945	0.87 µg/mL	99

Manual Int. "WP" (TDD)

Manual Int. "II" (TDD)

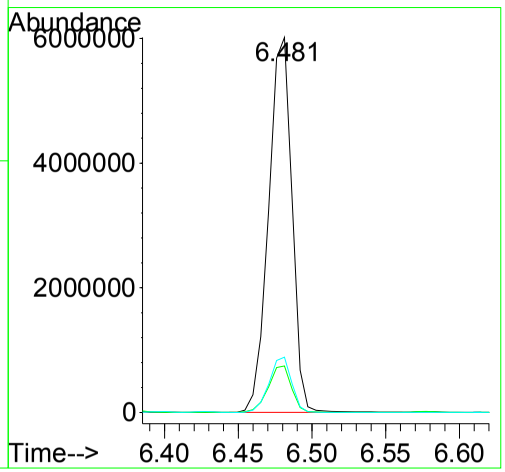
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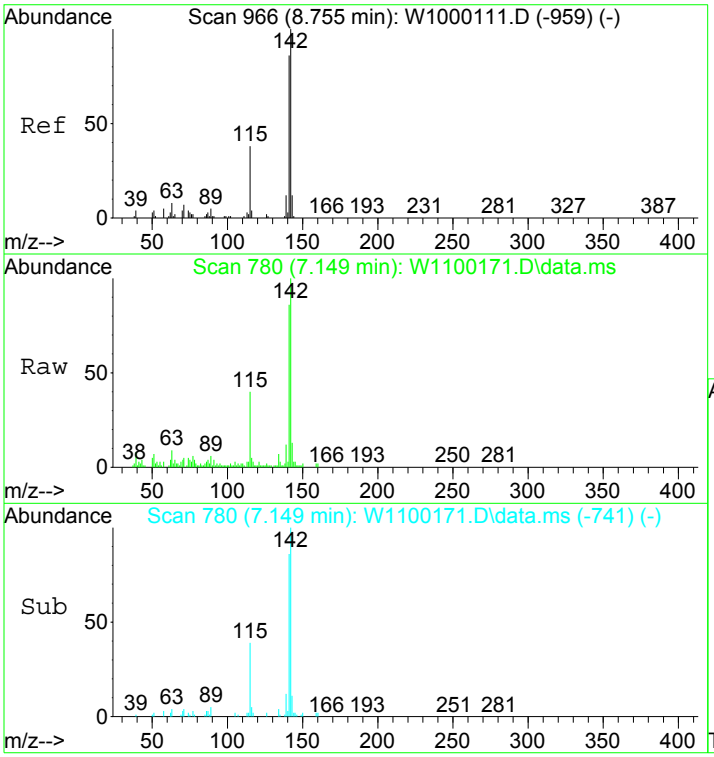


#29
Naphthalene
Concen: 113.93 µg/mL
RT: 6.481 min Scan# 655
Delta R.T. 0.000 min
Lab File: W1100171.D
Acq: 21 Feb 2011 5:31 pm

Tgt Ion:128 Resp: 6646853

Ion	Ratio	Lower	Upper
128	100		
129	12.3	17.0	25.6#
127	14.2	35.1	52.7#

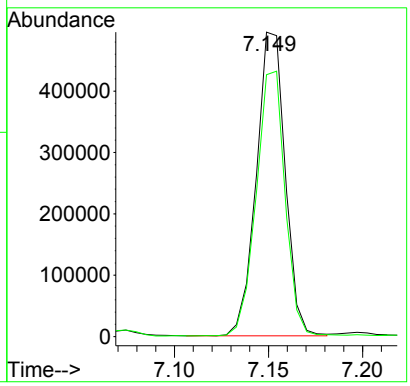


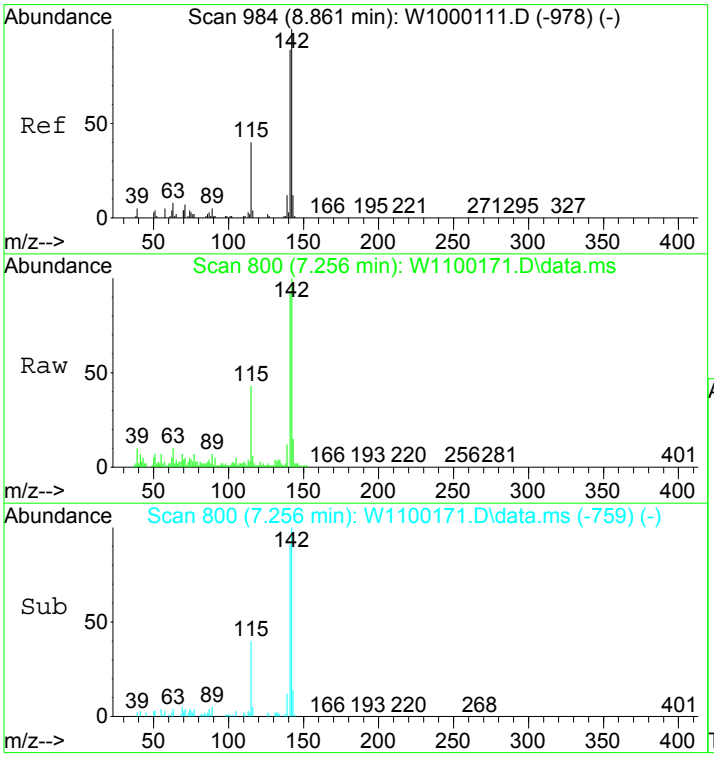


#33
2-Methylnaphthalene
Concen: 14.17 µg/mL
RT: 7.149 min Scan# 780
Delta R.T. 0.003 min
Lab File: W1100171.D
Acq: 21 Feb 2011 5:31 pm

Tgt Ion:142 Resp: 529527

Ion	Ratio	Lower	Upper
142	100		
141	87.2	69.7	104.5

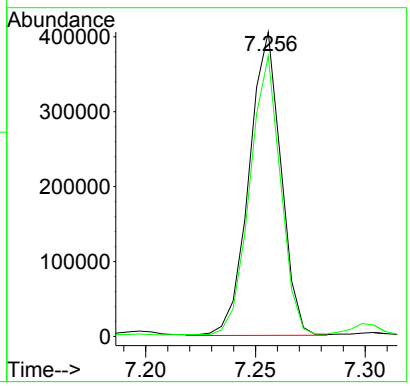


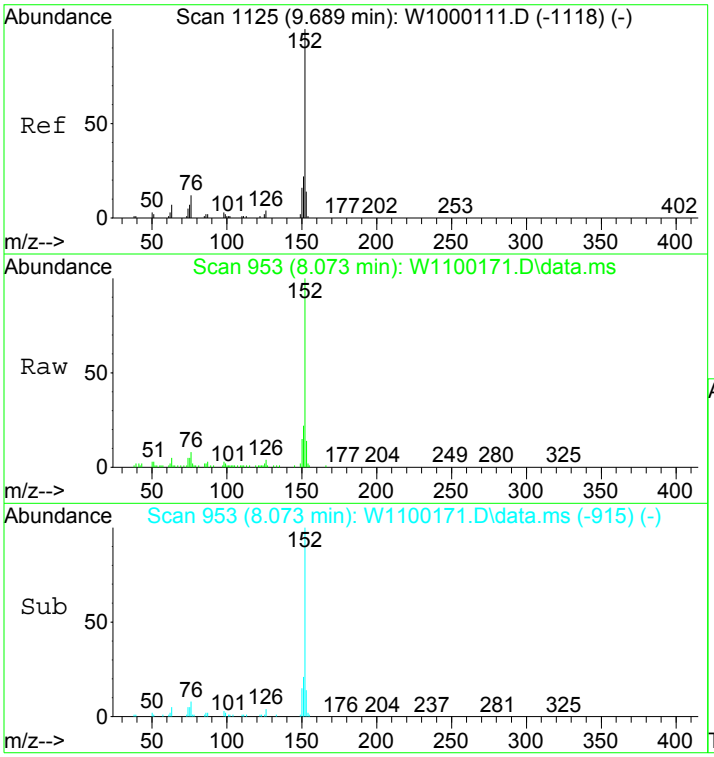


#34
1-Methylnaphthalene
Concen: 11.35 µg/mL
RT: 7.256 min Scan# 800
Delta R.T. 0.010 min
Lab File: W1100171.D
Acq: 21 Feb 2011 5:31 pm

Tgt Ion:142 Resp: 410185

Ion	Ratio	Lower	Upper
142	100		
141	89.0	72.5	108.7

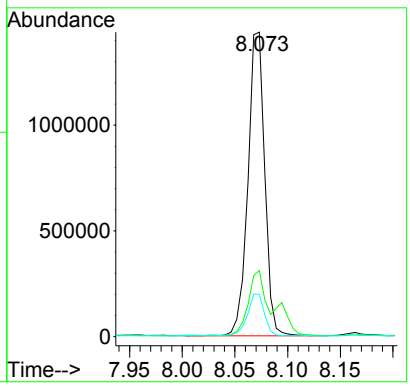


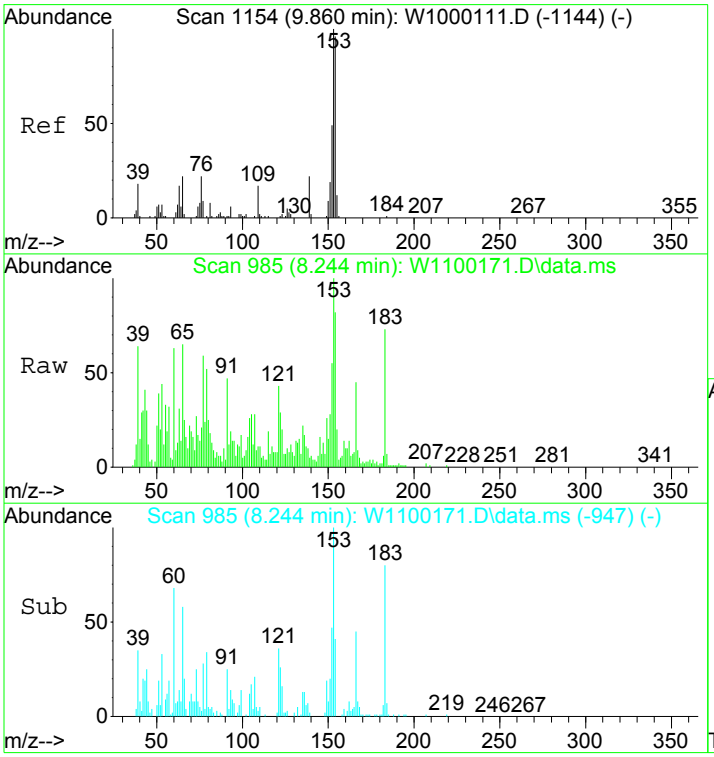


#47
Acenaphthylene
Concen: 28.69 µg/mL
RT: 8.073 min Scan# 953
Delta R.T. -0.008 min
Lab File: W1100171.D
Acq: 21 Feb 2011 5:31 pm

Tgt Ion:152 Resp: 1597473

Ion	Ratio	Lower	Upper
152	100		
151	22.1	15.0	22.4
153	14.2	10.2	15.2

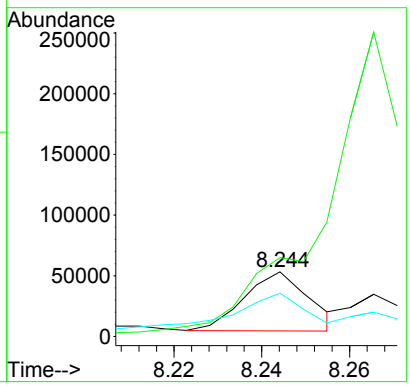


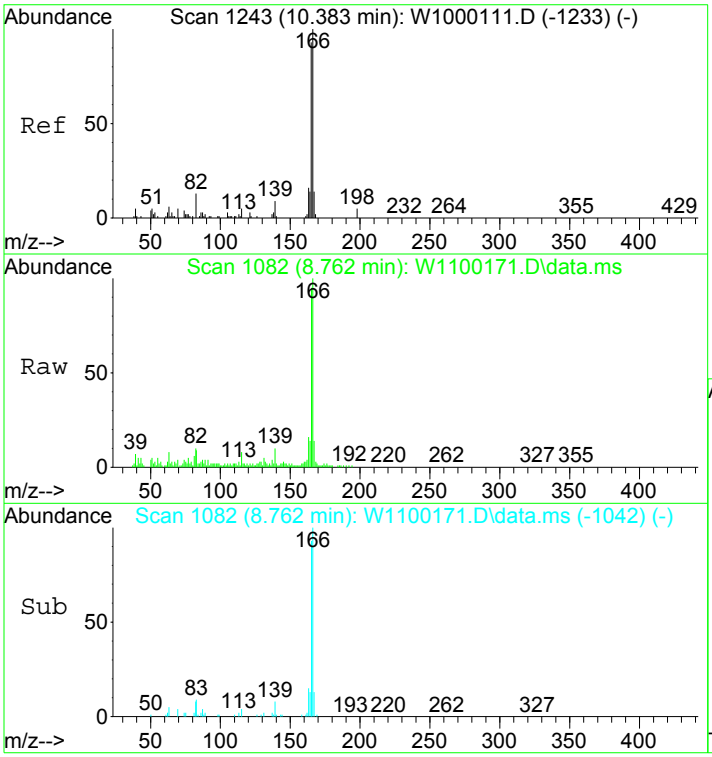


#49
Acenaphthene (CCC)
Concen: 1.40 µg/mL
RT: 8.244 min Scan# 985
Delta R.T. -0.005 min
Lab File: W1100171.D
Acq: 21 Feb 2011 5:31 pm

Tgt Ion:154 Resp: 49789

Ion	Ratio	Lower	Upper
154	100		
153	0.0	85.4	128.0#
152	74.3	41.4	62.2#

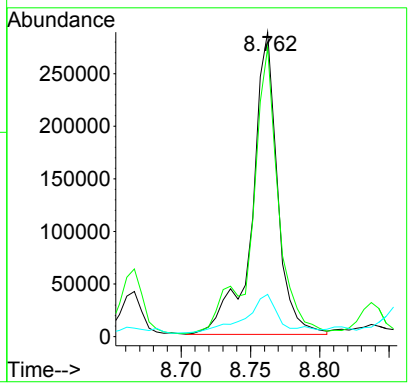


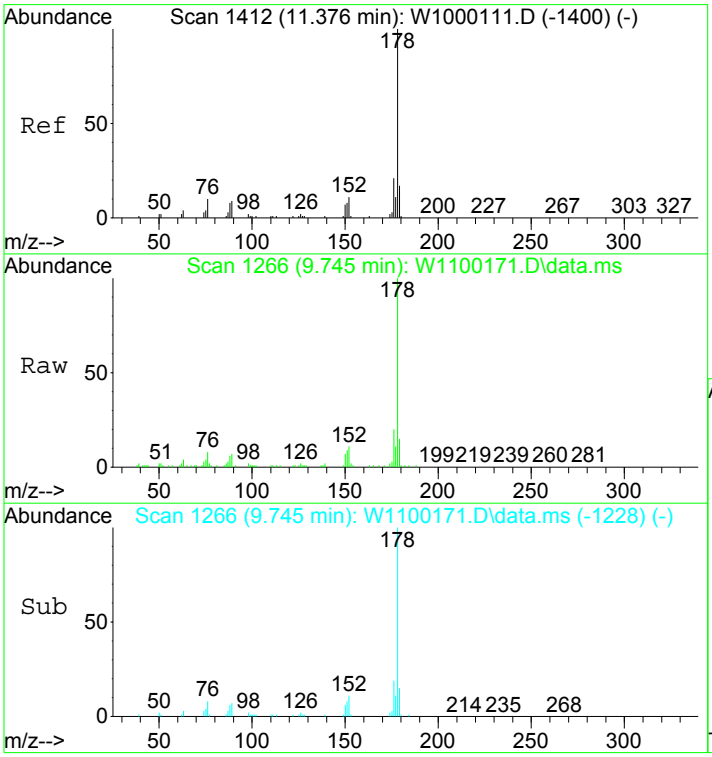


#59
Fluorene
Concen: 9.18 µg/mL
RT: 8.762 min Scan# 1082
Delta R.T. 0.003 min
Lab File: W1100171.D
Acq: 21 Feb 2011 5:31 pm

Tgt Ion:166 Resp: 366177

Ion	Ratio	Lower	Upper
166	100		
165	98.6	75.4	113.0
167	16.0	10.9	16.3

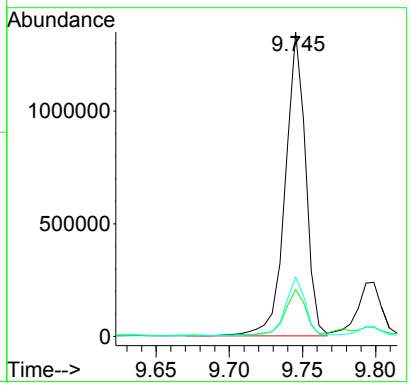


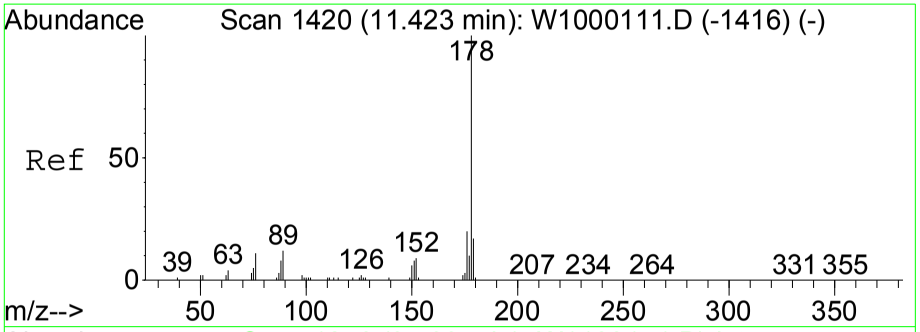


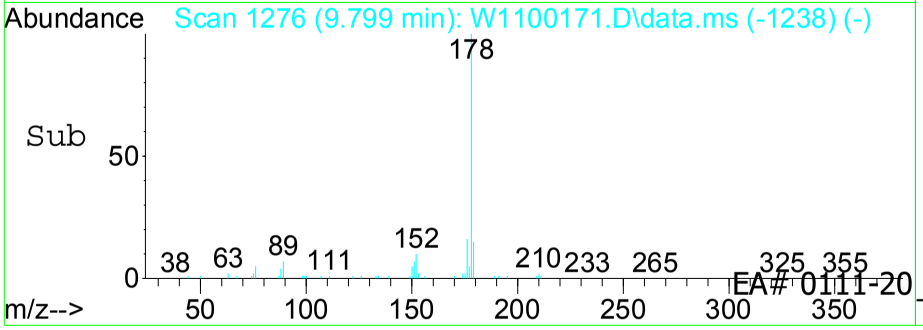
#69
Phenanthrene
Concen: 21.91 µg/mL
RT: 9.745 min Scan# 1266
Delta R.T. -0.005 min
Lab File: W1100171.D
Acq: 21 Feb 2011 5:31 pm

Tgt Ion:178 Resp: 1296702

Ion	Ratio	Lower	Upper
178	100		
179	16.1	12.5	18.7
176	18.9	15.0	22.4



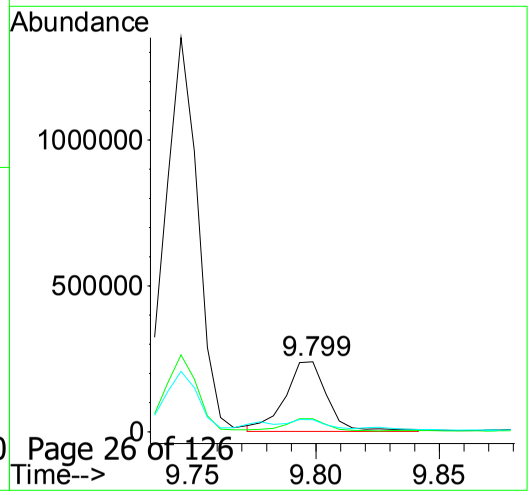


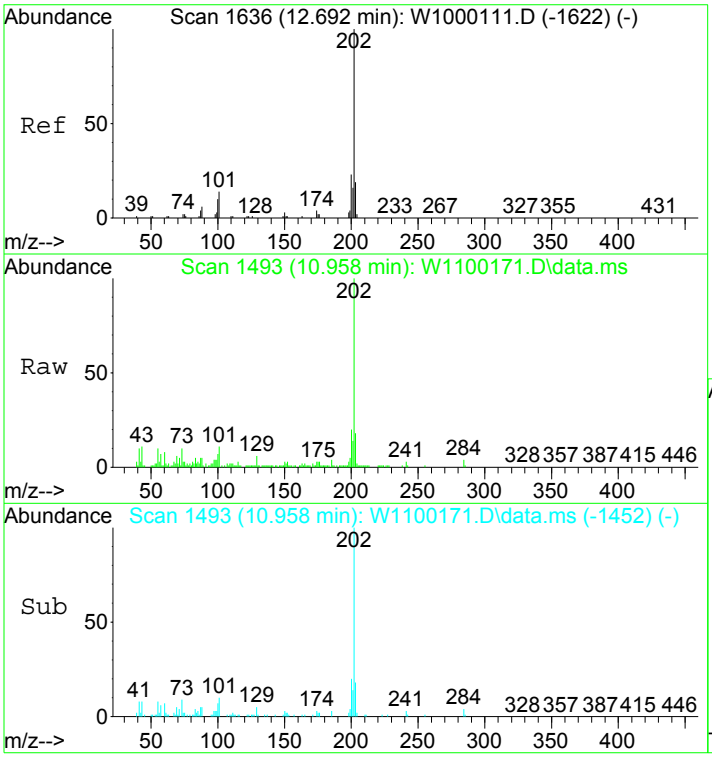


#70
Anthracene
Concen: 4.83 µg/mL m
RT: 9.799 min Scan# 1276
Delta R.T. -0.004 min
Lab File: W1100171.D
Acq: 21 Feb 2011 5:31 pm

Tgt Ion:178 Resp: 285592

Ion	Ratio	Lower	Upper
178	100		
176	85.9	15.0	22.4#
179	73.9	12.8	19.2#

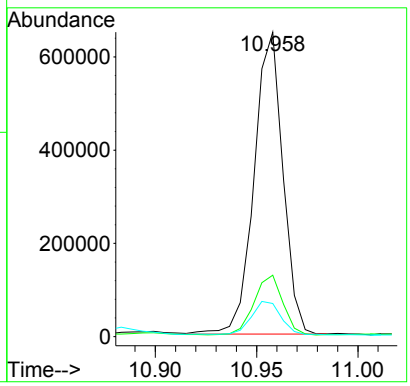


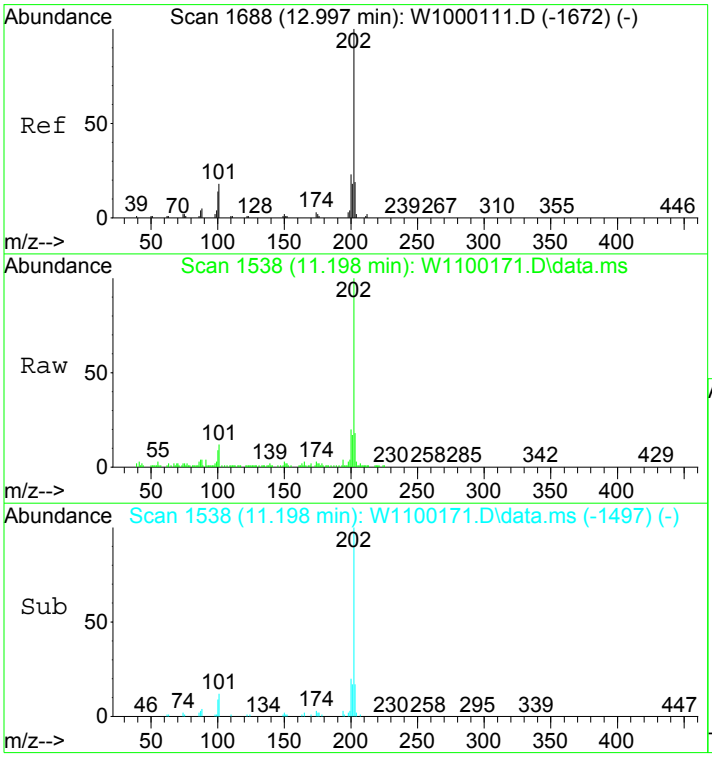


#73
Fluoranthene (CCC)
Concen: 10.39 µg/mL
RT: 10.958 min Scan# 1493
Delta R.T. 0.011 min
Lab File: W1100171.D
Acq: 21 Feb 2011 5:31 pm

Tgt Ion:202 Resp: 639953

Ion	Ratio	Lower	Upper
202	100		
200	19.6	16.5	24.7
101	11.6	8.6	12.8

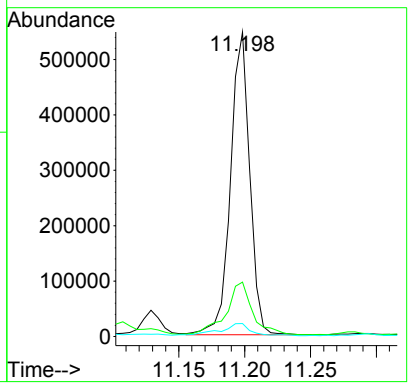


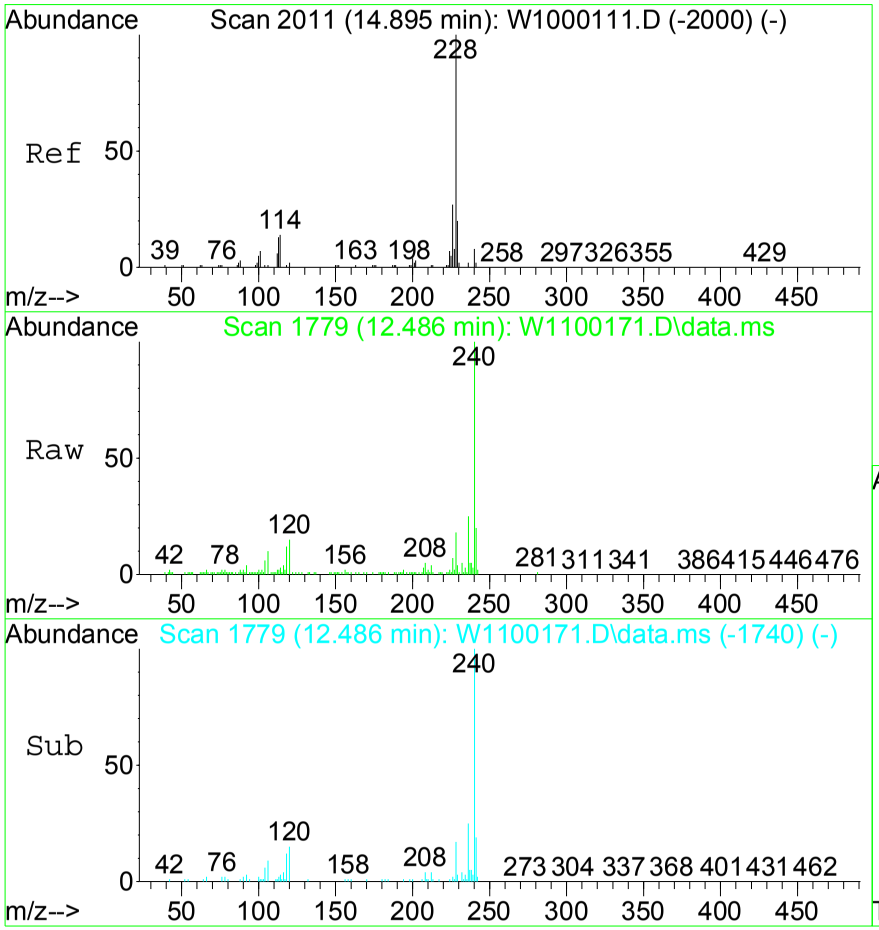


#76
Pyrene
Concen: 8.40 µg/mL
RT: 11.198 min Scan# 1538
Delta R.T. 0.009 min
Lab File: W1100171.D
Acq: 21 Feb 2011 5:31 pm

Tgt Ion:202 Resp: 555852

Ion	Ratio	Lower	Upper
202	100		
203	23.8	14.5	21.7#
88	6.4	3.4	5.0#

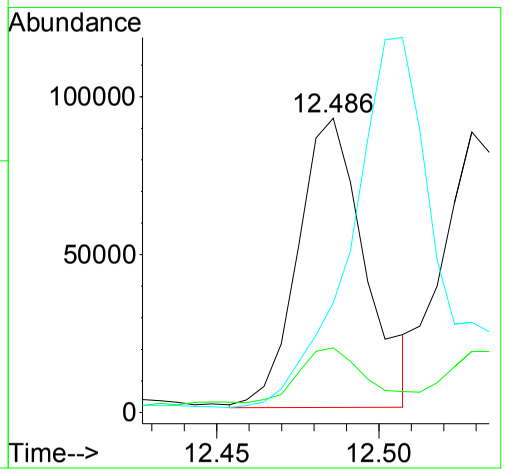


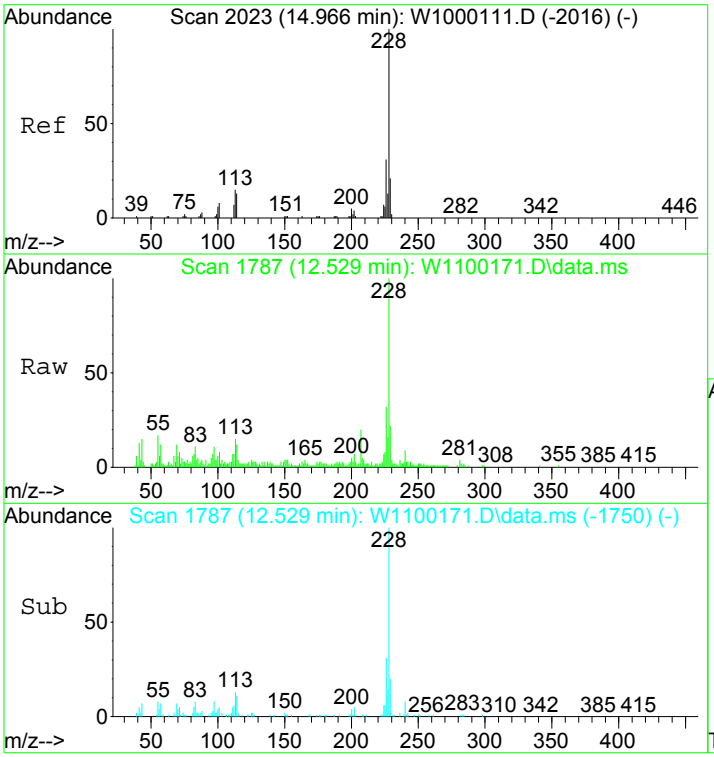


#84
Benzo(a)anthracene
Concen: 2.06 µg/mL
RT: 12.486 min Scan# 1779
Delta R.T. -0.000 min
Lab File: W1100171.D
Acq: 21 Feb 2011 5:31 pm

Tgt Ion:228 Resp: 132322

Ion	Ratio	Lower	Upper
228	100		
229	26.2	14.7	22.1#
226	0.0	21.0	31.6#

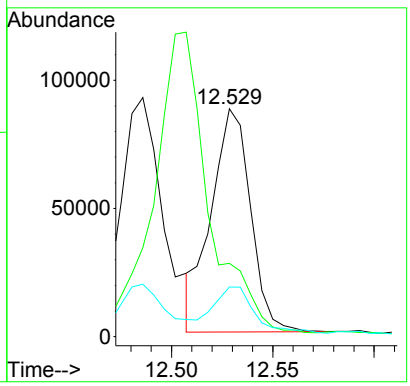


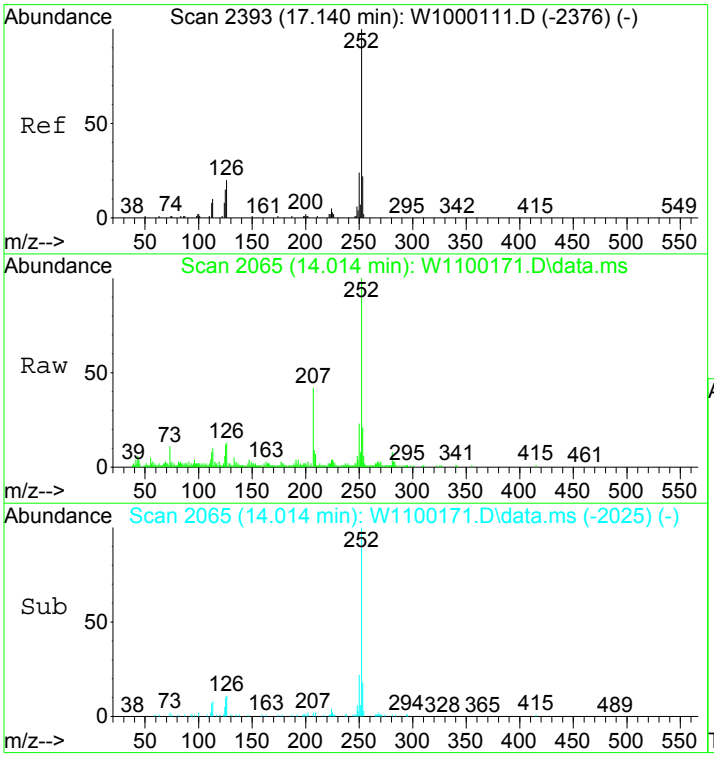


#85
Chrysene
Concen: 1.95 µg/mL
RT: 12.529 min Scan# 1787
Delta R.T. -0.010 min
Lab File: W1100171.D
Acq: 21 Feb 2011 5:31 pm

Tgt Ion:228 Resp: 118034

Ion	Ratio	Lower	Upper
228	100		
226	186.8	23.6	35.4#
229	21.4	15.8	23.6

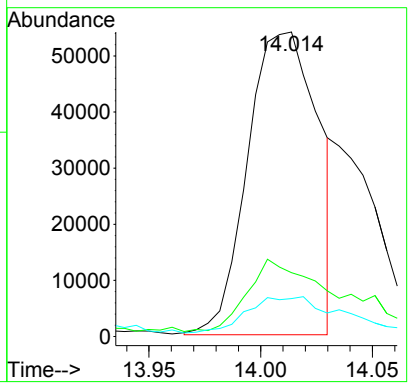


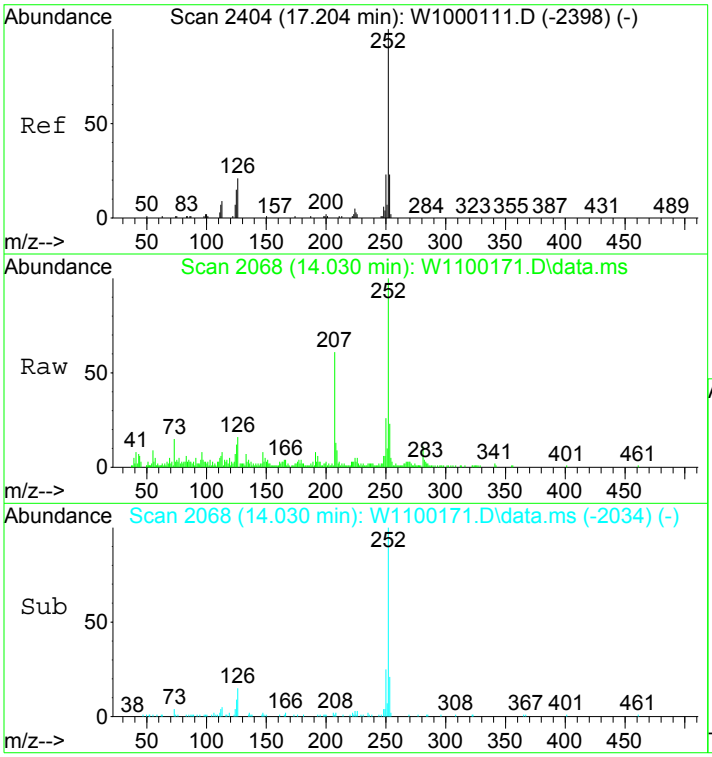


#88
Benzo(b)fluoranthene
Concen: 2.14 µg/mL m
RT: 14.014 min Scan# 2065
Delta R.T. 0.005 min
Lab File: W1100171.D
Acq: 21 Feb 2011 5:31 pm

Tgt Ion:252 Resp: 118581

Ion	Ratio	Lower	Upper
252	100		
253	31.0	17.9	26.9#
125	15.9	7.7	11.5#

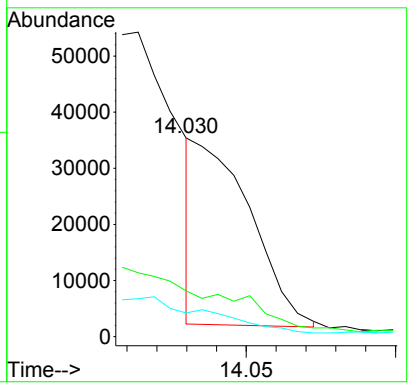


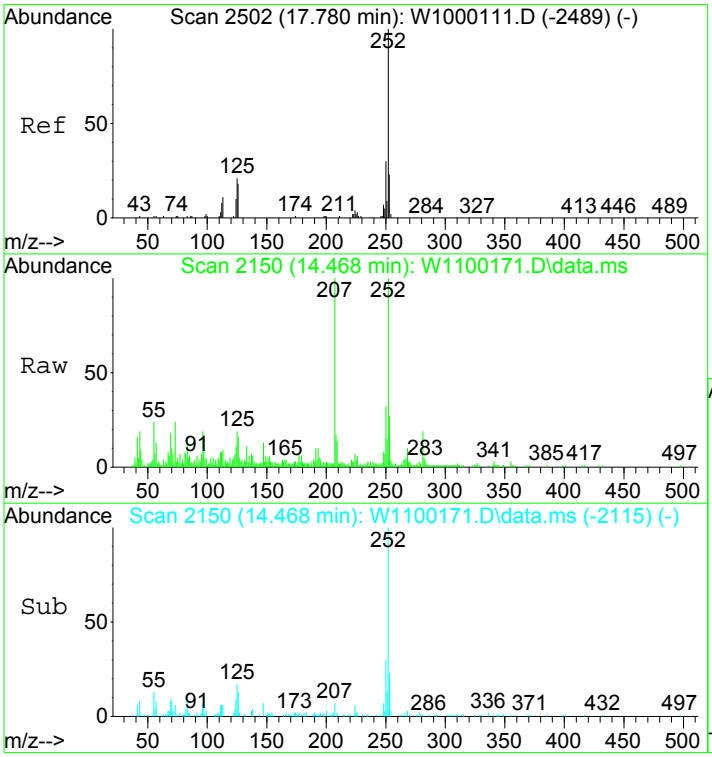


#89
Benzo(k)fluoranthene
Concen: 0.78 µg/mL m
RT: 14.030 min Scan# 2068
Delta R.T. -0.026 min
Lab File: W1100171.D
Acq: 21 Feb 2011 5:31 pm

Tgt Ion:252 Resp: 42266

Ion	Ratio	Lower	Upper
252	100		
253	87.0	14.9	22.3#
125	44.5	8.8	13.2#

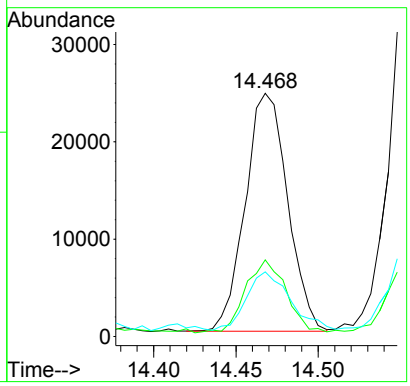


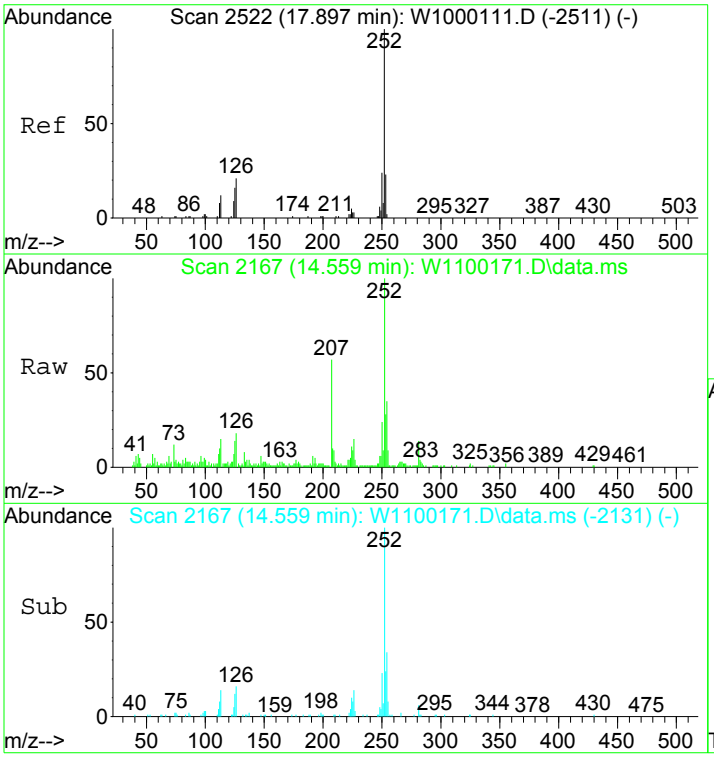


#90
Benzo(e)pyrene
Concen: 0.89 µg/mL
RT: 14.468 min Scan# 2150
Delta R.T. -0.014 min
Lab File: W1100171.D
Acq: 21 Feb 2011 5:31 pm

Tgt Ion:252 Resp: 43800

Ion	Ratio	Lower	Upper
252	100		
250	30.0	23.0	34.4
253	25.3	17.8	26.8

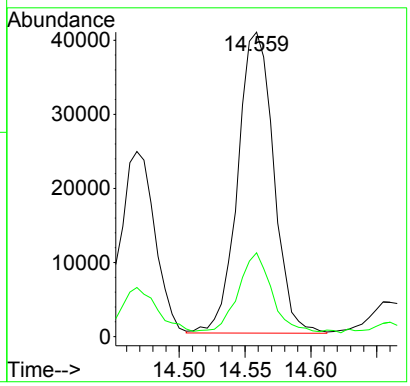


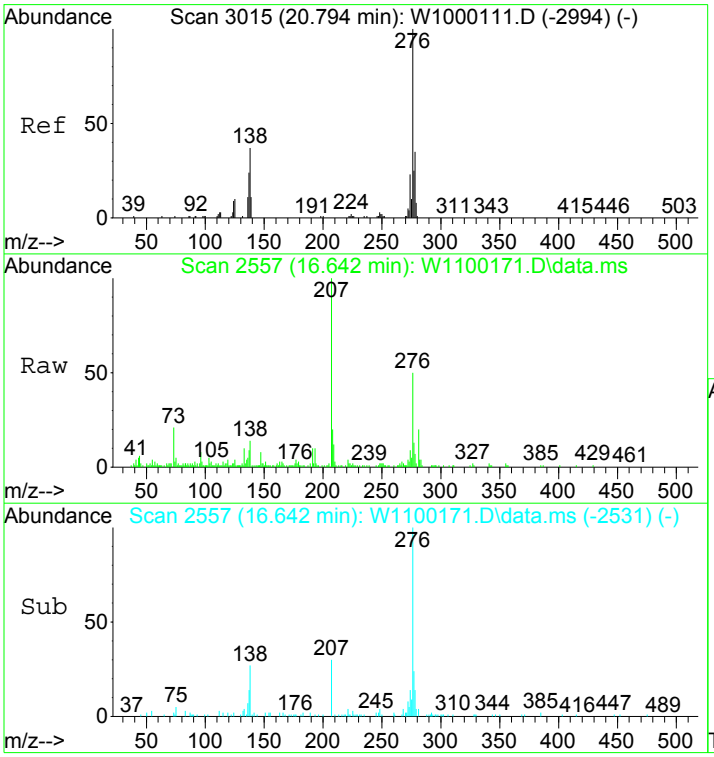


#91
Benzo(a)pyrene (CCC)
Concen: 1.51 µg/mL
RT: 14.559 min Scan# 2167
Delta R.T. -0.018 min
Lab File: W1100171.D
Acq: 21 Feb 2011 5:31 pm

Tgt Ion:252 Resp: 76972

Ion	Ratio	Lower	Upper
252	100		
253	24.4	16.6	25.0

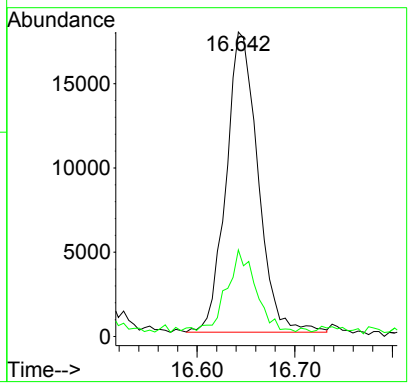


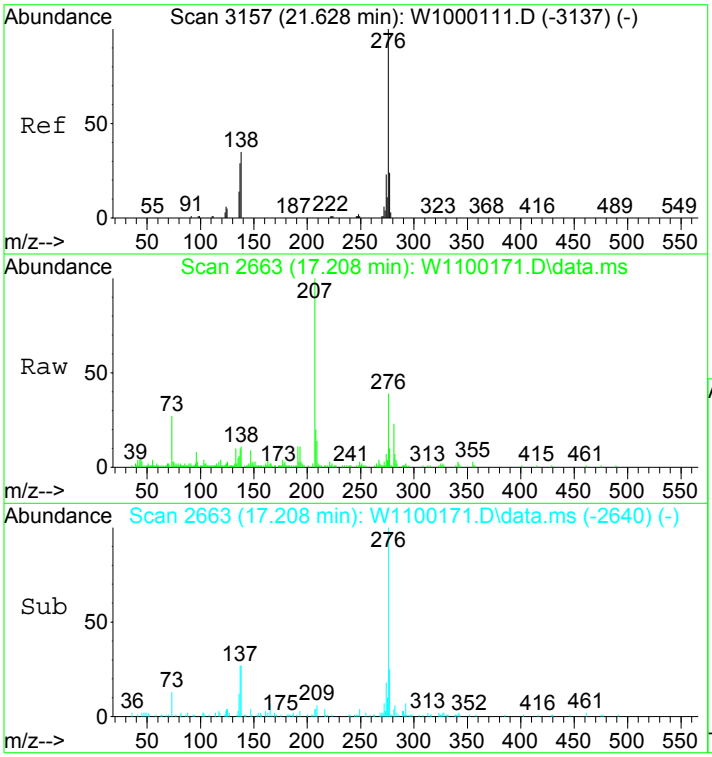


#93
Indeno(1,2,3-cd)pyrene
Concen: 0.80 µg/mL
RT: 16.642 min Scan# 2557
Delta R.T. -0.068 min
Lab File: W1100171.D
Acq: 21 Feb 2011 5:31 pm

Tgt Ion:276 Resp: 40344

Ion	Ratio	Lower	Upper
276	100		
138	25.0	21.4	32.2

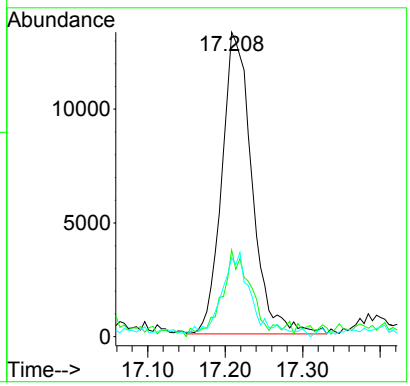




#95
Benzo(g,h,i)perylene
Concen: 0.87 µg/mL
RT: 17.208 min Scan# 2663
Delta R.T. -0.085 min
Lab File: W1100171.D
Acq: 21 Feb 2011 5:31 pm

Tgt Ion:276 Resp: 35945

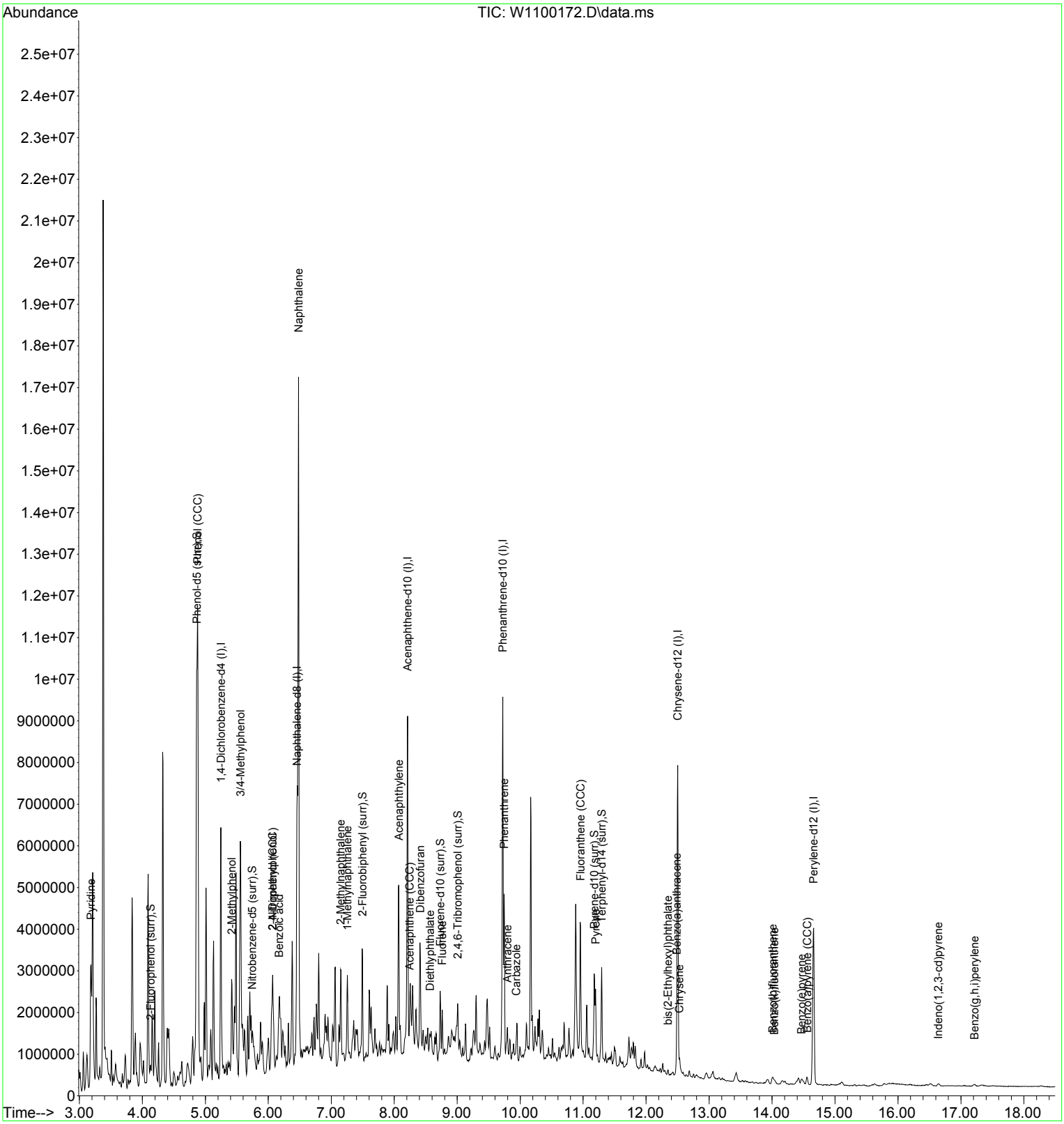
Ion	Ratio	Lower	Upper
276	100		
138	26.7	21.2	31.8
277	23.7	19.3	28.9



Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100172.D
Acq On : 21 Feb 2011 6:04 pm
Operator : tdd
Sample : 0111-20 1R-ACB-M0010-02 LD
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Feb 21 19:10:09 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Mon Feb 21 10:04:38 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100172.D
Acq On : 21 Feb 2011 6:04 pm
Operator : tdd
Sample : 0111-20 1R-ACB-M0010-02 LD
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Feb 21 19:10:09 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Mon Feb 21 10:04:38 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	5.247	152	897371	40.00	µg/mL	0.00
21) Naphthalene-d8 (I)	6.454	136	3211606	40.00	µg/mL	0.00
36) Acenaphthene-d10 (I)	8.212	164	1892982	40.00	µg/mL	0.00
64) Phenanthrene-d10 (I)	9.724	188	3475619	40.00	µg/mL	0.00
78) Chrysene-d12 (I)	12.502	240	3264792	40.00	µg/mL	0.00
87) Perylene-d12 (I)	14.660	264	2597182	40.00	µg/mL	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (surr)	4.131	112	209295	8.55	µg/mL	-0.02
5) Phenol-d5 (surr)	4.868	99	272058	9.56	µg/mL	0.00
19) Nitrobenzene-d5 (surr)	5.744	82	287163	10.28	µg/mL	0.00
39) 2-Fluorobiphenyl (surr)	7.496	172	566923	9.69	µg/mL	-0.01
57) Fluorene-d10 (surr)	8.730	176	413838	7.96	µg/mL	0.00
65) 2,4,6-Tribromophenol (...	9.008	330	81678	10.26	µg/mL	0.00
75) Pyrene-d10 (surr)	11.177	212	752659	10.39	µg/mL	0.00
77) Terphenyl-d14 (surr)	11.295	244	621747	10.78	µg/mL	0.02
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	0.000		0	N.D. d		
3) Pyridine	3.185	79	1662446m	57.84	µg/mL	
6) Phenol (CCC)	4.878	94	5585231	188.02	µg/mL#	93
7) Aniline	0.000		0	N.D. d		
8) bis(2-Chloroethyl)ether	0.000		0	N.D. d		
9) 2-Chlorophenol	0.000		0	N.D. d		
10) 1,3-Dichlorobenzene	0.000		0	N.D.		
11) 1,4-Dichlorobenzene (CCC)	0.000		0	N.D.		
12) Benzyl alcohol	0.000		0	N.D. d		
13) 1,2-Dichlorobenzene	0.000		0	N.D. d		
14) 2-Methylphenol	5.418	107	530883	27.00	µg/mL	97
15) bis(2-Chloroisopropyl)...	0.000		0	N.D. d		
16) 3/4-Methylphenol	5.557	107	2058921	79.98	µg/mL	94
17) N-Nitrso-di-n-propylam...	0.000		0	N.D. d		
18) Hexachloroethane	0.000		0	N.D. d		
20) Nitrobenzene	0.000		0	N.D. d		
22) Isophorone	0.000		0	N.D. d		
23) 2,4-Dimethylphenol	6.070	107	344500	14.89	µg/mL	89
24) 2-Nitrophenol (CCC)	6.070	139	227682	15.51	µg/mL#	77
25) Benzoic acid	6.171	105	396337	25.47	µg/mL#	1
26) bis(2-Chloroethoxy)met...	0.000		0	N.D. d		
27) 2,4-Dichlorophenol (CCC)	0.000		0	N.D. d		
28) 1,2,4-Trichlorobenzene	0.000		0	N.D. d		
29) Naphthalene	6.481	128	8221858	106.30	µg/mL#	64
30) 4-Chloroaniline	0.000		0	N.D. d		
31) Hexachlorobutadiene (CCC)	0.000		0	N.D.		
32) 4-Chloro-3-methylpheno...	0.000		0	N.D. d		
33) 2-Methylnaphthalene	7.149	142	690477	13.94	µg/mL	100
34) 1-Methylnaphthalene	7.256	142	546423	11.41	µg/mL	96
35) Hexachlorocyclopentadi...	0.000		0	N.D.		
37) 2,4,6-Trichlorophenol ...	0.000		0	N.D. d		
38) 2,4,5-Trichlorophenol	0.000		0	N.D. d		
40) 2-Chloronaphthalene	0.000		0	N.D. d		
41) 2-Nitroaniline	0.000		0	N.D. d		
42) 1,4-Dinitrobenzene	0.000		0	N.D. d		
43) Dimethylphthalate	0.000		0	N.D. d		
44) 1,3-Dinitrobenzene	0.000		0	N.D. d		
45) 2,6-Dinitrotoluene	0.000		0	N.D. d		
46) 1,2-Dinitrobenzene	0.000		0	N.D. d		

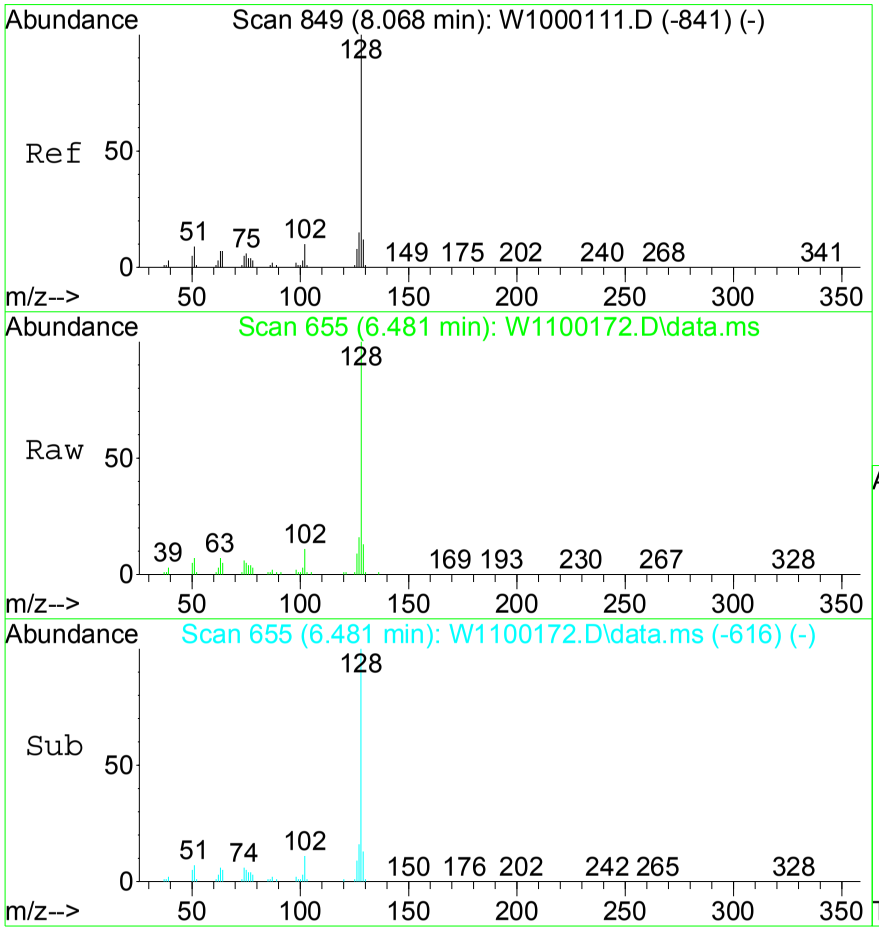
Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100172.D
Acq On : 21 Feb 2011 6:04 pm
Operator : tdd
Sample : 0111-20 1R-ACB-M0010-02 LD
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Feb 21 19:10:09 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Mon Feb 21 10:04:38 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
47) Acenaphthylene	8.073	152	2093917	27.50 µg/mL#	82
48) 3-Nitroaniline	0.000		0	N.D. d	
49) Acenaphthene (CCC)	8.244	154	62647	1.29 µg/mL#	1
50) 2,4-Dinitrophenol (SPCC)	0.000		0	N.D. d	
51) 4-Nitrophenol (SPCC)	0.000		0	N.D. d	
52) 2,4-Dinitrotoluene	0.000		0	N.D. d	
53) Dibenzofuran	8.415	168	654576	9.86 µg/mL#	83
54) 2,3,5,6-Tetrachlorophenol	0.000		0	N.D.	
55) 2,3,4,6-Tetrachlorophenol	0.000		0	N.D.	
56) Diethylphthalate	8.570	149	95069	1.72 µg/mL#	86
58) 4-Chlorophenyl-phenyle...	0.000		0	N.D.	
59) Fluorene	8.762	166	483637	8.87 µg/mL#	97
60) 4-Nitroaniline	0.000		0	N.D. d	
61) 4,6-Dinitro2-methylphenol	0.000		0	N.D. d	
62) N-Nitrosodiphenylamine...	0.000		0	N.D. d	
63) Azobenzene	0.000		0	N.D. d	
66) 4-Bromophenyl-phenylether	0.000		0	N.D.	
67) Hexachlorobenzene	0.000		0	N.D.	
68) Pentachlorophenol (CCC)	0.000		0	N.D.	
69) Phenanthrene	9.745	178	1686639	21.50 µg/mL	99
70) Anthracene	9.799	178	371108	4.74 µg/mL	97
71) Carbazole	9.938	167	101560	1.49 µg/mL#	78
72) Di-n-butylphthalate	0.000		0	N.D. d	
73) Fluoranthene (CCC)	10.958	202	804904	9.86 µg/mL	98
74) Benzidine	0.000		0	N.D. d	
76) Pyrene	11.198	202	691504	7.88 µg/mL#	88
79) Butylbenzylphthalate	0.000		0	N.D. d	
80) 3,3-Dimethylbenzidine	0.000		0	N.D. d	
81) bis(2-ethylhexyl)adipate	0.000		0	N.D. d	
82) bis(2-Ethylhexyl)phtha...	12.347	149	49533	1.00 µg/mL#	98
83) 3,3'-Dichlorobenzidine	0.000		0	N.D. d	
84) Benzo(a)anthracene	12.486	228	155187	1.97 µg/mL#	64
85) Chrysene	12.529	228	138276	1.86 µg/mL#	1
86) Di-n-octylphthalate (CCC)	0.000		0	N.D. d	
88) Benzo(b)fluoranthene	14.008	252	138735m	2.14 µg/mL	Manual Int. "II" (TDD)
89) Benzo(k)fluoranthene	14.035	252	41874m	0.66 µg/mL	
90) Benzo(e)pyrene	14.468	252	50794	0.88 µg/mL	99
91) Benzo(a)pyrene (CCC)	14.559	252	86534	1.45 µg/mL	93
92) Perylene	0.000		0	N.D. d	
93) Indeno(1,2,3-cd)pyrene	16.642	276	43017	0.73 µg/mL	90
94) Dibenz(a,h)anthracene	0.000		0	N.D. d	
95) Benzo(g,h,i)perylene	17.214	276	38236	0.79 µg/mL	97

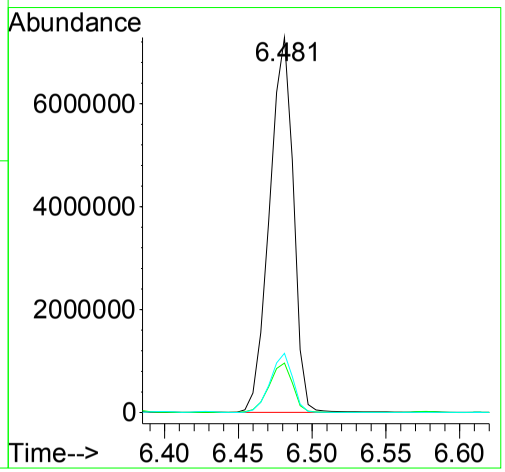
(#) = qualifier out of range (m) = manual integration (+) = signals summed

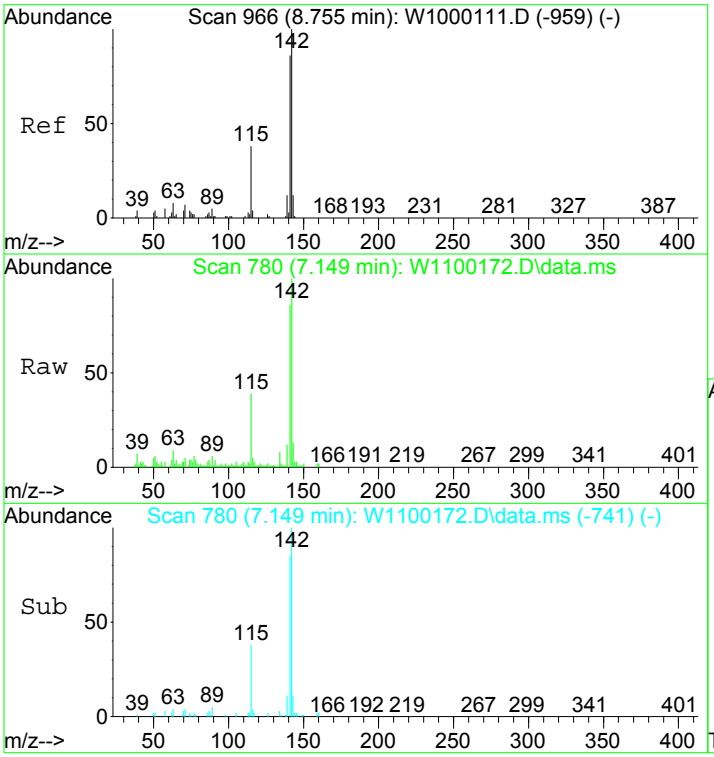


#29
Naphthalene
Concen: 106.30 µg/mL
RT: 6.481 min Scan# 655
Delta R.T. 0.000 min
Lab File: W1100172.D
Acq: 21 Feb 2011 6:04 pm

Tgt Ion:128 Resp: 8221858

Ion	Ratio	Lower	Upper
128	100		
129	13.0	17.0	25.6#
127	14.7	35.1	52.7#

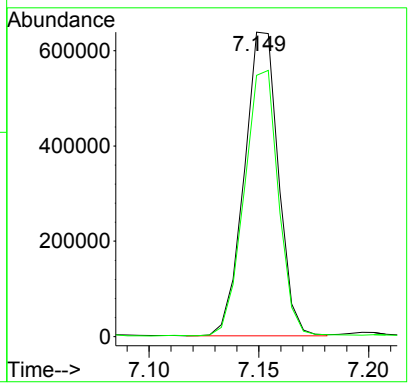


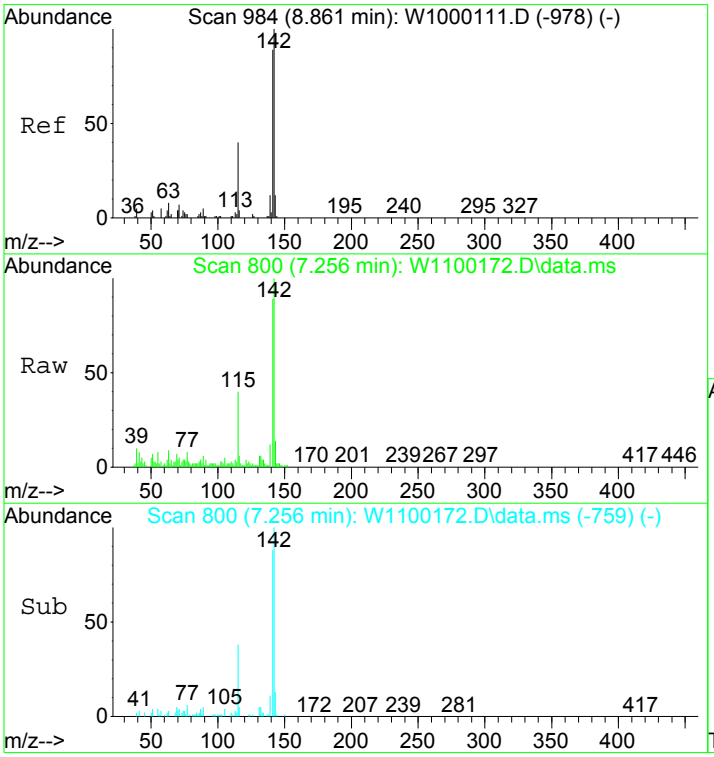


#33
2-Methylnaphthalene
Concen: 13.94 µg/mL
RT: 7.149 min Scan# 780
Delta R.T. 0.003 min
Lab File: W1100172.D
Acq: 21 Feb 2011 6:04 pm

Tgt Ion:142 Resp: 690477

Ion	Ratio	Lower	Upper
142	100		
141	87.2	69.7	104.5

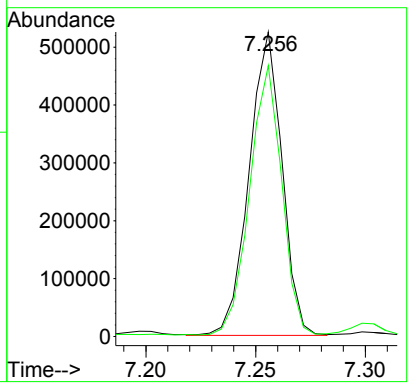


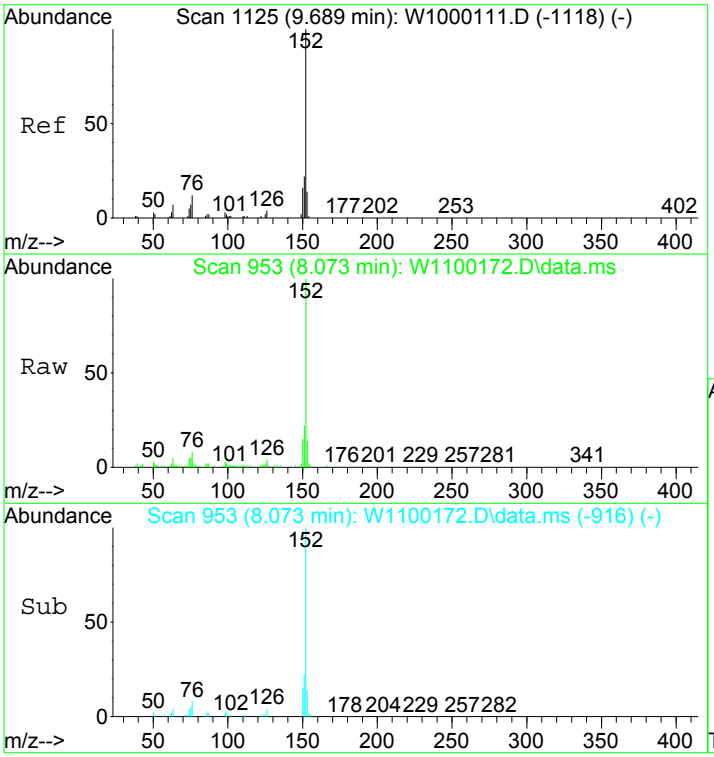


#34
1-Methylnaphthalene
Concen: 11.41 µg/mL
RT: 7.256 min Scan# 800
Delta R.T. 0.010 min
Lab File: W1100172.D
Acq: 21 Feb 2011 6:04 pm

Tgt Ion:142 Resp: 546423

Ion	Ratio	Lower	Upper
142	100		
141	86.8	72.5	108.7

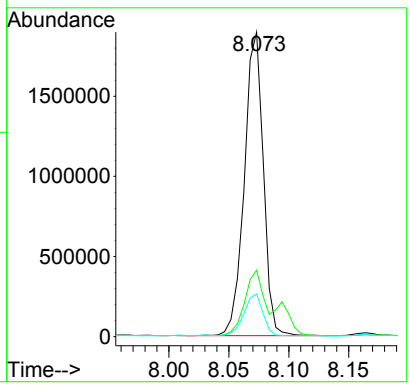


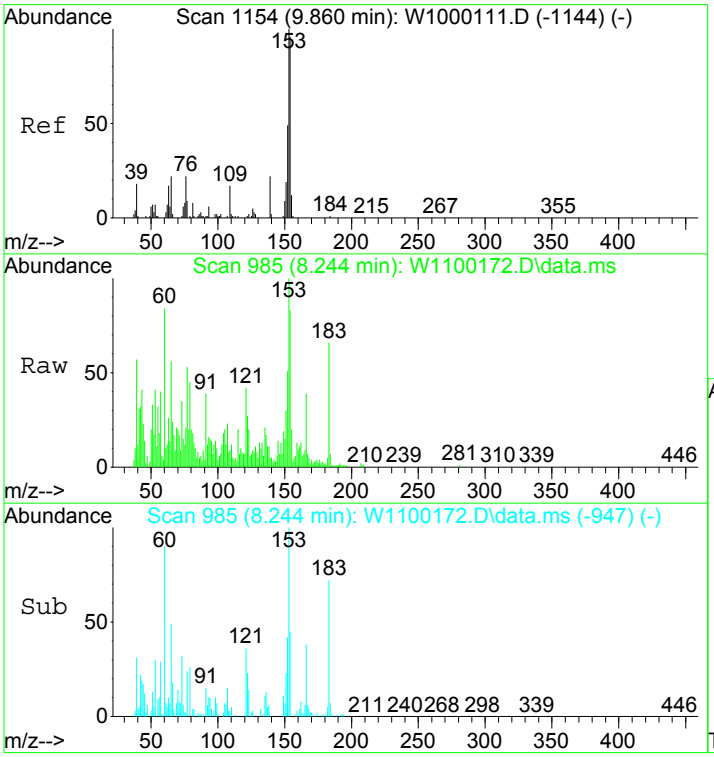


#47
Acenaphthylene
Concen: 27.50 µg/mL
RT: 8.073 min Scan# 953
Delta R.T. -0.008 min
Lab File: W1100172.D
Acq: 21 Feb 2011 6:04 pm

Tgt Ion:152 Resp: 2093917

Ion	Ratio	Lower	Upper
152	100		
151	31.0	15.0	22.4#
153	13.9	10.2	15.2

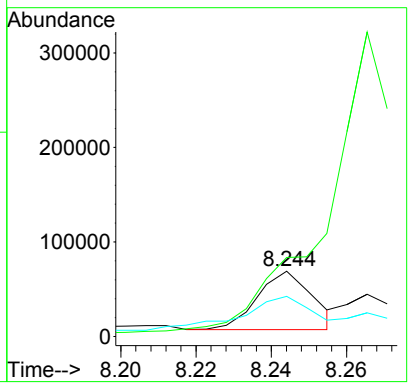


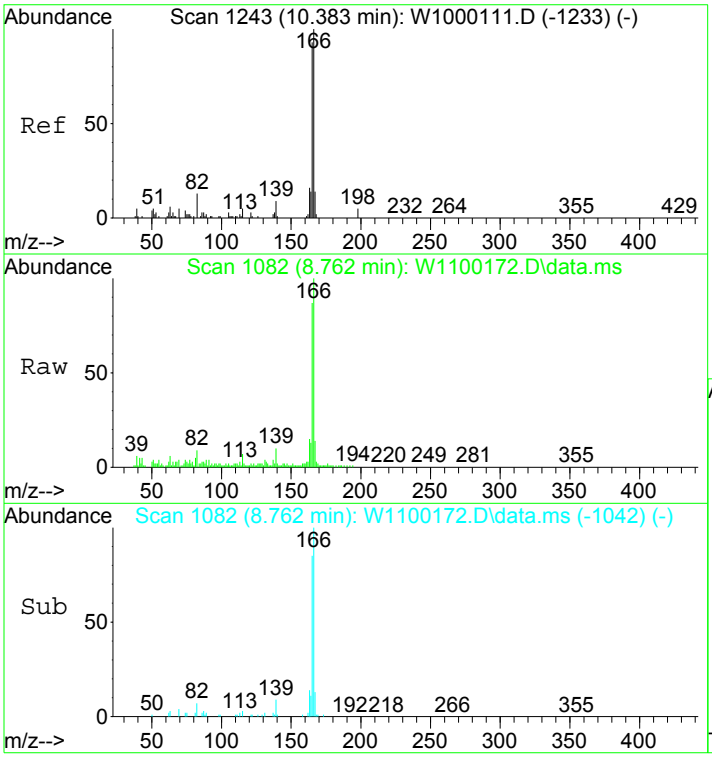


#49
Acenaphthene (CCC)
Concen: 1.29 µg/mL
RT: 8.244 min Scan# 985
Delta R.T. -0.005 min
Lab File: W1100172.D
Acq: 21 Feb 2011 6:04 pm

Tgt Ion:154 Resp: 62647

Ion	Ratio	Lower	Upper
154	100		
153	657.9	85.4	128.0#
152	81.5	41.4	62.2#

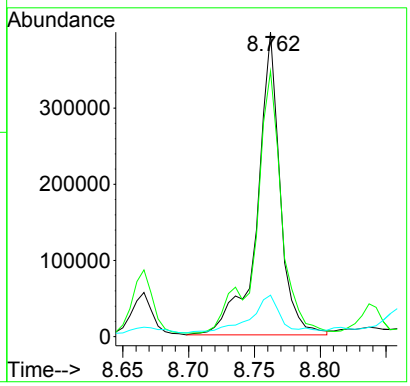


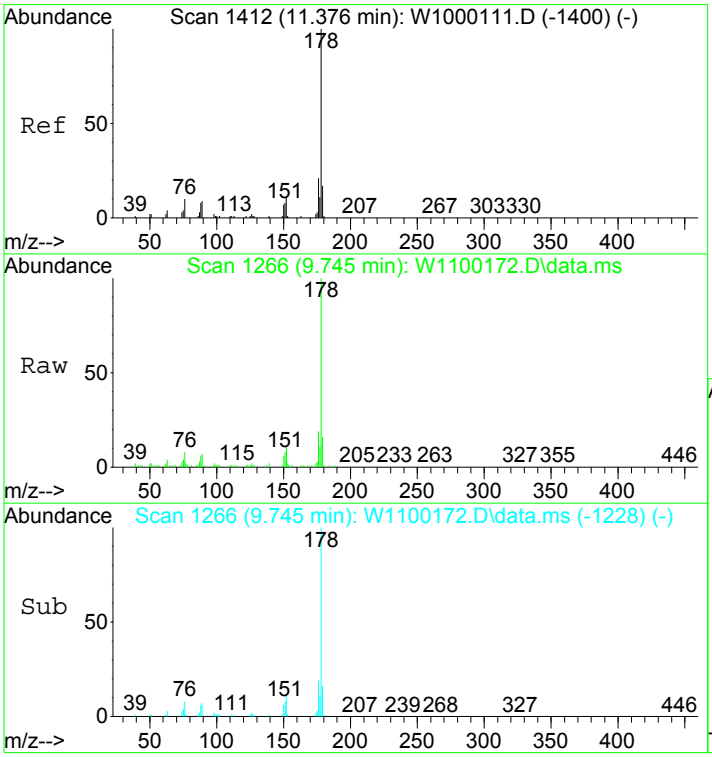


#59
Fluorene
Concen: 8.87 µg/mL
RT: 8.762 min Scan# 1082
Delta R.T. 0.003 min
Lab File: W1100172.D
Acq: 21 Feb 2011 6:04 pm

Tgt Ion:166 Resp: 483637

Ion	Ratio	Lower	Upper
166	100		
165	96.3	75.4	113.0
167	17.0	10.9	16.3#

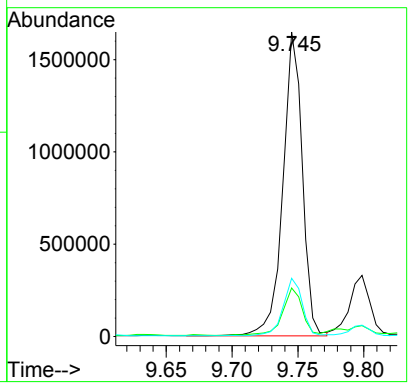


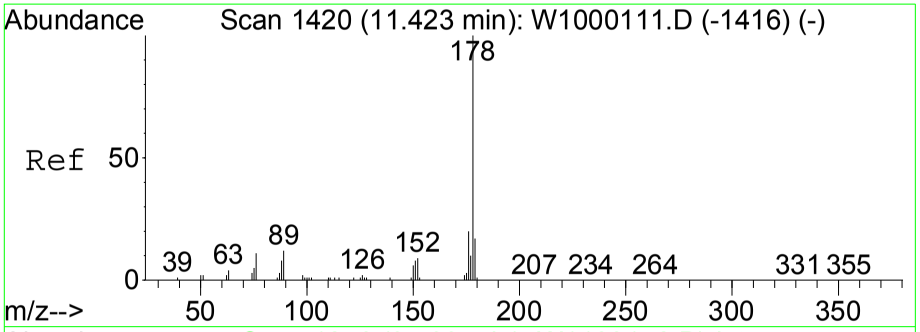


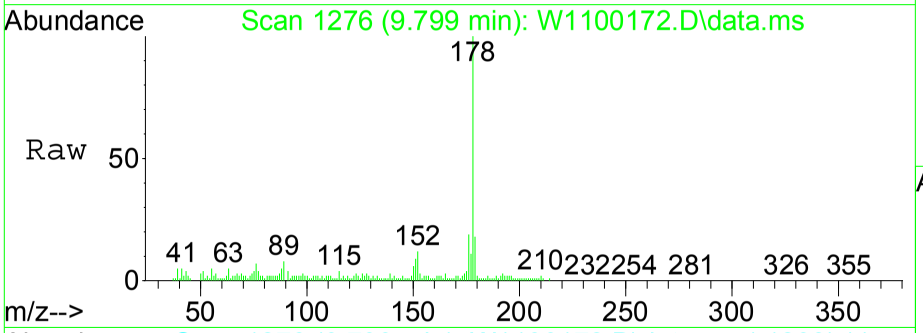
#69
Phenanthrene
Concen: 21.50 µg/mL
RT: 9.745 min Scan# 1266
Delta R.T. -0.005 min
Lab File: W1100172.D
Acq: 21 Feb 2011 6:04 pm

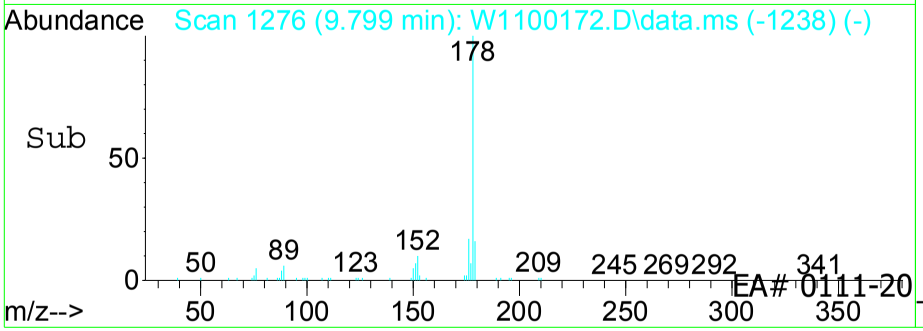
Tgt Ion:178 Resp: 1686639

Ion	Ratio	Lower	Upper
178	100		
179	16.1	12.5	18.7
176	18.8	15.0	22.4





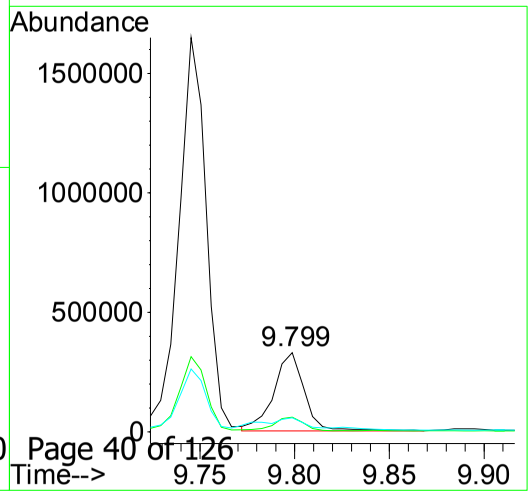


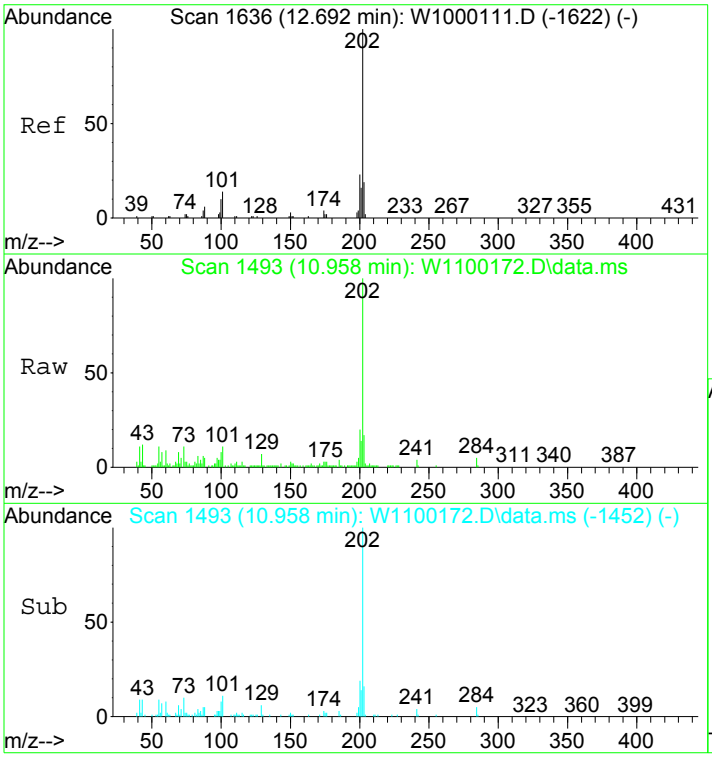


#70
Anthracene
Concen: 4.74 µg/mL
RT: 9.799 min Scan# 1276
Delta R.T. -0.004 min
Lab File: W1100172.D
Acq: 21 Feb 2011 6:04 pm

Tgt Ion:178 Resp: 371108

Ion	Ratio	Lower	Upper
178	100		
176	17.2	15.0	22.4
179	17.1	12.8	19.2

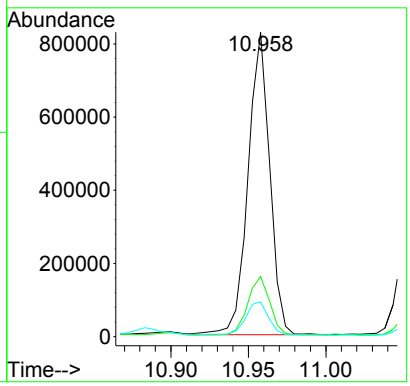


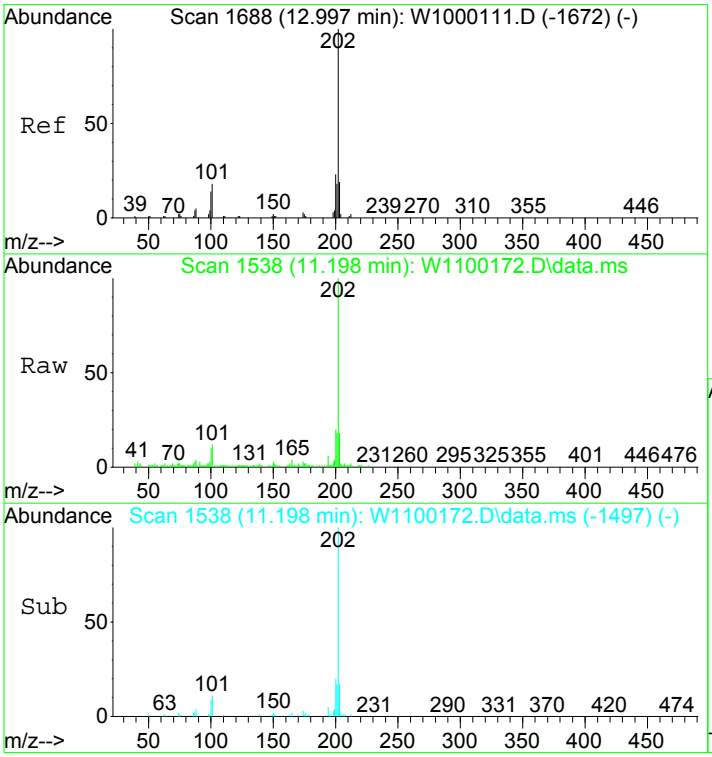


#73
Fluoranthene (CCC)
Concen: 9.86 µg/mL
RT: 10.958 min Scan# 1493
Delta R.T. 0.011 min
Lab File: W1100172.D
Acq: 21 Feb 2011 6:04 pm

Tgt Ion:202 Resp: 804904

Ion	Ratio	Lower	Upper
202	100		
200	19.7	16.5	24.7
101	11.9	8.6	12.8

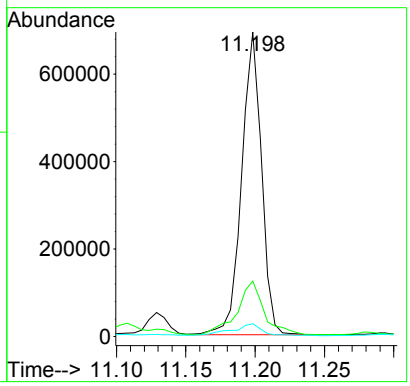


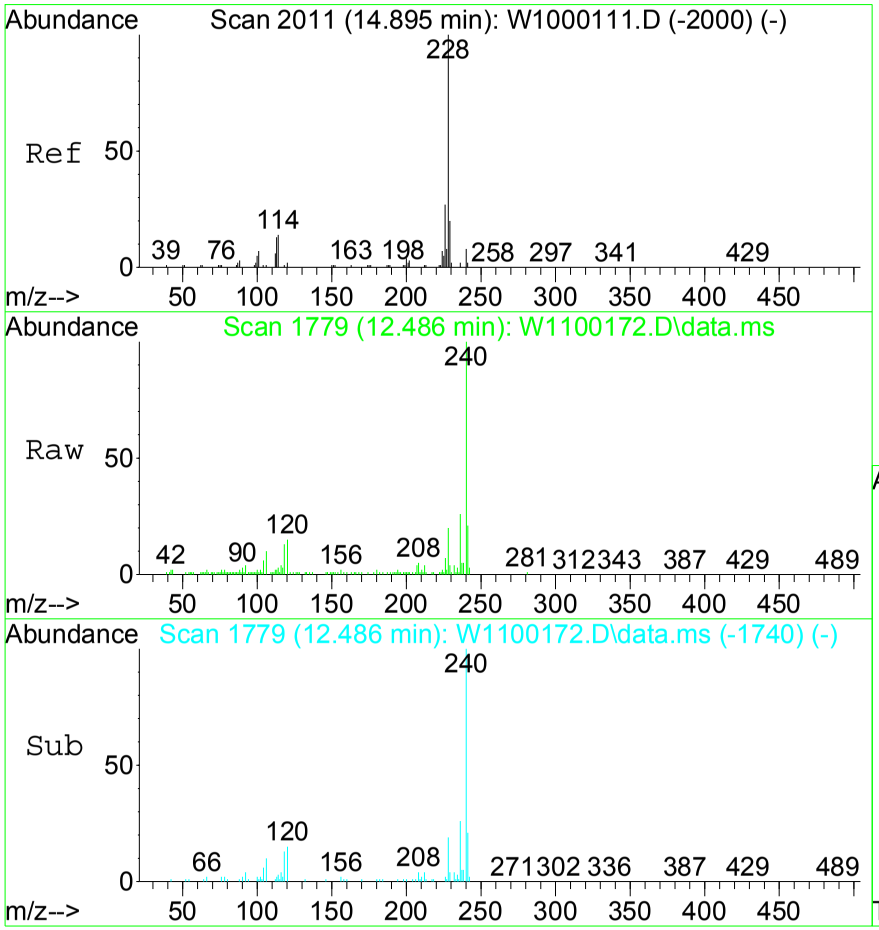


#76
Pyrene
Concen: 7.88 µg/mL
RT: 11.198 min Scan# 1538
Delta R.T. 0.009 min
Lab File: W1100172.D
Acq: 21 Feb 2011 6:04 pm

Tgt Ion:202 Resp: 691504

Ion	Ratio	Lower	Upper
202	100		
203	23.9	14.5	21.7#
88	5.9	3.4	5.0#

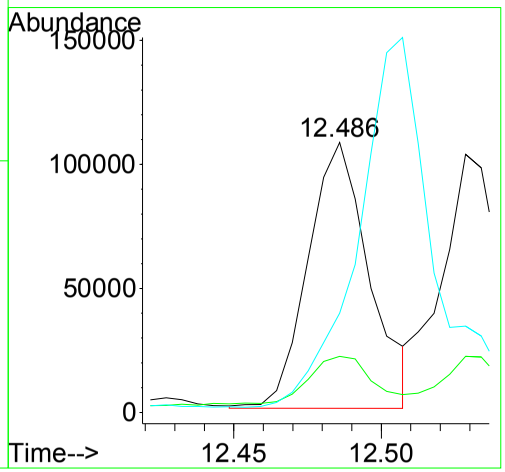


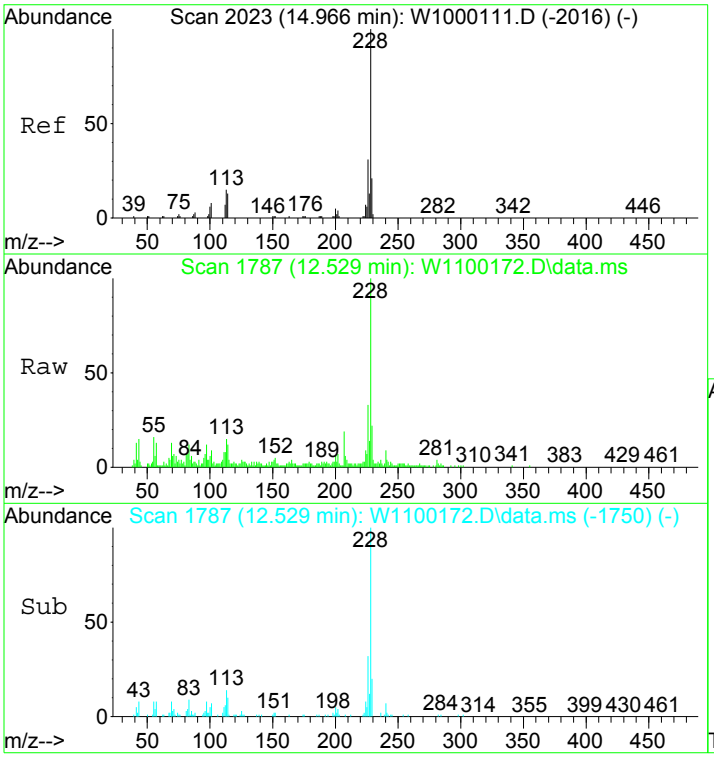


#84
Benzo(a)anthracene
Concen: 1.97 µg/mL
RT: 12.486 min Scan# 1779
Delta R.T. -0.000 min
Lab File: W1100172.D
Acq: 21 Feb 2011 6:04 pm

Tgt Ion:228 Resp: 155187

Ion	Ratio	Lower	Upper
228	100		
229	24.2	14.7	22.1#
226	0.0	21.0	31.6#

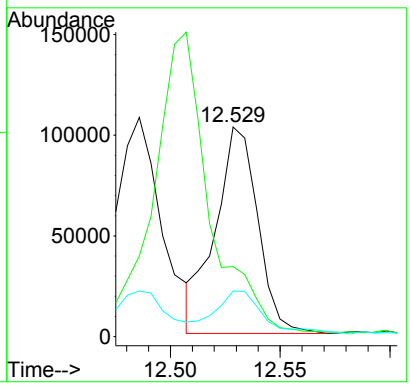


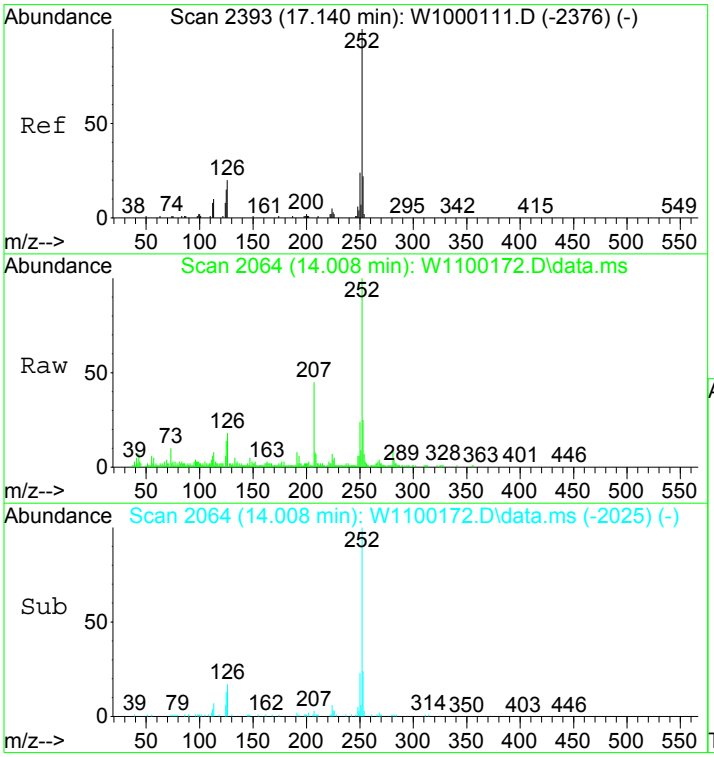


#85
Chrysene
Concen: 1.86 µg/mL
RT: 12.529 min Scan# 1787
Delta R.T. -0.010 min
Lab File: W1100172.D
Acq: 21 Feb 2011 6:04 pm

Tgt Ion:228 Resp: 138276

Ion	Ratio	Lower	Upper
228	100		
226	192.7	23.6	35.4#
229	24.0	15.8	23.6#

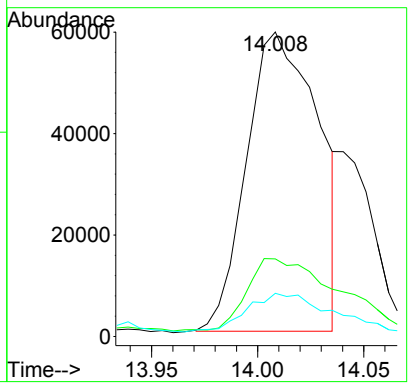


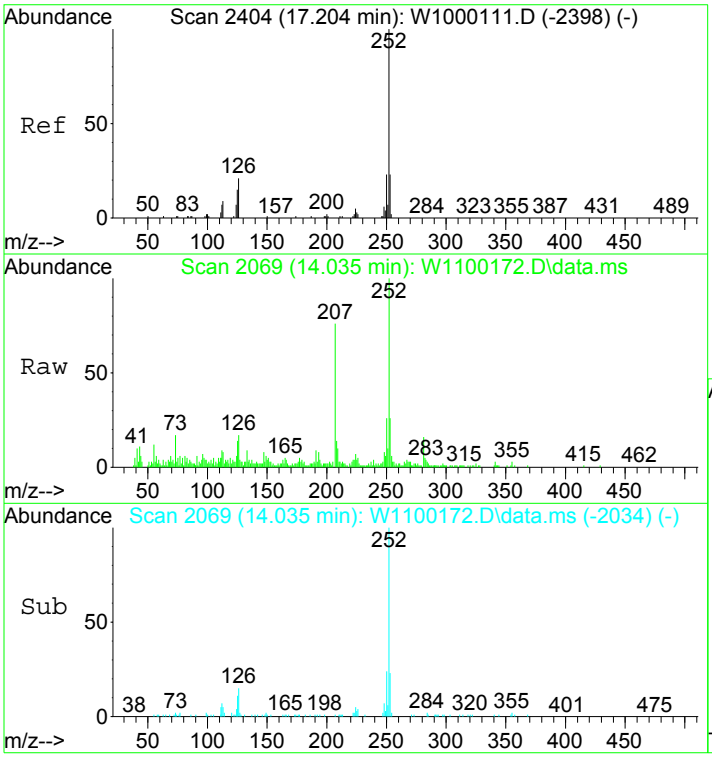


#88
Benzo(b)fluoranthene
Concen: 2.14 µg/mL m
RT: 14.008 min Scan# 2064
Delta R.T. -0.000 min
Lab File: W1100172.D
Acq: 21 Feb 2011 6:04 pm

Tgt Ion:252 Resp: 138735

Ion	Ratio	Lower	Upper
252	100		
253	32.7	17.9	26.9#
125	15.0	7.7	11.5#

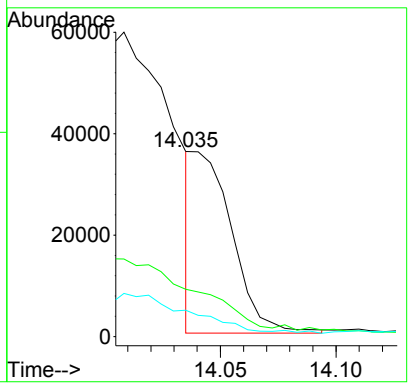


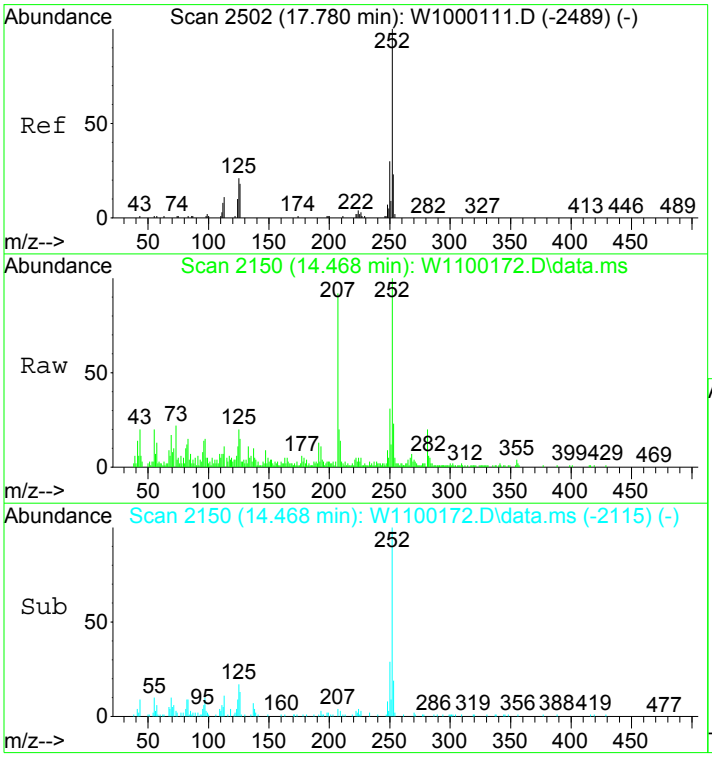


#89
Benzo(k)fluoranthene
Concen: 0.66 µg/mL m
RT: 14.035 min Scan# 2069
Delta R.T. -0.021 min
Lab File: W1100172.D
Acq: 21 Feb 2011 6:04 pm

Tgt Ion:252 Resp: 41874

Ion	Ratio	Lower	Upper
252	100		
253	108.2	14.9	22.3#
125	50.1	8.8	13.2#

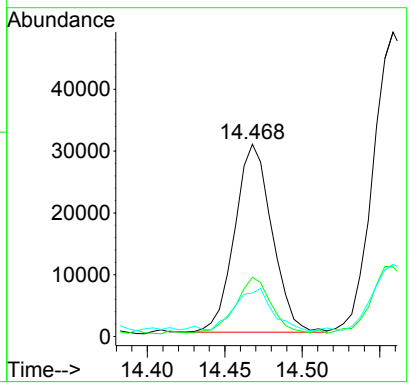


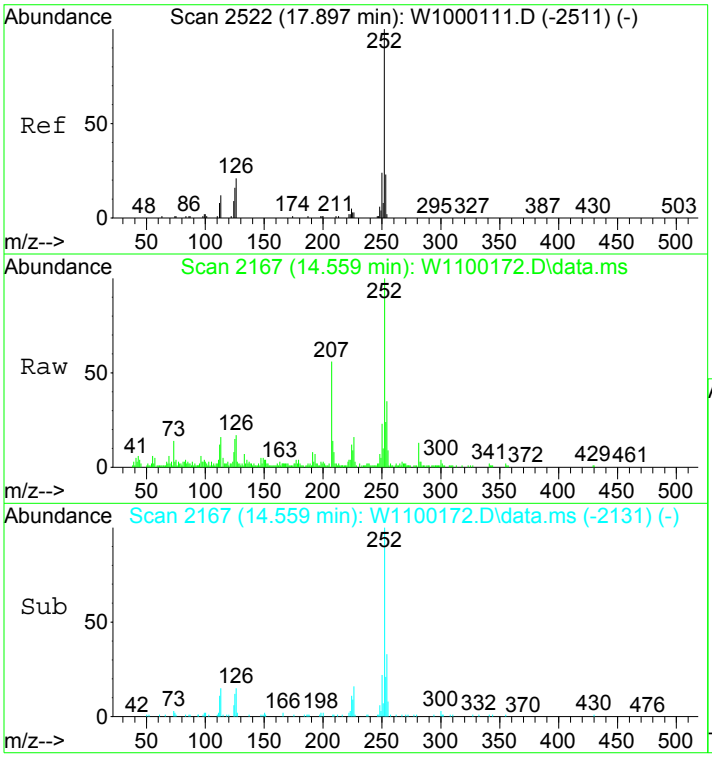


#90
Benzo(e)pyrene
Concen: 0.88 µg/mL
RT: 14.468 min Scan# 2150
Delta R.T. -0.014 min
Lab File: W1100172.D
Acq: 21 Feb 2011 6:04 pm

Tgt Ion:252 Resp: 50794

Ion	Ratio	Lower	Upper
252	100		
250	28.2	23.0	34.4
253	22.7	17.8	26.8

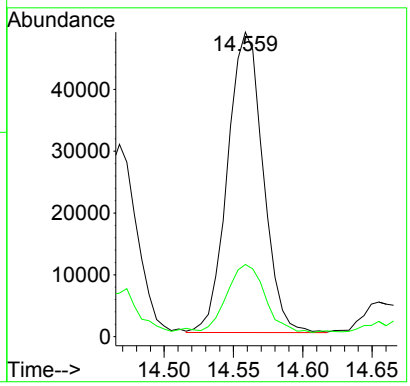


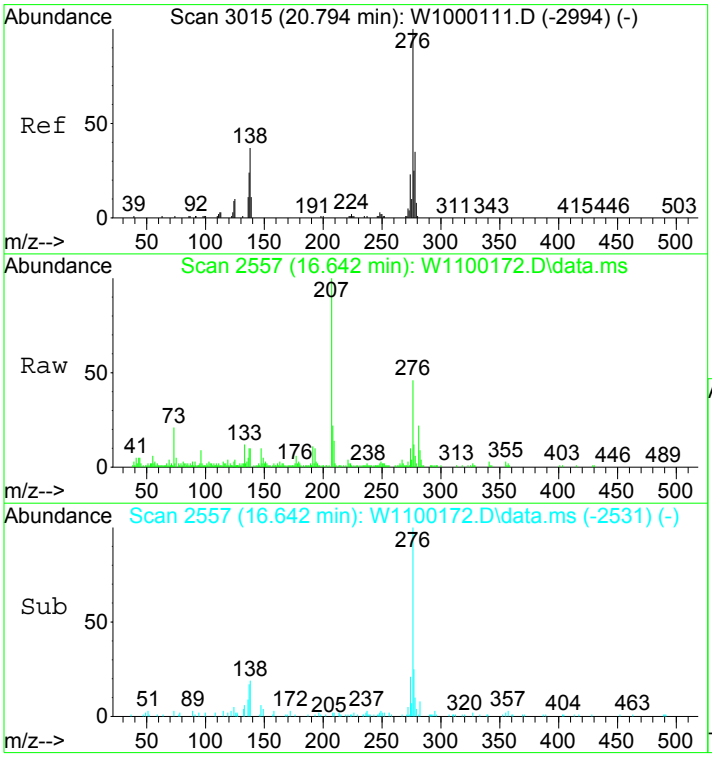


#91
Benzo(a)pyrene (CCC)
Concen: 1.45 µg/mL
RT: 14.559 min Scan# 2167
Delta R.T. -0.018 min
Lab File: W1100172.D
Acq: 21 Feb 2011 6:04 pm

Tgt Ion:252 Resp: 86534

Ion	Ratio	Lower	Upper
252	100		
253	24.0	16.6	25.0

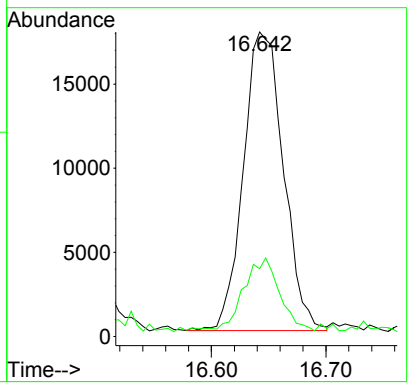


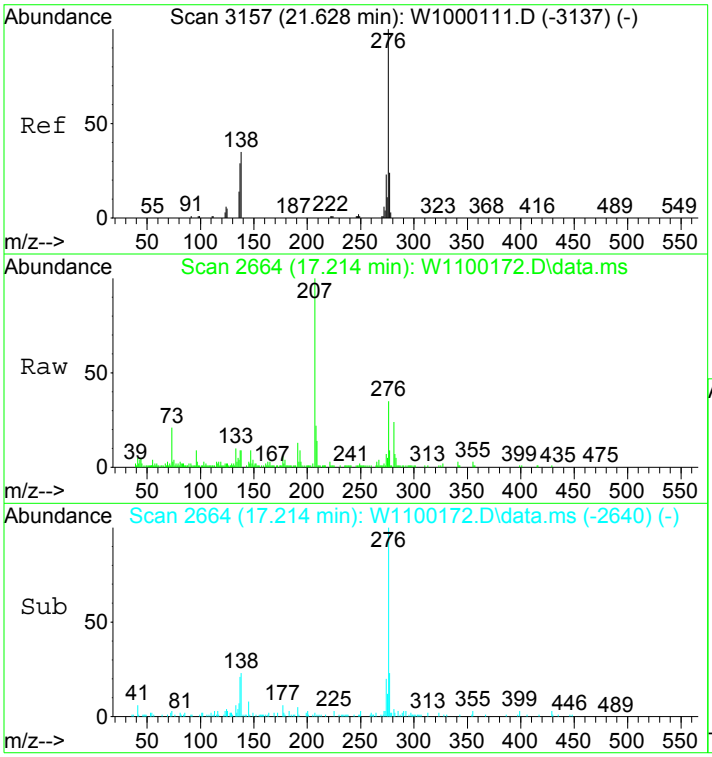


#93
Indeno(1,2,3-cd)pyrene
Concen: 0.73 µg/mL
RT: 16.642 min Scan# 2557
Delta R.T. -0.068 min
Lab File: W1100172.D
Acq: 21 Feb 2011 6:04 pm

Tgt Ion:276 Resp: 43017

Ion	Ratio	Lower	Upper
276	100		
138	21.7	21.4	32.2

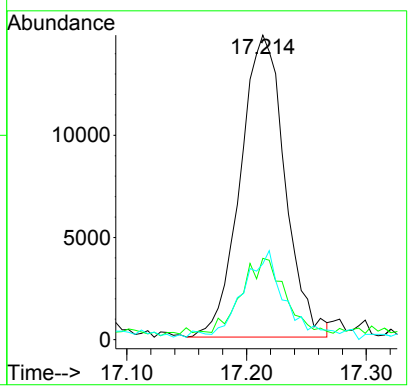




#95
Benzo(g,h,i)perylene
Concen: 0.79 µg/mL
RT: 17.214 min Scan# 2664
Delta R.T. -0.080 min
Lab File: W1100172.D
Acq: 21 Feb 2011 6:04 pm

Tgt Ion:276 Resp: 38236

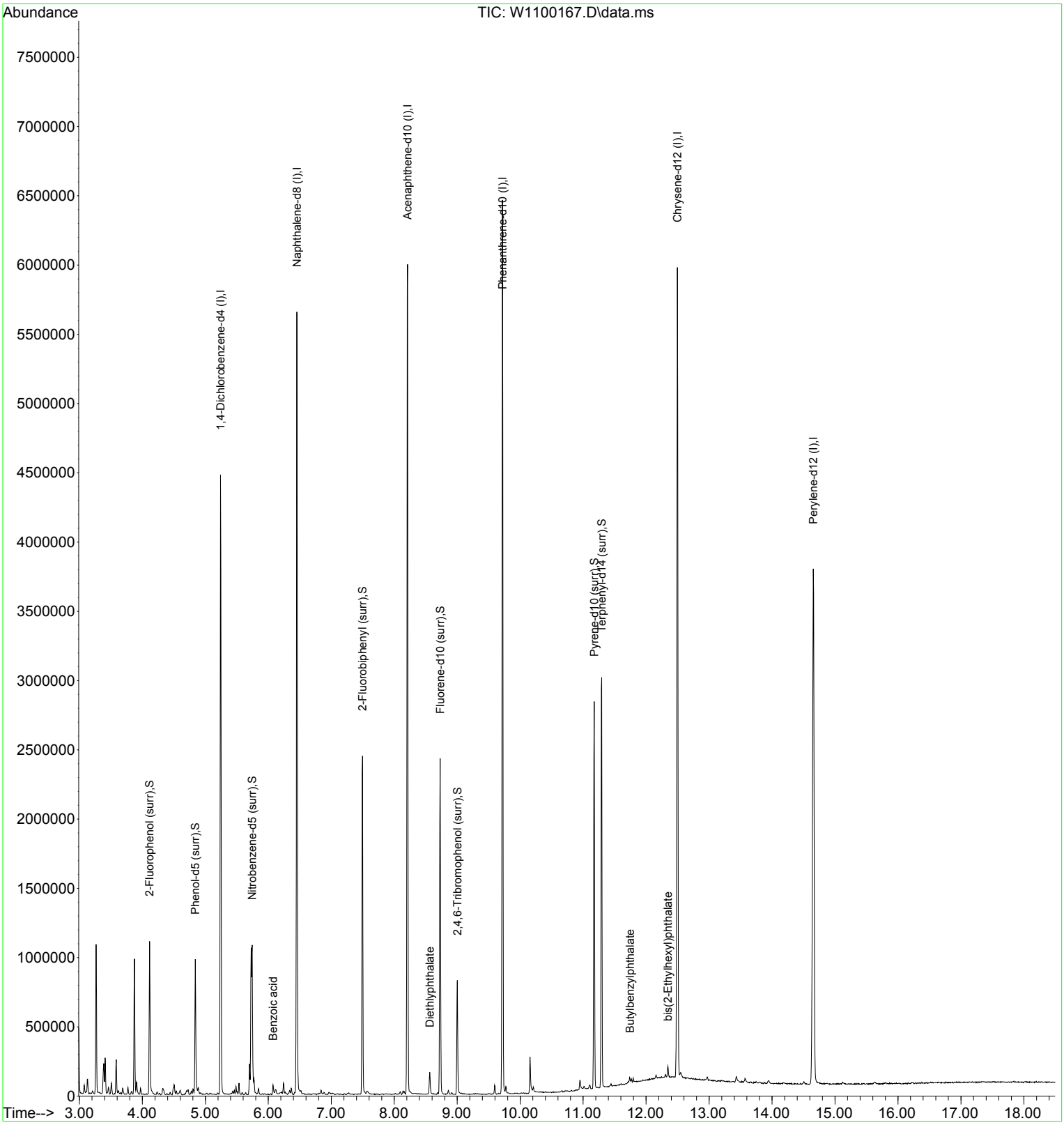
Ion	Ratio	Lower	Upper
276	100		
138	23.8	21.2	31.8
277	23.6	19.3	28.9



Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100167.D
Acq On : 21 Feb 2011 3:08 pm
Operator : tdd
Sample : 0111-20 ACB-M0010-FB
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 21 16:24:56 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Mon Feb 21 10:04:38 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100167.D
Acq On : 21 Feb 2011 3:08 pm
Operator : tdd
Sample : 0111-20 ACB-M0010-FB
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 21 16:24:56 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Mon Feb 21 10:04:38 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	5.242	152	725663	40.00	µg/mL	0.00
21) Naphthalene-d8 (I)	6.454	136	2519480	40.00	µg/mL	0.00
36) Acenaphthene-d10 (I)	8.212	164	1421101	40.00	µg/mL	0.00
64) Phenanthrene-d10 (I)	9.719	188	2538416	40.00	µg/mL	0.00
78) Chrysene-d12 (I)	12.496	240	2681283	40.00	µg/mL	0.00
87) Perylene-d12 (I)	14.655	264	2484829	40.00	µg/mL	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (surr)	4.114	112	300841	15.21	µg/mL	-0.03
5) Phenol-d5 (surr)	4.841	99	346781	15.07	µg/mL	-0.02
19) Nitrobenzene-d5 (surr)	5.744	82	353511	15.65	µg/mL	0.00
39) 2-Fluorobiphenyl (surr)	7.496	172	825474	18.79	µg/mL	-0.01
57) Fluorene-d10 (surr)	8.730	176	614909	15.76	µg/mL	0.00
65) 2,4,6-Tribromophenol (...	9.003	330	91293	15.71	µg/mL	-0.02
75) Pyrene-d10 (surr)	11.177	212	1152403	21.78	µg/mL	0.00
77) Terphenyl-d14 (surr)	11.294	244	918194	21.80	µg/mL	0.02
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	0.000		0	N.D.		
3) Pyridine	0.000		0	N.D.		
6) Phenol (CCC)	0.000		0	N.D. d		
7) Aniline	0.000		0	N.D.		
8) bis(2-Chloroethyl)ether	0.000		0	N.D.		
9) 2-Chlorophenol	0.000		0	N.D.		
10) 1,3-Dichlorobenzene	0.000		0	N.D.		
11) 1,4-Dichlorobenzene (CCC)	0.000		0	N.D.		
12) Benzyl alcohol	0.000		0	N.D. d		
13) 1,2-Dichlorobenzene	0.000		0	N.D. d		
14) 2-Methylphenol	0.000		0	N.D.		
15) bis(2-Chloroisopropyl)...	0.000		0	N.D.		
16) 3/4-Methylphenol	0.000		0	N.D.		
17) N-Nitrso-di-n-propylam...	0.000		0	N.D. d		
18) Hexachloroethane	0.000		0	N.D. d		
20) Nitrobenzene	0.000		0	N.D. d		
22) Isophorone	0.000		0	N.D.		
23) 2,4-Dimethylphenol	0.000		0	N.D. d		
24) 2-Nitrophenol (CCC)	0.000		0	N.D.		
25) Benzoic acid	6.075	105	18050m	1.48	µg/mL	
26) bis(2-Chloroethoxy)met...	0.000		0	N.D. d		
27) 2,4-Dichlorophenol (CCC)	0.000		0	N.D. d		
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.		
29) Naphthalene	0.000		0	N.D. d		
30) 4-Chloroaniline	0.000		0	N.D. d		
31) Hexachlorobutadiene (CCC)	0.000		0	N.D.		
32) 4-Chloro-3-methylpheno...	0.000		0	N.D.		
33) 2-Methylnaphthalene	0.000		0	N.D.		
34) 1-Methylnaphthalene	0.000		0	N.D.		
35) Hexachlorocyclopentadi...	0.000		0	N.D.		
37) 2,4,6-Trichlorophenol ...	0.000		0	N.D.		
38) 2,4,5-Trichlorophenol	0.000		0	N.D.		
40) 2-Chloronaphthalene	0.000		0	N.D.		
41) 2-Nitroaniline	0.000		0	N.D.		
42) 1,4-Dinitrobenzene	0.000		0	N.D.		
43) Dimethylphthalate	0.000		0	N.D.		
44) 1,3-Dinitrobenzene	0.000		0	N.D.		
45) 2,6-Dinitrotoluene	0.000		0	N.D.		
46) 1,2-Dinitrobenzene	0.000		0	N.D.		

Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100167.D
Acq On : 21 Feb 2011 3:08 pm
Operator : tdd
Sample : 0111-20 ACB-M0010-FB
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 21 16:24:56 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Mon Feb 21 10:04:38 2011
Response via : Initial Calibration

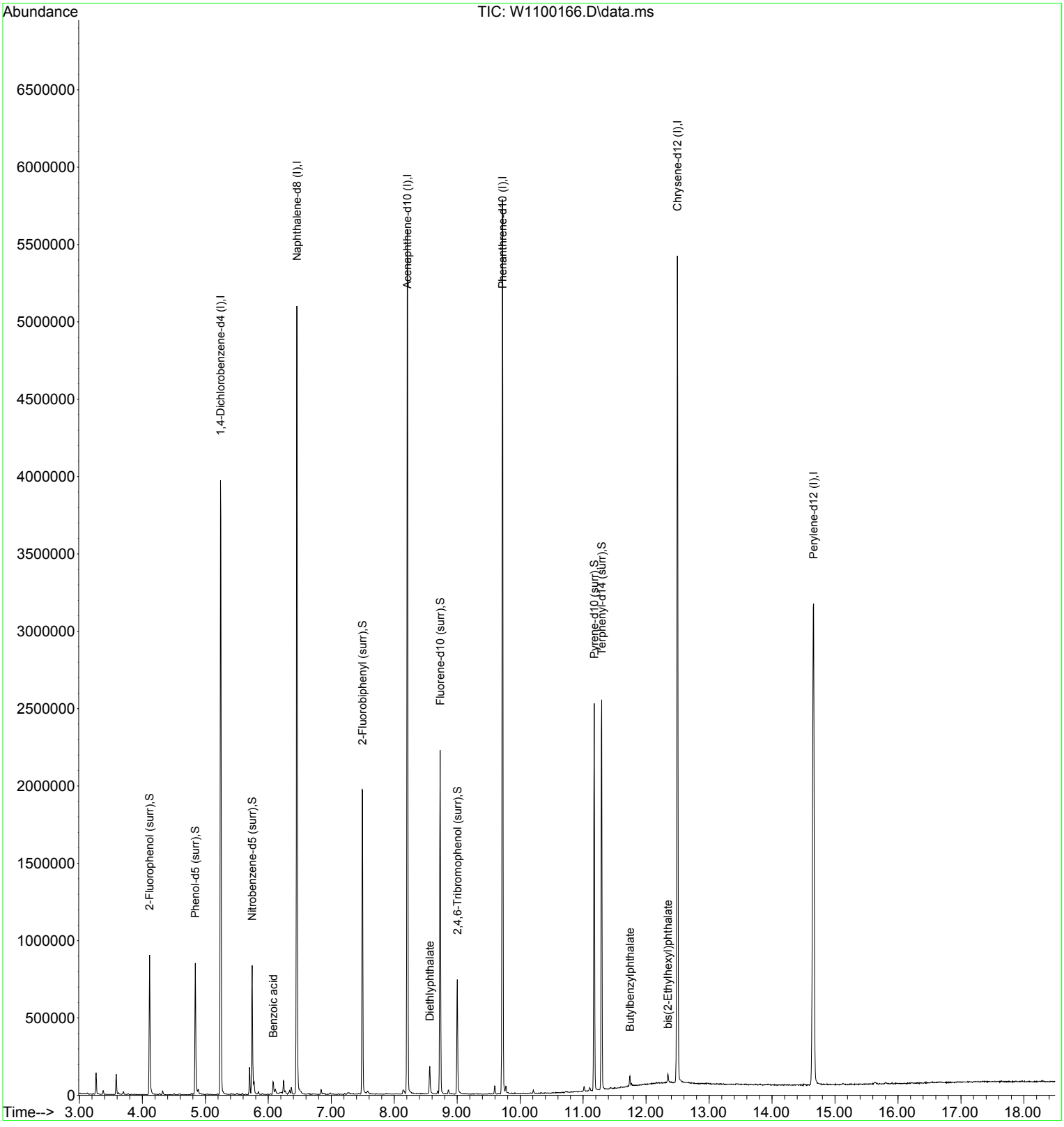
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
47) Acenaphthylene	0.000		0	N.D.	
48) 3-Nitroaniline	0.000		0	N.D.	
49) Acenaphthene (CCC)	0.000		0	N.D. d	
50) 2,4-Dinitrophenol (SPCC)	0.000		0	N.D.	
51) 4-Nitrophenol (SPCC)	0.000		0	N.D.	
52) 2,4-Dinitrotoluene	0.000		0	N.D.	
53) Dibenzofuran	0.000		0	N.D.	
54) 2,3,5,6-Tetrachlorophenol	0.000		0	N.D.	
55) 2,3,4,6-Tetrachlorophenol	0.000		0	N.D.	
56) Diethylphthalate	8.565	149	75661	1.82 µg/mL	98
58) 4-Chlorophenyl-phenyle...	0.000		0	N.D.	
59) Fluorene	0.000		0	N.D. d	
60) 4-Nitroaniline	0.000		0	N.D.	
61) 4,6-Dinitro2-methylphenol	0.000		0	N.D.	
62) N-Nitrosodiphenylamine...	0.000		0	N.D.	
63) Azobenzene	0.000		0	N.D.	
66) 4-Bromophenyl-phenylether	0.000		0	N.D.	
67) Hexachlorobenzene	0.000		0	N.D.	
68) Pentachlorophenol (CCC)	0.000		0	N.D.	
69) Phenanthrene	0.000		0	N.D.	
70) Anthracene	0.000		0	N.D.	
71) Carbazole	0.000		0	N.D.	
72) Di-n-butylphthalate	10.210	149	15023	N.D.	
73) Fluoranthene (CCC)	0.000		0	N.D.	
74) Benzidine	0.000		0	N.D.	
76) Pyrene	0.000		0	N.D. d	
79) Butylbenzylphthalate	11.743	149	9476	0.32 µg/mL#	100
80) 3,3-Dimethylbenzidine	0.000		0	N.D.	
81) bis(2-ethylhexyl)adipate	0.000		0	N.D. d	
82) bis(2-Ethylhexyl)phtha...	12.347	149	28209	0.69 µg/mL#	99
83) 3,3'-Dichlorobenzidine	0.000		0	N.D.	
84) Benzo(a)anthracene	0.000		0	N.D. d	
85) Chrysene	0.000		0	N.D. d	
86) Di-n-octylphthalate (CCC)	0.000		0	N.D. d	
88) Benzo(b)fluoranthene	0.000		0	N.D.	
89) Benzo(k)fluoranthene	0.000		0	N.D.	
90) Benzo(e)pyrene	0.000		0	N.D.	
91) Benzo(a)pyrene (CCC)	0.000		0	N.D. d	
92) Perylene	0.000		0	N.D. d	
93) Indeno(1,2,3-cd)pyrene	0.000		0	N.D.	
94) Dibenz(a,h)anthracene	0.000		0	N.D.	
95) Benzo(g,h,i)perylene	0.000		0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100166.D
Acq On : 21 Feb 2011 2:36 pm
Operator : tdd
Sample : 0111-20 MB
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 21 16:12:32 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Mon Feb 21 10:04:38 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100166.D
Acq On : 21 Feb 2011 2:36 pm
Operator : tdd
Sample : 0111-20 MB
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 21 16:12:32 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Mon Feb 21 10:04:38 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	5.242	152	670592	40.00	µg/mL	0.00
21) Naphthalene-d8 (I)	6.454	136	2325282	40.00	µg/mL	0.00
36) Acenaphthene-d10 (I)	8.207	164	1339713	40.00	µg/mL	0.00
64) Phenanthrene-d10 (I)	9.719	188	2297128	40.00	µg/mL	0.00
78) Chrysene-d12 (I)	12.497	240	2342775	40.00	µg/mL	0.00
87) Perylene-d12 (I)	14.660	264	2147243	40.00	µg/mL	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (surr)	4.115	112	250857	13.72	µg/mL	-0.03
5) Phenol-d5 (surr)	4.841	99	308078	14.49	µg/mL	-0.02
19) Nitrobenzene-d5 (surr)	5.744	82	275269	13.19	µg/mL	0.00
39) 2-Fluorobiphenyl (surr)	7.496	172	679603	16.41	µg/mL	-0.01
57) Fluorene-d10 (surr)	8.730	176	540343	14.69	µg/mL	0.00
65) 2,4,6-Tribromophenol (...	9.003	330	81848	15.56	µg/mL	-0.02
75) Pyrene-d10 (surr)	11.177	212	991551	20.71	µg/mL	0.00
77) Terphenyl-d14 (surr)	11.295	244	770215	20.21	µg/mL	0.02
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	0.000		0	N.D.		
3) Pyridine	0.000		0	N.D.		
6) Phenol (CCC)	0.000		0	N.D.	d	
7) Aniline	0.000		0	N.D.		
8) bis(2-Chloroethyl)ether	0.000		0	N.D.		
9) 2-Chlorophenol	0.000		0	N.D.		
10) 1,3-Dichlorobenzene	0.000		0	N.D.		
11) 1,4-Dichlorobenzene (CCC)	0.000		0	N.D.		
12) Benzyl alcohol	0.000		0	N.D.	d	
13) 1,2-Dichlorobenzene	0.000		0	N.D.	d	
14) 2-Methylphenol	0.000		0	N.D.		
15) bis(2-Chloroisopropyl)...	0.000		0	N.D.		
16) 3/4-Methylphenol	0.000		0	N.D.		
17) N-Nitrso-di-n-propylam...	0.000		0	N.D.		
18) Hexachloroethane	0.000		0	N.D.	d	
20) Nitrobenzene	0.000		0	N.D.	d	
22) Isophorone	0.000		0	N.D.		
23) 2,4-Dimethylphenol	0.000		0	N.D.	d	
24) 2-Nitrophenol (CCC)	0.000		0	N.D.		
25) Benzoic acid	6.081	105	25374m	2.25	µg/mL	
26) bis(2-Chloroethoxy)met...	0.000		0	N.D.	d	
27) 2,4-Dichlorophenol (CCC)	0.000		0	N.D.	d	
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.		
29) Naphthalene	0.000		0	N.D.	d	
30) 4-Chloroaniline	0.000		0	N.D.	d	
31) Hexachlorobutadiene (CCC)	0.000		0	N.D.		
32) 4-Chloro-3-methylpheno...	0.000		0	N.D.		
33) 2-Methylnaphthalene	0.000		0	N.D.		
34) 1-Methylnaphthalene	0.000		0	N.D.		
35) Hexachlorocyclopentadi...	0.000		0	N.D.		
37) 2,4,6-Trichlorophenol ...	0.000		0	N.D.		
38) 2,4,5-Trichlorophenol	0.000		0	N.D.		
40) 2-Chloronaphthalene	0.000		0	N.D.		
41) 2-Nitroaniline	0.000		0	N.D.		
42) 1,4-Dinitrobenzene	0.000		0	N.D.		
43) Dimethylphthalate	0.000		0	N.D.		
44) 1,3-Dinitrobenzene	0.000		0	N.D.		
45) 2,6-Dinitrotoluene	0.000		0	N.D.		
46) 1,2-Dinitrobenzene	0.000		0	N.D.		

Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100166.D
Acq On : 21 Feb 2011 2:36 pm
Operator : tdd
Sample : 0111-20 MB
Misc :
ALS Vial : 8 Sample Multiplier: 1

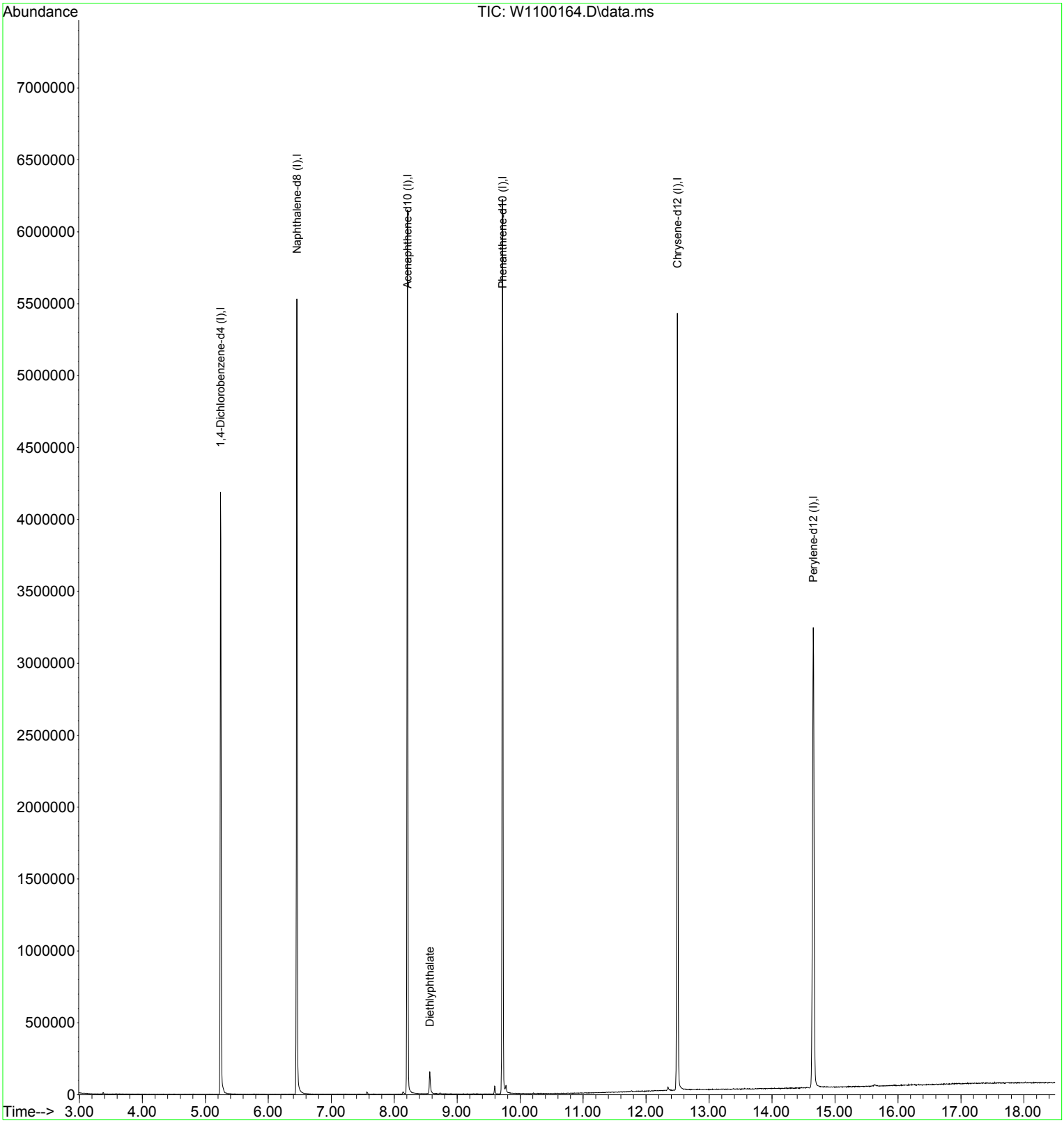
Quant Time: Feb 21 16:12:32 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Mon Feb 21 10:04:38 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
47) Acenaphthylene	0.000		0	N.D.		
48) 3-Nitroaniline	0.000		0	N.D.		
49) Acenaphthene (CCC)	0.000		0	N.D.	d	
50) 2,4-Dinitrophenol (SPCC)	0.000		0	N.D.		
51) 4-Nitrophenol (SPCC)	0.000		0	N.D.		
52) 2,4-Dinitrotoluene	0.000		0	N.D.		
53) Dibenzofuran	0.000		0	N.D.		
54) 2,3,5,6-Tetrachlorophenol	0.000		0	N.D.		
55) 2,3,4,6-Tetrachlorophenol	0.000		0	N.D.		
56) Diethylphthalate	8.565	149	82339	2.10	µg/mL	98
58) 4-Chlorophenyl-phenyle...	0.000		0	N.D.		
59) Fluorene	0.000		0	N.D.	d	
60) 4-Nitroaniline	0.000		0	N.D.		
61) 4,6-Dinitro2-methylphenol	0.000		0	N.D.		
62) N-Nitrosodiphenylamine...	0.000		0	N.D.		
63) Azobenzene	0.000		0	N.D.		
66) 4-Bromophenyl-phenylether	0.000		0	N.D.		
67) Hexachlorobenzene	0.000		0	N.D.		
68) Pentachlorophenol (CCC)	0.000		0	N.D.		
69) Phenanthrene	0.000		0	N.D.		
70) Anthracene	0.000		0	N.D.		
71) Carbazole	0.000		0	N.D.		
72) Di-n-butylphthalate	0.000		0	N.D.	d	
73) Fluoranthene (CCC)	0.000		0	N.D.		
74) Benzidine	0.000		0	N.D.		
76) Pyrene	0.000		0	N.D.	d	
79) Butylbenzylphthalate	11.743	149	15205	0.59	µg/mL#	100
80) 3,3-Dimethylbenzidine	0.000		0	N.D.		
81) bis(2-ethylhexyl)adipate	0.000		0	N.D.	d	
82) bis(2-Ethylhexyl)phtha...	12.347	149	20413	0.58	µg/mL#	99
83) 3,3'-Dichlorobenzidine	0.000		0	N.D.		
84) Benzo(a)anthracene	0.000		0	N.D.	d	
85) Chrysene	0.000		0	N.D.	d	
86) Di-n-octylphthalate (CCC)	0.000		0	N.D.		
88) Benzo(b)fluoranthene	0.000		0	N.D.		
89) Benzo(k)fluoranthene	0.000		0	N.D.		
90) Benzo(e)pyrene	0.000		0	N.D.		
91) Benzo(a)pyrene (CCC)	0.000		0	N.D.	d	
92) Perylene	0.000		0	N.D.	d	
93) Indeno(1,2,3-cd)pyrene	0.000		0	N.D.		
94) Dibenz(a,h)anthracene	0.000		0	N.D.	d	
95) Benzo(g,h,i)perylene	0.000		0	N.D.	d	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100164.D
Acq On : 21 Feb 2011 1:30 pm
Operator : tdd
Sample : CH2Cl2 System Blank
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 21 14:13:03 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Mon Feb 21 10:04:38 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100164.D
Acq On : 21 Feb 2011 1:30 pm
Operator : tdd
Sample : CH2Cl2 System Blank
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 21 14:13:03 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Mon Feb 21 10:04:38 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	5.242	152	723138	40.00	µg/mL	0.00
21) Naphthalene-d8 (I)	6.455	136	2495204	40.00	µg/mL	0.00
36) Acenaphthene-d10 (I)	8.212	164	1439095	40.00	µg/mL	0.00
64) Phenanthrene-d10 (I)	9.719	188	2532591	40.00	µg/mL	0.00
78) Chrysene-d12 (I)	12.497	240	2447876	40.00	µg/mL	0.00
87) Perylene-d12 (I)	14.655	264	2164661	40.00	µg/mL	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (surr)	0.000	112	0	0.00	µg/mL	
5) Phenol-d5 (surr)	0.000	99	0	0.00	µg/mL	
19) Nitrobenzene-d5 (surr)	0.000	82	0	0.00	µg/mL	
39) 2-Fluorobiphenyl (surr)	0.000	172	0	0.00	µg/mL	
57) Fluorene-d10 (surr)	0.000	176	0	0.00	µg/mL	
65) 2,4,6-Tribromophenol (...	0.000	330	0	0.00	µg/mL	
75) Pyrene-d10 (surr)	0.000	212	0	0.00	µg/mL	
77) Terphenyl-d14 (surr)	0.000	244	0	0.00	µg/mL	
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	0.000		0	N.D.		
3) Pyridine	0.000		0	N.D.		
6) Phenol (CCC)	0.000		0	N.D.		
7) Aniline	0.000		0	N.D.		
8) bis(2-Chloroethyl)ether	0.000		0	N.D.		
9) 2-Chlorophenol	0.000		0	N.D.		
10) 1,3-Dichlorobenzene	0.000		0	N.D.		
11) 1,4-Dichlorobenzene (CCC)	0.000		0	N.D.		
12) Benzyl alcohol	0.000		0	N.D.	d	
13) 1,2-Dichlorobenzene	0.000		0	N.D.		
14) 2-Methylphenol	0.000		0	N.D.		
15) bis(2-Chloroisopropyl)...	0.000		0	N.D.		
16) 3/4-Methylphenol	0.000		0	N.D.		
17) N-Nitrso-di-n-propylam...	0.000		0	N.D.		
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	0.000		0	N.D.		
22) Isophorone	0.000		0	N.D.		
23) 2,4-Dimethylphenol	0.000		0	N.D.		
24) 2-Nitrophenol (CCC)	0.000		0	N.D.		
25) Benzoic acid	0.000		0	N.D.		
26) bis(2-Chloroethoxy)met...	0.000		0	N.D.		
27) 2,4-Dichlorophenol (CCC)	0.000		0	N.D.		
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.		
29) Naphthalene	0.000		0	N.D.	d	
30) 4-Chloroaniline	0.000		0	N.D.	d	
31) Hexachlorobutadiene (CCC)	0.000		0	N.D.		
32) 4-Chloro-3-methylpheno...	0.000		0	N.D.		
33) 2-Methylnaphthalene	0.000		0	N.D.		
34) 1-Methylnaphthalene	0.000		0	N.D.		
35) Hexachlorocyclopentadi...	0.000		0	N.D.		
37) 2,4,6-Trichlorophenol ...	0.000		0	N.D.		
38) 2,4,5-Trichlorophenol	0.000		0	N.D.		
40) 2-Chloronaphthalene	0.000		0	N.D.		
41) 2-Nitroaniline	0.000		0	N.D.		
42) 1,4-Dinitrobenzene	0.000		0	N.D.		
43) Dimethylphthalate	0.000		0	N.D.		
44) 1,3-Dinitrobenzene	0.000		0	N.D.		
45) 2,6-Dinitrotoluene	0.000		0	N.D.		
46) 1,2-Dinitrobenzene	0.000		0	N.D.		

Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100164.D
Acq On : 21 Feb 2011 1:30 pm
Operator : tdd
Sample : CH2Cl2 System Blank
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 21 14:13:03 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Mon Feb 21 10:04:38 2011
Response via : Initial Calibration

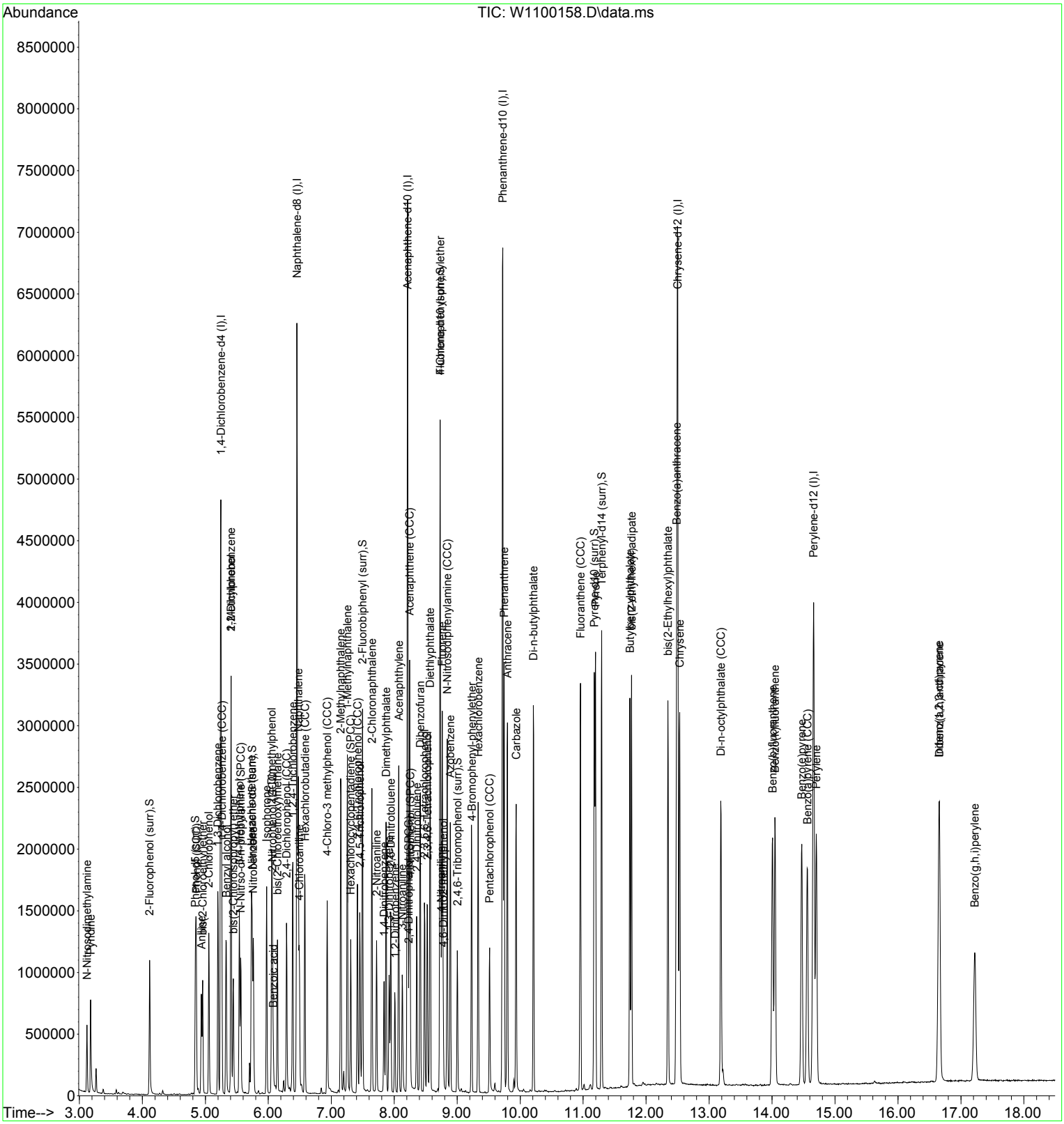
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
47) Acenaphthylene	0.000		0	N.D.		
48) 3-Nitroaniline	0.000		0	N.D.		
49) Acenaphthene (CCC)	0.000		0	N.D.	d	
50) 2,4-Dinitrophenol (SPCC)	0.000		0	N.D.		
51) 4-Nitrophenol (SPCC)	0.000		0	N.D.		
52) 2,4-Dinitrotoluene	0.000		0	N.D.		
53) Dibenzofuran	0.000		0	N.D.		
54) 2,3,5,6-Tetrachlorophenol	0.000		0	N.D.		
55) 2,3,4,6-Tetrachlorophenol	0.000		0	N.D.		
56) Diethylphthalate	8.565	149	83638	1.99	µg/mL	98
58) 4-Chlorophenyl-phenyle...	0.000		0	N.D.		
59) Fluorene	0.000		0	N.D.		
60) 4-Nitroaniline	0.000		0	N.D.		
61) 4,6-Dinitro2-methylphenol	0.000		0	N.D.		
62) N-Nitrosodiphenylamine...	0.000		0	N.D.		
63) Azobenzene	0.000		0	N.D.		
66) 4-Bromophenyl-phenylether	0.000		0	N.D.		
67) Hexachlorobenzene	0.000		0	N.D.		
68) Pentachlorophenol (CCC)	0.000		0	N.D.		
69) Phenanthrene	0.000		0	N.D.		
70) Anthracene	0.000		0	N.D.		
71) Carbazole	0.000		0	N.D.		
72) Di-n-butylphthalate	0.000		0	N.D.	d	
73) Fluoranthene (CCC)	0.000		0	N.D.		
74) Benzidine	0.000		0	N.D.		
76) Pyrene	0.000		0	N.D.		
79) Butylbenzylphthalate	0.000		0	N.D.		
80) 3,3-Dimethylbenzidine	0.000		0	N.D.		
81) bis(2-ethylhexyl)adipate	0.000		0	N.D.	d	
82) bis(2-Ethylhexyl)phtha...	0.000		0	N.D.	d	
83) 3,3'-Dichlorobenzidine	0.000		0	N.D.		
84) Benzo(a)anthracene	0.000		0	N.D.	d	
85) Chrysene	0.000		0	N.D.	d	
86) Di-n-octylphthalate (CCC)	0.000		0	N.D.		
88) Benzo(b)fluoranthene	0.000		0	N.D.		
89) Benzo(k)fluoranthene	0.000		0	N.D.		
90) Benzo(e)pyrene	0.000		0	N.D.		
91) Benzo(a)pyrene (CCC)	0.000		0	N.D.	d	
92) Perylene	0.000		0	N.D.	d	
93) Indeno(1,2,3-cd)pyrene	0.000		0	N.D.		
94) Dibenz(a,h)anthracene	0.000		0	N.D.		
95) Benzo(g,h,i)perylene	0.000		0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100158.D
Acq On : 21 Feb 2011 10:12 am
Operator : tdd
Sample : 0111-20 LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 21 10:34:53 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Mon Feb 21 10:04:38 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100158.D
Acq On : 21 Feb 2011 10:12 am
Operator : tdd
Sample : 0111-20 LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 21 10:34:53 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Mon Feb 21 10:04:38 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	5.247	152	807525	40.00	µg/mL	0.00
21) Naphthalene-d8 (I)	6.454	136	2791269	40.00	µg/mL	0.00
36) Acenaphthene-d10 (I)	8.212	164	1650724	40.00	µg/mL	0.00
64) Phenanthrene-d10 (I)	9.724	188	2996877	40.00	µg/mL	0.00
78) Chrysene-d12 (I)	12.502	240	3059085	40.00	µg/mL	0.00
87) Perylene-d12 (I)	14.660	264	2714151	40.00	µg/mL	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (surr)	4.115	112	323591	14.70	µg/mL	-0.03
5) Phenol-d5 (surr)	4.841	99	407923	15.93	µg/mL	-0.02
19) Nitrobenzene-d5 (surr)	5.744	82	427798	17.02	µg/mL	0.00
39) 2-Fluorobiphenyl (surr)	7.496	172	974679	19.10	µg/mL	-0.01
57) Fluorene-d10 (surr)	8.730	176	779205	17.19	µg/mL	0.00
65) 2,4,6-Tribromophenol (...	9.003	330	135784	19.79	µg/mL	-0.02
75) Pyrene-d10 (surr)	11.177	212	1363687	21.83	µg/mL	0.00
77) Terphenyl-d14 (surr)	11.295	244	1114833	22.42	µg/mL	0.02
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.121	74	212132	13.64	µg/mL	94
3) Pyridine	3.180	79	301847	11.67	µg/mL#	80
6) Phenol (CCC)	4.857	94	412030	15.41	µg/mL#	89
7) Aniline	4.937	66	115994	9.59	µg/mL#	32
8) bis(2-Chloroethyl)ether	4.959	63	215699	13.66	µg/mL#	17
9) 2-Chlorophenol	5.055	128	374547	15.53	µg/mL	98
10) 1,3-Dichlorobenzene	5.199	146	422216	15.26	µg/mL	99
11) 1,4-Dichlorobenzene (CCC)	5.263	146	447831	15.95	µg/mL	98
12) Benzyl alcohol	5.333	108	223695	17.18	µg/mL	86
13) 1,2-Dichlorobenzene	5.407	146	413122	15.66	µg/mL	96
14) 2-Methylphenol	5.407	107	292170	16.51	µg/mL	96
15) bis(2-Chloroisopropyl)...	5.445	45	264982	13.58	µg/mL#	68
16) 3/4-Methylphenol	5.541	107	371717	16.05	µg/mL	96
17) N-Nitrso-di-n-propylam...	5.562	70	240360	14.89	µg/mL#	77
18) Hexachloroethane	5.733	117	151702	14.79	µg/mL	92
20) Nitrobenzene	5.760	77	362549	15.64	µg/mL	90
22) Isophorone	5.974	82	663582	16.28	µg/mL	94
23) 2,4-Dimethylphenol	6.054	107	390649	19.43	µg/mL	96
24) 2-Nitrophenol (CCC)	6.064	139	217248	17.03	µg/mL	90
25) Benzoic acid	6.080	105	73977m	5.47	µg/mL	
26) bis(2-Chloroethoxy)met...	6.145	93	381714	15.38	µg/mL	97
27) 2,4-Dichlorophenol (CCC)	6.289	162	323422	18.17	µg/mL	97
28) 1,2,4-Trichlorobenzene	6.390	180	383994	16.37	µg/mL	98
29) Naphthalene	6.476	128	1174237	17.47	µg/mL	100
30) 4-Chloroaniline	6.492	65	97462	12.87	µg/mL	90
31) Hexachlorobutadiene (CCC)	6.583	225	223899	15.87	µg/mL	99
32) 4-Chloro-3-methylpheno...	6.935	107	328834	19.30	µg/mL	93
33) 2-Methylnaphthalene	7.149	142	780660	18.13	µg/mL	98
34) 1-Methylnaphthalene	7.256	142	756707	18.17	µg/mL	98
35) Hexachlorocyclopentadi...	7.309	237	200778	13.94	µg/mL#	100
37) 2,4,6-Trichlorophenol ...	7.416	196	252784	16.92	µg/mL	99
38) 2,4,5-Trichlorophenol	7.453	196	256067	17.09	µg/mL#	84
40) 2-Chloronaphthalene	7.646	162	757894	17.31	µg/mL	95
41) 2-Nitroaniline	7.721	65	187751	16.62	µg/mL	90
42) 1,4-Dinitrobenzene	7.838	168	128060	17.78	µg/mL#	86
43) Dimethylphthalate	7.870	163	921909	18.55	µg/mL	99
44) 1,3-Dinitrobenzene	7.918	168	147546	17.82	µg/mL#	79
45) 2,6-Dinitrotoluene	7.945	165	216372	18.02	µg/mL#	85
46) 1,2-Dinitrobenzene	8.014	168	99232	17.64	µg/mL	91

Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100158.D
Acq On : 21 Feb 2011 10:12 am
Operator : tdd
Sample : 0111-20 LCS
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 21 10:34:53 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Mon Feb 21 10:04:38 2011
Response via : Initial Calibration

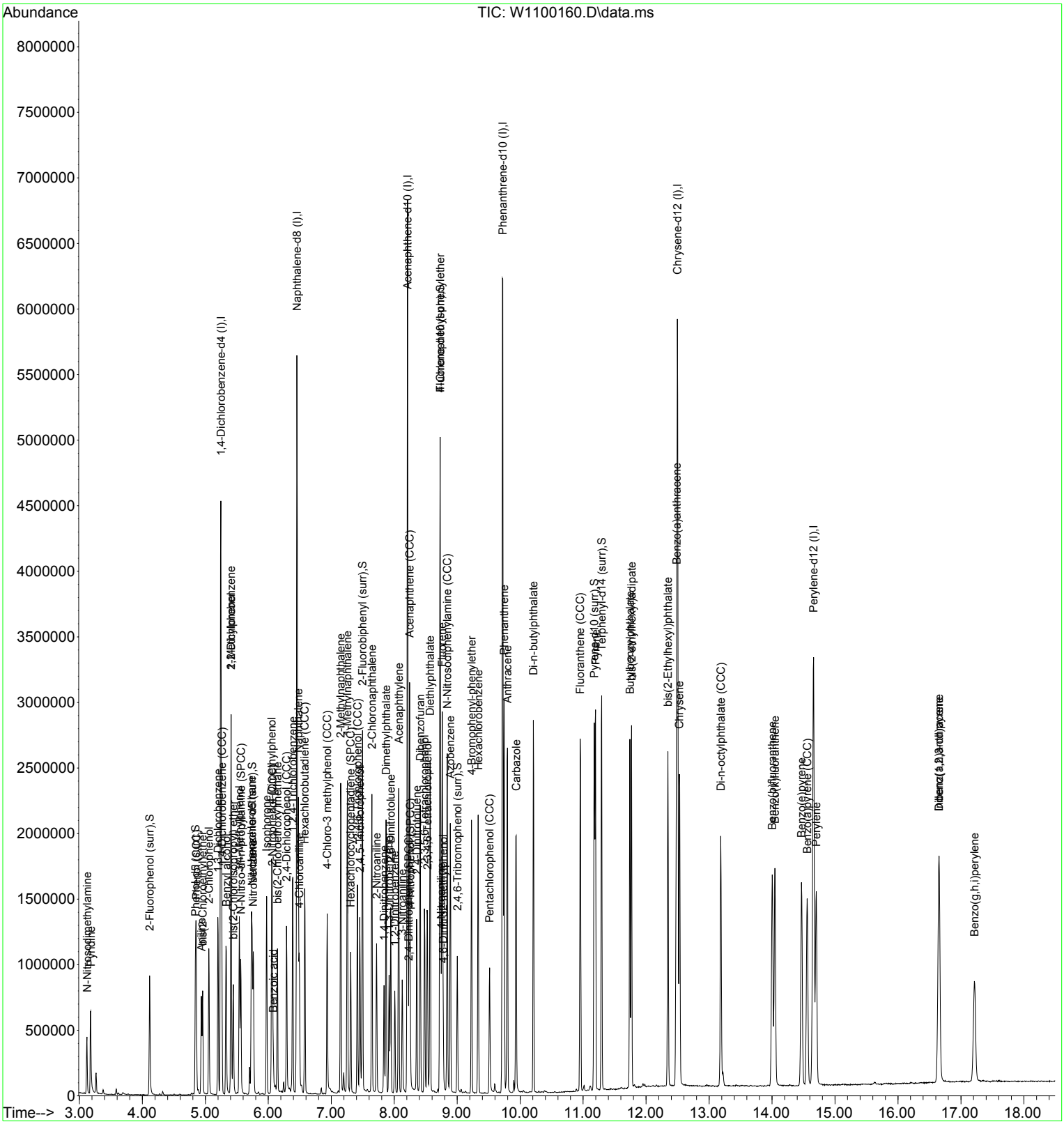
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
47) Acenaphthylene	8.073	152	1228078	18.50	µg/mL	98
48) 3-Nitroaniline	8.127	138	171999	14.56	µg/mL#	78
49) Acenaphthene (CCC)	8.244	154	795545	18.74	µg/mL	93
50) 2,4-Dinitrophenol (SPCC)	8.228	184	84162	15.14	µg/mL#	100
51) 4-Nitrophenol (SPCC)	8.255	139	142556	16.95	µg/mL#	63
52) 2,4-Dinitrotoluene	8.356	165	283620	19.02	µg/mL	92
53) Dibenzofuran	8.415	168	1088355	18.80	µg/mL	94
54) 2,3,5,6-Tetrachlorophenol	8.479	232	217453	17.30	µg/mL	96
55) 2,3,4,6-Tetrachlorophenol	8.527	232	225273	17.71	µg/mL#	81
56) Diethylphthalate	8.570	149	1181375	24.50	µg/mL	99
58) 4-Chlorophenyl-phenyle...	8.730	204	470399	18.45	µg/mL	95
59) Fluorene	8.762	166	894472	18.81	µg/mL	100
60) 4-Nitroaniline	8.746	138	160686	14.30	µg/mL#	86
61) 4,6-Dinitro2-methylphenol	8.778	198	135052	16.90	µg/mL#	14
62) N-Nitrosodiphenylamine...	8.842	169	781095	18.83	µg/mL	95
63) Azobenzene	8.891	77	760554	17.60	µg/mL#	100
66) 4-Bromophenyl-phenylether	9.232	248	284824	18.14	µg/mL	96
67) Hexachlorobenzene	9.334	284	306727	18.84	µg/mL	95
68) Pentachlorophenol (CCC)	9.516	266	152075	17.54	µg/mL	91
69) Phenanthrene	9.745	178	1327957	19.63	µg/mL	100
70) Anthracene	9.799	178	1308700	19.37	µg/mL	100
71) Carbazole	9.938	167	1065952	18.17	µg/mL	99
72) Di-n-butylphthalate	10.210	149	1667107	22.21	µg/mL	98
73) Fluoranthene (CCC)	10.958	202	1441230	20.47	µg/mL	99
74) Benzidine	0.000		0	N.D.		
76) Pyrene	11.198	202	1563122	20.67	µg/mL	99
79) Butylbenzylphthalate	11.743	149	729093	21.56	µg/mL#	100
80) 3,3-Dimethylbenzidine	0.000		0	N.D.	d	
81) bis(2-ethylhexyl)adipate	11.770	129	618441	20.51	µg/mL#	100
82) bis(2-Ethylhexyl)phtha...	12.347	149	1046652	22.58	µg/mL#	100
83) 3,3'-Dichlorobenzidine	0.000		0	N.D.		
84) Benzo(a)anthracene	12.486	228	1460297	19.78	µg/mL	99
85) Chrysene	12.534	228	1377168	19.80	µg/mL	99
86) Di-n-octylphthalate (CCC)	13.186	149	1587503	21.69	µg/mL#	100
88) Benzo(b)fluoranthene	14.008	252	1307149	19.26	µg/mL	99
89) Benzo(k)fluoranthene	14.046	252	1346723	20.31	µg/mL	94
90) Benzo(e)pyrene	14.473	252	1295478	21.43	µg/mL	99
91) Benzo(a)pyrene (CCC)	14.564	252	1262471	20.23	µg/mL	98
92) Perylene	14.703	252	1324734	20.34	µg/mL	100
93) Indeno(1,2,3-cd)pyrene	16.653	276	1264804	20.49	µg/mL	97
94) Dibenz(a,h)anthracene	16.658	278	1052808	20.22	µg/mL	98
95) Benzo(g,h,i)perylene	17.219	276	1021882	20.30	µg/mL	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100160.D
Acq On : 21 Feb 2011 11:16 am
Operator : tdd
Sample : 0111-20 LCSD
Misc : Reprep
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 21 12:56:18 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Mon Feb 21 10:04:38 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100160.D
Acq On : 21 Feb 2011 11:16 am
Operator : tdd
Sample : 0111-20 LCSD
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ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 21 12:56:18 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Mon Feb 21 10:04:38 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	5.247	152	730272	40.00	µg/mL	0.00
21) Naphthalene-d8 (I)	6.454	136	2523281	40.00	µg/mL	0.00
36) Acenaphthene-d10 (I)	8.212	164	1479378	40.00	µg/mL	0.00
64) Phenanthrene-d10 (I)	9.724	188	2632375	40.00	µg/mL	0.00
78) Chrysene-d12 (I)	12.497	240	2529691	40.00	µg/mL	0.00
87) Perylene-d12 (I)	14.660	264	2231292	40.00	µg/mL	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (surr)	4.115	112	266783	13.40	µg/mL	-0.03
5) Phenol-d5 (surr)	4.841	99	355702	15.36	µg/mL	-0.02
19) Nitrobenzene-d5 (surr)	5.744	82	371886	16.36	µg/mL	0.00
39) 2-Fluorobiphenyl (surr)	7.496	172	866000	18.93	µg/mL	-0.01
57) Fluorene-d10 (surr)	8.730	176	710080	17.48	µg/mL	0.00
65) 2,4,6-Tribromophenol (...	9.003	330	112897	18.73	µg/mL	-0.02
75) Pyrene-d10 (surr)	11.177	212	1125850	20.52	µg/mL	0.00
77) Terphenyl-d14 (surr)	11.295	244	911997	20.88	µg/mL	0.02
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.121	74	169246	12.04	µg/mL	86
3) Pyridine	3.180	79	280180	11.98	µg/mL#	82
6) Phenol (CCC)	4.857	94	358928	14.85	µg/mL#	88
7) Aniline	4.937	66	111423	10.19	µg/mL#	25
8) bis(2-Chloroethyl)ether	4.959	63	187469	13.13	µg/mL#	16
9) 2-Chlorophenol	5.055	128	316085	14.49	µg/mL	98
10) 1,3-Dichlorobenzene	5.199	146	342314	13.68	µg/mL	98
11) 1,4-Dichlorobenzene (CCC)	5.263	146	355609	14.01	µg/mL	100
12) Benzyl alcohol	5.333	108	191832	16.29	µg/mL	84
13) 1,2-Dichlorobenzene	5.407	146	344926	14.45	µg/mL	96
14) 2-Methylphenol	5.407	107	256878	16.05	µg/mL	97
15) bis(2-Chloroisopropyl)...	5.445	45	229072	12.98	µg/mL#	69
16) 3/4-Methylphenol	5.541	107	337362	16.10	µg/mL	94
17) N-Nitrso-di-n-propylam...	5.562	70	218202	14.95	µg/mL#	77
18) Hexachloroethane	5.733	117	125242	13.50	µg/mL	89
20) Nitrobenzene	5.760	77	316349	15.09	µg/mL#	86
22) Isophorone	5.974	82	588161	15.97	µg/mL	94
23) 2,4-Dimethylphenol	6.054	107	347980	19.14	µg/mL	94
24) 2-Nitrophenol (CCC)	6.064	139	189068	16.40	µg/mL	88
25) Benzoic acid	6.080	105	54968m	4.50	µg/mL	
26) bis(2-Chloroethoxy)met...	6.145	93	333765	14.88	µg/mL	97
27) 2,4-Dichlorophenol (CCC)	6.289	162	286577	17.81	µg/mL#	97
28) 1,2,4-Trichlorobenzene	6.390	180	331751	15.64	µg/mL	99
29) Naphthalene	6.476	128	1019040	16.77	µg/mL	99
30) 4-Chloroaniline	6.492	65	86709	12.67	µg/mL	89
31) Hexachlorobutadiene (CCC)	6.577	225	191842	15.04	µg/mL	100
32) 4-Chloro-3-methylpheno...	6.935	107	296815	19.27	µg/mL	91
33) 2-Methylnaphthalene	7.149	142	699687	17.98	µg/mL	98
34) 1-Methylnaphthalene	7.256	142	681128	18.10	µg/mL	98
35) Hexachlorocyclopentadi...	7.309	237	167398	12.86	µg/mL#	100
37) 2,4,6-Trichlorophenol ...	7.416	196	225735	16.86	µg/mL	98
38) 2,4,5-Trichlorophenol	7.453	196	230508	17.17	µg/mL#	90
40) 2-Chloronaphthalene	7.646	162	674748	17.20	µg/mL	93
41) 2-Nitroaniline	7.721	65	170973	16.89	µg/mL	87
42) 1,4-Dinitrobenzene	7.838	168	112969	17.50	µg/mL#	88
43) Dimethylphthalate	7.870	163	821692	18.45	µg/mL	99
44) 1,3-Dinitrobenzene	7.918	168	129926	17.51	µg/mL#	74
45) 2,6-Dinitrotoluene	7.945	165	191376	17.78	µg/mL#	78
46) 1,2-Dinitrobenzene	8.009	168	89055	17.67	µg/mL#	91

Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100160.D
Acq On : 21 Feb 2011 11:16 am
Operator : tdd
Sample : 0111-20 LCSD
Misc : Reprep
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 21 12:56:18 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Mon Feb 21 10:04:38 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
47) Acenaphthylene	8.073	152	1105850	18.59	µg/mL	98
48) 3-Nitroaniline	8.127	138	155187	14.66	µg/mL#	79
49) Acenaphthene (CCC)	8.244	154	695387	18.27	µg/mL	95
50) 2,4-Dinitrophenol (SPCC)	8.228	184	63994	12.84	µg/mL#	100
51) 4-Nitrophenol (SPCC)	8.255	139	119166	15.81	µg/mL#	63
52) 2,4-Dinitrotoluene	8.356	165	250433	18.74	µg/mL	94
53) Dibenzofuran	8.415	168	976216	18.82	µg/mL	93
54) 2,3,5,6-Tetrachlorophenol	8.479	232	191888	17.03	µg/mL	96
55) 2,3,4,6-Tetrachlorophenol	8.527	232	198876	17.44	µg/mL#	79
56) Diethylphthalate	8.570	149	951200	22.01	µg/mL	99
58) 4-Chlorophenyl-phenyle...	8.730	204	415564	18.19	µg/mL	93
59) Fluorene	8.762	166	809596	19.00	µg/mL	99
60) 4-Nitroaniline	8.746	138	131334	13.04	µg/mL#	83
61) 4,6-Dinitro2-methylphenol	8.778	198	109991	15.36	µg/mL#	16
62) N-Nitrosodiphenylamine...	8.842	169	692985	18.64	µg/mL	96
63) Azobenzene	8.891	77	700713	18.09	µg/mL#	100
66) 4-Bromophenyl-phenylether	9.227	248	258220	18.72	µg/mL	98
67) Hexachlorobenzene	9.334	284	272153	19.03	µg/mL	95
68) Pentachlorophenol (CCC)	9.516	266	123888	16.27	µg/mL	92
69) Phenanthrene	9.745	178	1152513	19.39	µg/mL	100
70) Anthracene	9.799	178	1158166	19.52	µg/mL	99
71) Carbazole	9.938	167	925339	17.96	µg/mL	99
72) Di-n-butylphthalate	10.210	149	1446444	21.94	µg/mL	99
73) Fluoranthene (CCC)	10.953	202	1203866	19.47	µg/mL	98
74) Benzidine	0.000		0	N.D.		
76) Pyrene	11.198	202	1302584	19.61	µg/mL	99
79) Butylbenzylphthalate	11.743	149	617079	22.07	µg/mL#	100
80) 3,3-Dimethylbenzidine	11.770	212	7917	N.D.		
81) bis(2-ethylhexyl)adipate	11.770	129	509002	20.41	µg/mL#	100
82) bis(2-Ethylhexyl)phtha...	12.347	149	832944	21.73	µg/mL#	99
83) 3,3'-Dichlorobenzidine	0.000		0	N.D.		
84) Benzo(a)anthracene	12.486	228	1140788	18.68	µg/mL	98
85) Chrysene	12.529	228	1079996	18.77	µg/mL	99
86) Di-n-octylphthalate (CCC)	13.186	149	1274621	21.06	µg/mL#	100
88) Benzo(b)fluoranthene	14.003	252	1070422	19.18	µg/mL	98
89) Benzo(k)fluoranthene	14.046	252	1028663	18.87	µg/mL	95
90) Benzo(e)pyrene	14.468	252	1009827	20.31	µg/mL	99
91) Benzo(a)pyrene (CCC)	14.559	252	985394	19.21	µg/mL	97
92) Perylene	14.703	252	944939	17.65	µg/mL	99
93) Indeno(1,2,3-cd)pyrene	16.653	276	918701	18.10	µg/mL	97
94) Dibenz(a,h)anthracene	16.653	278	770875	18.01	µg/mL	99
95) Benzo(g,h,i)perylene	17.214	276	746659	18.04	µg/mL	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Calibration Curve Chromatograms (Scan)



Response Factor Report

Sample ID	LID	FileName	Acq. Date		
SSTD005-SCAN gcms22pg125	5	W1002873.D	10/18/10	17:56	
SSTD010-SCAN gcms22pg125	10	W1002874.D	10/18/10	18:26	**Inst:** **Wiley**
SSTD020-SCAN gcms22pg125	20	W1002875.D	10/18/10	18:55	
SSTD050-SCAN gcms22pg125	50	W1002876.D	10/18/10	19:25	**Curve:** **W101810X-8270.M**
SSTD080-SCAN gcms22pg125	80	W1002877.D	10/18/10	19:54	
SSTD120-SCAN gcms22pg125	120	W1002878.D	10/18/10	20:24	
SSTD160-SCAN gcms22pg125	160	W1002879.D	10/18/10	20:54	

PASS

#	Name	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	Average RF	%RSD	Pass/Fail
2)	N-Nitrosodimethylamine	0.765	0.750	0.746	0.776	0.804	0.779	0.771	0.770	2.53%	Pass
3)	Pyridine	1.22	1.27	1.26	1.30	1.34	1.29	1.28	1.28	2.86%	Pass
6)	Phenol (CCC)	1.41	1.40	1.36	1.31	1.30	1.24	1.25	1.32	4.92%	Pass
7)	Aniline	0.610	0.609	0.599	0.603	0.601	0.589	0.581	0.599	1.76%	Pass
8)	bis(2-Chloroethyl)ether	0.802	0.798	0.796	0.794	0.789	0.756	0.741	0.782	3.03%	Pass
9)	2-Chlorophenol	1.21	1.22	1.19	1.20	1.22	1.17	1.16	1.19	2.03%	Pass
10)	1,3-Dichlorobenzene	1.41	1.41	1.35	1.36	1.39	1.35	1.32	1.37	2.39%	Pass
11)	1,4-Dichlorobenzene (CCC)	1.43	1.44	1.37	1.38	1.41	1.37	1.34	1.39	2.74%	Pass
12)	Benzyl alcohol	0.611	0.652	0.658	0.643	0.653	0.644	0.653	0.645	2.46%	Pass
13)	1,2-Dichlorobenzene	1.36	1.36	1.28	1.30	1.32	1.28	1.26	1.31	3.08%	Pass
14)	2-Methylphenol	0.918	0.906	0.897	0.861	0.869	0.829	0.856	0.876	3.59%	Pass
15)	bis(2-Chloroisopropyl) ether	1.02	0.992	0.981	0.982	0.960	0.921	0.913	0.966	3.88%	Pass
16)	3/4-Methylphenol	1.16	1.16	1.14	1.13	1.14	1.15	1.16	1.15	1.08%	Pass
17)	N-Nitrso-di-n-propylamine (SPCC)	0.793	0.809	0.795	0.802	0.806	0.801	0.790	0.799	0.88%	Pass
18)	Hexachloroethane	0.504	0.505	0.493	0.512	0.523	0.514	0.506	0.508	1.83%	Pass
20)	Nitrobenzene	1.21	1.19	1.17	1.15	1.13	1.09	1.10	1.15	3.86%	Pass
22)	Isophorone	0.581	0.598	0.572	0.593	0.593	0.586	0.565	0.584	2.07%	Pass
23)	2,4-Dimethylphenol	0.221	0.233	0.273	0.305	0.328	0.335	0.322	0.288	16.2%	Warning
24)	2-Nitrophenol (CCC)	0.168	0.177	0.178	0.184	0.192	0.190	0.190	0.183	4.80%	Pass
25)	Benzoic acid	0.0945	0.124	0.172	0.216	0.233	0.258	0.258	0.194	33.6%	Warning
26)	bis(2-Chloroethoxy)methane	0.369	0.365	0.353	0.355	0.360	0.350	0.337	0.356	3.01%	Pass
27)	2,4-Dichlorophenol (CCC)	0.214	0.247	0.234	0.262	0.271	0.280	0.277	0.255	9.58%	Pass
28)	1,2,4-Trichlorobenzene	0.344	0.342	0.327	0.328	0.343	0.338	0.331	0.336	2.16%	Pass
29)	Naphthalene	1.04	1.02	0.978	0.957	0.967	0.912	0.868	0.963	6.20%	Pass
30)	4-Chloroaniline	0.106	0.109	0.106	0.109	0.111	0.111	0.107	0.108	1.99%	Pass
31)	Hexachlorobutadiene (CCC)	0.200	0.201	0.193	0.196	0.209	0.209	0.207	0.202	3.13%	Pass
32)	4-Chloro-3 methylphenol (CCC)	0.202	0.218	0.230	0.256	0.260	0.273	0.270	0.244	11.3%	Pass
33)	2-Methylnaphthalene	0.636	0.630	0.610	0.615	0.620	0.618	0.590	0.617	2.43%	Pass
34)	1-Methylnaphthalene	0.619	0.606	0.594	0.594	0.599	0.599	0.566	0.597	2.72%	Pass
35)	Hexachlorocyclopentadiene (SPCC)	0.182	0.177	0.197	0.218	0.217	0.233	0.222	0.206	10.3%	Pass
37)	2,4,6-Trichlorophenol (CCC)	0.333	0.356	0.349	0.364	0.380	0.374	0.378	0.362	4.76%	Pass
38)	2,4,5-Trichlorophenol	0.319	0.352	0.353	0.364	0.382	0.380	0.391	0.363	6.72%	Pass
40)	2-Chloronaphthalene	1.11	1.11	1.05	1.05	1.07	1.03	1.00	1.06	3.77%	Pass
41)	2-Nitroaniline	0.241	0.263	0.268	0.283	0.295	0.282	0.285	0.274	6.61%	Pass
42)	1,4-Dinitrobenzene	0.134	0.154	0.161	0.184	0.194	0.194	0.201	0.175	14.4%	Pass
43)	Dimethylphthalate	1.22	1.24	1.16	1.20	1.25	1.17	1.19	1.20	2.61%	Pass
44)	1,3-Dinitrobenzene	0.168	0.187	0.188	0.206	0.219	0.214	0.221	0.201	9.86%	Pass
45)	2,6-Dinitrotoluene	0.275	0.286	0.276	0.290	0.308	0.296	0.305	0.291	4.50%	Pass
46)	1,2-Dinitrobenzene	0.122	0.131	0.126	0.137	0.149	0.141	0.147	0.136	7.46%	Pass
47)	Acenaphthylene	1.67	1.69	1.64	1.62	1.62	1.52	1.49	1.61	4.55%	Pass
48)	3-Nitroaniline	0.260	0.278	0.270	0.292	0.303	0.297	0.304	0.286	6.00%	Pass
49)	Acenaphthene (CCC)	1.08	1.05	1.00	1.02	1.04	1.01	1.00	1.03	2.83%	Pass
50)	2,4-Dinitrophenol (SPCC)	0.0615	0.0781	0.108	0.150	0.170	0.180	0.195	0.135	38.9%	Warning
51)	4-Nitrophenol (SPCC)	0.140	0.160	0.182	0.222	0.237	0.238	0.248	0.204	21.0%	Warning
52)	2,4-Dinitrotoluene	0.312	0.342	0.342	0.368	0.398	0.375	0.391	0.361	8.45%	Pass
53)	Dibenzofuran	1.49	1.45	1.39	1.40	1.42	1.35	1.33	1.40	3.93%	Pass
54)	2,3,5,6-Tetrachlorophenol	0.253	0.270	0.275	0.310	0.337	0.333	0.354	0.305	12.7%	Pass
55)	2,3,4,6-Tetrachlorophenol	0.268	0.279	0.286	0.312	0.338	0.333	0.341	0.308	9.89%	Pass
56)	Diethlyphthalate	1.20	1.19	1.15	1.18	1.22	1.12	1.12	1.17	3.42%	Pass
58)	4-Chlorophenyl-phenylether	0.615	0.611	0.590	0.608	0.638	0.625	0.637	0.618	2.75%	Pass
59)	Fluorene	1.18	1.17	1.13	1.16	1.18	1.12	1.13	1.15	2.19%	Pass
60)	4-Nitroaniline	0.226	0.238	0.251	0.288	0.305	0.292	0.307	0.272	12.2%	Pass
61)	4,6-Dinitro2-methylphenol	0.117	0.138	0.166	0.210	0.237	0.235	0.253	0.194	27.6%	Warning
62)	N-Nitrosodiphenylamine (CCC)	1.01	1.02	0.970	1.01	1.04	0.982	1.01	1.01	2.42%	Pass
63)	Azobenzene	1.09	1.05	1.05	1.09	1.08	0.993	0.982	1.05	4.20%	Pass
66)	4-Bromophenyl-phenylether	0.203	0.210	0.203	0.203	0.212	0.217	0.218	0.210	3.21%	Pass
67)	Hexachlorobenzene	0.212	0.214	0.205	0.211	0.222	0.229	0.228	0.217	4.23%	Pass
68)	Pentachlorophenol (CCC)	0.0781	0.0932	0.0988	0.121	0.134	0.142	0.144	0.116	22.4%	Pass
69)	Phenanthrene	0.964	0.953	0.898	0.904	0.906	0.861	0.834	0.903	5.10%	Pass
70)	Anthracene	0.936	0.928	0.910	0.915	0.914	0.875	0.833	0.902	3.98%	Pass
71)	Carbazole	0.799	0.795	0.759	0.788	0.812	0.771	0.757	0.783	2.72%	Pass
72)	Di-n-butylphthalate	1.00	1.07	1.01	1.04	1.05	0.947	0.883	1.00	6.64%	Pass
73)	Fluoranthene (CCC)	0.951	0.993	0.905	0.947	0.990	0.914	0.877	0.940	4.61%	Pass
74)	Benzidine	0.402	0.387	0.430	0.496	0.557	0.573	0.549	0.485	16.1%	Warning
76)	Pyrene	1.06	1.08	0.980	1.01	1.06	0.962	0.911	1.01	6.18%	Pass
79)	Butylbenzylphthalate	0.405	0.435	0.438	0.451	0.473	0.444	0.448	0.442	4.65%	Pass
80)	3,3-Dimethylbenzidine	0.536	0.557	0.578	0.639	0.677	0.680	0.686	0.622	10.3%	Pass
81)	bis(2-ethylhexyl)adipate	0.377	0.397	0.397	0.404	0.411	0.382	0.392	0.394	3.06%	Pass
82)	bis(2-Ethylhexyl)phthalate	0.525	0.584	0.609	0.645	0.659	0.610	0.611	0.606	7.17%	Pass
83)	3,3'-Dichlorobenzidine	0.287	0.269	0.276	0.274	0.284	0.331	0.348	0.295	10.5%	Pass
84)	Benzo(a)anthracene	0.987	0.969	0.947	0.963	0.986	0.961	0.947	0.966	1.70%	Pass

Response Factor Report

Sample ID	LID	FileName	Acq. Date
SSTD005-SCAN gcms22pg125	5	W1002873.D	10/18/10 17:56
SSTD010-SCAN gcms22pg125	10	W1002874.D	10/18/10 18:26
SSTD020-SCAN gcms22pg125	20	W1002875.D	10/18/10 18:55
SSTD050-SCAN gcms22pg125	50	W1002876.D	10/18/10 19:25
SSTD080-SCAN gcms22pg125	80	W1002877.D	10/18/10 19:54
SSTD120-SCAN gcms22pg125	120	W1002878.D	10/18/10 20:24
SSTD160-SCAN gcms22pg125	160	W1002879.D	10/18/10 20:54

Inst: Wiley

Curve: W101810X-8270.M

PASS

#	Name	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	Average RF	%RSD	Pass/Fail
85)	Chrysene	0.936	0.933	0.887	0.913	0.922	0.892	0.885	0.910	2.40%	Pass
86)	Di-n-octylphthalate (CCC)	0.760	0.888	0.977	1.06	1.06	1.00	0.963	0.957	11.0%	Pass
88)	Benzo(b)fluoranthene	0.943	0.967	0.920	0.973	1.09	1.01	1.10	1.00	7.04%	Pass
89)	Benzo(k)fluoranthene	0.945	0.983	0.952	0.969	1.01	1.00	0.979	0.977	2.46%	Pass
90)	Benzo(e)pyrene	0.864	0.881	0.857	0.874	0.938	0.906	0.918	0.891	3.39%	Pass
91)	Benzo(a)pyrene (CCC)	0.859	0.882	0.882	0.916	0.985	0.951	0.962	0.920	5.17%	Pass
92)	Perylene	0.956	0.966	0.933	0.942	1.00	0.962	0.963	0.960	2.07%	Pass
93)	Indeno(1,2,3-cd)pyrene	0.879	0.842	0.966	0.984	0.937	0.909	0.851	0.910	6.09%	Pass
94)	Dibenz(a,h)anthracene	0.723	0.701	0.808	0.828	0.793	0.781	0.737	0.767	6.15%	Pass
95)	Benzo(g,h,i)perylene	0.744	0.707	0.815	0.812	0.747	0.711	0.657	0.742	7.72%	Pass
									Average %	6.7%	

SPCC Average RF must be > 0.05
CCC %RSD must be <= 30%
Other %RSD <= 15%
Average %RSD <= 15%
No %RSD > 50%

Relative Retention Time Report

Sample ID	LID	FileName	Acq. Date		
SSTD005-SCAN gcms22pg125	5	W1002873.D	10/18/10 17:56		
SSTD010-SCAN gcms22pg125	10	W1002874.D	10/18/10 18:26	**Inst:**	**Wiley**
SSTD020-SCAN gcms22pg125	20	W1002875.D	10/18/10 18:55		
SSTD050-SCAN gcms22pg125	50	W1002876.D	10/18/10 19:25	**Curve:**	**W101810X-8270.M**
SSTD080-SCAN gcms22pg125	80	W1002877.D	10/18/10 19:54		
SSTD120-SCAN gcms22pg125	120	W1002878.D	10/18/10 20:24		
SSTD160-SCAN gcms22pg125	160	W1002879.D	10/18/10 20:54		

#	Name	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	Average RRT
2)	N-Nitrosodimethylamine	0.60	0.60	0.60	0.60	0.60	0.61	0.61	0.60
3)	Pyridine	0.62	0.62	0.62	0.62	0.61	0.62	0.62	0.62
6)	Phenol (CCC)	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
7)	Aniline	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
8)	bis(2-Chloroethyl)ether	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
9)	2-Chlorophenol	0.96	0.96	0.96	0.97	0.97	0.97	0.97	0.96
10)	1,3-Dichlorobenzene	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
11)	1,4-Dichlorobenzene (CCC)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
12)	Benzyl alcohol	1.01	1.01	1.01	1.02	1.02	1.02	1.02	1.02
13)	1,2-Dichlorobenzene	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
14)	2-Methylphenol	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
15)	bis(2-Chloroisopropyl) ether	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
16)	3/4-Methylphenol	1.05	1.05	1.05	1.05	1.06	1.06	1.06	1.05
17)	N-Nitrso-di-n-propylamine (SPCC)	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
18)	Hexachloroethane	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
20)	Nitrobenzene	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
22)	Isophorone	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
23)	2,4-Dimethylphenol	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
24)	2-Nitrophenol (CCC)	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
25)	Benzoic acid	0.94	0.94	0.94	0.95	0.95	0.95	0.96	0.95
26)	bis(2-Chloroethoxy)methane	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
27)	2,4-Dichlorophenol (CCC)	0.97	0.98	0.98	0.97	0.97	0.98	0.98	0.98
28)	1,2,4-Trichlorobenzene	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
29)	Naphthalene	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
30)	4-Chloroaniline	1.01	1.01	1.01	1.00	1.01	1.01	1.01	1.01
31)	Hexachlorobutadiene (CCC)	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
32)	4-Chloro-3 methylphenol (CCC)	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
33)	2-Methylnaphthalene	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
34)	1-Methylnaphthalene	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
35)	Hexachlorocyclopentadiene (SPCC)	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
37)	2,4,6-Trichlorophenol (CCC)	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
38)	2,4,5-Trichlorophenol	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
40)	2-Chloronaphthalene	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
41)	2-Nitroaniline	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
42)	1,4-Dinitrobenzene	0.95	0.95	0.96	0.95	0.96	0.96	0.96	0.96
43)	Dimethylphthalate	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
44)	1,3-Dinitrobenzene	0.96	0.96	0.96	0.96	0.97	0.97	0.97	0.97
45)	2,6-Dinitrotoluene	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
46)	1,2-Dinitrobenzene	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
47)	Acenaphthylene	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
48)	3-Nitroaniline	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
49)	Acenaphthene (CCC)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
50)	2,4-Dinitrophenol (SPCC)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
51)	4-Nitrophenol (SPCC)	1.00	1.00	1.00	1.00	1.00	1.01	1.01	1.00
52)	2,4-Dinitrotoluene	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
53)	Dibenzofuran	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
54)	2,3,5,6-Tetrachlorophenol	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
55)	2,3,4,6-Tetrachlorophenol	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
56)	Diethlyphthalate	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
58)	4-Chlorophenyl-phenylether	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
59)	Fluorene	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
60)	4-Nitroaniline	1.06	1.06	1.06	1.06	1.06	1.07	1.07	1.06
61)	4,6-Dinitro2-methylphenol	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
62)	N-Nitrosodiphenylamine (CCC)	1.07	1.07	1.08	1.07	1.07	1.08	1.08	1.08
63)	Azobenzene	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
66)	4-Bromophenyl-phenylether	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
67)	Hexachlorobenzene	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
68)	Pentachlorophenol (CCC)	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
69)	Phenanthrene	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
70)	Anthracene	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
71)	Carbazole	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02

Relative Retention Time Report

Sample ID	LID	FileName	Acq. Date
SSTD005-SCAN gcms22pg125	5	W1002873.D	10/18/10 17:56
SSTD010-SCAN gcms22pg125	10	W1002874.D	10/18/10 18:26
SSTD020-SCAN gcms22pg125	20	W1002875.D	10/18/10 18:55
SSTD050-SCAN gcms22pg125	50	W1002876.D	10/18/10 19:25
SSTD080-SCAN gcms22pg125	80	W1002877.D	10/18/10 19:54
SSTD120-SCAN gcms22pg125	120	W1002878.D	10/18/10 20:24
SSTD160-SCAN gcms22pg125	160	W1002879.D	10/18/10 20:54

Inst: Wiley

Curve: W101810X-8270.M

#	Name	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	Average RRT
72)	Di-n-butylphthalate	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
73)	Fluoranthene (CCC)	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
74)	Benzidine	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
76)	Pyrene	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15
79)	Butylbenzylphthalate	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
80)	3,3-Dimethylbenzidine	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
81)	bis(2-ethylhexyl)adipate	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
82)	bis(2-Ethylhexyl)phthalate	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
83)	3,3'-Dichlorobenzidine	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
84)	Benzo(a)anthracene	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
85)	Chrysene	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
86)	Di-n-octylphthalate (CCC)	1.06	1.06	1.06	1.06	1.05	1.05	1.05	1.06
88)	Benzo(b)fluoranthene	0.95	0.95	0.95	0.95	0.96	0.96	0.96	0.96
89)	Benzo(k)fluoranthene	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
90)	Benzo(e)pyrene	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
91)	Benzo(a)pyrene (CCC)	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
92)	Perylene	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
93)	Indeno(1,2,3-cd)pyrene	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
94)	Dibenz(a,h)anthracene	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
95)	Benzo(g,h,i)perylene	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18

= RRT outside 0.06 unit RRT window

Internal Standards Retention Time Report

Sample ID	LID	FileName	Acq. Date
SSTD005-SCAN gcms22pg125	5	W1002873.D	10/18/10 17:56
SSTD010-SCAN gcms22pg125	10	W1002874.D	10/18/10 18:26
SSTD020-SCAN gcms22pg125	20	W1002875.D	10/18/10 18:55
SSTD050-SCAN gcms22pg125	50	W1002876.D	10/18/10 19:25
SSTD080-SCAN gcms22pg125	80	W1002877.D	10/18/10 19:54
SSTD120-SCAN gcms22pg125	120	W1002878.D	10/18/10 20:24
SSTD160-SCAN gcms22pg125	160	W1002879.D	10/18/10 20:54

Inst: **Wiley**

Curve: **W101810X-8270.M**

#	Name	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	SCAN gcms22pg1 25	Average
1)	1,4-Dichlorobenzene-d4 (I)	5.38	5.38	5.38	5.38	5.38	5.38	5.38	5.38
21)	Naphthalene-d8 (I)	6.58	6.58	6.58	6.59	6.59	6.59	6.59	6.59
36)	Acenaphthene-d10 (I)	8.34	8.34	8.34	8.35	8.35	8.35	8.35	8.34
64)	Phenanthrene-d10 (I)	9.85	9.85	9.85	9.85	9.85	9.86	9.86	9.85
78)	Chrysene-d12 (I)	12.66	12.66	12.66	12.66	12.67	12.67	12.67	12.67
87)	Perylene-d12 (I)	14.89	14.89	14.90	14.90	14.90	14.90	14.90	14.90

= ISTD retention time outside of 20 sec (0.33 min) window

Internal Standards Area Report

Sample ID	LID	FileName	Acq. Date
SSTD005-SCAN gcms22pg125	5	W1002873.D	10/18/10 17:56
SSTD010-SCAN gcms22pg125	10	W1002874.D	10/18/10 18:26
SSTD020-SCAN gcms22pg125	20	W1002875.D	10/18/10 18:55
SSTD050-SCAN gcms22pg125	50	W1002876.D	10/18/10 19:25
SSTD080-SCAN gcms22pg125	80	W1002877.D	10/18/10 19:54
SSTD120-SCAN gcms22pg125	120	W1002878.D	10/18/10 20:24
SSTD160-SCAN gcms22pg125	160	W1002879.D	10/18/10 20:54

Inst: Wiley

Curve: W101810X-8270.M

#	Name	SCAN gcms22pg125	SCAN gcms22pg125	SCAN gcms22pg125	SCAN gcms22pg125	SCAN gcms22pg125	SCAN gcms22pg125	SCAN gcms22pg125	Average
1)	1,4-Dichlorobenzene-d4 (I)	694,978	706,693	720,068	655,591	662,846	708,059	673,532	688,824
21)	Naphthalene-d8 (I)	2,450,968	2,486,145	2,542,711	2,346,284	2,259,727	2,432,537	2,366,580	2,412,136
36)	Acenaphthene-d10 (I)	1,342,042	1,339,110	1,390,154	1,314,587	1,246,926	1,402,728	1,358,679	1,342,032
64)	Phenanthrene-d10 (I)	2,316,172	2,294,140	2,354,525	2,336,676	2,303,538	2,472,354	2,516,253	2,370,523
78)	Chrysene-d12 (I)	2,072,984	2,146,192	2,151,499	2,279,787	2,250,870	2,393,551	2,291,395	2,226,611
87)	Perylene-d12 (I)	1,889,069	1,945,018	2,135,523	2,168,681	1,934,135	2,217,223	1,886,569	2,025,174

= ISTD response outside of 40% window

Response Factor Report Wiley

Method Path : M:\ms2010\methods\wiley\
Method File : W101810X-8270.M
Title : 8270C - Full List
Last Update : Wed Oct 20 14:58:44 2010
Response Via : Initial Calibration

Calibration Files
5 =W1002873.D 10 =W1002874.D 20 =W1002875.D 50 =W1002876.D 80 =W1002877.D 120 =W1002878.D 160 =W1002879.D

		Compound	5	10	20	50	80	120	160	Avg	%RSD
1)	I	1,4-Dichlorobenzen...	----------ISTD----------								
2)		N-Nitrosodimet...	0.765	0.750	0.746	0.776	0.804	0.779	0.771	0.770	2.53
3)		Pyridine	1.222	1.265	1.264	1.297	1.341	1.294	1.285	1.281	2.86
4)	S	2-Fluorophenol...	1.045	1.074	1.070	1.099	1.147	1.110	1.090	1.091	3.01
5)	S	Phenol-d5 (surr)	1.311	1.311	1.309	1.254	1.264	1.206	1.223	1.268	3.47
6)		Phenol (CCC)	1.405	1.396	1.358	1.311	1.305	1.242	1.252	1.324	4.92
7)		Aniline	0.610	0.609	0.599	0.603	0.601	0.589	0.581	0.599	1.76
8)		bis(2-Chloroet...	0.802	0.798	0.796	0.794	0.789	0.756	0.741	0.782	3.03
9)		2-Chlorophenol	1.208	1.222	1.187	1.196	1.221	1.172	1.158	1.195	2.03
10)		1,3-Dichlorobe...	1.410	1.409	1.354	1.362	1.389	1.347	1.325	1.371	2.39
11)		1,4-Dichlorobe...	1.434	1.439	1.366	1.385	1.406	1.367	1.335	1.390	2.74
12)		Benzyl alcohol	0.611	0.652	0.658	0.643	0.653	0.644	0.653	0.645	2.46
13)		1,2-Dichlorobe...	1.361	1.357	1.281	1.300	1.317	1.278	1.255	1.307	3.08
14)		2-Methylphenol	0.918	0.906	0.897	0.861	0.869	0.829	0.856	0.876	3.59
15)		bis(2-Chlorois...	1.016	0.992	0.981	0.982	0.960	0.921	0.913	0.966	3.88
16)		3/4-Methylphenol	1.159	1.159	1.144	1.128	1.137	1.146	1.160	1.148	1.08
17)		N-Nitrso-di-n-...	0.793	0.809	0.795	0.802	0.806	0.801	0.790	0.799	0.88
18)		Hexachloroethane	0.504	0.505	0.493	0.512	0.523	0.514	0.506	0.508	1.83
19)	S	Nitrobenzene-d...	1.270	1.240	1.263	1.260	1.240	1.211	1.232	1.245	1.65
20)		Nitrobenzene	1.211	1.185	1.169	1.153	1.131	1.090	1.101	1.149	3.86
21)	I	Naphthalene-d8 (I)	----------ISTD----------								
22)		Isophorone	0.581	0.598	0.572	0.593	0.593	0.586	0.565	0.584	2.07
23)		2,4-Dimethylph...	0.221	0.233	0.273	0.305	0.328	0.335	0.322	0.288	16.20
24)		2-Nitrophenol ...	0.168	0.177	0.178	0.184	0.192	0.190	0.190	0.183	4.80
25)		Benzoic acid	0.094	0.124	0.172	0.216	0.233	0.258	0.258	0.194	33.64
26)		bis(2-Chloroet...	0.369	0.365	0.353	0.355	0.360	0.350	0.337	0.356	3.01
27)		2,4-Dichloroph...	0.214	0.247	0.234	0.262	0.271	0.280	0.277	0.255	9.58
28)		1,2,4-Trichlor...	0.344	0.342	0.327	0.328	0.343	0.338	0.331	0.336	2.16
29)		Naphthalene	1.040	1.023	0.978	0.957	0.967	0.912	0.868	0.963	6.20
30)		4-Chloroaniline	0.106	0.109	0.106	0.109	0.111	0.111	0.107	0.108	1.99
31)		Hexachlorobuta...	0.200	0.201	0.193	0.196	0.209	0.209	0.207	0.202	3.13
32)		4-Chloro-3 met...	0.202	0.218	0.230	0.256	0.260	0.273	0.270	0.244	11.29
33)		2-Methylnaphth...	0.636	0.630	0.610	0.615	0.620	0.618	0.590	0.617	2.43
34)		1-Methylnaphth...	0.619	0.606	0.594	0.594	0.599	0.599	0.566	0.597	2.72
35)		Hexachlorocycl...	0.182	0.177	0.197	0.218	0.217	0.233	0.222	0.206	10.31
36)	I	Acenaphthene-d10 (I)	----------ISTD----------								
37)		2,4,6-Trichlor...	0.333	0.356	0.349	0.364	0.380	0.374	0.378	0.362	4.76
38)		2,4,5-Trichlor...	0.319	0.352	0.353	0.364	0.382	0.380	0.391	0.363	6.72
39)	S	2-Fluorobiphen...	1.304	1.328	1.239	1.231	1.235	1.177	1.144	1.237	5.23
40)		2-Chloronaphth...	1.111	1.106	1.054	1.052	1.075	1.028	1.000	1.061	3.77
41)		2-Nitroaniline	0.241	0.263	0.268	0.283	0.295	0.282	0.285	0.274	6.61
42)		1,4-Dinitroben...	0.168	0.187	0.188	0.184	0.194	0.214	0.220	0.194	9.27

Method Path : M:\ms2010\methods\wiley\
Method File : W101810X-8270.M

43)		Dimethylphthalate	1.221	1.235	1.164	1.196	1.248	1.173	1.194	1.204	2.61
44)		1,3-Dinitroben...	0.168	0.187	0.188	0.206	0.219	0.214	0.221	0.201	9.86
45)		2,6-Dinitrotol...	0.275	0.286	0.276	0.290	0.308	0.296	0.305	0.291	4.50
46)		1,2-Dinitroben...	0.122	0.131	0.126	0.137	0.149	0.141	0.147	0.136	7.46
47)		Acenaphthylene	1.672	1.689	1.638	1.625	1.621	1.524	1.493	1.609	4.55
48)		3-Nitroaniline	0.260	0.278	0.270	0.292	0.303	0.297	0.304	0.286	6.00
49)		Acenaphthene (...	1.081	1.050	1.001	1.016	1.036	1.014	1.003	1.029	2.83
50)		2,4-Dinitrophe...	0.062	0.078	0.108	0.150	0.170	0.180	0.195	0.135	38.88
51)		4-Nitrophenol ...	0.140	0.160	0.182	0.222	0.237	0.238	0.248	0.204	21.04
52)		2,4-Dinitrotol...	0.312	0.342	0.342	0.368	0.398	0.375	0.391	0.361	8.45
53)		Dibenzofuran	1.487	1.449	1.390	1.398	1.419	1.346	1.330	1.403	3.93
54)		2,3,5,6-Tetrac...	0.253	0.270	0.275	0.310	0.337	0.333	0.354	0.305	12.74
55)		2,3,4,6-Tetrac...	0.268	0.279	0.286	0.312	0.338	0.333	0.341	0.308	9.89
56)		Diethlyphthalate	1.200	1.195	1.145	1.181	1.217	1.121	1.118	1.168	3.42
57)	S	Fluorene-d10 (...	1.116	1.095	1.057	1.106	1.142	1.079	1.094	1.098	2.46
58)		4-Chlorophenyl...	0.615	0.611	0.590	0.608	0.638	0.625	0.637	0.618	2.75
59)		Fluorene	1.179	1.168	1.134	1.163	1.176	1.118	1.126	1.152	2.19
60)		4-Nitroaniline	0.226	0.238	0.251	0.288	0.305	0.292	0.307	0.272	12.19
61)		4,6-Dinitro2-m...	0.117	0.138	0.166	0.210	0.237	0.235	0.253	0.194	27.59
62)		N-Nitrosodiphe...	1.007	1.023	0.970	1.005	1.044	0.982	1.005	1.005	2.42
63)		Azobenzene	1.086	1.047	1.052	1.086	1.084	0.993	0.982	1.047	4.20
64)	I	Phenanthrene-d10 (I)	----------ISTD----------								
65)	S	2,4,6-Tribromo...	0.077	0.084	0.084	0.090	0.098	0.103	0.106	0.092	11.84
66)		4-Bromophenyl-...	0.203	0.210	0.203	0.203	0.212	0.217	0.218	0.210	3.21
67)		Hexachlorobenzene	0.212	0.214	0.205	0.211	0.222	0.229	0.228	0.217	4.23
68)		Pentachlorophe...	0.078	0.093	0.099	0.121	0.134	0.142	0.144	0.116	22.41
69)		Phenanthrene	0.964	0.953	0.898	0.904	0.906	0.861	0.834	0.903	5.10
70)		Anthracene	0.936	0.928	0.910	0.915	0.914	0.875	0.833	0.902	3.98
71)		Carbazole	0.799	0.795	0.759	0.788	0.812	0.771	0.757	0.783	2.72
72)		Di-n-butylphth...	1.003	1.072	1.014	1.042	1.052	0.947	0.883	1.002	6.64
73)		Fluoranthene (...	0.951	0.993	0.905	0.947	0.990	0.914	0.877	0.940	4.61
74)		Benzidine	0.402	0.387	0.430	0.496	0.557	0.573	0.549	0.485	16.12
75)	S	Pyrene-d10 (surr)	0.839	0.867	0.797	0.836	0.875	0.823	0.799	0.834	3.62
76)		Pyrene	1.059	1.084	0.980	1.010	1.060	0.962	0.911	1.009	6.18
77)	S	Terphenyl-d14 ...	0.659	0.687	0.613	0.662	0.712	0.669	0.644	0.664	4.70
78)	I	Chrysene-d12 (I)	----------ISTD----------								
79)		Butylbenzylpht...	0.405	0.435	0.438	0.451	0.473	0.444	0.448	0.442	4.65
80)		3,3-Dimethylbe...	0.536	0.557	0.578	0.639	0.677	0.680	0.686	0.622	10.25
81)		bis(2-ethylhex...	0.377	0.397	0.397	0.404	0.411	0.382	0.392	0.394	3.06
82)		bis(2-Ethylhex...	0.525	0.584	0.609	0.645	0.659	0.610	0.611	0.606	7.17
83)		3,3'-Dichlorob...	0.287	0.269	0.276	0.274	0.284	0.331	0.348	0.295	10.53
84)		Benzo(a)anthra...	0.987	0.969	0.947	0.963	0.986	0.961	0.947	0.966	1.70
85)		Chrysene	0.936	0.933	0.887	0.913	0.922	0.892	0.885	0.910	2.40
86)		Di-n-octylphth...	0.760	0.888	0.977	1.058	1.060	0.996	0.963	0.957	10.97
87)	I	Perylene-d12 (I)	----------ISTD----------								
88)		Benzo(b)fluora...	0.943	0.967	0.920	0.973	1.090	1.010	1.100	1.000	7.04
89)		Benzo(k)fluora...	0.945	0.983	0.952	0.969	1.014	0.996	0.979	0.977	2.46
90)		Benzo(e)pyrene	0.864	0.881	0.857	0.874	0.938	0.906	0.918	0.891	3.39
91)		Benzo(a)pyrene...	0.859	0.882	0.882	0.916	0.985	0.951	0.962	0.920	5.17
92)		Perylene	0.956	0.966	0.933	0.942	0.996	0.962	0.963	0.960	2.07
93)		Indeno(1,2,3-c...	0.744	0.707	0.815	0.984	0.937	0.711	0.657	0.794	15.66

Method Path : M:\ms2010\methods\wiley\
Method File : W101810X-8270.M

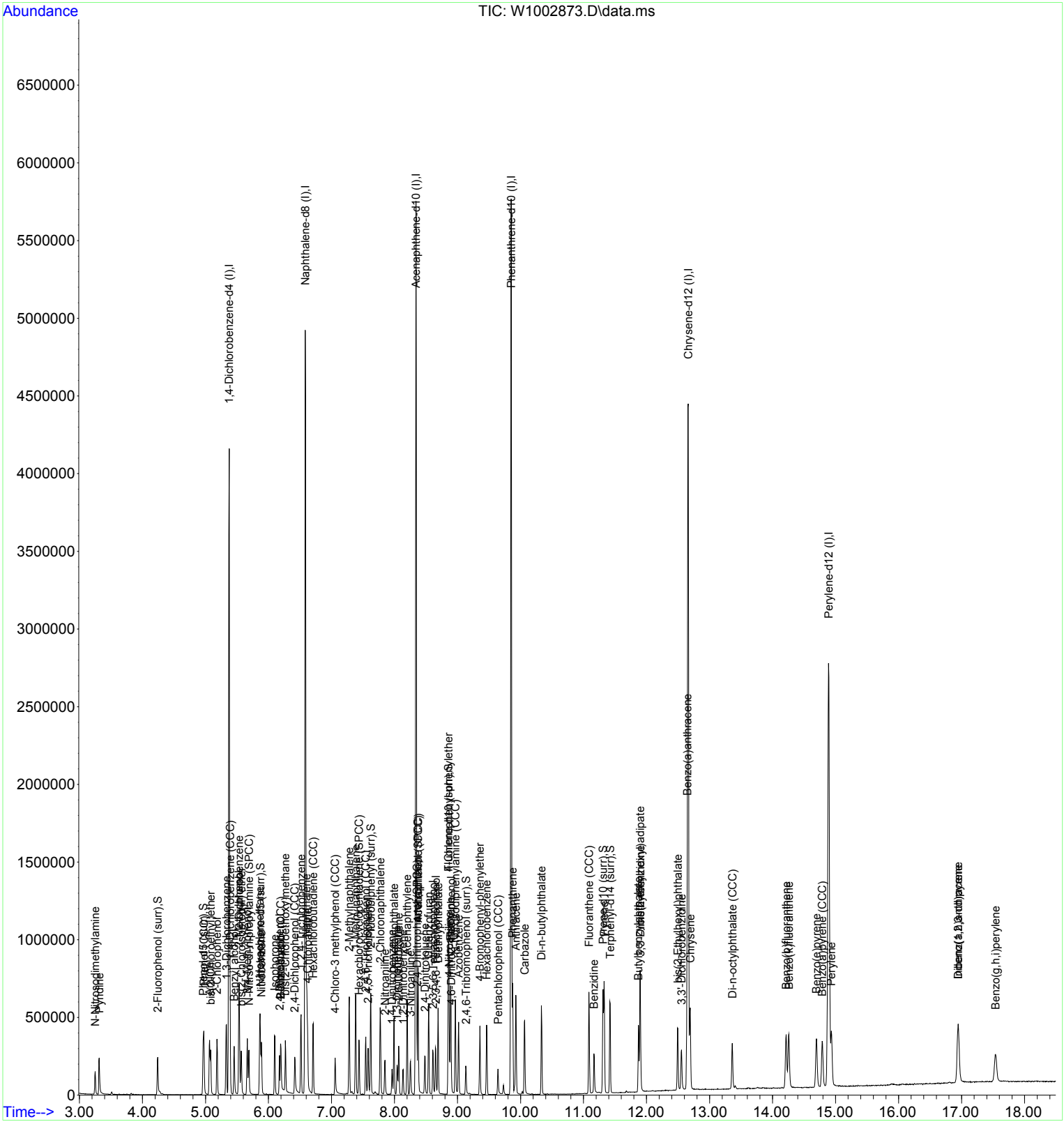
94)	Dibenz(a,h)ant...	0.723	0.701	0.808	0.828	0.793	0.781	0.737	0.767	6.15
95)	Benzo(g,h,i)pe...	0.744	0.707	0.815	0.812	0.747	0.711	0.657	0.742	7.72

(#) = Out of Range

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002873.D
Acq On : 18 Oct 2010 5:56 pm
Operator : dda
Sample : SSTD005-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 20 12:12:33 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 10:41:33 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002873.D
Acq On : 18 Oct 2010 5:56 pm
Operator : dda
Sample : SSTD005-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 20 12:12:33 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 10:41:33 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) 1,4-Dichlorobenzene-d4...	5.375	152	694978	40.00	µg/mL	0.00	
21) Naphthalene-d8 (I)	6.583	136	2450968	40.00	µg/mL	0.00	
36) Acenaphthene-d10 (I)	8.340	164	1342042	40.00	µg/mL	0.00	
64) Phenanthrene-d10 (I)	9.852	188	2316172	40.00	µg/mL	0.00	
78) Chrysene-d12 (I)	12.662	240	2072984	40.00	µg/mL	0.00	
87) Perylene-d12 (I)	14.890	264	1889069	40.00	µg/mL	0.00	
System Monitoring Compounds							
4) 2-Fluorophenol (surr)	4.243	112	90746	4.79	µg/mL	0.00	
5) Phenol-d5 (surr)	4.964	99	113905	5.17	µg/mL	-0.02	
19) Nitrobenzene-d5 (surr)	5.872	82	110324	5.10	µg/mL	-0.01	
39) 2-Fluorobiphenyl (surr)	7.624	172	218740	5.27	µg/mL	0.00	
57) Fluorene-d10 (surr)	8.858	176	187221	5.08	µg/mL	-0.01	
65) 2,4,6-Tribromophenol (...	9.136	330	22208	4.19	µg/mL	0.00	
75) Pyrene-d10 (surr)	11.311	212	242828	5.03	µg/mL	0.00	
77) Terphenyl-d14 (surr)	11.423	244	190827	4.97	µg/mL	0.00	
Target Compounds						Qvalue	
2) N-Nitrosodimethylamine	3.249	74	66491	4.97	µg/mL	91	
3) Pyridine	3.313	79	106190	4.77	µg/mL#	83	
6) Phenol (CCC)	4.975	94	122087	5.31	µg/mL#	91	
7) Aniline	5.065	66	53017	5.10	µg/mL	91	
8) bis(2-Chloroethyl)ether	5.082	63	69681	5.13	µg/mL	88	
9) 2-Chlorophenol	5.183	128	104979	5.06	µg/mL	96	
10) 1,3-Dichlorobenzene	5.333	146	122495	5.14	µg/mL	99	
11) 1,4-Dichlorobenzene (CCC)	5.391	146	124574	5.16	µg/mL	96	
12) Benzyl alcohol	5.455	108	53085	4.74	µg/mL	85	
13) 1,2-Dichlorobenzene	5.536	146	118211	5.21	µg/mL#	95	
14) 2-Methylphenol	5.530	107	79720	5.24	µg/mL	98	
15) bis(2-Chloroisopropyl)...	5.568	45	88243	5.26	µg/mL#	81	
16) 3/4-Methylphenol	5.664	107	100657	5.05	µg/mL	94	
17) N-Nitrso-di-n-propylam...	5.691	70	68876	4.96	µg/mL#	67	
18) Hexachloroethane	5.861	117	43746	4.95	µg/mL	87	
20) Nitrobenzene	5.888	77	105233	5.27	µg/mL#	85	
22) Isophorone	6.097	82	177985	4.97	µg/mL	97	
23) 2,4-Dimethylphenol	6.177	107	67707m	3.72	µg/mL		**Manual Int. "II" (EDE)**
24) 2-Nitrophenol (CCC)	6.193	139	51599	4.61	µg/mL	92	
25) Benzoic acid	6.193	105	28941	2.44	µg/mL#	1	
26) bis(2-Chloroethoxy)met...	6.267	93	112965	5.18	µg/mL	96	
27) 2,4-Dichlorophenol (CCC)	6.417	162	65593	4.16	µg/mL#	95	
28) 1,2,4-Trichlorobenzene	6.519	180	105411	5.12	µg/mL	98	
29) Naphthalene	6.604	128	318534	5.40	µg/mL	93	
30) 4-Chloroaniline	6.620	65	32494	4.89	µg/mL	77	
31) Hexachlorobutadiene (CCC)	6.711	225	61216	4.94	µg/mL	98	
32) 4-Chloro-3 methylpheno...	7.058	107	61911	4.14	µg/mL	89	
33) 2-Methylnaphthalene	7.283	142	194818	5.15	µg/mL	100	
34) 1-Methylnaphthalene	7.384	142	189695	5.19	µg/mL	97	
35) Hexachlorocyclopentadi...	7.437	237	55760	4.41	µg/mL#	100	
37) 2,4,6-Trichlorophenol ...	7.544	196	55851	4.60	µg/mL	98	
38) 2,4,5-Trichlorophenol	7.582	196	53497	4.39	µg/mL#	90	
40) 2-Chloronaphthalene	7.774	162	186345	5.24	µg/mL	95	
41) 2-Nitroaniline	7.849	65	40358	4.40	µg/mL#	83	
42) 1,4-Dinitrobenzene	7.961	168	22517m	3.85	µg/mL		**Manual Int. "WP" (EDE)**
43) Dimethylphthalate	7.993	163	204773	5.07	µg/mL	99	
44) 1,3-Dinitrobenzene	8.041	168	28240	4.20	µg/mL#	62	
45) 2,6-Dinitrotoluene	8.068	165	46163	4.73	µg/mL#	84	
46) 1,2-Dinitrobenzene	8.137	168	20495	4.48	µg/mL	89	

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002873.D
Acq On : 18 Oct 2010 5:56 pm
Operator : dda
Sample : SSTD005-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 20 12:12:33 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 10:41:33 2010
Response via : Initial Calibration

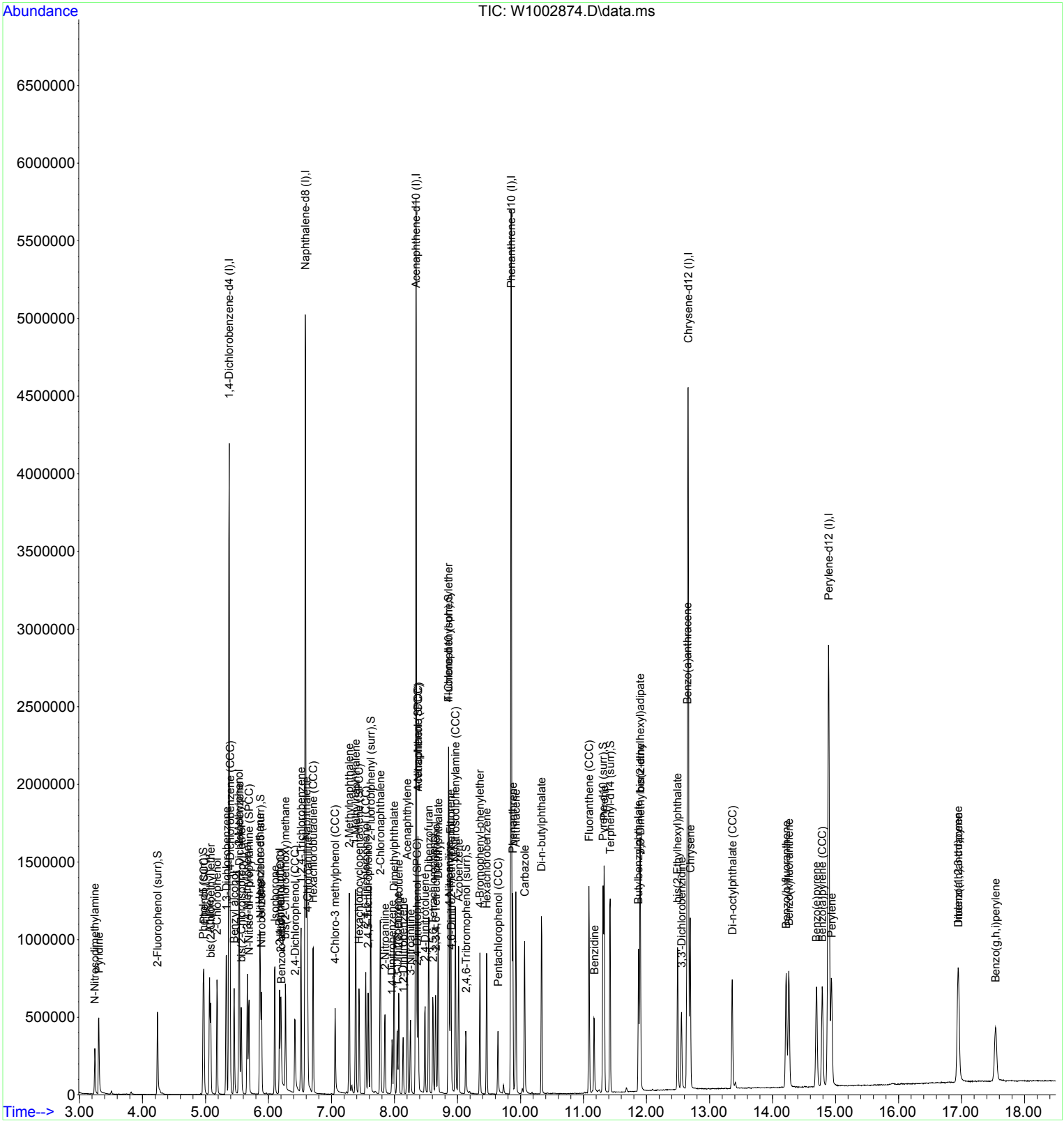
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
47) Acenaphthylene	8.201	152	280459	5.20 µg/mL	98
48) 3-Nitroaniline	8.255	138	43562	4.54 µg/mL#	74
49) Acenaphthene (CCC)	8.372	154	181422	5.26 µg/mL	94
50) 2,4-Dinitrophenol (SPCC)	8.356	184	10321	2.28 µg/mL#	100
51) 4-Nitrophenol (SPCC)	8.372	139	23474	3.45 µg/mL#	81
52) 2,4-Dinitrotoluene	8.485	165	52380	4.32 µg/mL	92
53) Dibenzofuran	8.543	168	249463	5.30 µg/mL	95
54) 2,3,5,6-Tetrachlorophenol	8.613	232	42498	4.16 µg/mL	97
55) 2,3,4,6-Tetrachlorophenol	8.655	232	44942	4.32 µg/mL#	75
56) Diethlyphthalate	8.693	149	201374	5.14 µg/mL	100
58) 4-Chlorophenyl-phenyle...	8.858	204	103250	4.98 µg/mL	95
59) Fluorene	8.891	166	197862	5.12 µg/mL	100
60) 4-Nitroaniline	8.869	138	37898	4.15 µg/mL#	81
61) 4,6-Dinitro2-methylphenol	8.901	198	19583	3.03 µg/mL#	17
62) N-Nitrosodiphenylamine...	8.965	169	168974	5.01 µg/mL	95
63) Azobenzene	9.019	77	182189	5.19 µg/mL#	100
66) 4-Bromophenyl-phenylether	9.355	248	58744	4.84 µg/mL	98
67) Hexachlorobenzene	9.462	284	61475	4.88 µg/mL	94
68) Pentachlorophenol (CCC)	9.644	266	22599	3.37 µg/mL	92
69) Phenanthrene	9.873	178	279098	5.34 µg/mL	98
70) Anthracene	9.927	178	270861	5.19 µg/mL	99
71) Carbazole	10.066	167	231460	5.10 µg/mL	98
72) Di-n-butylphthalate	10.333	149	290388	5.01 µg/mL	97
73) Fluoranthene (CCC)	11.086	202	275456	5.06 µg/mL	98
74) Benzidine	11.166	184	116352	4.15 µg/mL#	92
76) Pyrene	11.327	202	306508	5.25 µg/mL#	99
79) Butylbenzylphthalate	11.871	149	104995	4.58 µg/mL#	100
80) 3,3-Dimethylbenzidine	11.904	212	138785	4.31 µg/mL#	100
81) bis(2-ethylhexyl)adipate	11.898	129	97568	4.77 µg/mL#	100
82) bis(2-Ethylhexyl)phtha...	12.497	149	136132	4.33 µg/mL#	100
83) 3,3'-Dichlorobenzidine	12.555	252	74279	4.85 µg/mL#	95
84) Benzo(a)anthracene	12.646	228	255683	5.10 µg/mL	98
85) Chrysene	12.694	228	242579	5.15 µg/mL	99
86) Di-n-octylphthalate (CCC)	13.362	149	196874	3.97 µg/mL#	100
88) Benzo(b)fluoranthene	14.217	252	222593	4.71 µg/mL	99
89) Benzo(k)fluoranthene	14.259	252	223219	4.85 µg/mL	94
90) Benzo(e)pyrene	14.698	252	204034	4.85 µg/mL	99
91) Benzo(a)pyrene (CCC)	14.788	252	202852	4.66 µg/mL	98
92) Perylene	14.933	252	225687	4.99 µg/mL	99
93) Indeno(1,2,3-cd)pyrene	16.947	276	207540m	5.92 µg/mL	**Manual Int. "WP" (EDE)**
94) Dibenz(a,h)anthracene	16.947	278	170747	4.71 µg/mL#	96
95) Benzo(g,h,i)perylene	17.540	276	175572	5.01 µg/mL	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002874.D
Acq On : 18 Oct 2010 6:26 pm
Operator : dda
Sample : SSTD010-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 20 12:13:17 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:24:37 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002874.D
Acq On : 18 Oct 2010 6:26 pm
Operator : dda
Sample : SSTD010-SCAN gcms22pg125
Misc : gcmsprep2pg30
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Quant Time: Oct 20 12:13:17 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:24:37 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	5.375	152	706693	40.00	µg/mL	0.00
21) Naphthalene-d8 (I)	6.583	136	2486145	40.00	µg/mL	0.00
36) Acenaphthene-d10 (I)	8.340	164	1339110	40.00	µg/mL	0.00
64) Phenanthrene-d10 (I)	9.852	188	2294140	40.00	µg/mL	0.00
78) Chrysene-d12 (I)	12.662	240	2146192	40.00	µg/mL	0.00
87) Perylene-d12 (I)	14.890	264	1945018	40.00	µg/mL	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (surr)	4.238	112	189663	9.84	µg/mL	0.00
5) Phenol-d5 (surr)	4.964	99	231671	10.34	µg/mL	0.00
19) Nitrobenzene-d5 (surr)	5.872	82	219110	9.96	µg/mL	0.00
39) 2-Fluorobiphenyl (surr)	7.625	172	444619	10.74	µg/mL	0.00
57) Fluorene-d10 (surr)	8.859	176	366528	9.97	µg/mL	0.00
65) 2,4,6-Tribromophenol (...	9.136	330	48270	9.19	µg/mL	0.00
75) Pyrene-d10 (surr)	11.311	212	497272	10.40	µg/mL	0.00
77) Terphenyl-d14 (surr)	11.423	244	393732	10.34	µg/mL	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.244	74	132455	9.73	µg/mL	91
3) Pyridine	3.308	79	223500	9.87	µg/mL#	86
6) Phenol (CCC)	4.975	94	246658	10.54	µg/mL#	91
7) Aniline	5.066	66	107534	10.16	µg/mL	91
8) bis(2-Chloroethyl)ether	5.082	63	141015	10.20	µg/mL	87
9) 2-Chlorophenol	5.183	128	215831	10.22	µg/mL	96
10) 1,3-Dichlorobenzene	5.333	146	248947	10.28	µg/mL	98
11) 1,4-Dichlorobenzene (CCC)	5.392	146	254240	10.35	µg/mL	98
12) Benzyl alcohol	5.456	108	115259	10.12	µg/mL	84
13) 1,2-Dichlorobenzene	5.541	146	239817	10.38	µg/mL	96
14) 2-Methylphenol	5.530	107	160017	10.34	µg/mL	95
15) bis(2-Chloroisopropyl)...	5.568	45	175237	10.26	µg/mL#	83
16) 3/4-Methylphenol	5.664	107	204756	10.10	µg/mL	96
17) N-Nitrso-di-n-propylam...	5.691	70	142924	10.12	µg/mL#	71
18) Hexachloroethane	5.862	117	89308	9.95	µg/mL	87
20) Nitrobenzene	5.888	77	209432	10.32	µg/mL	86
22) Isophorone	6.102	82	371720	10.24	µg/mL	97
23) 2,4-Dimethylphenol	6.177	107	144581m	7.95	µg/mL	
24) 2-Nitrophenol (CCC)	6.193	139	109870	9.67	µg/mL	94
25) Benzoic acid	6.204	105	77311	6.42	µg/mL#	1
26) bis(2-Chloroethoxy)met...	6.268	93	227084	10.27	µg/mL	97
27) 2,4-Dichlorophenol (CCC)	6.423	162	153620	9.69	µg/mL	97
28) 1,2,4-Trichlorobenzene	6.519	180	212317	10.16	µg/mL	98
29) Naphthalene	6.604	128	635629	10.62	µg/mL	91
30) 4-Chloroaniline	6.620	65	67758	10.05	µg/mL	75
31) Hexachlorobutadiene (CCC)	6.711	225	124967	9.95	µg/mL	99
32) 4-Chloro-3 methylpheno...	7.058	107	135411	8.93	µg/mL	91
33) 2-Methylnaphthalene	7.283	142	391569	10.21	µg/mL	99
34) 1-Methylnaphthalene	7.384	142	376496	10.15	µg/mL	100
35) Hexachlorocyclopentadi...	7.438	237	109877	8.56	µg/mL#	100
37) 2,4,6-Trichlorophenol ...	7.544	196	119287	9.84	µg/mL	99
38) 2,4,5-Trichlorophenol	7.582	196	117762	9.69	µg/mL#	92
40) 2-Chloronaphthalene	7.774	162	370284	10.43	µg/mL	96
41) 2-Nitroaniline	7.849	65	87885	9.59	µg/mL	84
42) 1,4-Dinitrobenzene	7.961	168	51444m	8.57	µg/mL	
43) Dimethylphthalate	7.993	163	413512	10.26	µg/mL	99
44) 1,3-Dinitrobenzene	8.047	168	62670	9.33	µg/mL#	74
45) 2,6-Dinitrotoluene	8.068	165	95709	9.82	µg/mL#	84
46) 1,2-Dinitrobenzene	8.137	168	43995	9.64	µg/mL	89

Manual Int. "II" (EDE)

Manual Int. "WP" (EDE)

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002874.D
Acq On : 18 Oct 2010 6:26 pm
Operator : dda
Sample : SSTD010-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 20 12:13:17 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:24:37 2010
Response via : Initial Calibration

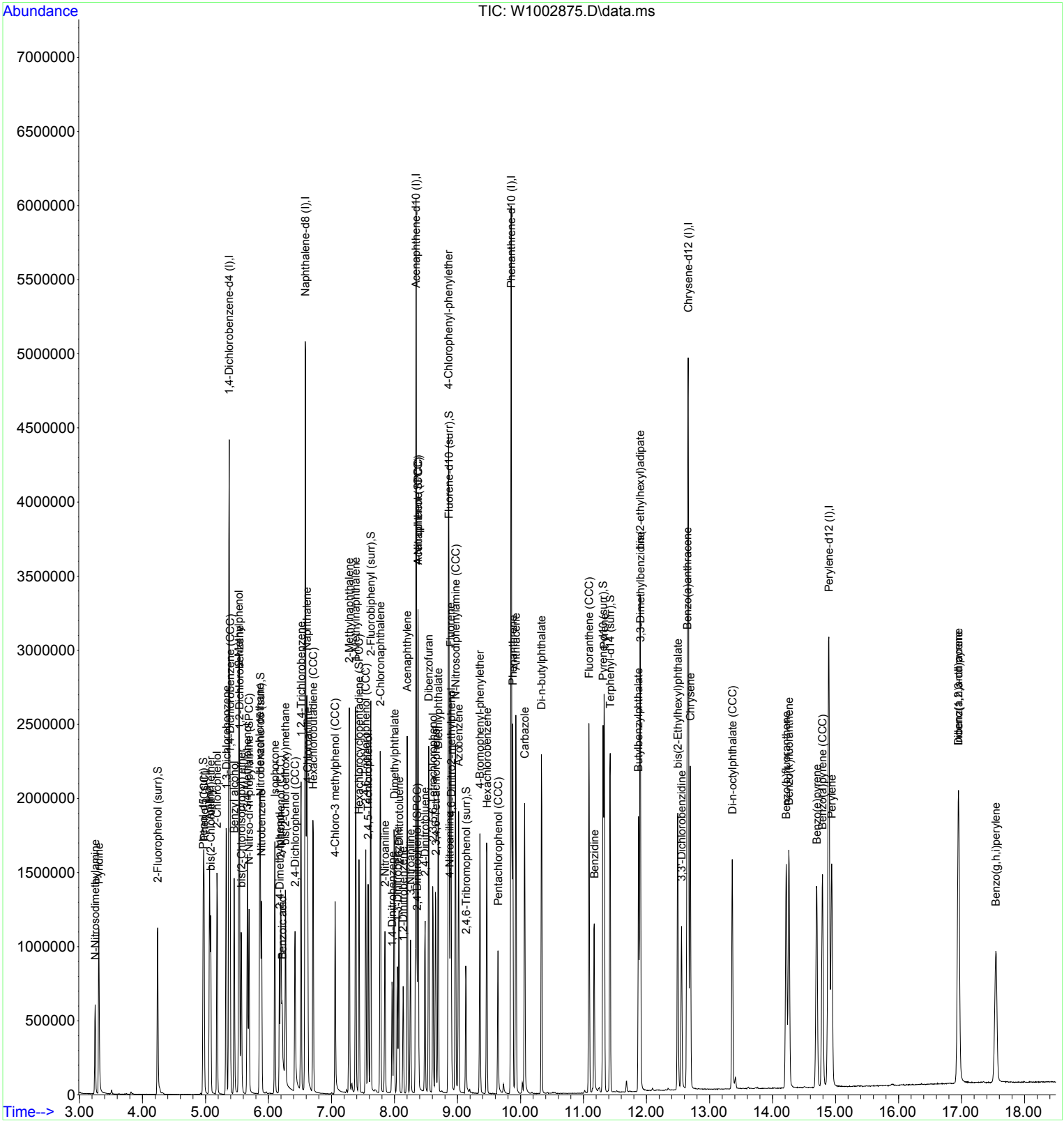
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
47) Acenaphthylene	8.202	152	565311	10.50 µg/mL	98	
48) 3-Nitroaniline	8.255	138	93155	9.72 µg/mL#	76	
49) Acenaphthene (CCC)	8.373	154	351625	10.21 µg/mL	96	
50) 2,4-Dinitrophenol (SPCC)	8.356	184	26144	5.80 µg/mL#	100	
51) 4-Nitrophenol (SPCC)	8.373	139	53475	7.87 µg/mL#	69	
52) 2,4-Dinitrotoluene	8.485	165	114585	9.47 µg/mL	90	
53) Dibenzofuran	8.543	168	485032	10.33 µg/mL	96	
54) 2,3,5,6-Tetrachlorophenol	8.613	232	90233	8.85 µg/mL	98	
55) 2,3,4,6-Tetrachlorophenol	8.656	232	93540	9.06 µg/mL#	78	
56) Diethlyphthalate	8.693	149	399969	10.23 µg/mL	99	
58) 4-Chlorophenyl-phenyle...	8.859	204	204672	9.90 µg/mL	96	
59) Fluorene	8.891	166	391149	10.14 µg/mL	99	
60) 4-Nitroaniline	8.869	138	79786	8.75 µg/mL#	83	
61) 4,6-Dinitro2-methylphenol	8.901	198	46162	7.12 µg/mL#	12	
62) N-Nitrosodiphenylamine...	8.965	169	342496	10.18 µg/mL	95	
63) Azobenzene	9.019	77	350420	10.00 µg/mL#	100	
66) 4-Bromophenyl-phenylether	9.355	248	120530	10.03 µg/mL	97	
67) Hexachlorobenzene	9.462	284	123010	9.87 µg/mL	95	
68) Pentachlorophenol (CCC)	9.644	266	53464	8.05 µg/mL	91	
69) Phenanthrene	9.879	178	546524	10.55 µg/mL	100	
70) Anthracene	9.927	178	532469	10.30 µg/mL	100	
71) Carbazole	10.066	167	455826	10.15 µg/mL	99	
72) Di-n-butylphthalate	10.333	149	614998	10.70 µg/mL	97	
73) Fluoranthene (CCC)	11.086	202	569316	10.56 µg/mL	98	
74) Benzidine	11.172	184	221945	7.98 µg/mL	100	
76) Pyrene	11.327	202	621484	10.74 µg/mL#	99	
79) Butylbenzylphthalate	11.872	149	233209	9.83 µg/mL#	100	
80) 3,3-Dimethylbenzidine	11.904	212	298947	8.96 µg/mL#	100	
81) bis(2-ethylhexyl)adipate	11.898	129	213098	10.07 µg/mL#	100	
82) bis(2-Ethylhexyl)phtha...	12.491	149	313443	9.64 µg/mL#	99	
83) 3,3'-Dichlorobenzidine	12.555	252	144361	9.11 µg/mL	100	
84) Benzo(a)anthracene	12.646	228	519832	10.03 µg/mL	98	
85) Chrysene	12.694	228	500412	10.25 µg/mL	99	
86) Di-n-octylphthalate (CCC)	13.362	149	476626	9.28 µg/mL#	100	
88) Benzo(b)fluoranthene	14.217	252	470026m	9.66 µg/mL		Manual Int. "WP" (EDE)
89) Benzo(k)fluoranthene	14.260	252	478117	10.06 µg/mL	96	
90) Benzo(e)pyrene	14.698	252	428593	9.89 µg/mL	99	
91) Benzo(a)pyrene (CCC)	14.789	252	429107	9.60 µg/mL	98	
92) Perylene	14.938	252	469953	10.07 µg/mL	98	
93) Indeno(1,2,3-cd)pyrene	16.947	276	409345m	11.35 µg/mL		Manual Int. "WP" (EDE)
94) Dibenz(a,h)anthracene	16.952	278	341073	9.14 µg/mL#	96	
95) Benzo(g,h,i)perylene	17.540	276	343597	9.52 µg/mL	99	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002875.D
Acq On : 18 Oct 2010 6:55 pm
Operator : dda
Sample : SSTD020-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Oct 20 12:13:56 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:28:56 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002875.D
Acq On : 18 Oct 2010 6:55 pm
Operator : dda
Sample : SSTD020-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Oct 20 12:13:56 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:28:56 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	5.375	152	720068	40.00	µg/mL	0.00
21) Naphthalene-d8 (I)	6.583	136	2542711	40.00	µg/mL	0.00
36) Acenaphthene-d10 (I)	8.340	164	1390154	40.00	µg/mL	0.00
64) Phenanthrene-d10 (I)	9.852	188	2354525	40.00	µg/mL	0.00
78) Chrysene-d12 (I)	12.662	240	2151499	40.00	µg/mL	0.00
87) Perylene-d12 (I)	14.895	264	2135523	40.00	µg/mL	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (surr)	4.243	112	385102	19.62	µg/mL	0.00
5) Phenol-d5 (surr)	4.964	99	471390	20.65	µg/mL	0.00
19) Nitrobenzene-d5 (surr)	5.872	82	454648	20.28	µg/mL	0.00
39) 2-Fluorobiphenyl (surr)	7.624	172	861131	20.03	µg/mL	0.00
57) Fluorene-d10 (surr)	8.864	176	734622	19.24	µg/mL	0.00
65) 2,4,6-Tribromophenol (...	9.136	330	98664	18.30	µg/mL	0.00
75) Pyrene-d10 (surr)	11.311	212	938517	19.12	µg/mL	0.00
77) Terphenyl-d14 (surr)	11.423	244	721401	18.47	µg/mL	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.249	74	268662	19.38	µg/mL	93
3) Pyridine	3.308	79	454960	19.73	µg/mL#	82
6) Phenol (CCC)	4.980	94	488820	20.51	µg/mL#	92
7) Aniline	5.066	66	215533	19.99	µg/mL	91
8) bis(2-Chloroethyl)ether	5.082	63	286491	20.34	µg/mL	89
9) 2-Chlorophenol	5.183	128	427306	19.87	µg/mL	95
10) 1,3-Dichlorobenzene	5.333	146	487385	19.75	µg/mL	99
11) 1,4-Dichlorobenzene (CCC)	5.391	146	491902	19.65	µg/mL	99
12) Benzyl alcohol	5.456	108	236968	20.41	µg/mL	84
13) 1,2-Dichlorobenzene	5.541	146	461266	19.60	µg/mL#	94
14) 2-Methylphenol	5.530	107	322944	20.47	µg/mL	96
15) bis(2-Chloroisopropyl)...	5.568	45	353103	20.30	µg/mL#	82
16) 3/4-Methylphenol	5.664	107	412029	19.95	µg/mL	96
17) N-Nitrso-di-n-propylam...	5.691	70	286292	19.90	µg/mL#	71
18) Hexachloroethane	5.862	117	177593	19.41	µg/mL	87
20) Nitrobenzene	5.888	77	420879	20.36	µg/mL#	86
22) Isophorone	6.102	82	727219	19.59	µg/mL	97
23) 2,4-Dimethylphenol	6.177	107	346769m	18.90	µg/mL	
24) 2-Nitrophenol (CCC)	6.193	139	226482	19.49	µg/mL	92
25) Benzoic acid	6.219	105	218584	17.74	µg/mL#	1
26) bis(2-Chloroethoxy)met...	6.268	93	448403	19.84	µg/mL	97
27) 2,4-Dichlorophenol (CCC)	6.422	162	298031	18.38	µg/mL#	95
28) 1,2,4-Trichlorobenzene	6.519	180	415380	19.44	µg/mL	98
29) Naphthalene	6.609	128	1242897	20.30	µg/mL#	89
30) 4-Chloroaniline	6.620	65	135275	19.62	µg/mL	77
31) Hexachlorobutadiene (CCC)	6.711	225	245812	19.13	µg/mL	99
32) 4-Chloro-3 methylpheno...	7.058	107	292277	18.84	µg/mL	90
33) 2-Methylnaphthalene	7.283	142	775011	19.76	µg/mL	99
34) 1-Methylnaphthalene	7.384	142	755442	19.92	µg/mL	99
35) Hexachlorocyclopentadi...	7.438	237	250781	19.11	µg/mL#	100
37) 2,4,6-Trichlorophenol ...	7.544	196	242401	19.27	µg/mL	98
38) 2,4,5-Trichlorophenol	7.582	196	245683	19.48	µg/mL#	94
40) 2-Chloronaphthalene	7.774	162	732264	19.86	µg/mL	94
41) 2-Nitroaniline	7.849	65	186464	19.61	µg/mL	84
42) 1,4-Dinitrobenzene	7.966	168	111999m	17.50	µg/mL	
43) Dimethylphthalate	7.998	163	808845	19.32	µg/mL	99
44) 1,3-Dinitrobenzene	8.047	168	130890	18.77	µg/mL#	76
45) 2,6-Dinitrotoluene	8.073	165	191913	18.98	µg/mL#	87
46) 1,2-Dinitrobenzene	8.137	168	87855	18.55	µg/mL	89

Manual Int. "II" (EDE)

Manual Int. "WP" (EDE)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002875.D
Acq On : 18 Oct 2010 6:55 pm
Operator : dda
Sample : SSTD020-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Oct 20 12:13:56 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:28:56 2010
Response via : Initial Calibration

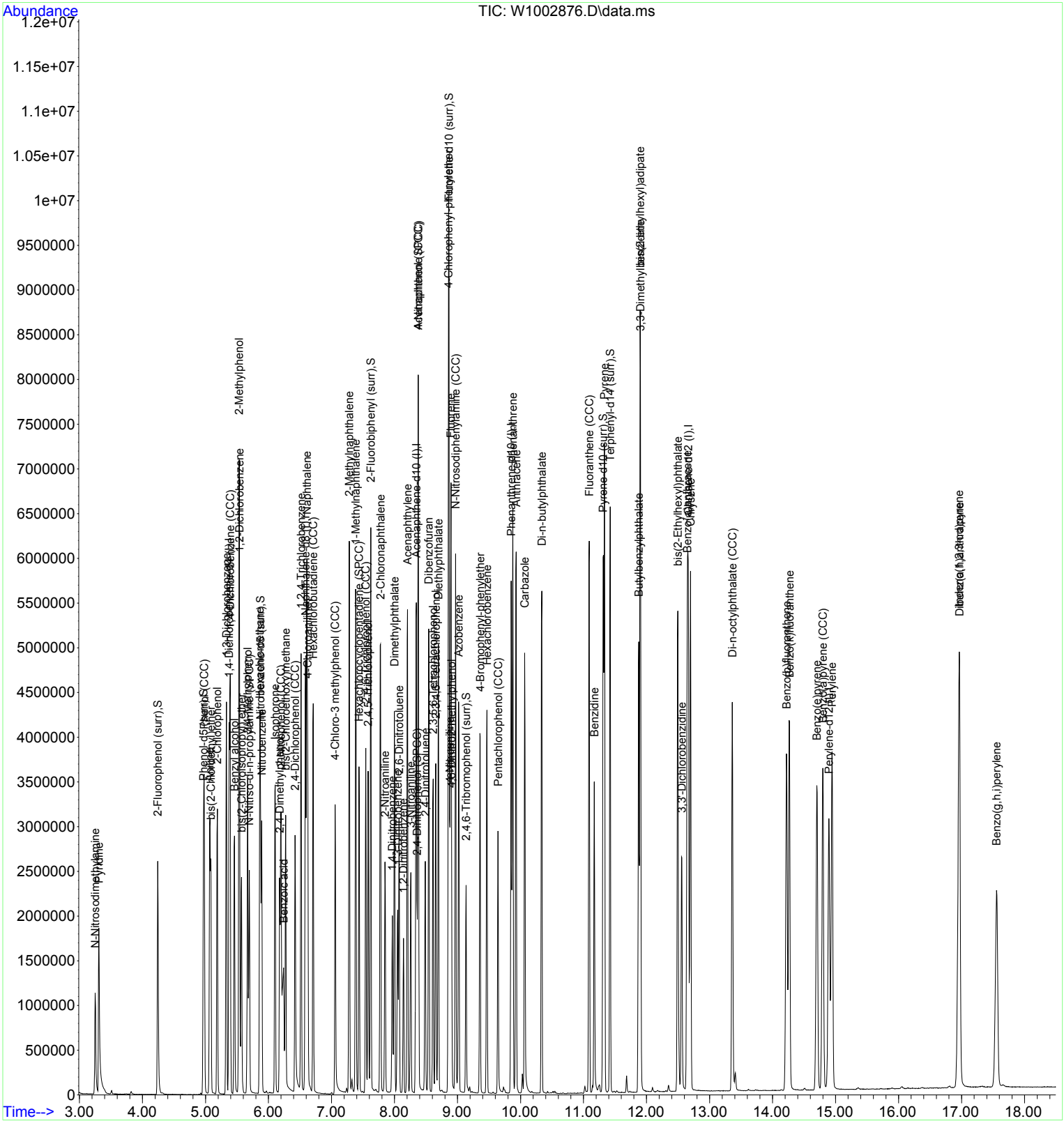
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
47) Acenaphthylene	8.201	152	1138687	20.37 µg/mL	98	
48) 3-Nitroaniline	8.255	138	187783	18.87 µg/mL#	72	
49) Acenaphthene (CCC)	8.372	154	696007	19.46 µg/mL	95	
50) 2,4-Dinitrophenol (SPCC)	8.356	184	75132	16.05 µg/mL#	100	
51) 4-Nitrophenol (SPCC)	8.372	139	126824	17.99 µg/mL#	70	
52) 2,4-Dinitrotoluene	8.485	165	237923	18.95 µg/mL	90	
53) Dibenzofuran	8.543	168	966279	19.82 µg/mL	94	
54) 2,3,5,6-Tetrachlorophenol	8.607	232	191404	18.08 µg/mL	97	
55) 2,3,4,6-Tetrachlorophenol	8.656	232	198571	18.54 µg/mL#	81	
56) Diethlyphthalate	8.693	149	796177	19.61 µg/mL	99	
58) 4-Chlorophenyl-phenyle...	8.859	204	410164	19.10 µg/mL	96	
59) Fluorene	8.891	166	788273	19.69 µg/mL	99	
60) 4-Nitroaniline	8.875	138	174390	18.43 µg/mL#	81	
61) 4,6-Dinitro2-methylphenol	8.901	198	115410	17.15 µg/mL#	11	
62) N-Nitrosodiphenylamine...	8.971	169	674512	19.31 µg/mL	95	
63) Azobenzene	9.019	77	731513	20.10 µg/mL#	100	
66) 4-Bromophenyl-phenylether	9.355	248	238946	19.37 µg/mL	100	
67) Hexachlorobenzene	9.468	284	241102	18.84 µg/mL	95	
68) Pentachlorophenol (CCC)	9.644	266	116269	17.07 µg/mL	90	
69) Phenanthrene	9.879	178	1057464	19.89 µg/mL	100	
70) Anthracene	9.927	178	1071540	20.19 µg/mL	99	
71) Carbazole	10.066	167	893014	19.37 µg/mL	99	
72) Di-n-butylphthalate	10.333	149	1194294	20.25 µg/mL	98	
73) Fluoranthene (CCC)	11.086	202	1065299	19.26 µg/mL	97	
74) Benzidine	11.172	184	506627	17.75 µg/mL	99	
76) Pyrene	11.327	202	1153486	19.41 µg/mL#	99	
79) Butylbenzylphthalate	11.872	149	471590	19.83 µg/mL#	100	
80) 3,3-Dimethylbenzidine	11.904	212	621800	18.59 µg/mL#	100	
81) bis(2-ethylhexyl)adipate	11.898	129	427604	20.16 µg/mL#	100	
82) bis(2-Ethylhexyl)phtha...	12.497	149	655163	20.10 µg/mL#	99	
83) 3,3'-Dichlorobenzidine	12.555	252	296700	18.67 µg/mL	99	
84) Benzo(a)anthracene	12.646	228	1018235	19.61 µg/mL	98	
85) Chrysene	12.694	228	954008	19.50 µg/mL	99	
86) Di-n-octylphthalate (CCC)	13.362	149	1050503	20.40 µg/mL#	100	
88) Benzo(b)fluoranthene	14.217	252	981816	18.39 µg/mL#	97	
89) Benzo(k)fluoranthene	14.260	252	1016689	19.49 µg/mL	95	
90) Benzo(e)pyrene	14.703	252	914623	19.22 µg/mL	99	
91) Benzo(a)pyrene (CCC)	14.794	252	942058	19.19 µg/mL	97	
92) Perylene	14.938	252	996589	19.45 µg/mL	98	
93) Indeno(1,2,3-cd)pyrene	16.952	276	1031781m	26.05 µg/mL		**Manual Int. "WP" (EDE)**
94) Dibenz(a,h)anthracene	16.952	278	863105	21.07 µg/mL#	96	
95) Benzo(g,h,i)perylene	17.545	276	870239	21.97 µg/mL	99	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002876.D
Acq On : 18 Oct 2010 7:25 pm
Operator : dda
Sample : SSTD050-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 20 10:47:01 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:30:55 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002876.D
Acq On : 18 Oct 2010 7:25 pm
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Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:30:55 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	5.375	152	655591	40.00	µg/mL	0.00
21) Naphthalene-d8 (I)	6.588	136	2346284	40.00	µg/mL	0.00
36) Acenaphthene-d10 (I)	8.346	164	1314587	40.00	µg/mL	0.00
64) Phenanthrene-d10 (I)	9.852	188	2336676	40.00	µg/mL	0.00
78) Chrysene-d12 (I)	12.662	240	2279787	40.00	µg/mL	0.00
87) Perylene-d12 (I)	14.895	264	2168681	40.00	µg/mL	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (surr)	4.243	112	900585	50.39	µg/mL	0.00
5) Phenol-d5 (surr)	4.969	99	1027693	49.44	µg/mL	0.00
19) Nitrobenzene-d5 (surr)	5.872	82	1032667	50.60	µg/mL	0.00
39) 2-Fluorobiphenyl (surr)	7.625	172	2022693	49.76	µg/mL	0.00
57) Fluorene-d10 (surr)	8.864	176	1817663	50.35	µg/mL	0.00
65) 2,4,6-Tribromophenol (...	9.136	330	262774	49.12	µg/mL	0.00
75) Pyrene-d10 (surr)	11.311	212	2440734	50.11	µg/mL	0.00
77) Terphenyl-d14 (surr)	11.423	244	1933841	49.88	µg/mL	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.249	74	635596	50.35	µg/mL	91
3) Pyridine	3.308	79	1062640	50.61	µg/mL#	82
6) Phenol (CCC)	4.980	94	1074210	49.50	µg/mL#	91
7) Aniline	5.066	66	494387	50.37	µg/mL	89
8) bis(2-Chloroethyl)ether	5.087	63	650353	50.72	µg/mL	89
9) 2-Chlorophenol	5.188	128	979940	50.04	µg/mL	96
10) 1,3-Dichlorobenzene	5.333	146	1116124	49.68	µg/mL	98
11) 1,4-Dichlorobenzene (CCC)	5.391	146	1134699	49.79	µg/mL	99
12) Benzyl alcohol	5.461	108	526916	49.86	µg/mL	85
13) 1,2-Dichlorobenzene	5.541	146	1065553	49.74	µg/mL#	95
14) 2-Methylphenol	5.536	107	705677	49.14	µg/mL	97
15) bis(2-Chloroisopropyl)...	5.573	45	804523	50.80	µg/mL#	82
16) 3/4-Methylphenol	5.669	107	924560	49.16	µg/mL	94
17) N-Nitrso-di-n-propylam...	5.696	70	656842	50.14	µg/mL#	72
18) Hexachloroethane	5.862	117	419458	50.36	µg/mL	87
20) Nitrobenzene	5.894	77	944597	50.18	µg/mL	87
22) Isophorone	6.107	82	1738085	50.74	µg/mL	96
23) 2,4-Dimethylphenol	6.177	107	895507	52.91	µg/mL#	61
24) 2-Nitrophenol (CCC)	6.198	139	539145	50.28	µg/mL	93
25) Benzoic acid	6.241	105	634258	55.80	µg/mL#	1
26) bis(2-Chloroethoxy)met...	6.273	93	1042176	49.96	µg/mL	97
27) 2,4-Dichlorophenol (CCC)	6.423	162	767304	51.28	µg/mL	96
28) 1,2,4-Trichlorobenzene	6.519	180	963119	48.84	µg/mL	98
29) Naphthalene	6.610	128	2807524	49.68	µg/mL#	86
30) 4-Chloroaniline	6.620	65	320545	50.38	µg/mL	75
31) Hexachlorobutadiene (CCC)	6.711	225	574376	48.44	µg/mL	99
32) 4-Chloro-3 methylpheno...	7.058	107	750985	52.45	µg/mL	91
33) 2-Methylnaphthalene	7.283	142	1804232	49.86	µg/mL	99
34) 1-Methylnaphthalene	7.384	142	1742830	49.79	µg/mL	99
35) Hexachlorocyclopentadi...	7.438	237	638121	52.70	µg/mL#	100
37) 2,4,6-Trichlorophenol ...	7.544	196	597498	50.23	µg/mL	99
38) 2,4,5-Trichlorophenol	7.582	196	598687	50.19	µg/mL#	90
40) 2-Chloronaphthalene	7.779	162	1729488	49.61	µg/mL	94
41) 2-Nitroaniline	7.849	65	465188	51.72	µg/mL	85
42) 1,4-Dinitrobenzene	7.966	168	301749m	48.86	µg/mL	
43) Dimethylphthalate	7.998	163	1964791	49.64	µg/mL	99
44) 1,3-Dinitrobenzene	8.052	168	339018	51.42	µg/mL#	71
45) 2,6-Dinitrotoluene	8.073	165	477324	49.91	µg/mL#	72
46) 1,2-Dinitrobenzene	8.143	168	225093	50.25	µg/mL	89

Manual Int. "WP" (EDE)

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002876.D
Acq On : 18 Oct 2010 7:25 pm
Operator : dda
Sample : SSTD050-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 20 10:47:01 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:30:55 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
47) Acenaphthylene	8.207	152	2670061	50.50	µg/mL	97
48) 3-Nitroaniline	8.260	138	479906	51.01	µg/mL#	72
49) Acenaphthene (CCC)	8.378	154	1669970	49.38	µg/mL	94
50) 2,4-Dinitrophenol (SPCC)	8.356	184	247053	55.80	µg/mL#	100
51) 4-Nitrophenol (SPCC)	8.378	139	363991	54.59	µg/mL#	70
52) 2,4-Dinitrotoluene	8.490	165	605293	50.97	µg/mL	90
53) Dibenzofuran	8.543	168	2297357	49.83	µg/mL	94
54) 2,3,5,6-Tetrachlorophenol	8.613	232	508913	50.84	µg/mL	97
55) 2,3,4,6-Tetrachlorophenol	8.656	232	513321	50.67	µg/mL#	81
56) Diethlyphthalate	8.698	149	1941442	50.56	µg/mL	99
58) 4-Chlorophenyl-phenyle...	8.859	204	999101	49.21	µg/mL	96
59) Fluorene	8.896	166	1910816	50.46	µg/mL	99
60) 4-Nitroaniline	8.880	138	472667	52.83	µg/mL	85
61) 4,6-Dinitro2-methylphenol	8.907	198	345178	54.25	µg/mL#	12
62) N-Nitrosodiphenylamine...	8.971	169	1651904	50.00	µg/mL	96
63) Azobenzene	9.019	77	1784554	51.85	µg/mL#	100
66) 4-Bromophenyl-phenylether	9.361	248	593204	48.45	µg/mL	99
67) Hexachlorobenzene	9.468	284	615677	48.49	µg/mL	94
68) Pentachlorophenol (CCC)	9.644	266	352570	52.15	µg/mL	90
69) Phenanthrene	9.879	178	2640876	50.06	µg/mL	99
70) Anthracene	9.932	178	2674012	50.77	µg/mL	100
71) Carbazole	10.066	167	2302237	50.33	µg/mL	99
72) Di-n-butylphthalate	10.338	149	3044317	52.01	µg/mL	99
73) Fluoranthene (CCC)	11.092	202	2764843	50.37	µg/mL#	98
74) Benzidine	11.172	184	1448854	51.15	µg/mL	99
76) Pyrene	11.332	202	2949812	50.03	µg/mL#	98
79) Butylbenzylphthalate	11.877	149	1286236	51.04	µg/mL#	100
80) 3,3-Dimethylbenzidine	11.904	212	1821139	51.38	µg/mL#	100
81) bis(2-ethylhexyl)adipate	11.898	129	1151877	51.25	µg/mL#	100
82) bis(2-Ethylhexyl)phtha...	12.497	149	1837456	53.19	µg/mL#	100
83) 3,3'-Dichlorobenzidine	12.561	252	779586	46.30	µg/mL	99
84) Benzo(a)anthracene	12.646	228	2743401	49.85	µg/mL	99
85) Chrysene	12.700	228	2601527	50.18	µg/mL	99
86) Di-n-octylphthalate (CCC)	13.362	149	3014003	55.25	µg/mL#	100
88) Benzo(b)fluoranthene	14.222	252	2638192	48.65	µg/mL#	98
89) Benzo(k)fluoranthene	14.270	252	2627687	49.60	µg/mL	95
90) Benzo(e)pyrene	14.703	252	2368320	49.02	µg/mL	99
91) Benzo(a)pyrene (CCC)	14.799	252	2483685	49.83	µg/mL	97
92) Perylene	14.943	252	2553222	49.07	µg/mL	100
93) Indeno(1,2,3-cd)pyrene	16.963	276	2666636m	66.30	µg/mL	
94) Dibenz(a,h)anthracene	16.968	278	2243251	53.92	µg/mL	96
95) Benzo(g,h,i)perylene	17.556	276	2201757	54.74	µg/mL	99

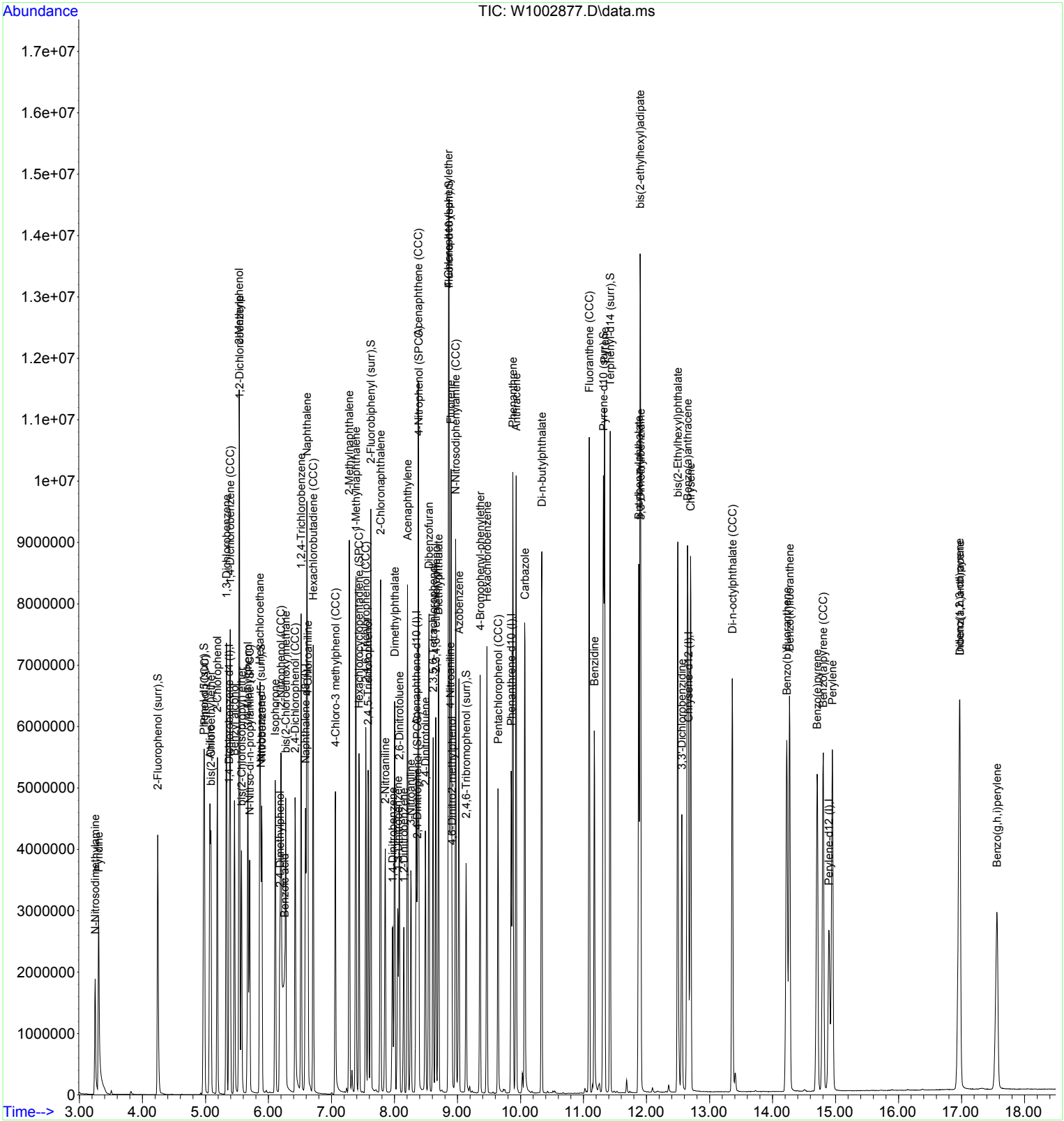
Manual Int. "WP" (EDE)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002877.D
Acq On : 18 Oct 2010 7:54 pm
Operator : dda
Sample : SSTD080-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 20 10:45:38 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:32:38 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002877.D
Acq On : 18 Oct 2010 7:54 pm
Operator : dda
Sample : SSTD080-SCAN gcms22pg125
Misc : gcmsprep2pg30
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Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:32:38 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	5.375	152	662846	40.00	µg/mL	0.00
21) Naphthalene-d8 (I)	6.588	136	2259727	40.00	µg/mL	0.00
36) Acenaphthene-d10 (I)	8.346	164	1246926	40.00	µg/mL	0.00
64) Phenanthrene-d10 (I)	9.852	188	2303538	40.00	µg/mL	0.00
78) Chrysene-d12 (I)	12.667	240	2250870	40.00	µg/mL	0.00
87) Perylene-d12 (I)	14.895	264	1934135	40.00	µg/mL	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (surr)	4.243	112	1520406	84.13	µg/mL	0.00
5) Phenol-d5 (surr)	4.975	99	1676087	79.75	µg/mL	0.00
19) Nitrobenzene-d5 (surr)	5.877	82	1643568	79.65	µg/mL	0.00
39) 2-Fluorobiphenyl (surr)	7.624	172	3079250	79.87	µg/mL	0.00
57) Fluorene-d10 (surr)	8.864	176	2847479	83.16	µg/mL	0.00
65) 2,4,6-Tribromophenol (...	9.136	330	450730	85.46	µg/mL	0.00
75) Pyrene-d10 (surr)	11.316	212	4032039	83.98	µg/mL	0.00
77) Terphenyl-d14 (surr)	11.423	244	3278436	85.79	µg/mL	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.249	74	1065824	83.51	µg/mL	90
3) Pyridine	3.302	79	1777926	83.75	µg/mL#	83
6) Phenol (CCC)	4.985	94	1729656	78.83	µg/mL#	92
7) Aniline	5.071	66	797205	80.33	µg/mL	88
8) bis(2-Chloroethyl)ether	5.087	63	1046624	80.73	µg/mL	91
9) 2-Chlorophenol	5.188	128	1618701	81.75	µg/mL	95
10) 1,3-Dichlorobenzene	5.333	146	1841092	81.06	µg/mL	99
11) 1,4-Dichlorobenzene (CCC)	5.391	146	1864578	80.93	µg/mL	99
12) Benzyl alcohol	5.461	108	865190	80.97	µg/mL	86
13) 1,2-Dichlorobenzene	5.541	146	1745698	80.59	µg/mL#	95
14) 2-Methylphenol	5.536	107	1151734	79.32	µg/mL	97
15) bis(2-Chloroisopropyl)...	5.573	45	1272195	79.45	µg/mL#	82
16) 3/4-Methylphenol	5.674	107	1506894	79.24	µg/mL	95
17) N-Nitrso-di-n-propylam...	5.701	70	1068651	80.68	µg/mL#	71
18) Hexachloroethane	5.861	117	693404	82.34	µg/mL	89
20) Nitrobenzene	5.893	77	1499787	78.80	µg/mL#	86
22) Isophorone	6.107	82	2678725	81.20	µg/mL	96
23) 2,4-Dimethylphenol	6.182	107	1483117	90.99	µg/mL#	79
24) 2-Nitrophenol (CCC)	6.198	139	868327	84.08	µg/mL	91
25) Benzoic acid	6.257	105	1054266	96.30	µg/mL#	1
26) bis(2-Chloroethoxy)met...	6.273	93	1628238	81.05	µg/mL	97
27) 2,4-Dichlorophenol (CCC)	6.422	162	1226169	85.09	µg/mL#	96
28) 1,2,4-Trichlorobenzene	6.518	180	1550822	81.66	µg/mL	99
29) Naphthalene	6.609	128	4368870	80.28	µg/mL#	86
30) 4-Chloroaniline	6.625	65	501374	81.81	µg/mL	75
31) Hexachlorobutadiene (CCC)	6.711	225	942468	82.53	µg/mL	99
32) 4-Chloro-3 methylpheno...	7.063	107	1175601	85.26	µg/mL	93
33) 2-Methylnaphthalene	7.282	142	2802443	80.41	µg/mL	100
34) 1-Methylnaphthalene	7.389	142	2709029	80.37	µg/mL	99
35) Hexachlorocyclopentadi...	7.437	237	979053	83.96	µg/mL#	100
37) 2,4,6-Trichlorophenol ...	7.544	196	948267	84.04	µg/mL	99
38) 2,4,5-Trichlorophenol	7.582	196	952771	84.20	µg/mL#	89
40) 2-Chloronaphthalene	7.779	162	2680042	81.04	µg/mL	94
41) 2-Nitroaniline	7.854	65	734512	86.10	µg/mL	86
42) 1,4-Dinitrobenzene	7.972	168	484493m	81.29	µg/mL	
43) Dimethylphthalate	8.004	163	3112785	82.91	µg/mL	99
44) 1,3-Dinitrobenzene	8.057	168	546881	87.44	µg/mL#	68
45) 2,6-Dinitrotoluene	8.078	165	769244	84.80	µg/mL#	74
46) 1,2-Dinitrobenzene	8.148	168	370447	87.19	µg/mL	88

Manual Int. "WP" (EDE)

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002877.D
Acq On : 18 Oct 2010 7:54 pm
Operator : dda
Sample : SSTD080-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 20 10:45:38 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:32:38 2010
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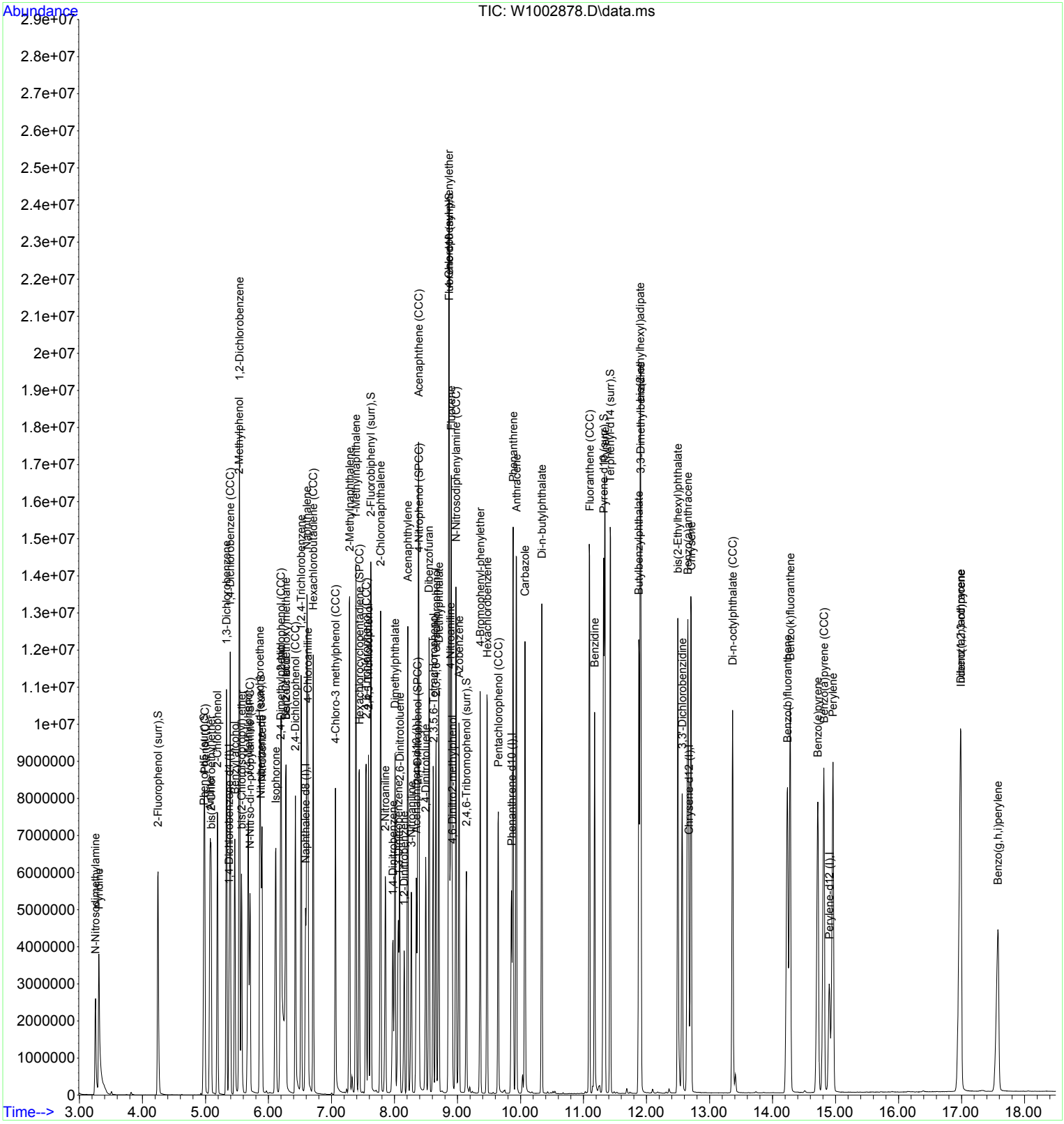
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
47) Acenaphthylene	8.207	152	4042909	80.61 µg/mL	96	
48) 3-Nitroaniline	8.260	138	756365	84.76 µg/mL#	74	
49) Acenaphthene (CCC)	8.378	154	2583448	80.54 µg/mL	94	
50) 2,4-Dinitrophenol (SPCC)	8.362	184	422751	100.67 µg/mL#	100	
51) 4-Nitrophenol (SPCC)	8.383	139	590584	92.94 µg/mL#	72	
52) 2,4-Dinitrotoluene	8.490	165	991694	88.05 µg/mL	88	
53) Dibenzofuran	8.549	168	3539646	80.95 µg/mL	93	
54) 2,3,5,6-Tetrachlorophenol	8.613	232	841349	88.61 µg/mL	98	
55) 2,3,4,6-Tetrachlorophenol	8.655	232	843608	87.79 µg/mL#	82	
56) Diethlyphthalate	8.698	149	3035443	83.34 µg/mL	98	
58) 4-Chlorophenyl-phenyle...	8.858	204	1590412	82.58 µg/mL	97	
59) Fluorene	8.896	166	2932322	81.64 µg/mL	100	
60) 4-Nitroaniline	8.885	138	759570	89.50 µg/mL	85	
61) 4,6-Dinitro2-methylphenol	8.912	198	591276	97.97 µg/mL#	10	
62) N-Nitrosodiphenylamine...	8.971	169	2602966	83.06 µg/mL	96	
63) Azobenzene	9.024	77	2703666	82.82 µg/mL#	100	
66) 4-Bromophenyl-phenylether	9.361	248	978655	81.09 µg/mL	98	
67) Hexachlorobenzene	9.467	284	1022518	81.69 µg/mL	92	
68) Pentachlorophenol (CCC)	9.644	266	615106	92.29 µg/mL	89	
69) Phenanthrene	9.879	178	4174914	80.28 µg/mL	99	
70) Anthracene	9.932	178	4211925	81.12 µg/mL	99	
71) Carbazole	10.071	167	3742990	83.00 µg/mL	99	
72) Di-n-butylphthalate	10.338	149	4846729	84.00 µg/mL	99	
73) Fluoranthene (CCC)	11.091	202	4561098	84.29 µg/mL#	97	
74) Benzidine	11.172	184	2566248	91.90 µg/mL	99	
76) Pyrene	11.337	202	4884640	84.04 µg/mL#	97	
79) Butylbenzylphthalate	11.877	149	2130889	85.64 µg/mL#	100	
80) 3,3-Dimethylbenzidine	11.909	212	3049279	87.14 µg/mL#	100	
81) bis(2-ethylhexyl)adipate	11.898	129	1851064	83.42 µg/mL#	100	
82) bis(2-Ethylhexyl)phtha...	12.496	149	2966387	86.97 µg/mL#	99	
83) 3,3'-Dichlorobenzidine	12.561	252	1278774	76.92 µg/mL	98	
84) Benzo(a)anthracene	12.651	228	4440131	81.72 µg/mL	98	
85) Chrysene	12.699	228	4151696	81.11 µg/mL	100	
86) Di-n-octylphthalate (CCC)	13.362	149	4770907	88.58 µg/mL#	100	
88) Benzo(b)fluoranthene	14.227	252	4214544	87.14 µg/mL#	98	
89) Benzo(k)fluoranthene	14.270	252	3922979m	83.03 µg/mL		Manual Int. "WP" (EDE)
90) Benzo(e)pyrene	14.708	252	3629102	84.22 µg/mL	100	
91) Benzo(a)pyrene (CCC)	14.804	252	3812109	85.76 µg/mL	97	
92) Perylene	14.949	252	3851179	82.99 µg/mL	100	
93) Indeno(1,2,3-cd)pyrene	16.968	276	3625684m	101.07 µg/mL		Manual Int. "WP" (EDE)
94) Dibenz(a,h)anthracene	16.973	278	3067089	82.66 µg/mL	97	
95) Benzo(g,h,i)perylene	17.561	276	2891515	80.60 µg/mL	100	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002878.D
Acq On : 18 Oct 2010 8:24 pm
Operator : dda
Sample : SSTD120-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 20 12:14:38 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:34:25 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002878.D
Acq On : 18 Oct 2010 8:24 pm
Operator : dda
Sample : SSTD120-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 20 12:14:38 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:34:25 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	5.375	152	708059	40.00	µg/mL	# 0.00
21) Naphthalene-d8 (I)	6.588	136	2432537	40.00	µg/mL	0.00
36) Acenaphthene-d10 (I)	8.346	164	1402728	40.00	µg/mL	0.00
64) Phenanthrene-d10 (I)	9.857	188	2472354	40.00	µg/mL	0.00
78) Chrysene-d12 (I)	12.673	240	2393551	40.00	µg/mL	0.00
87) Perylene-d12 (I)	14.901	264	2217223	40.00	µg/mL	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (surr)	4.248	112	2357516	122.13	µg/mL	0.00
5) Phenol-d5 (surr)	4.975	99	2560855	114.06	µg/mL	0.00
19) Nitrobenzene-d5 (surr)	5.878	82	2572034	116.69	µg/mL	0.00
39) 2-Fluorobiphenyl (surr)	7.624	172	4954156	114.22	µg/mL	0.00
57) Fluorene-d10 (surr)	8.869	176	4539684	117.86	µg/mL	0.00
65) 2,4,6-Tribromophenol (...	9.142	330	763894	134.95	µg/mL	0.00
75) Pyrene-d10 (surr)	11.321	212	6105122	118.47	µg/mL	0.00
77) Terphenyl-d14 (surr)	11.423	244	4961073	120.95	µg/mL	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.254	74	1655479	121.42	µg/mL	89
3) Pyridine	3.308	79	2748558	121.20	µg/mL#	83
6) Phenol (CCC)	4.991	94	2638757	112.58	µg/mL#	92
7) Aniline	5.071	66	1250650	117.97	µg/mL	85
8) bis(2-Chloroethyl)ether	5.092	63	1606548	116.01	µg/mL	90
9) 2-Chlorophenol	5.188	128	2488942	117.68	µg/mL	95
10) 1,3-Dichlorobenzene	5.333	146	2860266	117.89	µg/mL	99
11) 1,4-Dichlorobenzene (CCC)	5.391	146	2903770	117.98	µg/mL	99
12) Benzyl alcohol	5.466	108	1367289	119.78	µg/mL	86
13) 1,2-Dichlorobenzene	5.541	146	2714894	117.33	µg/mL#	95
14) 2-Methylphenol	5.536	107	1761446	113.57	µg/mL	97
15) bis(2-Chloroisopropyl)...	5.573	45	1956537	114.38	µg/mL#	81
16) 3/4-Methylphenol	5.680	107	2433885	119.82	µg/mL	95
17) N-Nitrso-di-n-propylam...	5.707	70	1701666	120.26	µg/mL#	71
18) Hexachloroethane	5.862	117	1091581	121.34	µg/mL	91
20) Nitrobenzene	5.899	77	2314661	113.84	µg/mL	89
22) Isophorone	6.118	82	4279898	120.52	µg/mL	95
23) 2,4-Dimethylphenol	6.193	107	2442858	139.42	µg/mL	95
24) 2-Nitrophenol (CCC)	6.198	139	1390088	125.04	µg/mL	92
25) Benzoic acid	6.278	105	1884010	159.86	µg/mL#	1
26) bis(2-Chloroethoxy)met...	6.278	93	2556990	118.23	µg/mL	97
27) 2,4-Dichlorophenol (CCC)	6.428	162	2045970	131.90	µg/mL#	96
28) 1,2,4-Trichlorobenzene	6.519	180	2465876	120.61	µg/mL	98
29) Naphthalene	6.609	128	6652351	113.55	µg/mL#	82
30) 4-Chloroaniline	6.625	65	810900	122.92	µg/mL	73
31) Hexachlorobutadiene (CCC)	6.711	225	1526411	124.17	µg/mL	99
32) 4-Chloro-3 methylpheno...	7.064	107	1993072	134.27	µg/mL	91
33) 2-Methylnaphthalene	7.288	142	4510862	120.24	µg/mL	100
34) 1-Methylnaphthalene	7.389	142	4367649	120.36	µg/mL	99
35) Hexachlorocyclopentadi...	7.443	237	1697507	135.23	µg/mL#	100
37) 2,4,6-Trichlorophenol ...	7.550	196	1575736	124.13	µg/mL	100
38) 2,4,5-Trichlorophenol	7.587	196	1597090	125.47	µg/mL#	89
40) 2-Chloronaphthalene	7.779	162	4326768	116.31	µg/mL	93
41) 2-Nitroaniline	7.854	65	1185450	123.53	µg/mL	87
42) 1,4-Dinitrobenzene	7.977	168	816936m	119.66	µg/mL	
43) Dimethylphthalate	8.009	163	4936719	116.89	µg/mL	98
44) 1,3-Dinitrobenzene	8.063	168	900830	128.04	µg/mL#	72
45) 2,6-Dinitrotoluene	8.084	165	1243711	121.87	µg/mL#	76
46) 1,2-Dinitrobenzene	8.153	168	593585	124.19	µg/mL	88

Manual Int. "WP" (EDE)

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002878.D
Acq On : 18 Oct 2010 8:24 pm
Operator : dda
Sample : SSTD120-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 20 12:14:38 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:34:25 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
47) Acenaphthylene	8.212	152	6412169	113.65 µg/mL	95
48) 3-Nitroaniline	8.271	138	1247776	124.30 µg/mL#	76
49) Acenaphthene (CCC)	8.383	154	4267963	118.28 µg/mL	92
50) 2,4-Dinitrophenol (SPCC)	8.367	184	758110	160.48 µg/mL#	100
51) 4-Nitrophenol (SPCC)	8.388	139	1003648	140.40 µg/mL#	74
52) 2,4-Dinitrotoluene	8.495	165	1578371	124.57 µg/mL	87
53) Dibenzofuran	8.549	168	5664751	115.15 µg/mL	92
54) 2,3,5,6-Tetrachlorophenol	8.618	232	1400720	131.14 µg/mL	98
55) 2,3,4,6-Tetrachlorophenol	8.661	232	1402198	129.71 µg/mL#	82
56) Diethlyphthalate	8.704	149	4716072	115.11 µg/mL	97
58) 4-Chlorophenyl-phenyle...	8.864	204	2628420	121.32 µg/mL	98
59) Fluorene	8.901	166	4706583	116.49 µg/mL	99
60) 4-Nitroaniline	8.891	138	1227582	128.57 µg/mL	88
61) 4,6-Dinitro2-methylphenol	8.917	198	987659	145.47 µg/mL#	10
62) N-Nitrosodiphenylamine...	8.976	169	4133249	117.24 µg/mL	97
63) Azobenzene	9.024	77	4180139	113.83 µg/mL#	100
66) 4-Bromophenyl-phenylether	9.361	248	1612330	124.47 µg/mL	97
67) Hexachlorobenzene	9.473	284	1701383	126.64 µg/mL#	90
68) Pentachlorophenol (CCC)	9.649	266	1052185	147.10 µg/mL	89
69) Phenanthrene	9.884	178	6387152	114.44 µg/mL	97
70) Anthracene	9.938	178	6488275	116.42 µg/mL	98
71) Carbazole	10.071	167	5721649	118.21 µg/mL	99
72) Di-n-butylphthalate	10.338	149	7022165	113.39 µg/mL	99
73) Fluoranthene (CCC)	11.097	202	6782097	116.78 µg/mL#	96
74) Benzidine	11.177	184	4250745	141.82 µg/mL	98
76) Pyrene	11.343	202	7136986	114.40 µg/mL#	96
79) Butylbenzylphthalate	11.877	149	3186427	120.43 µg/mL#	100
80) 3,3-Dimethylbenzidine	11.909	212	4879382	131.13 µg/mL#	100
81) bis(2-ethylhexyl)adipate	11.898	129	2743784	116.28 µg/mL#	100
82) bis(2-Ethylhexyl)phtha...	12.497	149	4377746	120.70 µg/mL#	98
83) 3,3'-Dichlorobenzidine	12.566	252	2373255	134.24 µg/mL	99
84) Benzo(a)anthracene	12.657	228	6897657	119.38 µg/mL	97
85) Chrysene	12.710	228	6402828	117.64 µg/mL	99
86) Di-n-octylphthalate (CCC)	13.367	149	7148627	124.81 µg/mL#	100
88) Benzo(b)fluoranthene	14.238	252	6718692	121.18 µg/mL#	98
89) Benzo(k)fluoranthene	14.281	252	6627053	122.38 µg/mL#	94
90) Benzo(e)pyrene	14.719	252	6027853	122.03 µg/mL	100
91) Benzo(a)pyrene (CCC)	14.815	252	6326927	124.14 µg/mL	96
92) Perylene	14.959	252	6400912	120.33 µg/mL	99
93) Indeno(1,2,3-cd)pyrene	16.989	276	6045974m	147.02 µg/mL	
94) Dibenz(a,h)anthracene	16.984	278	5197283	122.19 µg/mL	97
95) Benzo(g,h,i)perylene	17.577	276	4731566	115.06 µg/mL	100

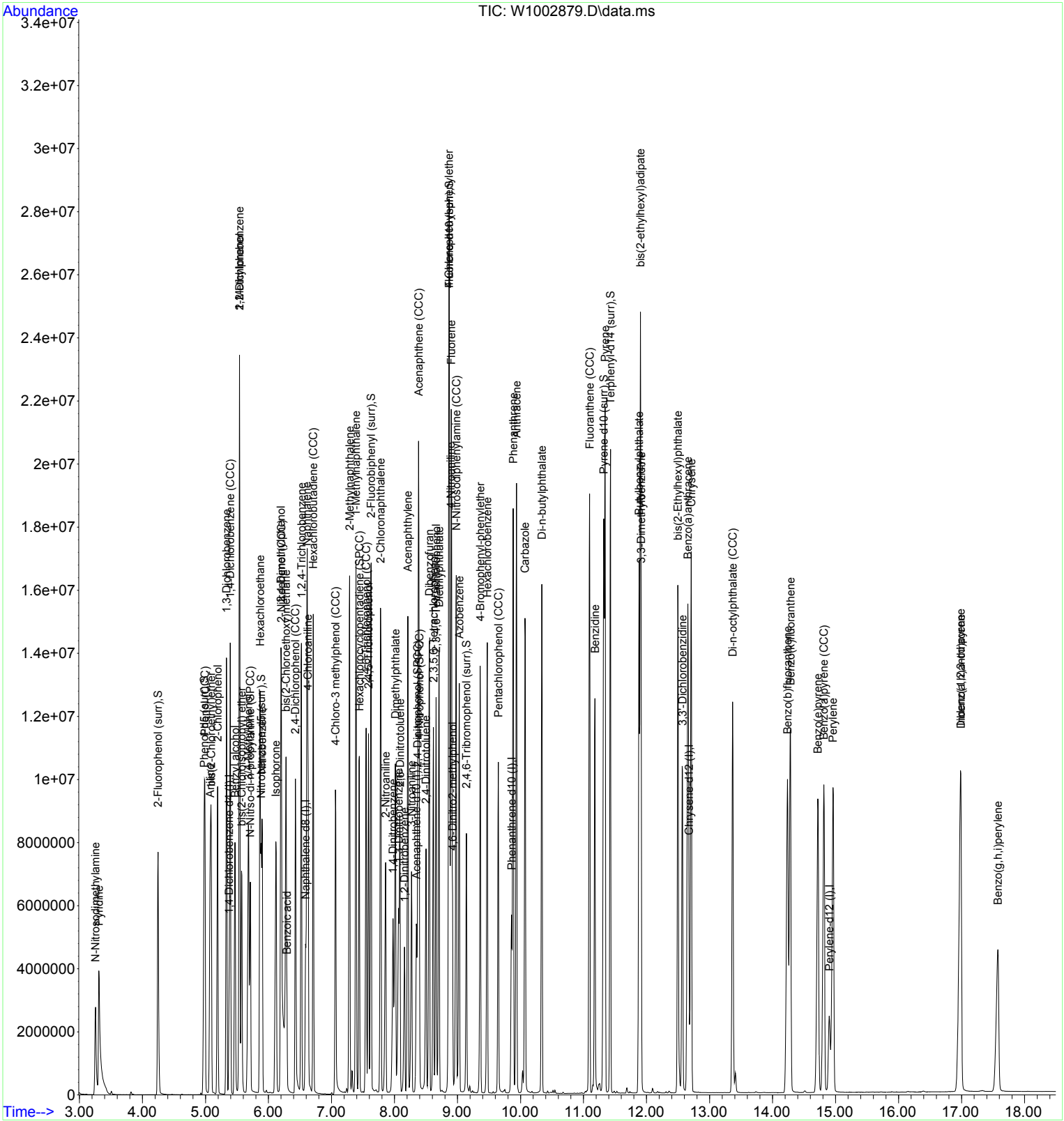
Manual Int. "WP" (EDE)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002879.D
Acq On : 18 Oct 2010 8:54 pm
Operator : dda
Sample : SSTD160-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 20 12:15:17 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:36:17 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002879.D
Acq On : 18 Oct 2010 8:54 pm
Operator : dda
Sample : SSTD160-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 20 12:15:17 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:36:17 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	5.375	152	673532	40.00	µg/mL	# 0.00
21) Naphthalene-d8 (I)	6.588	136	2366580	40.00	µg/mL	0.00
36) Acenaphthene-d10 (I)	8.346	164	1358679	40.00	µg/mL	0.00
64) Phenanthrene-d10 (I)	9.858	188	2516253	40.00	µg/mL	0.00
78) Chrysene-d12 (I)	12.673	240	2291395	40.00	µg/mL	0.00
87) Perylene-d12 (I)	14.901	264	1886569	40.00	µg/mL	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (surr)	4.248	112	2937218	159.96	µg/mL	0.00
5) Phenol-d5 (surr)	4.980	99	3293639	154.22	µg/mL	0.00
19) Nitrobenzene-d5 (surr)	5.883	82	3320235	158.36	µg/mL	0.00
39) 2-Fluorobiphenyl (surr)	7.630	172	6215938	147.96	µg/mL	0.00
57) Fluorene-d10 (surr)	8.869	176	5946373	159.38	µg/mL	0.00
65) 2,4,6-Tribromophenol (...	9.142	330	1063166	184.54	µg/mL	0.00
75) Pyrene-d10 (surr)	11.321	212	8046097	153.41	µg/mL	0.00
77) Terphenyl-d14 (surr)	11.428	244	6485723	155.36	µg/mL	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.255	74	2078189	160.24	µg/mL	89
3) Pyridine	3.308	79	3461744	160.48	µg/mL#	83
6) Phenol (CCC)	4.991	94	3371914	151.24	µg/mL#	92
7) Aniline	5.076	66	1566019	155.29	µg/mL	82
8) bis(2-Chloroethyl)ether	5.092	63	1996432	151.55	µg/mL	91
9) 2-Chlorophenol	5.194	128	3120918	155.12	µg/mL	95
10) 1,3-Dichlorobenzene	5.333	146	3568480	154.62	µg/mL	99
11) 1,4-Dichlorobenzene (CCC)	5.391	146	3597095	153.65	µg/mL	99
12) Benzyl alcohol	5.472	108	1759118	162.01	µg/mL	86
13) 1,2-Dichlorobenzene	5.541	146	3382190	153.67	µg/mL#	94
14) 2-Methylphenol	5.541	107	2305638	156.25	µg/mL	96
15) bis(2-Chloroisopropyl)...	5.573	45	2460461	151.22	µg/mL#	80
16) 3/4-Methylphenol	5.680	107	3125251	161.74	µg/mL	95
17) N-Nitrso-di-n-propylam...	5.712	70	2127745	158.08	µg/mL#	71
18) Hexachloroethane	5.867	117	1364287	159.43	µg/mL	93
20) Nitrobenzene	5.899	77	2965421	153.33	µg/mL	88
22) Isophorone	6.118	82	5347160	154.77	µg/mL	94
23) 2,4-Dimethylphenol	6.198	107	3051656	179.01	µg/mL	97
24) 2-Nitrophenol (CCC)	6.203	139	1796992	166.15	µg/mL	93
25) Benzoic acid	6.294	105	2443160	213.08	µg/mL#	1
26) bis(2-Chloroethoxy)met...	6.278	93	3186218	151.43	µg/mL#	97
27) 2,4-Dichlorophenol (CCC)	6.428	162	2620544	173.64	µg/mL#	96
28) 1,2,4-Trichlorobenzene	6.524	180	3137769	157.75	µg/mL	98
29) Naphthalene	6.609	128	8215827	144.15	µg/mL#	81
30) 4-Chloroaniline	6.625	65	1008461	157.13	µg/mL	75
31) Hexachlorobutadiene (CCC)	6.711	225	1961876	164.04	µg/mL	99
32) 4-Chloro-3 methylpheno...	7.064	107	2554086	176.83	µg/mL	93
33) 2-Methylnaphthalene	7.288	142	5580915	152.90	µg/mL	99
34) 1-Methylnaphthalene	7.389	142	5353707	151.65	µg/mL	100
35) Hexachlorocyclopentadi...	7.443	237	2101657	172.10	µg/mL#	100
37) 2,4,6-Trichlorophenol ...	7.550	196	2051735	166.87	µg/mL	99
38) 2,4,5-Trichlorophenol	7.587	196	2123898	172.27	µg/mL#	90
40) 2-Chloronaphthalene	7.779	162	5435141	150.84	µg/mL#	92
41) 2-Nitroaniline	7.860	65	1548645	166.60	µg/mL	87
42) 1,4-Dinitrobenzene	7.977	168	1091043m	162.60	µg/mL	
43) Dimethylphthalate	8.014	163	6489698	158.64	µg/mL	95
44) 1,3-Dinitrobenzene	8.068	168	1200737	176.20	µg/mL#	75
45) 2,6-Dinitrotoluene	8.089	165	1659543	167.89	µg/mL#	78
46) 1,2-Dinitrobenzene	8.159	168	801577	173.15	µg/mL	88

Manual Int. "WP" (EDE)

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002879.D
Acq On : 18 Oct 2010 8:54 pm
Operator : dda
Sample : SSTD160-SCAN gcms22pg125
Misc : gcmsprep2pg30
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 20 12:15:17 2010
Quant Method : M:\ms2010\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 11:36:17 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
47) Acenaphthylene	8.212	152	8115474	148.51 µg/mL	94
48) 3-Nitroaniline	8.271	138	1651596	169.86 µg/mL#	76
49) Acenaphthene (CCC)	8.383	154	5451356	155.98 µg/mL	93
50) 2,4-Dinitrophenol (SPCC)	8.367	184	1061235	231.92 µg/mL#	100
51) 4-Nitrophenol (SPCC)	8.394	139	1347780	194.65 µg/mL#	74
52) 2,4-Dinitrotoluene	8.501	165	2126518	173.27 µg/mL	87
53) Dibenzofuran	8.554	168	7226840	151.67 µg/mL	91
54) 2,3,5,6-Tetrachlorophenol	8.618	232	1923007	185.88 µg/mL	98
55) 2,3,4,6-Tetrachlorophenol	8.661	232	1852921	176.96 µg/mL#	81
56) Diethlyphthalate	8.709	149	6077894	153.16 µg/mL	96
58) 4-Chlorophenyl-phenyle...	8.864	204	3463398	165.04 µg/mL	99
59) Fluorene	8.901	166	6120247	156.39 µg/mL	99
60) 4-Nitroaniline	8.896	138	1667054	180.27 µg/mL	91
61) 4,6-Dinitro2-methylphenol	8.923	198	1373367	208.84 µg/mL#	8
62) N-Nitrosodiphenylamine...	8.981	169	5463024	159.98 µg/mL	98
63) Azobenzene	9.030	77	5335363	149.99 µg/mL#	100
66) 4-Bromophenyl-phenylether	9.361	248	2194998	166.50 µg/mL	96
67) Hexachlorobenzene	9.473	284	2292317	167.65 µg/mL#	90
68) Pentachlorophenol (CCC)	9.649	266	1449126	199.06 µg/mL	89
69) Phenanthrene	9.884	178	8396637	147.82 µg/mL	96
70) Anthracene	9.938	178	8383752	147.81 µg/mL	96
71) Carbazole	10.071	167	7617280	154.63 µg/mL	97
72) Di-n-butylphthalate	10.338	149	8883374	140.95 µg/mL	98
73) Fluoranthene (CCC)	11.097	202	8829464	149.38 µg/mL#	95
74) Benzidine	11.182	184	5525908	181.15 µg/mL	98
76) Pyrene	11.343	202	9167949	144.39 µg/mL#	94
79) Butylbenzylphthalate	11.882	149	4110291	162.28 µg/mL#	100
80) 3,3-Dimethylbenzidine	11.914	212	6289525	176.56 µg/mL#	100
81) bis(2-ethylhexyl)adipate	11.904	129	3588752	158.87 µg/mL#	100
82) bis(2-Ethylhexyl)phtha...	12.497	149	5599108	161.26 µg/mL#	96
83) 3,3'-Dichlorobenzidine	12.571	252	3194173	188.73 µg/mL	98
84) Benzo(a)anthracene	12.657	228	8682401	156.97 µg/mL	96
85) Chrysene	12.710	228	8108075	155.61 µg/mL	97
86) Di-n-octylphthalate (CCC)	13.367	149	8822468	160.90 µg/mL#	100
88) Benzo(b)fluoranthene	14.238	252	8302487	175.99 µg/mL	98
89) Benzo(k)fluoranthene	14.286	252	7385841	160.30 µg/mL#	93
90) Benzo(e)pyrene	14.719	252	6925339	164.78 µg/mL	100
91) Benzo(a)pyrene (CCC)	14.815	252	7257690	167.35 µg/mL	96
92) Perylene	14.959	252	7263792	160.48 µg/mL	98
93) Indeno(1,2,3-cd)pyrene	16.984	276	6422568m	183.55 µg/mL	
94) Dibenz(a,h)anthracene	16.989	278	5561636	153.67 µg/mL	97
95) Benzo(g,h,i)perylene	17.577	276	4959425	141.74 µg/mL	100

Manual Int. "WP" (EDE)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Evaluate Continuing Calibration Report

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002880.D
Acq On : 18 Oct 2010 9:22 pm
Operator : dda
Sample : SSTD050-SCAN (ICV) gcms22pg14
Misc : gcmsprep2pg14
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 20 12:15:59 2010
Quant Method : M:\ms2010\methods\wiley\W101810Xjunk-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 10:23:46 2010
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4 (I)	1.000	1.000	0.0	105	0.00
2		N-Nitrosodimethylamine	0.770	0.756	1.8	102	0.00
3		Pyridine	1.281	1.260	1.6	102	0.00
4	S	2-Fluorophenol (surr)	1.091	1.096	-0.5	105	0.00
5	S	Phenol-d5 (surr)	1.268	1.246	1.7	104	0.00
6		Phenol (CCC)	1.324	1.264	4.5	101	0.00
7		Aniline	0.599	0.579	3.3	101	0.00
8		bis(2-Chloroethyl)ether	0.782	0.760	2.8	100	0.00
9		2-Chlorophenol	1.195	1.165	2.5	102	0.00
10		1,3-Dichlorobenzene	1.371	1.319	3.8	102	0.00
11		1,4-Dichlorobenzene (CCC)	1.390	1.349	2.9	102	0.00
12		Benzyl alcohol	0.645	0.639	0.9	104	0.00
13		1,2-Dichlorobenzene	1.307	1.246	4.7	101	0.00
14		2-Methylphenol	0.876	0.830	5.3	101	0.00
15		bis(2-Chloroisopropyl) ethe	0.966	0.942	2.5	101	0.00
16		3/4-Methylphenol	1.148	1.097	4.4	102	0.00
17		N-Nitrso-di-n-propylamine (	0.799	0.773	3.3	101	0.00
18		Hexachloroethane	0.508	0.496	2.4	102	0.00
19	S	Nitrobenzene-d5 (surr)	1.245	1.221	1.9	102	0.00
20		Nitrobenzene	1.149	1.107	3.7	101	0.00
21	I	Naphthalene-d8 (I)	1.000	1.000	0.0	102	0.00
22		Isophorone	0.584	0.587	-0.5	101	0.00
23		2,4-Dimethylphenol	0.288	0.310	-7.6	104	0.00
24		2-Nitrophenol (CCC)	0.183	0.182	0.5	102	0.00
25		Benzoic acid	0.194	0.218	-12.4	103	0.00
26		bis(2-Chloroethoxy)methane	0.356	0.352	1.1	101	0.00
27		2,4-Dichlorophenol (CCC)	0.255	0.258	-1.2	101	0.00
28		1,2,4-Trichlorobenzene	0.336	0.317	5.7	99	0.00
29		Naphthalene	0.963	0.944	2.0	101	0.00
30		4-Chloroaniline	0.108	0.109	-0.9	102	0.00
31		Hexachlorobutadiene (CCC)	0.202	0.196	3.0	102	0.00
32		4-Chloro-3 methylphenol (CC	0.244	0.253	-3.7	101	0.00
33		2-Methylnaphthalene	0.617	0.575	6.8	96	0.00
34		1-Methylnaphthalene	0.597	0.587	1.7	101	0.00
35		Hexachlorocyclopentadiene (	0.206	0.207	-0.5	98	0.00
36	I	Acenaphthene-d10 (I)	1.000	1.000	0.0	102	0.00
37		2,4,6-Trichlorophenol (CCC)	0.362	0.355	1.9	100	0.00
38		2,4,5-Trichlorophenol	0.363	0.366	-0.8	103	0.00
39	S	2-Fluorobiphenyl (surr)	1.237	1.213	1.9	101	0.00
40		2-Chloronaphthalene	1.061	1.040	2.0	101	0.00
41		2-Nitroaniline	0.274	0.277	-1.1	100	0.00
42		1,4-Dinitrobenzene	0.194	0.179	7.7	100	0.00
43		Dimethylphthalate	1.204	1.182	1.8	101	0.00
44		1,3-Dinitrobenzene	0.201	0.202	-0.5	100	0.00
45		2,6-Dinitrotoluene	0.291	0.289	0.7	102	0.00
46		1,2-Dinitrobenzene	0.136	0.136	0.0	102	0.00
47		Acenaphthylene	1.609	1.602	0.4	101	0.00
48		3-Nitroaniline	0.286	0.282	1.4	99	0.00
49		Acenaphthene (CCC)	1.029	0.994	3.4	100	0.00
50		2,4-Dinitrophenol (SPCC)	0.135	0.144	-6.7	98	0.00
51		4-Nitrophenol (SPCC)	0.204	0.208	-2.0	96	0.00
52		2,4-Dinitrotoluene	0.361	0.362	-0.3	101	0.00

Evaluate Continuing Calibration Report

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002880.D
Acq On : 18 Oct 2010 9:22 pm
Operator : dda
Sample : SSTD050-SCAN (ICV) gcms22pg14
Misc : gcmsprep2pg14
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 20 12:15:59 2010
Quant Method : M:\ms2010\methods\wiley\W101810Xjunk-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 10:23:46 2010
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

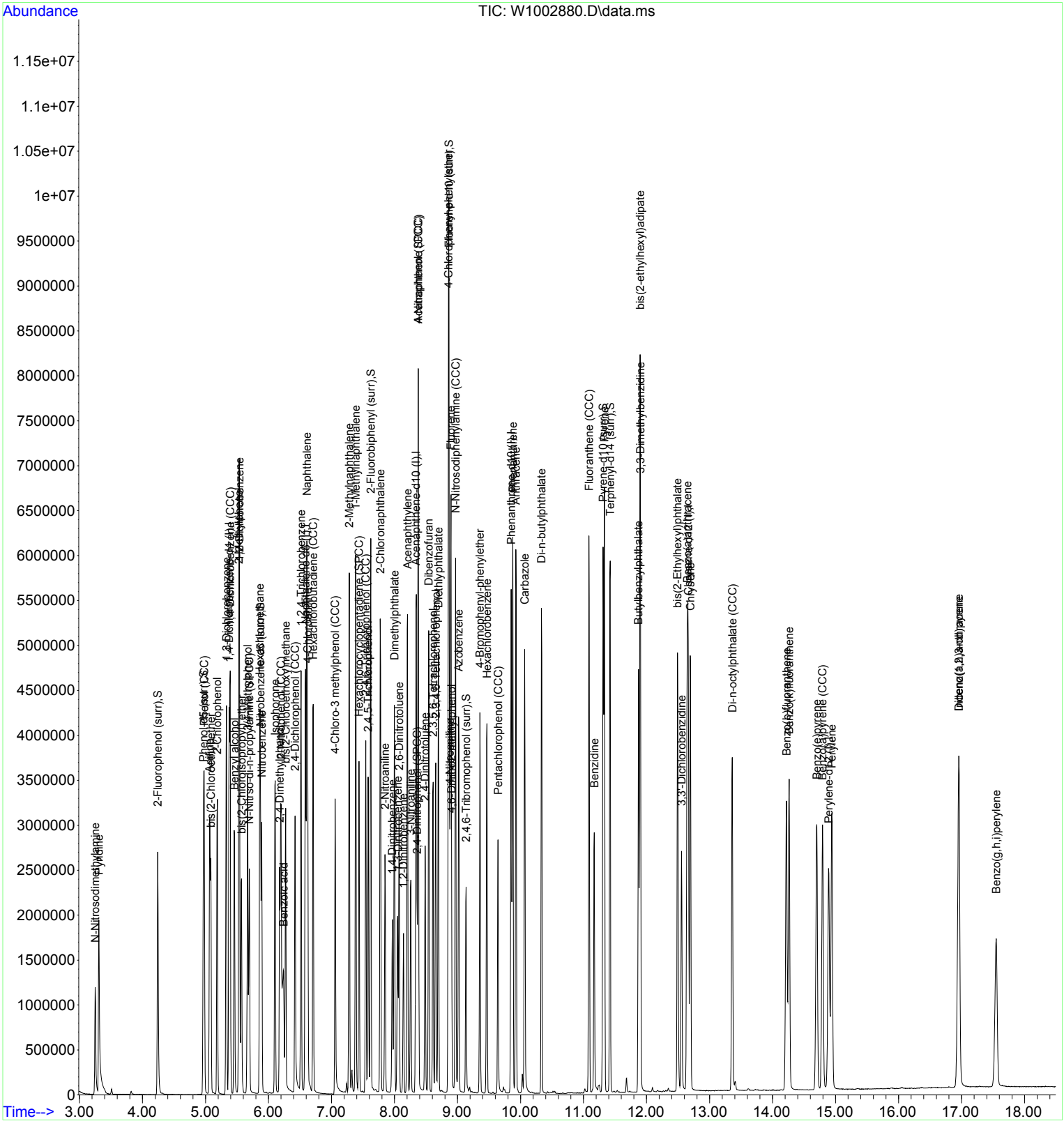
		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
53		Dibenzofuran	1.403	1.338	4.6	98	0.00
54		2,3,5,6-Tetrachlorophenol	0.305	0.304	0.3	100	0.00
55		2,3,4,6-Tetrachlorophenol	0.308	0.308	0.0	101	0.00
56		Diethlyphthalate	1.168	1.145	2.0	99	0.00
57	S	Fluorene-d10 (surr)	1.098	0.983	10.5	91	0.00
58		4-Chlorophenyl-phenylether	0.618	0.594	3.9	100	0.00
59		Fluorene	1.152	1.105	4.1	97	0.00
60		4-Nitroaniline	0.272	0.272	0.0	97	0.00
61		4,6-Dinitro2-methylphenol	0.194	0.200	-3.1	98	0.00
62		N-Nitrosodiphenylamine (CCC	1.005	0.983	2.2	100	0.00
63		Azobenzene	1.047	1.020	2.6	96	0.00
64	I	Phenanthrene-d10 (I)	1.000	1.000	0.0	99	0.00
65	S	2,4,6-Tribromophenol (surr)	0.092	0.097	-5.4	107	0.00
66		4-Bromophenyl-phenylether	0.210	0.207	1.4	101	0.00
67		Hexachlorobenzene	0.217	0.215	0.9	101	0.00
68		Pentachlorophenol (CCC)	0.116	0.122	-5.2	101	0.00
69		Phenanthrene	0.903	0.885	2.0	97	0.00
70		Anthracene	0.902	0.899	0.3	98	0.00
71		Carbazole	0.783	0.792	-1.1	100	0.00
72		Di-n-butylphthalate	1.002	1.013	-1.1	97	0.00
73		Fluoranthene (CCC)	0.940	0.907	3.5	95	0.00
74		Benzidine	0.485	0.438	9.7	88	0.00
75	S	Pyrene-d10 (surr)	0.834	0.890	-6.7	106	0.00
76		Pyrene	1.009	0.970	3.9	95	0.00
77	S	Terphenyl-d14 (surr)	0.664	0.654	1.5	98	0.00
78	I	Chrysene-d12 (I)	1.000	1.000	0.0	88	0.00
79		Butylbenzylphthalate	0.442	0.477	-7.9	94	0.00
80		3,3-Dimethylbenzidine	0.622	0.625	-0.5	87	0.00
81		bis(2-ethylhexyl)adipate	0.394	0.423	-7.4	93	0.00
82		bis(2-Ethylhexyl)phthalate	0.606	0.664	-9.6	91	0.00
83		3,3'-Dichlorobenzidine	0.295	0.294	0.3	95	0.00
84		Benzo(a)anthracene	0.966	0.956	1.0	88	0.00
85		Chrysene	0.910	0.894	1.8	87	0.00
86		Di-n-octylphthalate (CCC)	0.957	1.048	-9.5	88	0.00
87	I	Perylene-d12 (I)	1.000	1.000	0.0	82	0.00
88		Benzo(b)fluoranthene	1.000	1.014	-1.4	85	0.00
89		Benzo(k)fluoranthene	0.977	0.940	3.8	79	0.00
90		Benzo(e)pyrene	0.891	0.916	-2.8	86	0.00
91		Benzo(a)pyrene (CCC)	0.920	0.911	1.0	81	0.00
92		Perylene	0.960	0.928	3.3	80	0.00
93		Indeno(1,2,3-cd)pyrene	0.794	0.901	-13.5	75	0.00
94		Dibenz(a,h)anthracene	0.767	0.757	1.3	75	-0.01
95		Benzo(g,h,i)perylene	0.742	0.738	0.5	74	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002880.D
Acq On : 18 Oct 2010 9:22 pm
Operator : dda
Sample : SSTD050-SCAN (ICV) gcms22pg14
Misc : gcmsprep2pg14
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 20 12:15:59 2010
Quant Method : M:\ms2010\methods\wiley\W101810Xjunk-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 10:23:46 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002880.D
Acq On : 18 Oct 2010 9:22 pm
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Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 10:23:46 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	5.375	152	688226	40.00	µg/mL	0.00
21) Naphthalene-d8 (I)	6.588	136	2399400	40.00	µg/mL	0.00
36) Acenaphthene-d10 (I)	8.340	164	1346787	40.00	µg/mL	0.00
64) Phenanthrene-d10 (I)	9.852	188	2321939	40.00	µg/mL	0.00
78) Chrysene-d12 (I)	12.662	240	2016217	40.00	µg/mL	-0.01
87) Perylene-d12 (I)	14.890	264	1770087	40.00	µg/mL	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol (surr)	4.243	112	942676	50.24	µg/mL	0.00
5) Phenol-d5 (surr)	4.969	99	1072314	49.14	µg/mL	-0.01
19) Nitrobenzene-d5 (surr)	5.872	82	1050722	49.04	µg/mL	-0.01
39) 2-Fluorobiphenyl (surr)	7.624	172	2042041	49.04	µg/mL	0.00
57) Fluorene-d10 (surr)	8.864	176	1654743	44.74	µg/mL	0.00
65) 2,4,6-Tribromophenol (...	9.136	330	282026	53.05	µg/mL	0.00
75) Pyrene-d10 (surr)	11.311	212	2584320	53.40	µg/mL	-0.01
77) Terphenyl-d14 (surr)	11.423	244	1897215	49.25	µg/mL	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.249	74	650462	49.08	µg/mL	89
3) Pyridine	3.308	79	1084039	49.18	µg/mL#	83
6) Phenol (CCC)	4.980	94	1087452	47.73	µg/mL#	92
7) Aniline	5.065	66	497934	48.32	µg/mL	90
8) bis(2-Chloroethyl)ether	5.087	63	653516	48.55	µg/mL	89
9) 2-Chlorophenol	5.188	128	1002204	48.75	µg/mL	95
10) 1,3-Dichlorobenzene	5.333	146	1134739	48.12	µg/mL	99
11) 1,4-Dichlorobenzene (CCC)	5.391	146	1160863	48.53	µg/mL	99
12) Benzyl alcohol	5.461	108	550127	49.58	µg/mL	88
13) 1,2-Dichlorobenzene	5.541	146	1071979	47.66	µg/mL	95
14) 2-Methylphenol	5.530	107	713985	47.36	µg/mL	96
15) bis(2-Chloroisopropyl)...	5.573	45	810431	48.75	µg/mL#	82
16) 3/4-Methylphenol	5.669	107	943342	47.78	µg/mL	95
17) N-Nitrso-di-n-propylam...	5.696	70	665016	48.35	µg/mL#	71
18) Hexachloroethane	5.861	117	427064	48.84	µg/mL	88
20) Nitrobenzene	5.894	77	952529	48.20	µg/mL	87
22) Isophorone	6.107	82	1759588	50.23	µg/mL	96
23) 2,4-Dimethylphenol	6.177	107	930823	52.23	µg/mL#	67
24) 2-Nitrophenol (CCC)	6.198	139	547329	49.91	µg/mL	90
25) Benzoic acid	6.241	105	653741	56.24	µg/mL#	1
26) bis(2-Chloroethoxy)met...	6.273	93	1054912	49.45	µg/mL	97
27) 2,4-Dichlorophenol (CCC)	6.422	162	773012	50.07	µg/mL#	96
28) 1,2,4-Trichlorobenzene	6.519	180	949915	47.10	µg/mL	97
29) Naphthalene	6.609	128	2831328	49.00	µg/mL#	87
30) 4-Chloroaniline	6.620	65	326892	50.24	µg/mL	73
31) Hexachlorobutadiene (CCC)	6.711	225	588090	48.50	µg/mL	99
32) 4-Chloro-3 methylpheno...	7.058	107	757761	51.75	µg/mL	93
33) 2-Methylnaphthalene	7.282	142	1723519	46.57	µg/mL	100
34) 1-Methylnaphthalene	7.384	142	1760290	49.18	µg/mL	99
35) Hexachlorocyclopentadi...	7.437	237	622246	50.26	µg/mL#	100
37) 2,4,6-Trichlorophenol ...	7.544	196	598454	49.12	µg/mL	99
38) 2,4,5-Trichlorophenol	7.582	196	616336	50.43	µg/mL#	92
40) 2-Chloronaphthalene	7.774	162	1750104	49.00	µg/mL	94
41) 2-Nitroaniline	7.849	65	466776	50.66	µg/mL	86
42) 1,4-Dinitrobenzene	7.966	168	301474	51.31	µg/mL#	85
43) Dimethylphthalate	7.998	163	1989983	49.07	µg/mL	99
44) 1,3-Dinitrobenzene	8.052	168	339326	50.23	µg/mL#	77
45) 2,6-Dinitrotoluene	8.073	165	486482	49.65	µg/mL#	75
46) 1,2-Dinitrobenzene	8.143	168	229329	49.97	µg/mL	88

Quantitation Report (QT Reviewed)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002880.D
Acq On : 18 Oct 2010 9:22 pm
Operator : dda
Sample : SSTD050-SCAN (ICV) gcms22pg14
Misc : gcmsprep2pg14
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 20 12:15:59 2010
Quant Method : M:\ms2010\methods\wiley\W101810Xjunk-8270.M
Quant Title : 8270C - Full List
QLast Update : Tue Oct 19 10:23:46 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
47) Acenaphthylene	8.207	152	2697323	49.80 µg/mL	97
48) 3-Nitroaniline	8.260	138	475207	49.30 µg/mL#	72
49) Acenaphthene (CCC)	8.378	154	1672802	48.29 µg/mL	94
50) 2,4-Dinitrophenol (SPCC)	8.356	184	243039	53.58 µg/mL#	100
51) 4-Nitrophenol (SPCC)	8.378	139	349836	51.21 µg/mL#	71
52) 2,4-Dinitrotoluene	8.484	165	609727	50.12 µg/mL	89
53) Dibenzofuran	8.543	168	2253212	47.71 µg/mL	94
54) 2,3,5,6-Tetrachlorophenol	8.613	232	511289	49.86 µg/mL	97
55) 2,3,4,6-Tetrachlorophenol	8.655	232	518904	49.75 µg/mL#	81
56) Diethlyphthalate	8.698	149	1926868	48.98 µg/mL	99
58) 4-Chlorophenyl-phenyle...	8.858	204	1000592	48.10 µg/mL	97
59) Fluorene	8.896	166	1860174	47.95 µg/mL	100
60) 4-Nitroaniline	8.880	138	457380	49.90 µg/mL	86
61) 4,6-Dinitro2-methylphenol	8.907	198	336568	51.84 µg/mL#	11
62) N-Nitrosodiphenylamine...	8.971	169	1654790	48.89 µg/mL	95
63) Azobenzene	9.019	77	1717854	48.72 µg/mL#	100
66) 4-Bromophenyl-phenylether	9.355	248	601962	49.48 µg/mL	97
67) Hexachlorobenzene	9.467	284	623183	49.39 µg/mL	92
68) Pentachlorophenol (CCC)	9.644	266	354702	52.80 µg/mL	90
69) Phenanthrene	9.879	178	2568324	49.01 µg/mL	99
70) Anthracene	9.927	178	2608767	49.84 µg/mL	100
71) Carbazole	10.066	167	2298332	50.56 µg/mL	99
72) Di-n-butylphthalate	10.333	149	2940310	50.57 µg/mL	99
73) Fluoranthene (CCC)	11.086	202	2633790	48.29 µg/mL#	98
74) Benzidine	11.172	184	1271135	45.17 µg/mL	99
76) Pyrene	11.332	202	2814190	48.06 µg/mL#	98
79) Butylbenzylphthalate	11.871	149	1202690	53.98 µg/mL#	100
80) 3,3-Dimethylbenzidine	11.904	212	1576400	50.30 µg/mL#	100
81) bis(2-ethylhexyl)adipate	11.898	129	1066265	53.63 µg/mL#	100
82) bis(2-Ethylhexyl)phtha...	12.491	149	1673071	54.74 µg/mL#	100
83) 3,3'-Dichlorobenzidine	12.555	252	741563	49.83 µg/mL	99
84) Benzo(a)anthracene	12.646	228	2409352	49.40 µg/mL	98
85) Chrysene	12.694	228	2253864	49.18 µg/mL	99
86) Di-n-octylphthalate (CCC)	13.362	149	2642075	54.74 µg/mL#	100
88) Benzo(b)fluoranthene	14.222	252	2244455	50.68 µg/mL	98
89) Benzo(k)fluoranthene	14.265	252	2079980	48.24 µg/mL	94
90) Benzo(e)pyrene	14.703	252	2027457	51.39 µg/mL	99
91) Benzo(a)pyrene (CCC)	14.794	252	2014918	49.42 µg/mL	97
92) Perylene	14.938	252	2052550	48.42 µg/mL	99
93) Indeno(1,2,3-cd)pyrene	16.957	276	1993996m	60.71 µg/mL	
94) Dibenz(a,h)anthracene	16.957	278	1674843	49.32 µg/mL#	96
95) Benzo(g,h,i)perylene	17.550	276	1633341	49.73 µg/mL	99

Manual Int. "WP" (EDE)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Evaluate Continuing Calibration Report

Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100157.D
Acq On : 21 Feb 2011 9:29 am
Operator : tdd
Sample : SSTD050 M8270 gcms22pg149
Misc : gcmsprep2pg30 exp 3/15/11
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 21 10:17:15 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Mon Feb 21 10:04:38 2011
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4 (I)	1.000	1.000	0.0	117	0.00
2		N-Nitrosodimethylamine	0.770	0.720	6.5	109	-0.06
3		Pyridine	1.281	1.287	-0.5	116	-0.05
4	S	2-Fluorophenol (surr)	1.091	1.128	-3.4	120	-0.03
5	S	Phenol-d5 (surr)	1.268	1.357	-7.0	127	-0.02
6		Phenol (CCC)	1.324	1.379	-4.2	123	0.00
7		Aniline	0.599	0.619	-3.3	120	-0.01
8		bis(2-Chloroethyl)ether	0.782	0.775	0.9	115	-0.01
9		2-Chlorophenol	1.195	1.246	-4.3	122	-0.01
10		1,3-Dichlorobenzene	1.371	1.446	-5.5	124	0.00
11		1,4-Dichlorobenzene (CCC)	1.390	1.493	-7.4	126	0.00
12		Benzyl alcohol	0.645	0.721	-11.8	132	0.00
13		1,2-Dichlorobenzene	1.307	1.403	-7.3	126	0.00
14		2-Methylphenol	0.876	0.977	-11.5	133	0.00
15		bis(2-Chloroisopropyl) ethe	0.966	0.939	2.8	112	0.00
16		3/4-Methylphenol	1.148	1.199	-4.4	125	0.00
17		N-Nitrso-di-n-propylamine (	0.799	0.781	2.3	114	0.00
18		Hexachloroethane	0.508	0.545	-7.3	125	0.00
19	S	Nitrobenzene-d5 (surr)	1.245	1.314	-5.5	122	0.00
20		Nitrobenzene	1.149	1.182	-2.9	120	0.00
21	I	Naphthalene-d8 (I)	1.000	1.000	0.0	118	0.00
22		Isophorone	0.584	0.583	0.2	116	-0.02
23		2,4-Dimethylphenol	0.288	0.344	-19.4	133	-0.02
24		2-Nitrophenol (CCC)	0.183	0.195	-6.6	125	-0.01
25		Benzoic acid	0.194	0.199	-2.6	108	-0.05
26		bis(2-Chloroethoxy)methane	0.356	0.337	5.3	112	0.00
27		2,4-Dichlorophenol (CCC)	0.255	0.282	-10.6	127	0.00
28		1,2,4-Trichlorobenzene	0.336	0.343	-2.1	123	0.00
29		Naphthalene	0.963	1.033	-7.3	127	0.00
30		4-Chloroaniline	0.108	0.110	-1.9	118	0.00
31		Hexachlorobutadiene (CCC)	0.202	0.207	-2.5	125	0.00
32		4-Chloro-3 methylphenol (CC	0.244	0.286	-17.2	131	0.00
33		2-Methylnaphthalene	0.617	0.675	-9.4	129	0.00
34		1-Methylnaphthalene	0.597	0.661	-10.7	131	0.01
35		Hexachlorocyclopentadiene (	0.206	0.190	7.8	103	0.01
36	I	Acenaphthene-d10 (I)	1.000	1.000	0.0	126	0.00
37		2,4,6-Trichlorophenol (CCC)	0.362	0.359	0.8	125	-0.01
38		2,4,5-Trichlorophenol	0.363	0.376	-3.6	130	0.00
39	S	2-Fluorobiphenyl (surr)	1.237	1.249	-1.0	128	-0.01
40		2-Chloronaphthalene	1.061	1.062	-0.1	127	0.00
41		2-Nitroaniline	0.274	0.272	0.7	121	-0.01
42		1,4-Dinitrobenzene	0.175	0.185	-5.7	127	0.00
43		Dimethylphthalate	1.204	1.245	-3.4	131	-0.01
44		1,3-Dinitrobenzene	0.201	0.207	-3.0	127	0.00
45		2,6-Dinitrotoluene	0.291	0.298	-2.4	130	0.00
46		1,2-Dinitrobenzene	0.136	0.136	0.0	126	0.00
47		Acenaphthylene	1.609	1.678	-4.3	130	0.00
48		3-Nitroaniline	0.286	0.285	0.3	123	0.00
49		Acenaphthene (CCC)	1.029	1.099	-6.8	136	0.00
50		2,4-Dinitrophenol (SPCC)	0.135	0.133	1.5	111	0.00
51		4-Nitrophenol (SPCC)	0.204	0.219	-7.4	125	0.00
52		2,4-Dinitrotoluene	0.361	0.385	-6.6	132	0.00

Evaluate Continuing Calibration Report

Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100157.D
Acq On : 21 Feb 2011 9:29 am
Operator : tdd
Sample : SSTD050 M8270 gcms22pg149
Misc : gcmsprep2pg30 exp 3/15/11
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 21 10:17:15 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Mon Feb 21 10:04:38 2011
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

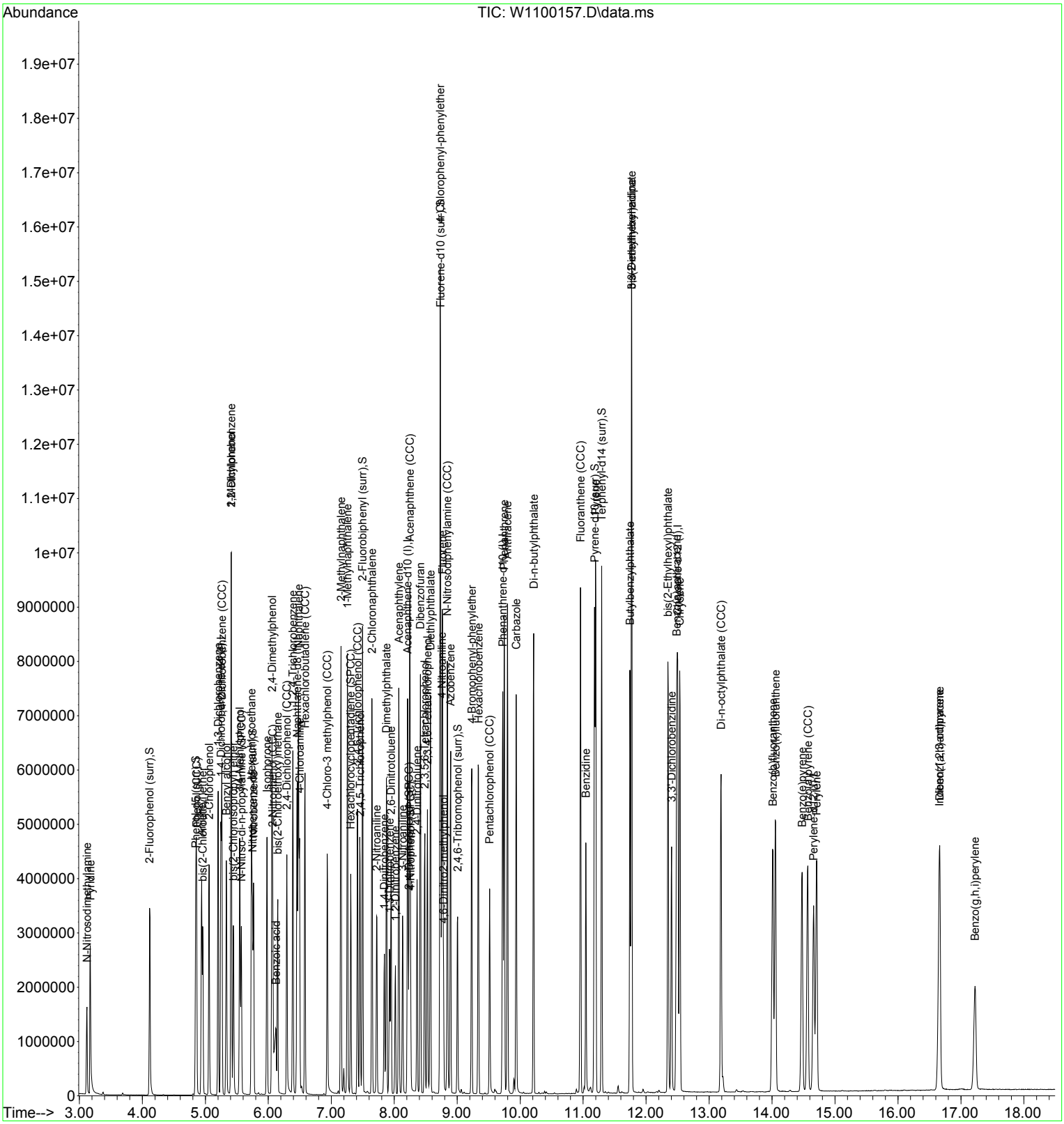
		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
53		Dibenzofuran	1.403	1.477	-5.3	133	0.00
54		2,3,5,6-Tetrachlorophenol	0.305	0.313	-2.6	128	0.00
55		2,3,4,6-Tetrachlorophenol	0.308	0.322	-4.5	130	0.00
56		Diethlyphthalate	1.168	1.330	-13.9	142	0.00
57	S	Fluorene-d10 (surr)	1.098	1.201	-9.4	137	0.00
58		4-Chlorophenyl-phenylether	0.618	0.666	-7.8	138	0.00
59		Fluorene	1.152	1.256	-9.0	136	0.00
60		4-Nitroaniline	0.272	0.287	-5.5	126	0.00
61		4,6-Dinitro2-methylphenol	0.194	0.199	-2.6	119	0.00
62		N-Nitrosodiphenylamine (CCC	1.005	1.063	-5.8	133	0.00
63		Azobenzene	1.047	1.077	-2.9	125	0.01
64	I	Phenanthrene-d10 (I)	1.000	1.000	0.0	129	0.00
65	S	2,4,6-Tribromophenol (surr)	0.092	0.101	-9.8	146	0.00
66		4-Bromophenyl-phenylether	0.210	0.220	-4.8	140	0.00
67		Hexachlorobenzene	0.217	0.228	-5.1	140	0.00
68		Pentachlorophenol (CCC)	0.116	0.122	-5.2	131	0.00
69		Phenanthrene	0.903	0.955	-5.8	137	0.00
70		Anthracene	0.902	0.957	-6.1	135	0.00
71		Carbazole	0.783	0.839	-7.2	138	0.00
72		Di-n-butylphthalate	1.002	1.162	-16.0	144	0.02
73		Fluoranthene (CCC)	0.940	1.003	-6.7	137	0.01
74		Benzidine	0.485	0.479	1.2	125	0.01
75	S	Pyrene-d10 (surr)	0.834	0.870	-4.3	135	0.01
76		Pyrene	1.009	1.090	-8.0	140	0.00
77	S	Terphenyl-d14 (surr)	0.664	0.709	-6.8	139	0.02
78	I	Chrysene-d12 (I)	1.000	1.000	0.0	131	0.00
79		Butylbenzylphthalate	0.442	0.505	-14.3	146	0.02
80		3,3-Dimethylbenzidine	0.622	0.693	-11.4	142	0.02
81		bis(2-ethylhexyl)adipate	0.394	0.453	-15.0	147	0.03
82		bis(2-Ethylhexyl)phthalate	0.606	0.691	-14.0	140	0.02
83		3,3'-Dichlorobenzidine	0.295	0.315	-6.8	150	0.00
84		Benzo(a)anthracene	0.966	0.971	-0.5	132	0.00
85		Chrysene	0.910	0.905	0.5	130	0.00
86		Di-n-octylphthalate (CCC)	0.957	1.088	-13.7	134	0.00
87	I	Perylene-d12 (I)	1.000	1.000	0.0	108	0.00
88		Benzo(b)fluoranthene	1.000	1.078	-7.8	120	0.00
89		Benzo(k)fluoranthene	0.977	1.072	-9.7	120	0.00
90		Benzo(e)pyrene	0.891	0.925	-3.8	115	0.00
91		Benzo(a)pyrene (CCC)	0.920	0.986	-7.2	117	0.00
92		Perylene	0.960	0.977	-1.8	112	0.00
93		Indeno(1,2,3-cd)pyrene	0.910	0.817	10.2	90	-0.05
94		Dibenz(a,h)anthracene	0.767	0.695	9.4	91	-0.05
95		Benzo(g,h,i)perylene	0.742	0.642	13.5	86	-0.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100157.D
Acq On : 21 Feb 2011 9:29 am
Operator : tdd
Sample : SSTD050 M8270 gcms22pg149
Misc : gcmsprep2pg30 exp 3/15/11
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 21 10:17:15 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Mon Feb 21 10:04:38 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100157.D
Acq On : 21 Feb 2011 9:29 am
Operator : tdd
Sample : SSTD050 M8270 gcms22pg149
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Quant Time: Feb 21 10:17:15 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Mon Feb 21 10:04:38 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	5.247	152	768718	40.00	µg/mL	0.00
21) Naphthalene-d8 (I)	6.460	136	2761610	40.00	µg/mL	0.00
36) Acenaphthene-d10 (I)	8.212	164	1657156	40.00	µg/mL	0.00
64) Phenanthrene-d10 (I)	9.724	188	3022233	40.00	µg/mL	0.00
78) Chrysene-d12 (I)	12.502	240	2979857	40.00	µg/mL	0.00
87) Perylene-d12 (I)	14.660	264	2352403	40.00	µg/mL	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (surr)	4.115	112	1083905	51.72	µg/mL	-0.03
5) Phenol-d5 (surr)	4.847	99	1304316	53.51	µg/mL	-0.02
19) Nitrobenzene-d5 (surr)	5.749	82	1263006	52.78	µg/mL	0.00
39) 2-Fluorobiphenyl (surr)	7.496	172	2586297	50.47	µg/mL	-0.01
57) Fluorene-d10 (surr)	8.736	176	2488349	54.68	µg/mL	0.00
65) 2,4,6-Tribromophenol (...	9.008	330	383444	55.41	µg/mL	0.00
75) Pyrene-d10 (surr)	11.183	212	3284803	52.14	µg/mL	0.01
77) Terphenyl-d14 (surr)	11.295	244	2679982	53.45	µg/mL	0.02
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	3.121	74	692191	46.76	µg/mL	92
3) Pyridine	3.175	79	1236732	50.23	µg/mL#	82
6) Phenol (CCC)	4.863	94	1325043	52.07	µg/mL#	89
7) Aniline	4.943	66	595229	51.72	µg/mL#	79
8) bis(2-Chloroethyl)ether	4.959	63	745136	49.56	µg/mL#	85
9) 2-Chlorophenol	5.060	128	1196912	52.12	µg/mL	96
10) 1,3-Dichlorobenzene	5.205	146	1389344	52.74	µg/mL	99
11) 1,4-Dichlorobenzene (CCC)	5.263	146	1434640	53.69	µg/mL	98
12) Benzyl alcohol	5.333	108	692918	55.91	µg/mL	85
13) 1,2-Dichlorobenzene	5.413	146	1347707	53.65	µg/mL	95
14) 2-Methylphenol	5.413	107	938657	55.73	µg/mL	97
15) bis(2-Chloroisopropyl)...	5.445	45	901840	48.56	µg/mL#	73
16) 3/4-Methylphenol	5.546	107	1151768	52.23	µg/mL	95
17) N-Nitrso-di-n-propylam...	5.573	70	750418	48.85	µg/mL#	78
18) Hexachloroethane	5.733	117	523219	53.57	µg/mL	86
20) Nitrobenzene	5.766	77	1135834	51.46	µg/mL	87
22) Isophorone	5.979	82	2013911	49.95	µg/mL	94
23) 2,4-Dimethylphenol	6.059	107	1186781	59.66	µg/mL#	85
24) 2-Nitrophenol (CCC)	6.070	139	674759	53.46	µg/mL	89
25) Benzoic acid	6.123	105	685507	51.23	µg/mL#	1
26) bis(2-Chloroethoxy)met...	6.150	93	1163103	47.37	µg/mL	98
27) 2,4-Dichlorophenol (CCC)	6.294	162	973055	55.25	µg/mL#	96
28) 1,2,4-Trichlorobenzene	6.391	180	1184682	51.04	µg/mL	98
29) Naphthalene	6.481	128	3566902	53.63	µg/mL#	48
30) 4-Chloroaniline	6.497	65	378599	50.55	µg/mL	80
31) Hexachlorobutadiene (CCC)	6.583	225	716020	51.31	µg/mL	98
32) 4-Chloro-3 methylpheno...	6.935	107	986770	58.54	µg/mL	91
33) 2-Methylnaphthalene	7.154	142	2329680	54.70	µg/mL	99
34) 1-Methylnaphthalene	7.256	142	2280107	55.35	µg/mL	98
35) Hexachlorocyclopentadi...	7.309	237	655259	45.98	µg/mL#	100
37) 2,4,6-Trichlorophenol ...	7.416	196	744195	49.63	µg/mL	99
38) 2,4,5-Trichlorophenol	7.459	196	779670	51.85	µg/mL#	91
40) 2-Chloronaphthalene	7.646	162	2200285	50.06	µg/mL#	92
41) 2-Nitroaniline	7.721	65	563224	49.68	µg/mL	87
42) 1,4-Dinitrobenzene	7.844	168	383071m	52.97	µg/mL	
43) Dimethylphthalate	7.876	163	2579322	51.69	µg/mL	99
44) 1,3-Dinitrobenzene	7.929	168	429040	51.62	µg/mL#	69
45) 2,6-Dinitrotoluene	7.950	165	618230	51.28	µg/mL#	84
46) 1,2-Dinitrobenzene	8.020	168	282621	50.05	µg/mL#	92

Manual Int. "WP" (TDD)

Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100157.D
Acq On : 21 Feb 2011 9:29 am
Operator : tdd
Sample : SSTD050 M8270 gcms22pg149
Misc : gcmsprep2pg30 exp 3/15/11
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 21 10:17:15 2011
Quant Method : M:\ms2011\methods\wiley\W101810X-8270.M
Quant Title : 8270C - Full List
QLast Update : Mon Feb 21 10:04:38 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
47) Acenaphthylene	8.073	152	3475286	52.14	µg/mL	97
48) 3-Nitroaniline	8.132	138	590339	49.78	µg/mL#	78
49) Acenaphthene (CCC)	8.250	154	2276836	53.41	µg/mL	93
50) 2,4-Dinitrophenol (SPCC)	8.234	184	274559	49.20	µg/mL#	100
51) 4-Nitrophenol (SPCC)	8.260	139	453573	53.71	µg/mL#	70
52) 2,4-Dinitrotoluene	8.362	165	797127	53.25	µg/mL	94
53) Dibenzofuran	8.415	168	3058756	52.63	µg/mL	91
54) 2,3,5,6-Tetrachlorophenol	8.485	232	648895	51.43	µg/mL	96
55) 2,3,4,6-Tetrachlorophenol	8.527	232	666346	52.18	µg/mL#	79
56) Diethlyphthalate	8.576	149	2755087	56.92	µg/mL	99
58) 4-Chlorophenyl-phenyle...	8.730	204	1379786	53.91	µg/mL	94
59) Fluorene	8.768	166	2602427	54.52	µg/mL	99
60) 4-Nitroaniline	8.757	138	594855	52.74	µg/mL#	83
61) 4,6-Dinitro2-methylphenol	8.784	198	412409	51.42	µg/mL#	16
62) N-Nitrosodiphenylamine...	8.843	169	2202773	52.89	µg/mL	97
63) Azobenzene	8.896	77	2230577	51.41	µg/mL#	100
66) 4-Bromophenyl-phenylether	9.233	248	830116	52.42	µg/mL	99
67) Hexachlorobenzene	9.339	284	861467	52.46	µg/mL	95
68) Pentachlorophenol (CCC)	9.516	266	461878	52.82	µg/mL	92
69) Phenanthrene	9.745	178	3607123	52.87	µg/mL	99
70) Anthracene	9.799	178	3613835	53.05	µg/mL	99
71) Carbazole	9.938	167	3169488	53.57	µg/mL	99
72) Di-n-butylphthalate	10.216	149	4389808	57.99	µg/mL	99
73) Fluoranthene (CCC)	10.958	202	3788528	53.37	µg/mL	100
74) Benzidine	11.044	184	1808735	49.37	µg/mL	100
76) Pyrene	11.199	202	4116044	53.97	µg/mL#	98
79) Butylbenzylphthalate	11.743	149	1879649	57.06	µg/mL#	100
80) 3,3-Dimethylbenzidine	11.770	212	2579977	55.69	µg/mL#	100
81) bis(2-ethylhexyl)adipate	11.770	129	1688696	57.49	µg/mL#	100
82) bis(2-Ethylhexyl)phtha...	12.347	149	2575456	57.04	µg/mL#	98
83) 3,3'-Dichlorobenzidine	12.406	252	1171876	53.24	µg/mL	99
84) Benzo(a)anthracene	12.486	228	3614992	50.26	µg/mL	98
85) Chrysene	12.534	228	3372090	49.76	µg/mL	99
86) Di-n-octylphthalate (CCC)	13.191	149	4053141	56.84	µg/mL#	100
88) Benzo(b)fluoranthene	14.014	252	3168592	53.86	µg/mL	99
89) Benzo(k)fluoranthene	14.057	252	3152928	54.87	µg/mL	95
90) Benzo(e)pyrene	14.479	252	2720643	51.91	µg/mL	100
91) Benzo(a)pyrene (CCC)	14.570	252	2900409	53.62	µg/mL	98
92) Perylene	14.708	252	2872198	50.89	µg/mL	100
93) Indeno(1,2,3-cd)pyrene	16.658	276	2403082	44.92	µg/mL	95
94) Dibenz(a,h)anthracene	16.664	278	2043957	45.29	µg/mL	98
95) Benzo(g,h,i)perylene	17.225	276	1887142	43.25	µg/mL	98

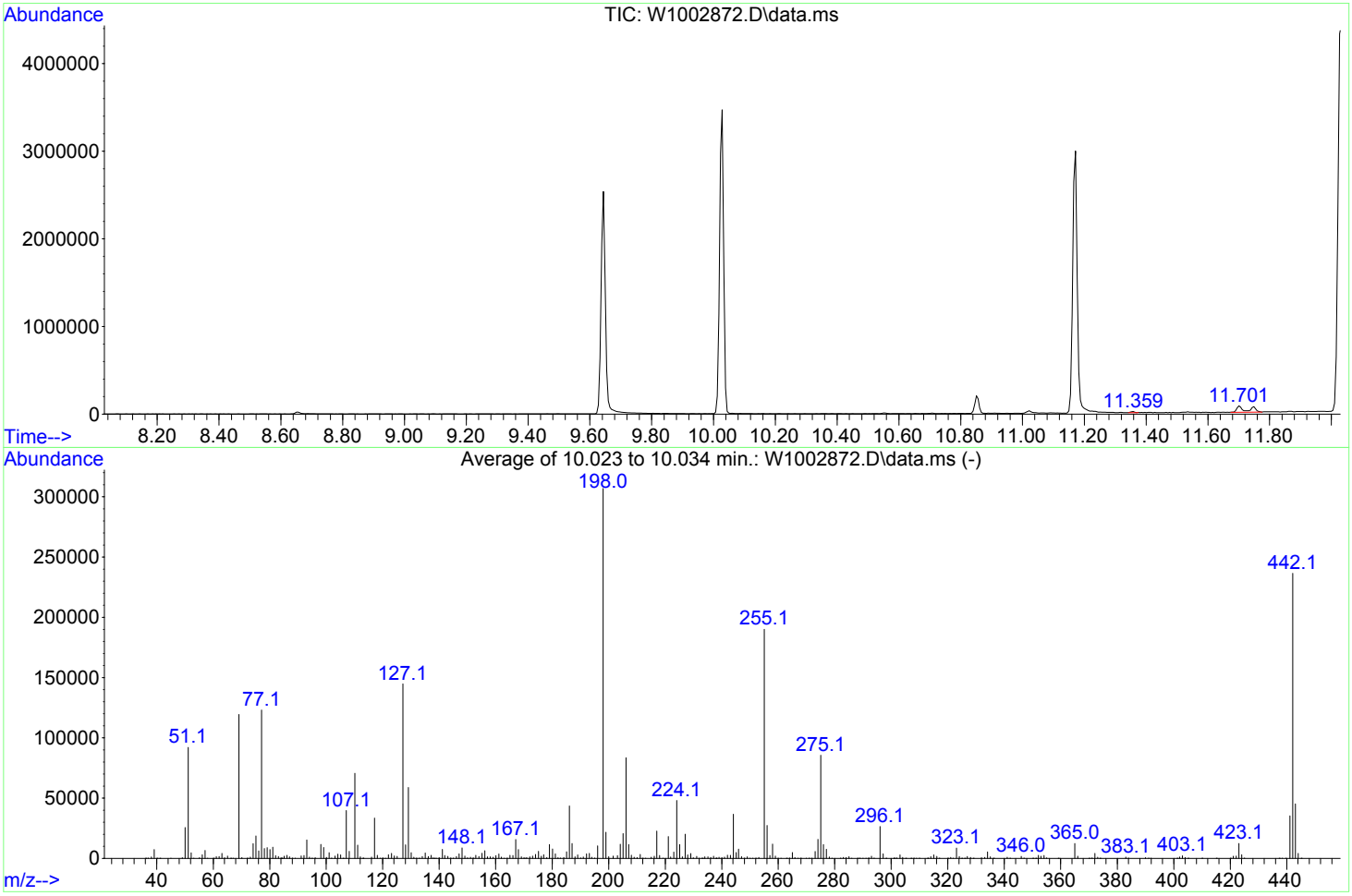
(#) = qualifier out of range (m) = manual integration (+) = signals summed

DFTPP

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002872.D
Acq On : 18 Oct 2010 5:33 pm
Operator : dda
Sample : DFTPP
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : M:\ms2010\methods\wiley\W101810X-8270.M
Title : 8270C - Full List
Last Update : Wed Oct 20 14:58:44 2010



AutoFind: Scans 1318, 1319, 1320; Background Corrected with Scan 1312

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	30.0	92083	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	38.9	119435	PASS
70	69	0.00	2	0.6	751	PASS
127	198	40	60	47.2	144776	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	306901	PASS
199	198	5	9	7.1	21658	PASS
275	198	10	30	27.9	85621	PASS
365	198	1	100	4.1	12456	PASS
441	443	0.01	100	77.9	35283	PASS
442	198	40	100	77.1	236523	PASS
443	442	17	23	19.1	45283	PASS

Average of 10.023 to 10.034 min.: W1002872.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.10	71	50.10	25623	62.10	1589	73.10	1095
36.05	140	51.10	92083	63.10	4232	74.10	12303
37.00	389	52.15	4613	64.05	599	75.10	18631
38.10	1201	53.10	249	65.10	2029	76.15	6251
39.15	7406	55.10	668	65.80	55	77.10	123147
40.10	153	56.10	3048	66.15	120	78.10	8219
41.15	124	57.10	6631	67.10	204	79.10	8921
45.00	193	58.10	250	69.10	119435	80.10	7354
45.20	44	58.90	78	70.10	751	81.10	9291
48.10	47	60.00	124	71.10	58	82.10	2334
49.10	588	61.10	1482	72.00	114	83.10	1632

Average of 10.023 to 10.034 min.: W1002872.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
83.85	99	92.10	2468	104.10	3541	115.00	47
84.10	126	93.10	15303	105.10	2975	116.10	1081
84.30	116	94.05	1071	106.00	177	117.10	33520
85.10	1840	95.05	347	107.10	39725	118.10	2531
86.10	2620	96.15	586	108.10	5856	119.10	243
87.05	1311	98.10	11724	110.10	70621	120.05	477
88.05	367	99.10	9039	111.10	11083	121.00	228
89.00	278	100.10	873	112.10	1404	122.05	3061
89.90	35	101.05	4787	113.00	177	123.10	4126
90.30	47	101.90	341	113.15	216	124.10	2074
91.10	2159	103.10	1964	114.80	78	125.10	1728

Average of 10.023 to 10.034 min.: W1002872.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
127.10	144776	137.80	464	148.10	8660	158.05	1390
128.10	11349	138.20	83	149.10	1984	159.05	1023
129.10	58907	139.00	289	150.05	661	160.05	2349
130.05	4828	140.00	732	151.10	997	161.10	3680
131.05	930	141.10	7532	151.90	313	162.00	1057
132.00	396	142.00	2457	152.20	399	163.10	254
133.05	394	143.05	1791	153.00	2621	164.10	412
134.05	1606	144.15	470	154.10	1608	165.05	2639
135.10	4589	145.00	328	155.10	4353	166.10	2444
136.10	1650	146.05	1588	156.10	6416	167.10	15701
137.10	2650	147.05	3771	157.05	1396	168.05	7359

Average of 10.023 to 10.034 min.: W1002872.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
169.10	1368	179.00	11587	190.10	527	203.05	2362
170.05	566	180.10	7881	191.05	1274	204.10	11774
170.40	216	181.10	3852	192.10	3773	205.10	20593
171.00	688	182.00	592	193.10	4234	206.10	83491
172.10	1354	182.90	349	194.00	954	207.10	11545
173.10	2000	184.05	828	195.00	402	208.05	2714
174.05	3320	185.10	5521	196.10	10417	209.05	934
175.10	5899	186.10	43536	198.00	306901	210.05	806
176.10	1852	187.05	12341	199.00	21658	211.10	3361
177.00	3035	188.05	1310	200.00	1542	211.90	95
178.05	753	189.05	2902	201.55	1992	213.05	233

Average of 10.023 to 10.034 min.: W1002872.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
214.20	58	226.10	1311	235.10	1361	245.10	4908
215.00	938	227.05	20096	236.10	924	246.00	7769
216.10	1914	228.00	2934	237.10	1915	247.05	1547
217.00	22667	229.05	4092	237.90	146	248.05	339
218.00	2506	229.95	612	238.10	116	249.00	1384
219.20	250	231.10	1744	239.00	965	250.00	235
221.10	18122	231.90	74	240.05	723	251.05	299
221.90	1255	232.10	288	241.00	1150	252.10	358
223.00	5264	233.00	246	242.05	2715	253.10	876
224.10	48035	233.20	173	243.10	2626	255.10	190088
225.10	11551	234.05	1356	244.10	36661	256.10	27339

Average of 10.023 to 10.034 min.: W1002872.D\data.ms

DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
257.10	2400	267.90	132	278.05	1203	291.05	291
258.00	11841	268.90	37	279.05	284	291.90	117
259.00	2008	269.70	68	281.00	36	292.10	257
260.00	312	269.95	225	282.10	361	293.05	1842
260.95	301	271.00	445	283.05	899	294.00	360
262.20	50	272.00	304	284.05	699	296.05	26536
262.90	120	273.10	5792	285.10	1520	297.10	3759
264.05	363	274.05	15820	286.00	314	298.10	176
265.00	4967	275.10	85621	288.10	116	299.70	38
265.90	720	276.05	11521	288.95	342	300.85	165
267.00	247	277.05	7677	290.05	214	301.10	147

Average of 10.023 to 10.034 min.: W1002872.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
302.00	466	310.05	370	321.05	880	332.00	593
303.10	2920	311.10	49	321.95	225	333.05	840
304.05	898	312.00	47	323.10	8598	334.05	5405
304.90	75	312.20	42	324.10	1553	335.05	1336
305.15	99	312.90	81	324.90	84	335.90	42
306.00	48	313.05	244	325.20	55	336.20	127
306.95	100	314.00	1443	325.95	97	339.10	45
308.05	391	315.05	2901	326.20	62	339.80	67
308.70	39	316.10	1693	326.95	1558	340.20	61
309.00	254	317.10	366	328.10	913	341.10	1038
309.20	58	320.00	144	329.00	132	342.10	351

Average of 10.023 to 10.034 min.: W1002872.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
343.00	55	358.90	57	373.90	90	395.00	45
343.30	43	359.15	117	374.30	57	395.20	43
346.00	1783	360.80	45	376.90	63	396.70	34
347.05	370	363.70	51	377.10	35	400.90	75
350.10	123	365.00	12456	383.05	1081	401.15	140
351.15	93	366.05	1888	383.95	400	402.05	1261
352.05	2544	367.10	40	385.00	48	403.05	2245
353.00	1802	370.05	184	389.95	614	404.05	743
354.10	2480	371.10	558	391.10	389	405.05	159
355.00	455	372.05	4186	392.00	311	410.00	82
358.00	50	373.10	1033	393.30	41	410.20	38

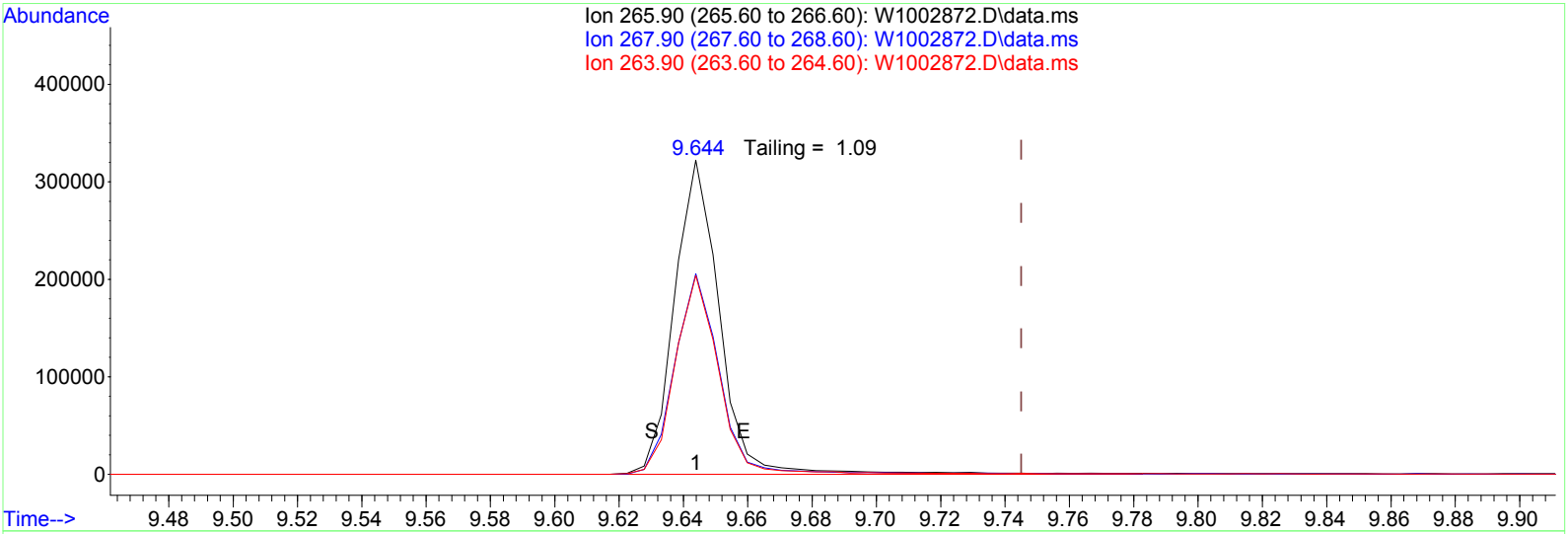
Average of 10.023 to 10.034 min.: W1002872.D\data.ms
DFTPP
Modified:subtracted

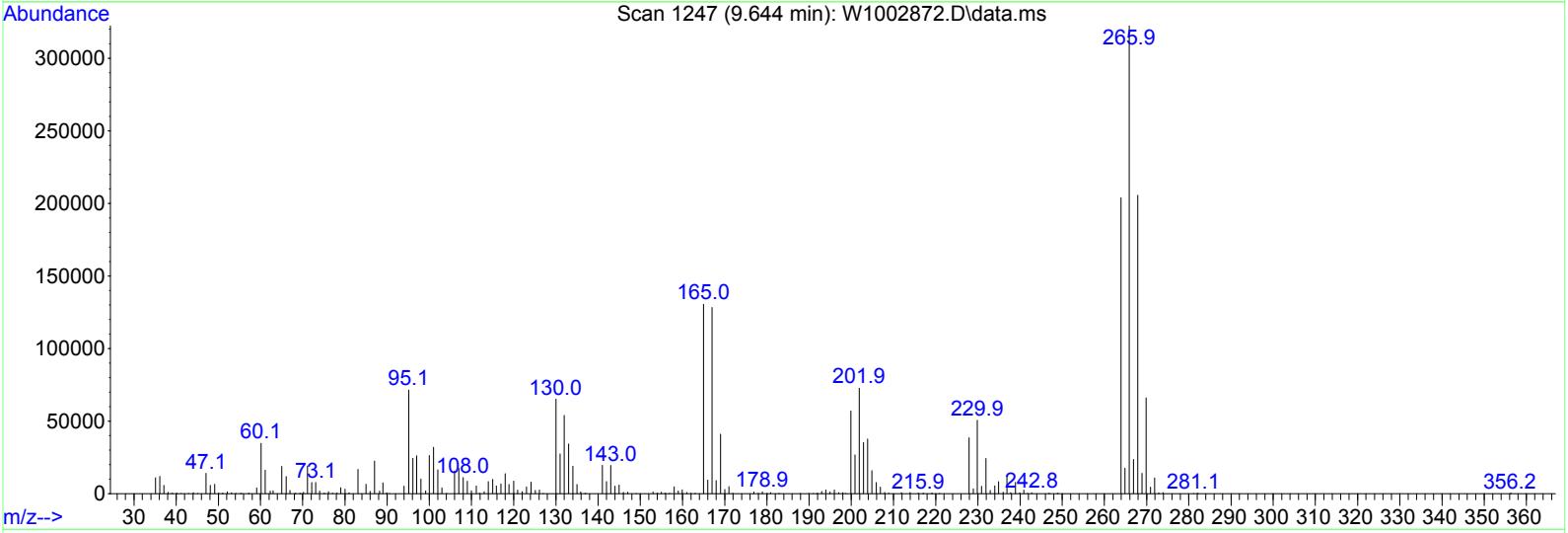
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
415.05	141	434.10	40	444.10	4210		
416.90	38	434.40	37	444.80	61		
420.00	95	436.80	73	445.10	190		
421.05	1802	437.30	83	445.30	34		
422.10	1923	437.80	52				
423.10	12408	438.45	262				
424.05	3115	439.20	61				
425.05	396	439.70	231				
426.10	39	441.10	35283				
427.10	53	442.10	236523				
431.70	60	443.10	45283				

Quantitation Report (Qedit)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002872.D
Acq On : 18 Oct 2010 5:33 pm
Operator : dda
Sample : DFTPP
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 25 10:14:04 2010
Quant Method : M:\ms2010\methods\wiley\DFTPP-4-EA.M
Quant Title : DFTPP
QLast Update : Fri Sep 17 17:54:07 2010
Response via : Initial Calibration





TIC: W1002872.D\data.ms

(1) Pentachlorophenol

9.644min (-0.101) 51.44 ug/mL

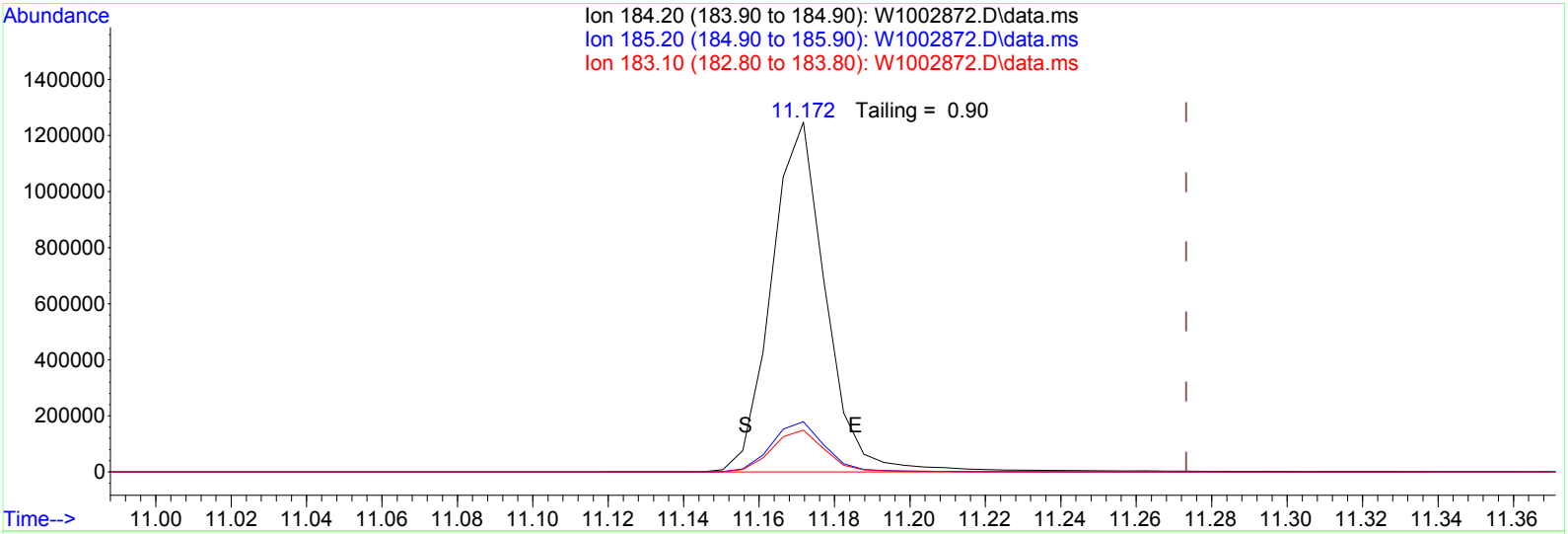
response 314663

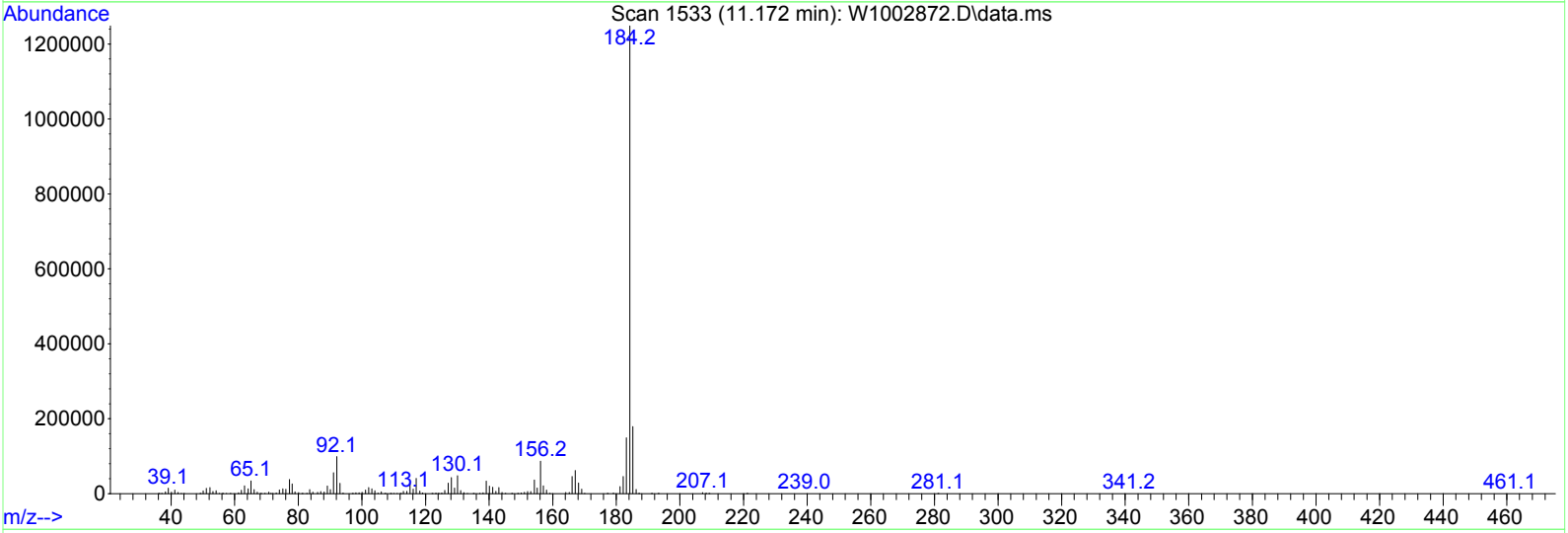
Ion	Exp%	Act%
265.90	100	100
267.90	65.10	62.69
263.90	65.90	61.44
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : M:\ms2010Q4\wiley\data\oct10\W101810A\
Data File : W1002872.D
Acq On : 18 Oct 2010 5:33 pm
Operator : dda
Sample : DFTPP
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 25 10:14:04 2010
Quant Method : M:\ms2010\methods\wiley\DFTPP-4-EA.M
Quant Title : DFTPP
QLast Update : Fri Sep 17 17:54:07 2010
Response via : Initial Calibration





TIC: W1002872.D\data.ms

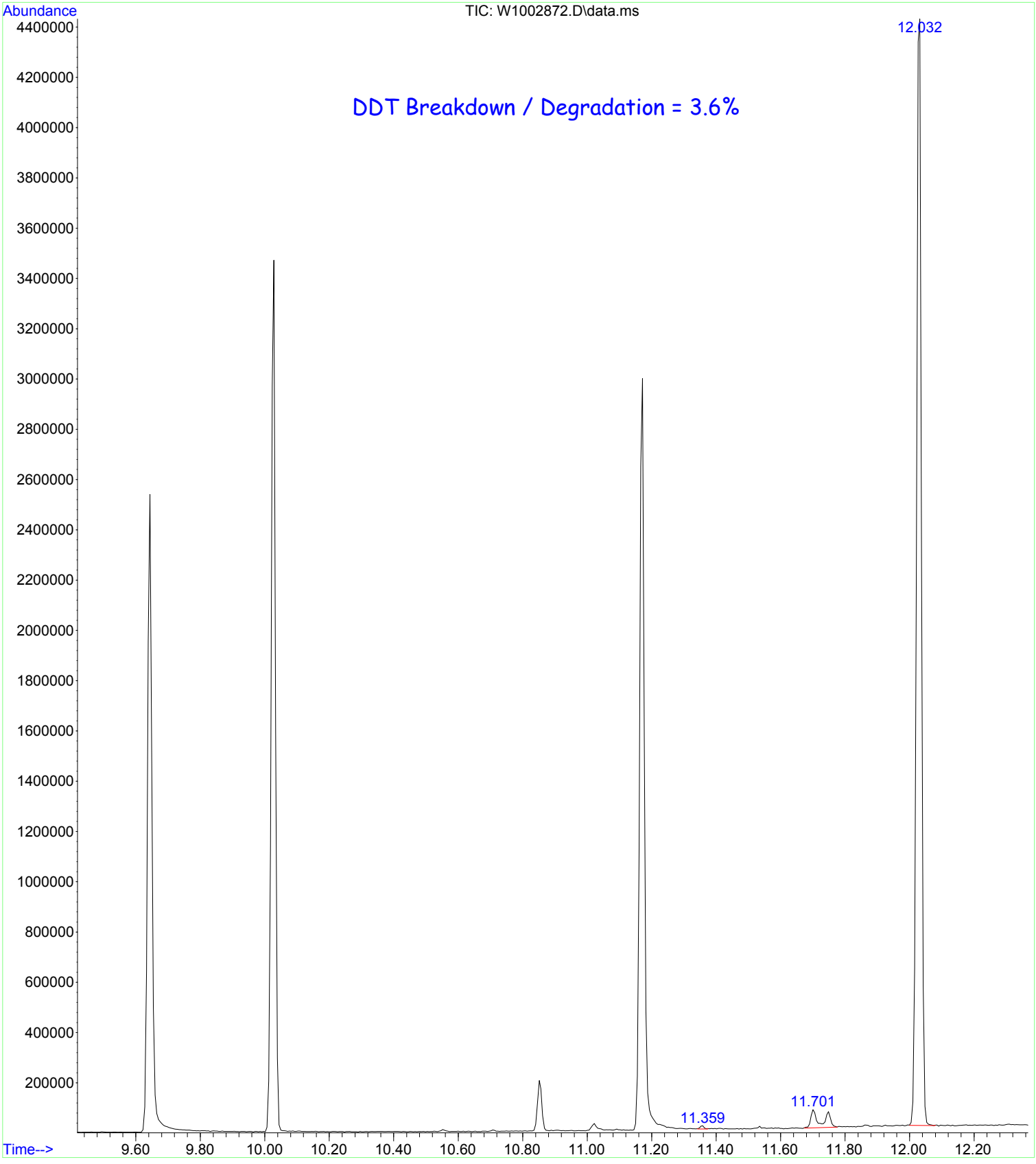
(3) Benzidine

11.172min (-0.101) 48.65 ug/mL

response 1263024

Ion	Exp%	Act%
184.20	100	100
185.20	13.60	14.18
183.10	12.20	11.72
0.00	0.00	0.00

File :M:\ms2010Q4\wiley\data\oct10\W101810A\W1002872.D
Operator : dda
Acquired : 18 Oct 2010 5:33 pm using AcqMethod RXI-2A-EA.M
Instrument : Wiley
Sample Name: DFTPP
Misc Info :
Vial Number: 1



TIC: W1002872.D\data.ms
DFTPP

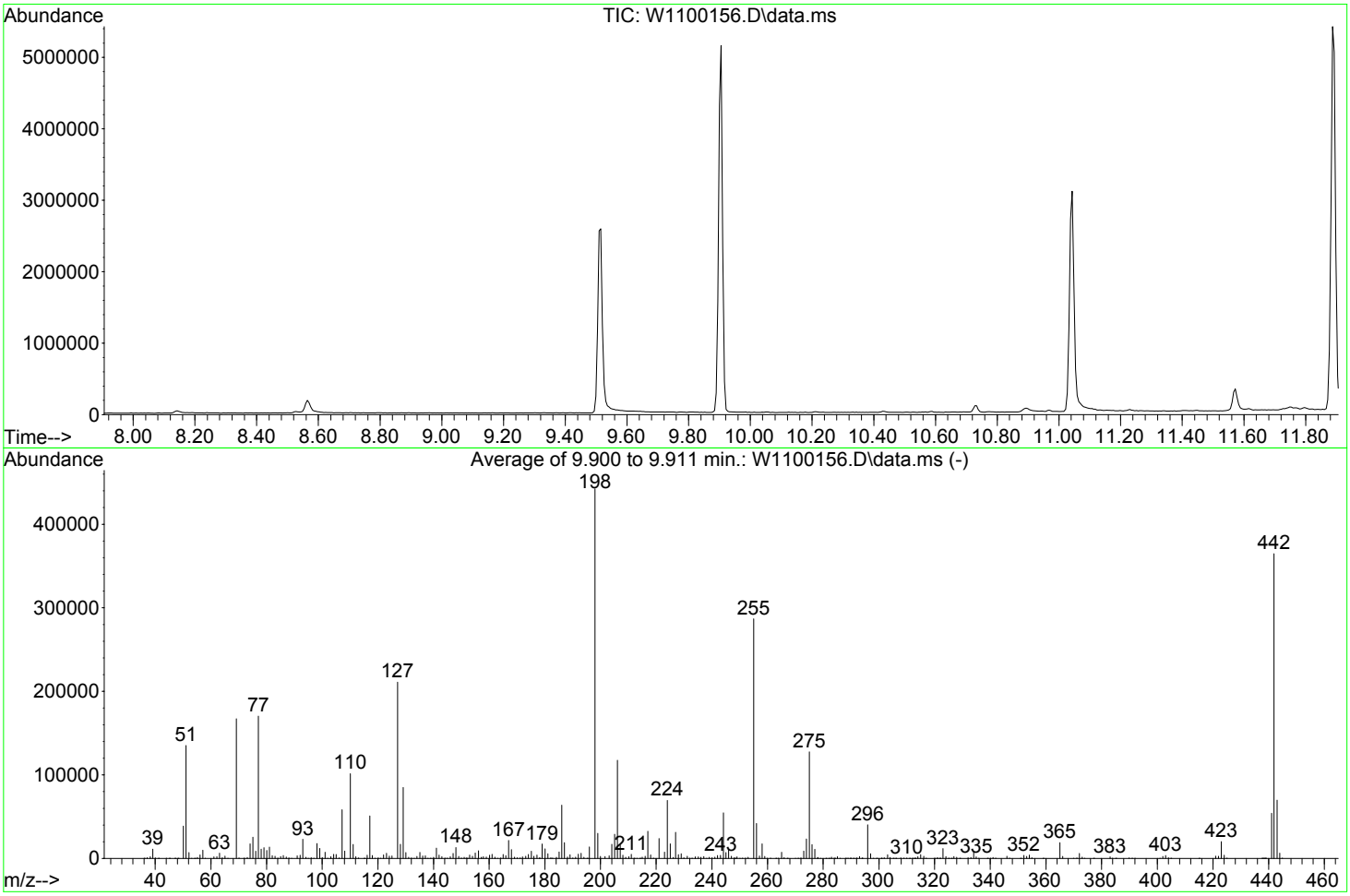
Peak #	Ret Time	Type	Width	Area	Start Time	End Time
1	11.359	rm	0.032	11072	11.343	11.375
2	11.701	rm	0.102	161495	11.674	11.775
3	12.032	rm	0.080	4671955	12.000	12.080

DFTPP

Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100156.D
Acq On : 21 Feb 2011 8:58 am
Operator : tdd
Sample : DFTPP
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : M:\ms2011\methods\wiley\W101810X-8270.M
Title : 8270C - Full List
Last Update : Wed Oct 20 14:58:44 2010



AutoFind: Scans 1295, 1296, 1297; Background Corrected with Scan 1288

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	30.6	135289	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	37.8	167234	PASS
70	69	0.00	2	0.4	752	PASS
127	198	40	60	47.7	210976	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	442304	PASS
199	198	5	9	6.8	30104	PASS
275	198	10	30	28.9	127659	PASS
365	198	1	100	4.3	18953	PASS
441	443	0.01	100	77.4	54120	PASS
442	198	40	100	82.5	364736	PASS
443	442	17	23	19.2	69893	PASS

Average of 9.900 to 9.911 min.: W1100156.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.50	37	48.25	119	60.05	51	71.80	121
36.00	96	50.10	38695	61.10	1990	72.10	50
37.10	866	51.05	135289	62.15	2071	73.05	1229
38.20	2199	52.10	7149	63.10	6346	74.10	17539
39.10	11173	53.10	335	64.15	824	75.05	25465
40.05	646	54.15	106	65.10	2899	76.15	8670
41.10	190	55.10	1320	66.15	320	77.10	170299
42.00	13	56.10	4260	67.10	64	78.10	11230
44.05	401	57.10	9842	69.10	167234	79.10	12912
45.05	224	58.00	357	70.10	752	80.10	9631
47.05	126	58.95	53	71.10	91	81.05	13548

Average of 9.900 to 9.911 min.: W1100156.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
82.05	3333	93.05	22963	104.10	4943	115.00	241
83.05	2578	94.10	1485	105.05	4704	116.10	3972
84.10	523	95.00	317	106.10	790	117.05	50844
85.10	2392	96.05	990	107.10	58411	118.00	3600
86.05	3537	97.05	326	108.05	8829	119.00	387
87.10	1867	98.10	17843	110.10	101530	120.10	665
88.05	770	99.10	11955	111.10	16784	121.00	317
88.95	381	100.05	1062	112.05	2141	122.00	4170
90.00	47	101.05	7466	113.05	650	123.10	6187
91.05	3256	101.95	344	113.80	75	124.10	2899
92.10	3883	103.05	2189	114.00	61	125.05	3015

Average of 9.900 to 9.911 min.: W1100156.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
127.10	210976	137.05	3183	148.05	13163	157.30	276
128.05	16994	137.95	345	149.05	2486	157.90	2200
129.05	85093	139.05	479	150.00	786	159.00	1790
130.00	7120	140.05	1367	151.05	1461	160.10	3812
131.00	1359	141.00	12327	151.75	674	161.05	5049
132.05	720	142.00	4058	152.10	167	162.05	1580
132.90	50	143.00	2191	153.00	4001	163.00	440
133.10	377	144.15	534	154.00	2700	164.10	752
134.00	2474	145.00	519	155.00	6536	165.05	4747
135.10	7176	146.05	2126	156.10	9194	166.00	3364
136.10	2942	147.05	6063	157.10	1481	167.00	21566

Average of 9.900 to 9.911 min.: W1100156.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
168.00	10604	178.20	732	189.00	4435	201.55	2313
169.05	1541	179.00	17350	190.05	723	203.05	3173
170.05	893	180.05	11538	191.00	1575	204.00	16987
171.10	753	181.05	5628	192.00	5101	205.05	28933
172.00	2038	182.10	902	193.00	6230	206.10	117456
173.10	2664	182.75	536	194.05	1357	207.10	16170
174.05	4814	184.10	1404	195.10	186	208.00	3817
175.10	8701	185.10	7805	196.00	13759	209.00	1454
176.00	2581	186.10	63797	198.00	442304	210.10	2115
177.10	4013	187.00	18888	199.00	30104	211.00	4905
178.00	629	188.10	1717	200.00	2520	212.00	203

Average of 9.900 to 9.911 min.: W1100156.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
213.10	443	225.10	17544	236.00	1392	247.00	2666
213.70	46	226.10	1230	237.05	2296	247.90	171
214.10	96	227.00	31309	238.10	329	248.05	542
214.95	1597	228.00	4514	239.05	1358	248.30	165
216.05	2600	229.00	5629	240.05	921	249.00	1983
217.00	32536	229.95	921	241.10	1649	249.80	53
218.00	4277	231.10	2605	242.00	3623	250.05	297
219.05	560	232.00	364	243.10	3634	251.00	603
221.05	23882	232.95	607	244.10	54584	252.05	555
223.00	7526	234.00	2028	245.05	7026	253.05	1391
224.00	69528	235.10	1985	246.00	11163	255.00	286763

Average of 9.900 to 9.911 min.: W1100156.D\data.ms

DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
256.00	41949	270.00	440	281.00	228	288.95	571
257.05	3005	271.05	634	282.05	240	289.70	98
258.00	17498	272.00	753	283.00	1545	289.95	333
259.00	2525	273.00	8905	283.90	617	290.85	208
259.95	446	274.00	23283	284.10	257	291.80	144
261.05	451	275.00	127659	285.05	2083	292.10	443
263.00	180	276.00	16703	285.90	67	293.05	2254
263.90	370	277.00	11042	286.10	296	293.90	182
265.00	7414	277.90	601	286.90	43	294.10	528
265.90	1073	278.10	1220	287.70	47	296.00	40261
267.10	268	279.00	402	288.05	122	297.00	5607

Average of 9.900 to 9.911 min.: W1100156.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
298.05	397	307.30	90	317.00	481	324.05	2242
298.80	35	307.90	751	318.10	44	325.00	233
299.15	99	309.00	473	318.90	62	326.05	264
300.90	229	310.05	523	319.10	39	326.95	2290
301.05	446	310.95	108	319.90	131	327.95	1397
301.95	973	312.00	174	320.20	57	329.05	258
303.10	4419	312.80	208	321.00	825	330.20	72
304.00	1220	313.00	179	321.20	375	332.00	853
305.00	64	314.00	2204	321.90	240	333.05	1237
305.15	120	315.00	4602	322.10	332	334.10	8048
306.00	96	316.10	2593	323.00	11881	335.00	1940

Average of 9.900 to 9.911 min.: W1100156.D\data.ms
DFTPP
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
335.90	299	349.50	37	363.10	64	377.10	123
339.00	191	350.90	203	365.00	18953	381.90	45
340.05	320	352.05	3693	366.00	2550	383.05	1906
341.05	1181	353.05	2409	366.80	64	384.00	387
342.00	503	354.05	4037	367.00	78	385.05	167
342.90	51	355.00	852	367.90	71	386.00	69
344.20	43	356.90	42	370.00	384	388.80	53
345.00	41	357.20	36	371.15	649	389.95	761
346.00	2679	359.00	232	372.00	6054	391.05	544
346.95	610	360.10	49	373.05	1617	392.05	402
347.80	59	362.10	45	373.90	278	394.90	90

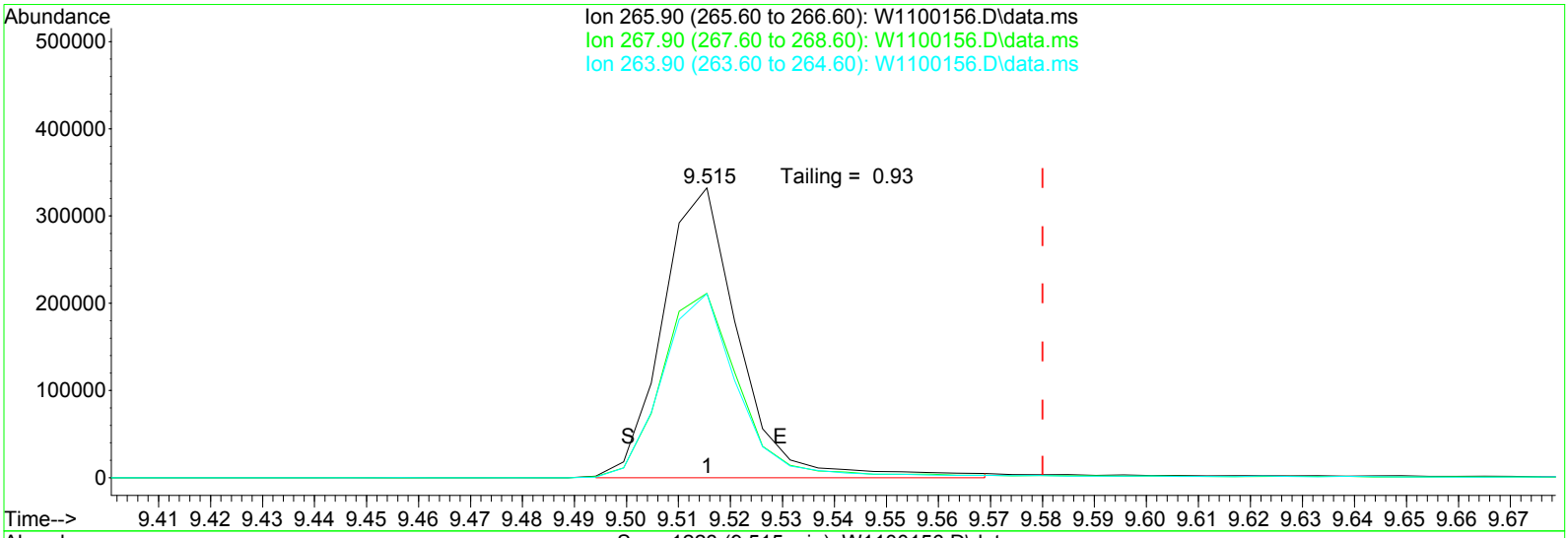
Average of 9.900 to 9.911 min.: W1100156.D\data.ms
DFTPP
Modified:subtracted

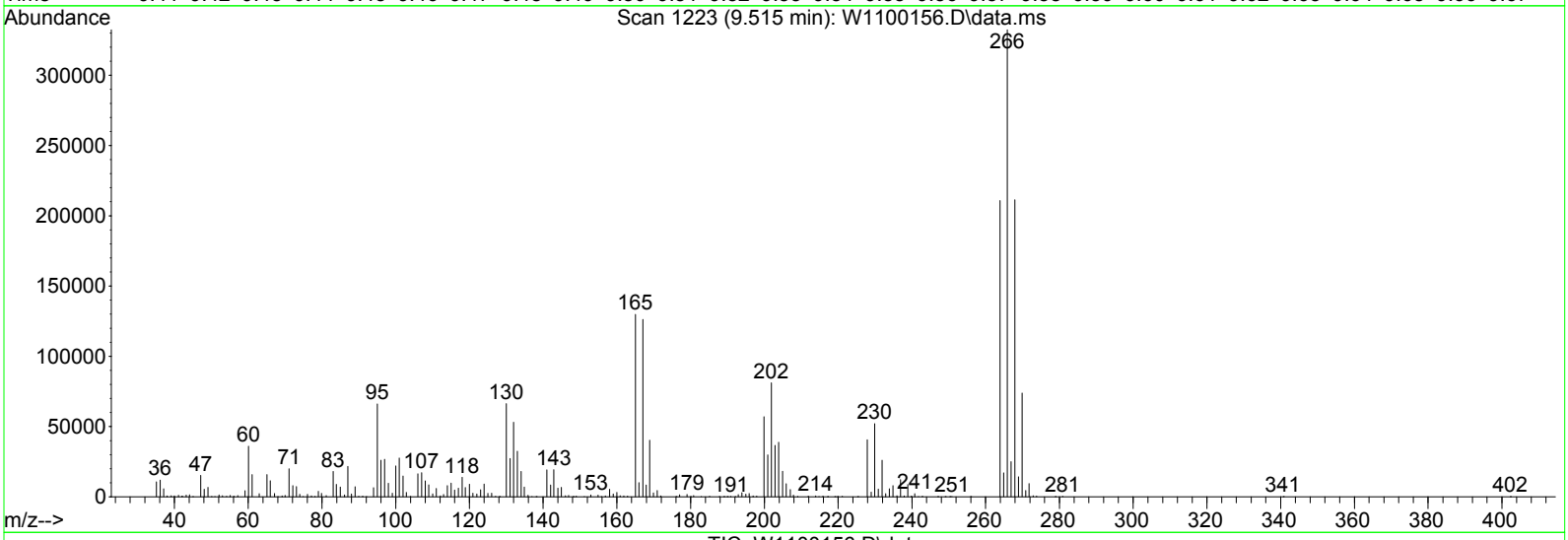
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
396.60	47	415.00	113	430.10	35	438.40	119
397.20	46	415.20	71	431.40	34	438.80	112
401.05	400	418.20	37	432.80	48	439.10	347
402.00	2466	419.70	79	433.60	35	441.05	54120
403.05	3541	421.00	2923	434.00	41	442.00	364736
404.00	955	422.05	2736	434.80	64	443.05	69893
404.85	186	423.00	20225	436.40	74	444.00	6381
405.10	70	424.05	3835	436.80	48	445.00	536
406.10	38	425.05	589	437.10	87	445.90	39
409.10	33	427.00	47	437.55	151	448.10	46
410.10	68	429.40	58	438.05	136	451.20	37

Quantitation Report (Qedit)

Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100156.D
Acq On : 21 Feb 2011 8:58 am
Operator : tdd
Sample : DFTPP
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 21 09:21:42 2011
Quant Method : M:\ms2011\methods\wiley\DFTPP-4-EA.M
Quant Title : DFTPP
QLast Update : Thu Dec 30 11:51:21 2010
Response via : Initial Calibration





TIC: W1100156.D\data.ms

(1) Pentachlorophenol

9.515min (-0.065) 68.77 ug/mL

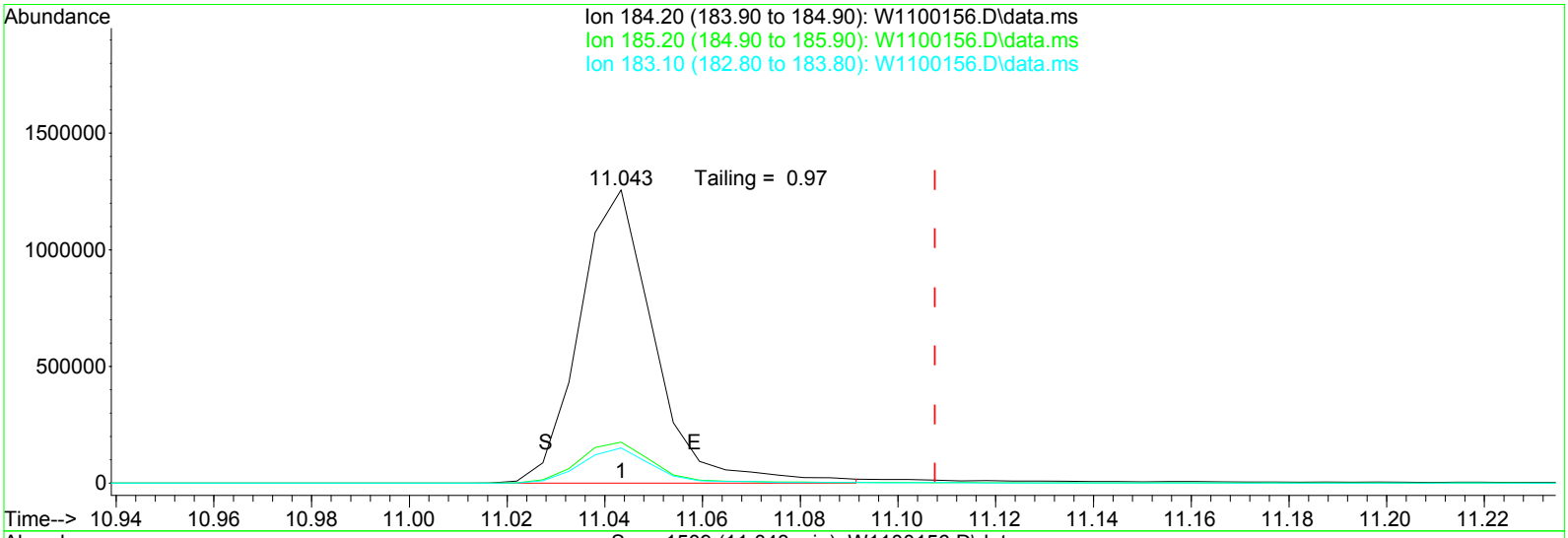
response 347630

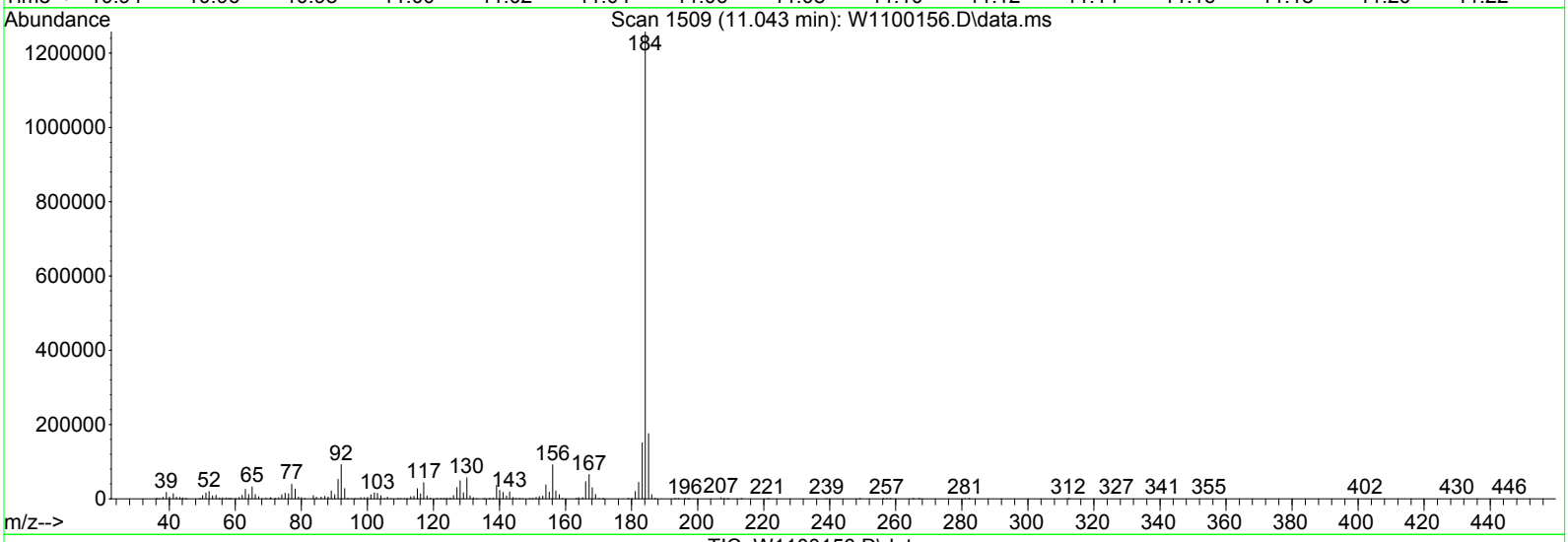
Ion	Exp%	Act%
265.90	100	100
267.90	65.10	65.31
263.90	65.90	63.17
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : M:\ms2011q1\wiley\data\feb11\W022111A\
Data File : W1100156.D
Acq On : 21 Feb 2011 8:58 am
Operator : tdd
Sample : DFTPP
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 21 09:21:42 2011
Quant Method : M:\ms2011\methods\wiley\DFTPP-4-EA.M
Quant Title : DFTPP
QLast Update : Thu Dec 30 11:51:21 2010
Response via : Initial Calibration





TIC: W1100156.D\data.ms

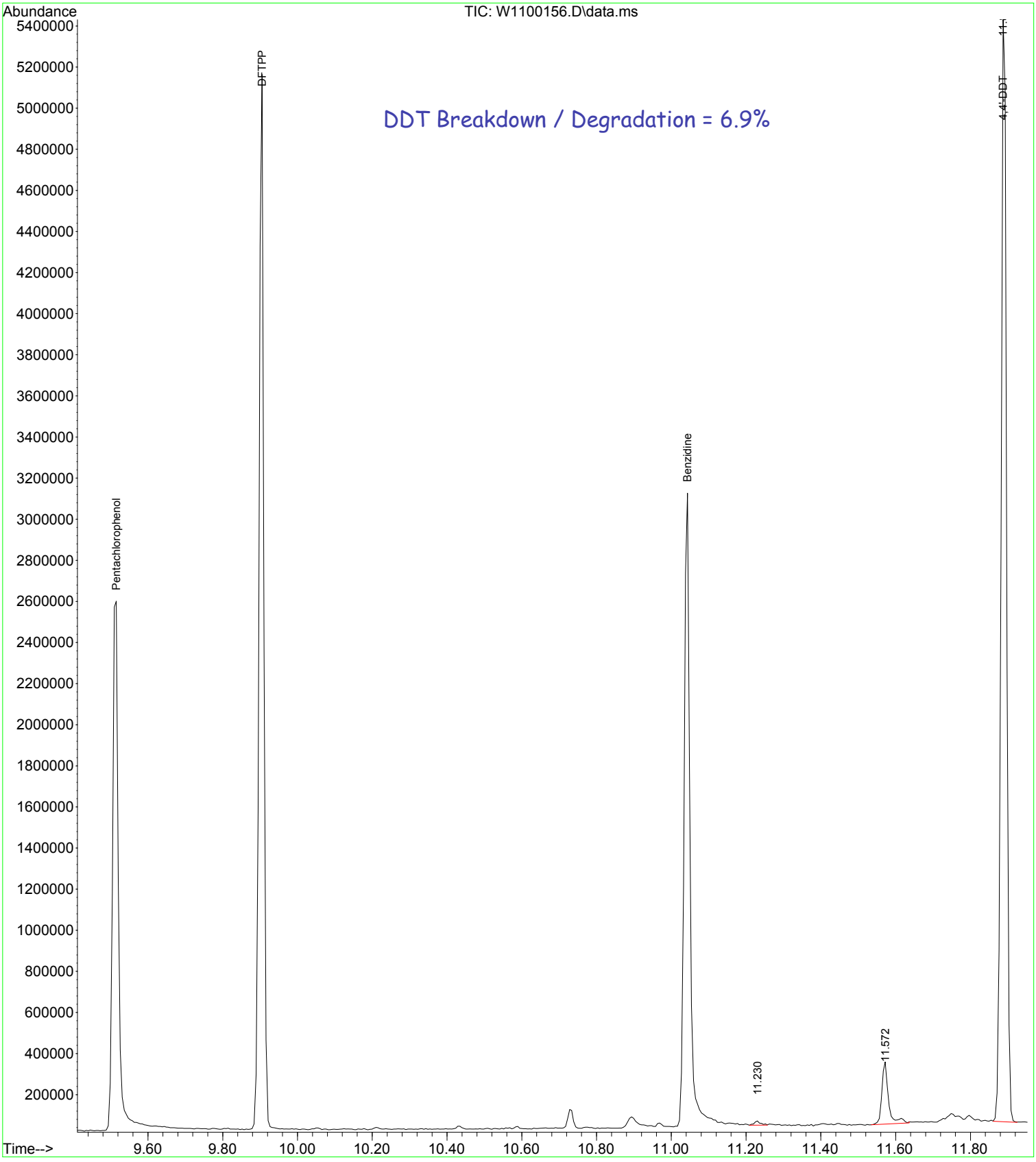
(3) Benzidine

11.043min (-0.064) 84.40 ug/mL

response 1373380

Ion	Exp%	Act%
184.20	100	100
185.20	13.60	14.16
183.10	12.20	11.61
0.00	0.00	0.00

File :M:\ms2011q1\wiley\data\feb11\W022111A\W1100156.D
Operator : tdd
Acquired : 21 Feb 2011 8:58 am using AcqMethod RXI-2A-EA.M
Instrument : Wiley
Sample Name: DFTPP
Misc Info :
Vial Number: 1



TIC: W1100156.D\data.ms
DFTPP

Peak #	Ret Time	Type	Width	Area	Start Time	End Time
1	11.230	rm	0.048	24291	11.209	11.257
2	11.572	rm	0.102	374417	11.535	11.636
3	11.887	rm	0.064	5420668	11.861	11.925

Sequence Name: M:\ms2010q4\wiley\sequence\w101810a
Operator: ede
Datapath: C:\ms2010q4\wiley\data\oct10\w101810a

Line	Type	Vial	DataFile	Method	Sample Name	Additional Info	Comments
1	DFTPP	1	W1002863	RXI-2A-EA	DFTPP		
2	DFTPP	1	W1002864	RXI-2A-EA	DFTPP		
3	DFTPP	1	W1002865	RXI-2A-EA	DFTPP		
4	Calibration	2	W1002866	RXI-2A-EA	SSTD005-SCAN	gcmsprep2pg30	
5	Sample	4	W1002867	RXI-2A-EA	High Conc Mega Mix		
6	Blank	5	W1002868	RXI-2A-EA	CH2Cl2 System Blank		
7	Calibration	2	W1002869	RXI-2A-EA	SSTD005-SCAN	gcmsprep2pg30	
8	Calibration	2	W1002870	RXI-2A-EA	SSTD005-SCAN	gcmsprep2pg30	
9	Calibration	2	W1002871	RXI-2A-EA	SSTD005-SCAN	gcmsprep2pg30	
10	DFTPP	1	W1002872	RXI-2A-EA	DFTPP		
11	Calibration	6	W1002873	RXI-2A-EA	SSTD005-SCAN	gcmsprep2pg30	
12	Calibration	7	W1002874	RXI-2A-EA	SSTD010-SCAN	gcmsprep2pg30	
13	Calibration	8	W1002875	RXI-2A-EA	SSTD020-SCAN	gcmsprep2pg30	
14	Calibration	9	W1002876	RXI-2A-EA	SSTD050-SCAN	gcmsprep2pg30	
15	Calibration	10	W1002877	RXI-2A-EA	SSTD080-SCAN	gcmsprep2pg30	
16	Calibration	11	W1002878	RXI-2A-EA	SSTD120-SCAN	gcmsprep2pg30	
17	Calibration	12	W1002879	RXI-2A-EA	SSTD160-SCAN	gcmsprep2pg30	
18	Calibration	13	W1002880	RXI-2A-EA	SSTD050-SCAN (ICV)	gcmsprep2pg14	
19	Blank	2	W1002881	RXI-2A-EA	CH2Cl2 System Blank		
20	Sample	16	W1002882	RXI-2A-EA	IDOC EDE "A"	QA-BS-1pg72 M8270-BS "A"	
21	Sample	17	W1002883	RXI-2A-EA	IDOC EDE "B"	QA-BS-1pg72 M8270-BS "B"	
22	Sample	18	W1002884	RXI-2A-EA	IDOC EDE "C"	QA-BS-1pg72 M8270-BS "C"	
23	Sample	19	W1002885	RXI-2A-EA	IDOC EDE "D"	QA-BS-1pg72 M8270-BS "D"	

Sequence Name: M:\ms2011q1\wiley\sequence\w022111a
Operator: tdd
Datapath: C:\ms2011q1\wiley\data\feb11\w022111a

Line	Type	Vial	DataFile	Method	Sample Name	Additional Info	Comments
1	DFTPP	1	W1100155	RXI-2A-EA	DFTPP		
2	DFTPP	1	W1100156	RXI-2A-EA	DFTPP		Inj @ 8:38am 2/21
3	DailyCal	2	W1100157	RXI-2A-EA	SSTD050 M8270 gcms22pg149	gcmsprep2pg30 exp 3/15/11	
4	Blank	3	W1100158	RXI-2A-EA	0111-20 LCS		
5	Sample	4	W1100159	RXI-2A-EA	0111-20 LCSD		
6	Spike	4	W1100160	RXI-2A-EA	0111-20 LCSD	Reprep	
7	Spike	5	W1100161	RXI-2A-EA	0111-20 LCS (Conf)		
8	Spike	6	W1100162	RXI-2A-EA	0111-20 LCSD (Conf)		
9	Blank	7	W1100163	RXI-2A-EA	CH2Cl2 System Blank		
10	Blank	7	W1100164	RXI-2A-EA	CH2Cl2 System Blank		
11	Sample	8	W1100165	RXI-2A-EA	0111-20 MB		
12	Sample	8	W1100166	RXI-2A-EA	0111-20 MB		
13	Sample	9	W1100167	RXI-2A-EA	0111-20 ACB-M0010-FB		
14	Sample	10	W1100168	RXI-2A-EA	0211-13 AE-15 SVOA PUF/XAD		
15	Sample	11	W1100169	RXI-2A-EA	0211-13 AE-15 SVOA PUF/XAD *2		
16	Sample	12	W1100170	RXI-2A-EA	0111-20 1R-ACB-M0010-02 *10		
17	Sample	14	W1100171	RXI-2A-EA	0111-20 1R-ACB-M0010-02		
18	Sample	15	W1100172	RXI-2A-EA	0111-20 1R-ACB-M0010-02 LD		
19	Sample	13	W1100173	RXI-2A-EA	0111-20 1R-ACB-M0010-02 *10 LD		
20							

INSTRUMENT CONTROL PARAMETERS: Wiley

M:\MS2010\METHODS\WILEY-EA\RXI-2A-EA.M
Thu Jun 10 12:52:48 2010

Control Information

Sample Inlet : GC
Injection Source : GC ALS
Mass Spectrometer : Enabled

6890 GC METHOD

OVEN
- Initial temp: 35 'C (On)
- Initial time: 0.50 min
- Maximum temp: 450 'C
- Equilibration time: 0.20 min
- Ramps:

#	Rate	Final temp	Final time
1	25.00	310	0.00
2	4.00	330	2.00
3	0.0(Off)		

- Post temp: 0 'C
- Post time: 0.00 min
- Run time: 18.50 min

FRONT INLET (SPLIT/SPLITLESS)
- Mode: Pulsed Splitless
- Initial temp: 250 'C (On)
- Pressure: 7.91 psi (On)
- Pulse pressure: 30.0 psi
- Pulse time: 0.40 min
- Purge flow: 50.0 mL/min
- Purge time: 0.30 min
- Total flow: 54.0 mL/min
- Gas saver: On
- Saver flow: 20.0 mL/min
- Saver time: 1.00 min
- Gas type: Helium

BACK INLET (SPLIT/SPLITLESS)
- Mode: Split
- Initial temp: 50 'C (Off)
- Pressure: 11.25 psi (On)
- Split ratio: 50:1
- Split flow: 43.6 mL/min
- Total flow: 51.9 mL/min
- Gas saver: On
- Saver flow: 20.0 mL/min
- Saver time: 2.00 min
- Gas type: Hydrogen

COLUMN 1
- Capillary Column
- Model Number: Restek 13638
- Rxi-5Sil MS, 30m x 0.25mm x 0.5µm
- Max temperature: 350 'C
- Nominal length: 30.0 m
- Nominal diameter: 250.00 um
- Nominal film thickness: 0.50 um
- Mode: constant flow
- Initial flow: 1.1 mL/min
- Nominal init pressure: 7.92 psi
- Average velocity: 38 cm/sec
- Inlet: Front Inlet
- Outlet: MSD
- Outlet pressure: vacuum

COLUMN 2
- Capillary Column
- Model Number: Restek 40111
- Rtx-1 20m x 0.18mm x 0.4µm
- Max temperature: 340 'C
- Nominal length: 20.0 m
- Nominal diameter: 180.00 um
- Nominal film thickness: 0.40 um
- Mode: constant flow
- Initial flow: 0.9 mL/min
- Nominal init pressure: 11.25 psi
- Average velocity: 42 cm/sec
- Inlet: Back Inlet
- Outlet: Back Detector
- Outlet pressure: ambient

FRONT DETECTOR (NO DET)

BACK DETECTOR (FID)
- Temperature: 250 'C (On)
- Hydrogen flow: 40.0 mL/min (Off)
- Air flow: 450.0 mL/min (Off)
- Mode: Constant makeup flow
- Makeup flow: 45.0 mL/min (Off)
- Makeup Gas Type: Nitrogen
- Flame: Off
- Electrometer: On
- Lit offset: 2.0

SIGNAL 1
   Data rate: 50 Hz
   Type: mux'ed adc offset
   Save Data: Off
   Zero: 0.0 (Off)
   Range: 0
   Fast Peaks: Off
   Attenuation: 0

SIGNAL 2
   Data rate: 50 Hz
   Type: mux'ed adc offset
   Save Data: Off
   Zero: 0.0 (Off)
   Range: 0
   Fast Peaks: Off
   Attenuation: 0

COLUMN COMP 1
   Derive from back detector

COLUMN COMP 2
   Derive from back detector

THERMAL AUX 2
   Use: MSD Transfer Line Heater
   Description:
   Initial temp: 280 'C (On)
   Initial time: 0.00 min
      # Rate Final temp Final time
      1   0.0(Off)

POST RUN
   Post Time: 0.00 min

TIME TABLE
   Time   Specifier   Parameter & Setpoint

GC Injector

Front Injector:

Sample Washes	1	
Sample Pumps	3	
Injection Volume	0.20	microliters
Syringe Size	10.0	microliters
PreInj Solvent A Washes	0	
PreInj Solvent B Washes	0	
PostInj Solvent A Washes	5	
PostInj Solvent B Washes	5	
Viscosity Delay	2	seconds
Plunger Speed	Fast	
PreInjection Dwell	0.00	minutes
PostInjection Dwell	0.00	minutes
Sampling Depth	2.0	mm

Back Injector:
No parameters specified

Column 1 Inventory Number : 13638
Column 2 Inventory Number : 40111

MS ACQUISITION PARAMETERS

General Information
------- -----------

Tune File   : dftpp060710d.u
Acquistion Mode   : Scan

MS Information
-- -----------

Solvent Delay   : 2.90 min

EMV Mode   : Gain Factor
Gain Factor   : 1.00
Resulting EM Voltage   : 1588

[Scan Parameters]

Low Mass : 35.0
High Mass : 500.0
Threshold : 100
Sample # : 2 A/D Samples 4

[MSZones]

MS Source : 230 C maximum 250 C
MS Quad : 150 C maximum 200 C

END OF MS ACQUISITION PARAMETERS

TUNE PARAMETERS for SN: US21844806

Trace Ion Detection is OFF.

EMISSION : 34.610
ENERGY : 69.922
REPELLER : 34.814
IONFOCUS : 90.157
ENTRANCE LE : 0.000
EMVOLTS : 1541.176
Actual EMV : 1588.23
GAIN FACTOR : 1.02
AMUGAIN : 2060.000
AMUOFFSET : 132.000
FILAMENT : 1.000
DCPOLARITY : 0.000
ENTLENSOFFS : 12.800@ 3 12.800@ 50 16.314@ 69 16.816@131 20.831@219 14.306@414
14.306@502 14.306@799
MASSGAIN : 69.000
MASSOFFSET : -10.000

END OF TUNE PARAMETERS

END OF INSTRUMENT CONTROL PARAMETERS

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Web Site: www.rtp-labs.com

February 4, 2011

ARCADIS
4915 Prospectus Drive, Suite F
Durham, NC 27713

Attn: Brent Hall

PROJECT: "ACB Outlet Duct"; Project Number: RN990271.0002; PO: RB68419
RTP Labs ID: 11-096

Enclosed with this letter is the report on the chemical analysis for the Tedlar bag sample received on January 21, 2011 for a normal turnaround. The sample was analyzed by EPA Method TO-15/0040 GC/MS for 60 VOC target compounds and a library search for unknown VOCs (Tentatively Identified Compounds).

Please call if you have any questions.

Sincerely,

Alston Sykes

Alston Sykes, Principal Chemist

Attachments: GC/MS report, COC form

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EPA Method TO-15

GC/MS VOLATILE ORGANICS

Data File: c:\varianws\wsdatafiles\voc113010\11-096-01b.sms **Acquisition Date:** 1/21/2011

Comment: Arcadis/ EPA IR-ACB-M0040-01 1/21/11; 10 mL; DF=5

CAS NO.	COMPOUND	CONCENTRATION	UNITS	MDL and Reporting Limit
75-71-8	Dichlorodifluoromethane (Freon 12)	Not Found	ppbv	1
76-14-2	1,2-Chloro-1,1,2,2-Tetrafluoroethane	Not Found	ppbv	1
74-87-3	Chloromethane	10.03	ppbv	1
75-01-4	Vinyl chloride	Not Found	ppbv	1
106-99-0	1,3-Butadiene	121.07	ppbv	1
74-83-9	Bromomethane	Not Found	ppbv	1
75-00-3	Chloroethane	1.73	ppbv	1
75-69-4	Trichloromonofluoromethane	Not Found	ppbv	1
75-35-4	1,1-dichloroethene	Not Found	ppbv	1
76-13-1	1,1,2-trichloro-1,2,2-trifluoroethane	Not Found	ppbv	1
64-17-5	Ethanol	1.71	ppbv	1
75-15-0	Carbon disulfide	1.70	ppbv	1
67-63-0	Isopropyl alcohol	3.59	ppbv	1
75-09-2	Methylene chloride	Not Found	ppbv	1
67-64-1	Acetone	104.40	ppbv	1
156-60-5	t-1,2-dichloroethene	Not Found	ppbv	1
11-05-3	Hexane	12.62	ppbv	1
1634-04-4	Methyl-t-butyl ether (MTBE)	Not Found	ppbv	1
75-34-3	1,1-Dichloroethane	Not Found	ppbv	1
108-05-4	Vinyl acetate	Below MDL	ppbv	1
156-59-2	cis-1,2-dichloroethene	Not Found	ppbv	1
110-82-7	Cyclohexane	Below MDL	ppbv	1
67-66-3	Chloroform	Not Found	ppbv	1
141-78-6	Ethyl Acetate	4.22	ppbv	1
109-99-9	Tetrahydrofuran	1.43	ppbv	1
71-55-6	1,1,1-trichloroethane	Not Found	ppbv	1
56-23-5	Carbon Tetrachloride	Not Found	ppbv	1
78-93-3	2-Butanone	Not Found	ppbv	1
142-82-5	Heptane	1.81	ppbv	1
71-43-2	Benzene	323.74	ppbv	1
107-06-2	1,2-dichloroethane	Not Found	ppbv	1
79-01-6	Trichloroethylene	Not Found	ppbv	1
78-87-5	1,2-dichloropropane	Not Found	ppbv	1
75-27-4	Bromodichloromethane	Not Found	ppbv	1
123-91-1	1,4-dioxane	Not Found	ppbv	1
10061-01-5	cis-1,3-dichloropropene	Not Found	ppbv	1
108-88-3	Toluene	42.66	ppbv	1
108-10-1	4-Methyl-2-pentanone (MIBK)	Not Found	ppbv	1
1006-02-6	t-1,3-dichloropropene	Not Found	ppbv	1
127-18-4	Tetrachloroethylene	Not Found	ppbv	1
79-00-5	1,1,2-trichloroethane	Not Found	ppbv	1
124-48-1	Dibromochloromethane	Not Found	ppbv	1
106-93-4	1,2-dibromoethane	Not Found	ppbv	1
591-78-6	2-Hexanone	1.78	ppbv	1
100-41-4	Ethylbenzene	5.43	ppbv	1
108-90-7	Chlorobenzene	Not Found	ppbv	1
1330-20-7	m/p-Xylene	3.42	ppbv	1
95-47-6	o-Xylene	1.36	ppbv	1
100-42-5	Styrene	5.92	ppbv	1
75-25-2	Tribromomethane	Not Found	ppbv	1
79-34-5	1,1,2,2-tetrachloroethane	Not Found	ppbv	1
622-96-8	1-ethyl-4-methylbenzene	Not Found	ppbv	1
108-67-8	1,3,5-trimethylbenzene	Not Found	ppbv	1
95-63-6	1,2,4-trimethylbenzene	Not Found	ppbv	1
541-73-1	1,3-dichlorobenzene	Not Found	ppbv	1
106-46-7	1,4-dichlorobenzene	Not Found	ppbv	1
100-44-7	Benzyl chloride	Not Found	ppbv	1
95-50-1	1,2-dichlorobenzene	Not Found	ppbv	1
87-68-3	1,1,2,3,4,4-hexachloro-1,3-butadiene	Not Found	ppbv	1
120-82-1	1,2,4-trichlorobenzene	Not Found	ppbv	1

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TENTATIVELY IDENTIFIED COMPOUNDS

EPA Method TO-15 — GC/MS VOLATILE ORGANICS

Data File: c:\varianws\wsdatafiles\voc113010\11-096-01b.sms **Acquisition Date:** 1/21/2011

Comment: Arcadis/ EPA IR-ACB-M0040-01 1/21/11; 10 mL; DF=5

CAS NO.	COMPOUND NAME	Retention Time	Estimated Concentration,	
151-56-4	Ethylenimine	8.15	**5.21**	ppbv
151-56-4	Ethylenimine	8.18	**8.77**	ppbv
186205-18-	Di(1,2,5-oxadiazolo)[3,4-b;3,4-E]pyrazin	8.29	**0.87**	ppbv
54060-80-9	N-(2-Methylacryloyl)imidazola	8.38	**15.23**	ppbv
21618-99-5	5-(2-Aminopropyl)-2-methylphenol	8.54	**2.13**	ppbv
460-19-5	Ethanedinitrile	8.58	**2.15**	ppbv
146724-75-	2,5-Dimethoxy-4-(methylsulfonyl)amphetam	8.66	**1.91**	ppbv
115-07-1	Propene	8.70	**0.77**	ppbv
115-11-7	1-Propene, 2-methyl-	9.32	**0.97**	ppbv
460-19-5	Ethanedinitrile	9.41	**6.61**	ppbv
2516-34-9	Cyclobutylamine	9.72	**4.19**	ppbv
10575-41-4	Hex-4-yn-3-one	10.2	**1.11**	ppbv
2562-38-1	Cyclopentane, nitro-	10.3	**3.71**	ppbv
7051-34-5	Cyclopropane, (bromomethyl)-	10.6	**0.83**	ppbv
513-35-9	2-Butene, 2-methyl-	11.0	**0.41**	ppbv
110-00-9	Furan	11.3	**3.97**	ppbv
460-19-5	Ethanedinitrile	12.0	**1.22**	ppbv
185-94-4	Bicyclo[2.1.0]pentane	12.2	**2.23**	ppbv
106-90-1	2-Propenoic acid, oxiranylmethyl ester	12.3	**8.01**	ppbv
3638-35-5	Propane, 2-cyclopropyl-	13.4	**7.02**	ppbv
75-05-8	Acetonitrile	14.1	**10.11**	ppbv
763-30-4	1,4-Pentadiene, 2-methyl-	14.3	**1.09**	ppbv
460-19-5	Ethanedinitrile	14.7	**29.90**	ppbv
534-22-5	Furan, 2-methyl-	15.0	**1.15**	ppbv
4723-10-8	1,5-Hexadiene-3,4-diol, 2,5-dimethyl-	16.2	**1.11**	ppbv
109862-24-	Propane, 1-acetoxy-2-isocyano-	16.6	**1.77**	ppbv
4025-37-0	(2-Aziridinylethyl)amine	16.9	**4.33**	ppbv
28290-01-9	Cyclobutanone, 2,3,3-trimethyl-	17.1	**3.91**	ppbv
110-02-1	Thiophene	17.6	**0.61**	ppbv
97-72-3	Propanoic acid, 2-methyl-, anhydride	17.7	**0.54**	ppbv
25350-22-5	Pentanamide, 2-(dimethylamino)-3-methyl-	18.2	**14.74**	ppbv
625-74-1	Propane, 2-methyl-1-nitro-	18.3	**0.61**	ppbv
625-74-1	Propane, 2-methyl-1-nitro-	18.5	**0.26**	ppbv

(IS) is BFB Internal Standard and (SS) are Surrogate Standards that are added to each sample.

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CAS NO.	COMPOUND NAME	Retention Time	Estimated Concentration,	
2978-58-7	3-Butyn-2-amine, 2-methyl-	18.6	**1.60**	ppbv
14617-88-0	2-Butenoic acid, 4-nitrophenyl ester, (E	18.9	**3.64**	ppbv
4786-20-3	2-Butenenitrile	19.1	**1.11**	ppbv
821-55-6	2-Nonanone	19.6	**0.95**	ppbv
36566-80-0	3-Hexyne, 2-methyl-	19.7	**0.47**	ppbv
872-56-0	Isopropylcyclobutane	20.1	**4.87**	ppbv
None	4-Methyl-2,4-bis(4'-trimethylsilyloxyphe	20.6	**0.71**	ppbv
286-76-0	Bicyclo[7.1.0]decane	21.2	**0.54**	ppbv
16411-13-5	Butanedinitrile, 2,3-dimethyl-	21.3	**1.94**	ppbv
3683-19-0	(Z)-4-Methyl-2-hexene	21.5	**0.69**	ppbv
625-74-1	Propane, 2-methyl-1-nitro-	21.5	**0.13**	ppbv
814-78-8	3-Buten-2-one, 3-methyl-	21.6	**1.32**	ppbv
498-51-1	2-Heptanone, 6-methyl-5-methylene-	22.0	**0.59**	ppbv
10374-74-0	7-Tetradecene	22.3	**3.08**	ppbv
536-74-3	Phenylethyne	23.1	**5.28**	ppbv
None	Ethyl [5-hydroxy-1-(6-methoxy-4-methyl-3	23.6	**4.77**	ppbv
542-54-1	Pentanenitrile, 4-methyl-	23.8	**2.04**	ppbv
52805-36-4	4-Benzyloxybenzonitrile	24.1	**0.57**	ppbv
620-14-4	Benzene, 1-ethyl-3-methyl-	24.2	**0.77**	ppbv
127-19-5	Acetamide, N,N-dimethyl-	24.7	**41.42**	ppbv
33868-50-7	Ethanone, 2-(benzoyloxy)-1-phenyl-	25.4	**13.04**	ppbv
673-32-5	Benzene, 1-propynyl-	25.9	**2.19**	ppbv
108-95-2	Phenol	26.1	**43.28**	ppbv
75314-19-1	Cyclobutanone, 2-methyl-2-oxiranyl-	26.5	**2.06**	ppbv
16484-17-6	2H-Inden-2-one, octahydro-, trans-	26.6	**0.99**	ppbv
4930-03-4	Carbamic acid, phenyl-, phenyl ester	26.9	**0.47**	ppbv
29812-79-1	Hydroxylamine, O-decyl-	27.7	**0.86**	ppbv
121-19-7	Roxarsone	27.9	**0.77**	ppbv
91-20-3	Naphthalene	28.1	**5.36**	ppbv

(IS) is BFB Internal Standard and (SS) are Surrogate Standards that are added to each sample.

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CHAIN OF CUSTODY RECORD

Project Name	US EPA
Project Location	RTP, NC
Sampling Location	ACB Outlet Duct
Project Number	RN990271.0002
Laboratory	RTP Labs
Laboratory P.O. #	

Sample ID	Sample Matrix	Analysis Requested
1R-ACB-M0040-01	Tedlar bag	VOCs

Notes/Comments:

Relinquished By:		Relinquished By:	
Date/Time:	1/21/11 - 1230	Date/Time:	
Received By:		Received By:	
Date/Time:	1/21/11 12:30	Date/Time:	

ARCADIS U.S., Inc.
4915 Prospectus Drive, Suite F
Durham, North Carolina 27713

Phone Number: (919) 544-4535
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ARCADIS-US: Durham

4915 Prospectus Drive, Suite F
Durham, NC 27713

ACB Outlet Duct

Client RN990271.0002
PO # RB68535

Analytical Report
(0211-49)

EPA Method TO-15

TO-15 Target Compound List

Enthalpy Analytical, Inc.

Phone: (919) 850 - 4392 / Fax: (919) 850 - 9012 / www.enthalpy.com
2202 Ellis Road Durham, NC 27703 - 5518

I certify that to the best of my knowledge all analytical data presented in this report:

- Have been checked for completeness
- Are accurate, error-free, and legible
- Have been conducted in accordance with approved protocol, and that all deviations and analytical problems are summarized in the appropriate narrative(s)

This analytical report was prepared in Portable Document Format (.PDF) and contains 106 pages.



QA Review Performed by: Michael Steven Schapira

Report Issued: 3/2/11

Results

Company	ARCADIS-US: Durham
Analyst	TDD
Parameters	EPA Method TO-15
# Samples	1 Run & 1 FB

Client #	RN990271.0002
Job #	0211-49
PO #	RB68535
Report Date	2/22/2011

Sample ID: **0211-49 1R-ACB-M0040-02 *5,000** DF: 5,000
Data File: L1100448.D Tank DF: 1.00
Tank/Misc ID: 10mL load of 100* Syr dil ConCal 1

Compound	Quant	Ret. Time (min)	Area	Conc. as Analyzed (ppbv)	Sample Conc. (ppbv)	Flags
Propylene	41	4.14	8,589	0.567	2,835	
Freon 12 (CCl2F2)	85	NA	0	0.200	1,000	ND
Freon 114 (C2Cl2F4)	85	NA	0	0.200	1,000	ND
Chloromethane	50	NA	0	0.200	1,000	ND
Chloroethene (Vinyl chloride)	62	NA	0	0.200	1,000	ND
1,3-Butadiene	39	5.11	37,224	1.33	6,631	
Bromomethane	94	NA	0	0.200	1,000	ND
Chloroethane	64	NA	0	0.200	1,000	ND
Bromoethene (Vinyl bromide)	106	NA	0	0.200	1,000	ND
Freon 11 (CCl3F)	101	NA	0	0.200	1,000	ND
Ethanol	45	NA	0	0.200	1,000	ND
Acrolein	56	7.90	1,964	0.270	1,352	J
Freon 113 (C2Cl3F3)	151	NA	0	0.200	1,000	ND
1,1-Dichloroethene	61	NA	0	0.200	1,000	ND
Acetone	43	8.22	2,962,902	57.6	288,146	E
Carbon disulfide	76	NA	0	0.200	1,000	ND
Isopropyl alcohol	45	NA	0	0.200	1,000	ND
Allyl chloride (3-chloropropene)	76	NA	0	0.200	1,000	ND
Acetonitrile	41	9.02	138,299	8.36	41,820	
Methylene chloride	49	9.14	16,188	0.462	2,311	
trans-1,2-Dichloroethene	61	NA	0	0.200	1,000	ND
Methyl tert-butyl ether	73	NA	0	0.200	1,000	ND
Acrylonitrile	53	NA	0	0.200	1,000	ND
Hexane	57	NA	0	0.200	1,000	ND
1,1-Dichloroethane	63	NA	0	0.200	1,000	ND
Vinyl acetate	43	NA	0	0.200	1,000	ND
cis-1,2-Dichloroethylene	61	NA	0	0.200	1,000	ND
Methyl ethyl ketone (2-Butanone)	72	NA	0	0.200	1,000	ND
Ethyl acetate	45	NA	0	0.200	1,000	ND
Chloroform	83	NA	0	0.200	1,000	ND
Tetrahydrofuran	72	12.42	15,560	1.57	7,832	
1,1,1-Trichloroethane	97	NA	0	0.200	1,000	ND
Cyclohexane	56	NA	0	0.200	1,000	ND
Carbon tetrachloride	117	NA	0	0.200	1,000	ND
Benzene	78	13.51	35,829	0.505	2,524	
2,2,4-trimethylpentane	57	NA	0	0.200	1,000	ND
1,2-Dichloroethane	62	NA	0	0.200	1,000	ND
Heptane	57	NA	0	0.200	1,000	ND
Trichloroethene	130	NA	0	0.200	1,000	ND
1,2-Dichloropropane	63	NA	0	0.200	1,000	ND
Methyl methacrylate	69	NA	0	0.200	1,000	ND
1,4-Dioxane	88	NA	0	0.200	1,000	ND
Bromodichloromethane	83	NA	0	0.200	1,000	ND
cis-1,3-Dichloropropene	75	NA	0	0.200	1,000	ND
Methyl isobutyl ketone	43	NA	0	0.200	1,000	ND
Toluene	91	16.65	35,300	0.310	1,551	J
trans-1,3-Dichloropropene	75	NA	0	0.200	1,000	ND
1,1,2-Trichloroethane	97	NA	0	0.200	1,000	ND
Tetrachloroethene	166	NA	0	0.200	1,000	ND
2-Hexanone (Methyl butyl ketone)	43	NA	0	0.200	1,000	ND
Dibromochloromethane	129	NA	0	0.200	1,000	ND

Company	ARCADIS-US: Durham
Analyst	TDD
Parameters	EPA Method TO-15
# Samples	1 Run & 1 FB

Client #	RN990271.0002
Job #	0211-49
PO #	RB68535
Report Date	2/22/2011

Sample ID: **0211-49 1R-ACB-M0040-02 *5,000** DF: 5,000
Data File: L1100448.D Tank DF: 1.00
Tank/Misc ID: 10mL load of 100* Syr dil ConCal 1

Compound	Quant	Ret. Time (min)	Area	Conc. as Analyzed (ppbv)	Sample Conc. (ppbv)	Flags
1,2-Dibromoethane	107	NA	0	0.200	1,000	ND
Chlorobenzene	112	NA	0	0.200	1,000	ND
Ethylbenzene	91	NA	0	0.200	1,000	ND
1,1,1,2-Tetrachloroethane	131	NA	0	0.200	1,000	ND
m-/p-Xylenes	91	NA	0	0.200	1,000	ND
o-Xylene	91	NA	0	0.200	1,000	ND
Styrene	104	NA	0	0.200	1,000	ND
Bromoform	173	NA	0	0.200	1,000	ND
1,1,2,2-Tetrachloroethane	83	NA	0	0.200	1,000	ND
4-Ethyltoluene	105	NA	0	0.200	1,000	ND
2-Chlorotoluene	91	NA	0	0.200	1,000	ND
1,3,5-Trimethylbenzene	105	NA	0	0.200	1,000	ND
1,2,4-Trimethylbenzene	105	NA	0	0.200	1,000	ND
1,3-Dichlorobenzene	146	NA	0	0.200	1,000	ND
1,4-Dichlorobenzene	146	NA	0	0.200	1,000	ND
Benzyl chloride	91	NA	0	0.200	1,000	ND
1,2-Dichlorobenzene	146	NA	0	0.200	1,000	ND
1,2,4-Trichlorobenzene	180	NA	0	0.200	1,000	ND
Hexachlorobutadiene	225	NA	0	0.200	1,000	ND
Naphthalene	128	NA	0	0.200	1,000	ND

					Rec. (%)
Bromochloromethane (IS)	130	12.42	954,897	11.24	N/A
1,4-Difluorobenzene (IS)	114	14.22	2,810,714	11.93	N/A
Chlorobenzene-d5 (IS)	117	18.63	2,090,202	11.13	N/A

Internal Standard Acceptance Criteria (Area +/- 40%, RT +/- 20 sec.)

Internal Standard Name	Concal RT	Sample RT	Ave. ICal IS Area	Sample IS Area	Flag
Bromochloromethane (IS)	12.41	12.42	1,089,684	954,897	Pass
1,4-Difluorobenzene (IS)	14.20	14.22	3,198,975	2,810,714	Pass
Chlorobenzene-d5 (IS)	18.60	18.63	2,556,498	2,090,202	Pass

Company	ARCADIS-US: Durham
Analyst	TDD
Parameters	EPA Method TO-15
# Samples	1 Run & 1 FB

Client #	RN990271.0002
Job #	0211-49
PO #	RB68535
Report Date	2/22/2011

Sample ID: **0211-49 1R-ACB-M0040-02 *10,000** DF: 10,000
Data File: L1100449.D Tank DF: 1.00
Tank/Misc ID: 5mL load of 100* Syr dil ConCal 1

Compound	Quant	Ret. Time (min)	Area	Conc. as Analyzed (ppbv)	Sample Conc. (ppbv)	Flags
Acetone	43	8.20	1,600,353	28.6	286,045	
						Rec. (%)
Bromochloromethane (IS)	130	12.43	1,039,112	11.24	N/A	
1,4-Difluorobenzene (IS)	114	14.22	3,002,647	11.93	N/A	
Chlorobenzene-d5 (IS)	117	18.63	1,662,386	11.13	N/A	

Internal Standard Acceptance Criteria (Area +/- 40%, RT +/- 20 sec.)

Internal Standard Name	Concal RT	Sample RT	Ave. ICal IS Area	Sample IS Area	Flag
Bromochloromethane (IS)	12.41	12.43	1,089,684	1,039,112	Pass
1,4-Difluorobenzene (IS)	14.20	14.22	3,198,975	3,002,647	Pass
Chlorobenzene-d5 (IS)	18.60	18.63	2,556,498	1,662,386	Pass

Company	ARCADIS-US: Durham
Analyst	TDD
Parameters	EPA Method TO-15
# Samples	1 Run & 1 FB

Client #	RN990271.0002
Job #	0211-49
PO #	RB68535
Report Date	2/22/2011

Sample ID: **0211-49 ACB-M0040-FB *50** DF: 50.0
Data File: L1100445.D Tank DF: 1.00
Tank/Misc ID: 10mL load ConCal 1

Compound	Quant	Ret. Time (min)	Area	Conc. as Analyzed (ppbv)	Sample Conc. (ppbv)	Flags
Propylene	41	NA	0	0.200	10.0	ND
Freon 12 (CCl2F2)	85	NA	0	0.200	10.0	ND
Freon 114 (C2Cl2F4)	85	NA	0	0.200	10.0	ND
Chloromethane	50	NA	0	0.200	10.0	ND
Chloroethene (Vinyl chloride)	62	NA	0	0.200	10.0	ND
1,3-Butadiene	39	NA	0	0.200	10.0	ND
Bromomethane	94	NA	0	0.200	10.0	ND
Chloroethane	64	NA	0	0.200	10.0	ND
Bromoethene (Vinyl bromide)	106	NA	0	0.200	10.0	ND
Freon 11 (CCl3F)	101	NA	0	0.200	10.0	ND
Ethanol	45	NA	0	0.200	10.0	ND
Acrolein	56	NA	0	0.200	10.0	ND
Freon 113 (C2Cl3F3)	151	NA	0	0.200	10.0	ND
1,1-Dichloroethene	61	NA	0	0.200	10.0	ND
Acetone	43	8.22	210,422	3.94	197	
Carbon disulfide	76	NA	0	0.200	10.0	ND
Isopropyl alcohol	45	NA	0	0.200	10.0	ND
Allyl chloride (3-chloropropene)	76	NA	0	0.200	10.0	ND
Acetonitrile	41	9.02	104,678	6.10	305	
Methylene chloride	49	9.14	8,150	0.224	11.2	J
trans-1,2-Dichloroethene	61	NA	0	0.200	10.0	ND
Methyl tert-butyl ether	73	NA	0	0.200	10.0	ND
Acrylonitrile	53	NA	0	0.200	10.0	ND
Hexane	57	NA	0	0.200	10.0	ND
1,1-Dichloroethane	63	NA	0	0.200	10.0	ND
Vinyl acetate	43	NA	0	0.200	10.0	ND
cis-1,2-Dichloroethylene	61	NA	0	0.200	10.0	ND
Methyl ethyl ketone (2-Butanone)	72	NA	0	0.200	10.0	ND
Ethyl acetate	45	NA	0	0.200	10.0	ND
Chloroform	83	NA	0	0.200	10.0	ND
Tetrahydrofuran	72	NA	0	0.200	10.0	ND
1,1,1-Trichloroethane	97	NA	0	0.200	10.0	ND
Cyclohexane	56	NA	0	0.200	10.0	ND
Carbon tetrachloride	117	NA	0	0.200	10.0	ND
Benzene	78	NA	0	0.200	10.0	ND
2,2,4-trimethylpentane	57	NA	0	0.200	10.0	ND
1,2-Dichloroethane	62	NA	0	0.200	10.0	ND
Heptane	57	NA	0	0.200	10.0	ND
Trichloroethene	130	NA	0	0.200	10.0	ND
1,2-Dichloropropane	63	NA	0	0.200	10.0	ND
Methyl methacrylate	69	NA	0	0.200	10.0	ND
1,4-Dioxane	88	NA	0	0.200	10.0	ND
Bromodichloromethane	83	NA	0	0.200	10.0	ND
cis-1,3-Dichloropropene	75	NA	0	0.200	10.0	ND
Methyl isobutyl ketone	43	NA	0	0.200	10.0	ND
Toluene	91	NA	0	0.200	10.0	ND
trans-1,3-Dichloropropene	75	NA	0	0.200	10.0	ND
1,1,2-Trichloroethane	97	NA	0	0.200	10.0	ND
Tetrachloroethene	166	NA	0	0.200	10.0	ND
2-Hexanone (Methyl butyl ketone)	43	NA	0	0.200	10.0	ND
Dibromochloromethane	129	NA	0	0.200	10.0	ND

Company	ARCADIS-US: Durham
Analyst	TDD
Parameters	EPA Method TO-15
# Samples	1 Run & 1 FB

Client #	RN990271.0002
Job #	0211-49
PO #	RB68535
Report Date	2/22/2011

Sample ID: **0211-49 ACB-M0040-FB *50** DF: 50.0
Data File: L1100445.D Tank DF: 1.00
Tank/Misc ID: 10mL load ConCal 1

Compound	Quant	Ret. Time (min)	Area	Conc. as Analyzed (ppbv)	Sample Conc. (ppbv)	Flags
1,2-Dibromoethane	107	NA	0	0.200	10.0	ND
Chlorobenzene	112	NA	0	0.200	10.0	ND
Ethylbenzene	91	NA	0	0.200	10.0	ND
1,1,1,2-Tetrachloroethane	131	NA	0	0.200	10.0	ND
m-/p-Xylenes	91	NA	0	0.200	10.0	ND
o-Xylene	91	NA	0	0.200	10.0	ND
Styrene	104	NA	0	0.200	10.0	ND
Bromoform	173	NA	0	0.200	10.0	ND
1,1,2,2-Tetrachloroethane	83	NA	0	0.200	10.0	ND
4-Ethyltoluene	105	NA	0	0.200	10.0	ND
2-Chlorotoluene	91	NA	0	0.200	10.0	ND
1,3,5-Trimethylbenzene	105	NA	0	0.200	10.0	ND
1,2,4-Trimethylbenzene	105	NA	0	0.200	10.0	ND
1,3-Dichlorobenzene	146	NA	0	0.200	10.0	ND
1,4-Dichlorobenzene	146	NA	0	0.200	10.0	ND
Benzyl chloride	91	NA	0	0.200	10.0	ND
1,2-Dichlorobenzene	146	NA	0	0.200	10.0	ND
1,2,4-Trichlorobenzene	180	NA	0	0.200	10.0	ND
Hexachlorobutadiene	225	NA	0	0.200	10.0	ND
Naphthalene	128	NA	0	0.200	10.0	ND

					Rec. (%)
Bromochloromethane (IS)	130	12.42	990,822	11.24	N/A
1,4-Difluorobenzene (IS)	114	14.21	2,931,311	11.93	N/A
Chlorobenzene-d5 (IS)	117	18.62	2,156,026	11.13	N/A

Internal Standard Acceptance Criteria (Area +/- 40%, RT +/- 20 sec.)

Internal Standard Name	Concal RT	Sample RT	Ave. ICal IS Area	Sample IS Area	Flag
Bromochloromethane (IS)	12.41	12.42	1,089,684	990,822	Pass
1,4-Difluorobenzene (IS)	14.20	14.21	3,198,975	2,931,311	Pass
Chlorobenzene-d5 (IS)	18.60	18.62	2,556,498	2,156,026	Pass

Company	ARCADIS-US: Durham
Analyst	TDD
Parameters	EPA Method TO-15
# Samples	1 Run & 1 FB

Client #	RN990271.0002
Job #	0211-49
PO #	RB68535
Report Date	2/22/2011

Sample ID: **humid blank** DF: 1.00
Data File: L1100439.D Tank DF: 1.00
Tank/Misc ID: Can #1470, 500mL ConCal 1

Compound	Quant	Ret. Time (min)	Area	Conc. as Analyzed (ppbv)	Sample Conc. (ppbv)	Flags
Propylene	41	NA	0	0.200	0.200	ND
Freon 12 (CCl2F2)	85	NA	0	0.200	0.200	ND
Freon 114 (C2Cl2F4)	85	NA	0	0.200	0.200	ND
Chloromethane	50	NA	0	0.200	0.200	ND
Chloroethene (Vinyl chloride)	62	NA	0	0.200	0.200	ND
1,3-Butadiene	39	NA	0	0.200	0.200	ND
Bromomethane	94	NA	0	0.200	0.200	ND
Chloroethane	64	NA	0	0.200	0.200	ND
Bromoethene (Vinyl bromide)	106	NA	0	0.200	0.200	ND
Freon 11 (CCl3F)	101	NA	0	0.200	0.200	ND
Ethanol	45	7.43	2,306	0.224	0.224	J
Acrolein	56	NA	0	0.200	0.200	ND
Freon 113 (C2Cl3F3)	151	NA	0	0.200	0.200	ND
1,1-Dichloroethene	61	NA	0	0.200	0.200	ND
Acetone	43	8.23	24,346	0.455	0.455	
Carbon disulfide	76	NA	0	0.200	0.200	ND
Isopropyl alcohol	45	NA	0	0.200	0.200	ND
Allyl chloride (3-chloropropene)	76	NA	0	0.200	0.200	ND
Acetonitrile	41	NA	0	0.930	0.930	ND
Methylene chloride	49	NA	0	0.200	0.200	ND
trans-1,2-Dichloroethene	61	NA	0	0.200	0.200	ND
Methyl tert-butyl ether	73	NA	0	0.200	0.200	ND
Acrylonitrile	53	NA	0	0.200	0.200	ND
Hexane	57	NA	0	0.200	0.200	ND
1,1-Dichloroethane	63	NA	0	0.200	0.200	ND
Vinyl acetate	43	NA	0	0.200	0.200	ND
cis-1,2-Dichloroethylene	61	NA	0	0.200	0.200	ND
Methyl ethyl ketone (2-Butanone)	72	NA	0	0.200	0.200	ND
Ethyl acetate	45	NA	0	0.200	0.200	ND
Chloroform	83	NA	0	0.200	0.200	ND
Tetrahydrofuran	72	NA	0	0.200	0.200	ND
1,1,1-Trichloroethane	97	NA	0	0.200	0.200	ND
Cyclohexane	56	NA	0	0.200	0.200	ND
Carbon tetrachloride	117	NA	0	0.200	0.200	ND
Benzene	78	NA	0	0.200	0.200	ND
2,2,4-trimethylpentane	57	NA	0	0.200	0.200	ND
1,2-Dichloroethane	62	NA	0	0.200	0.200	ND
Heptane	57	NA	0	0.200	0.200	ND
Trichloroethene	130	NA	0	0.200	0.200	ND
1,2-Dichloropropane	63	NA	0	0.200	0.200	ND
Methyl methacrylate	69	NA	0	0.200	0.200	ND
1,4-Dioxane	88	NA	0	0.200	0.200	ND
Bromodichloromethane	83	NA	0	0.200	0.200	ND
cis-1,3-Dichloropropene	75	NA	0	0.200	0.200	ND
Methyl isobutyl ketone	43	NA	0	0.200	0.200	ND
Toluene	91	NA	0	0.200	0.200	ND
trans-1,3-Dichloropropene	75	NA	0	0.200	0.200	ND
1,1,2-Trichloroethane	97	NA	0	0.200	0.200	ND
Tetrachloroethene	166	NA	0	0.200	0.200	ND
2-Hexanone (Methyl butyl ketone)	43	NA	0	0.200	0.200	ND
Dibromochloromethane	129	NA	0	0.200	0.200	ND

Company	ARCADIS-US: Durham
Analyst	TDD
Parameters	EPA Method TO-15
# Samples	1 Run & 1 FB

Client #	RN990271.0002
Job #	0211-49
PO #	RB68535
Report Date	2/22/2011

Sample ID: **humid blank** DF: 1.00
Data File: L1100439.D Tank DF: 1.00
Tank/Misc ID: Can #1470, 500mL ConCal 1

Compound	Quant	Ret. Time (min)	Area	Conc. as Analyzed (ppbv)	Sample Conc. (ppbv)	Flags
1,2-Dibromoethane	107	NA	0	0.200	0.200	ND
Chlorobenzene	112	NA	0	0.200	0.200	ND
Ethylbenzene	91	NA	0	0.200	0.200	ND
1,1,1,2-Tetrachloroethane	131	NA	0	0.200	0.200	ND
m-/p-Xylenes	91	NA	0	0.200	0.200	ND
o-Xylene	91	NA	0	0.200	0.200	ND
Styrene	104	NA	0	0.200	0.200	ND
Bromoform	173	NA	0	0.200	0.200	ND
1,1,2,2-Tetrachloroethane	83	NA	0	0.200	0.200	ND
4-Ethyltoluene	105	NA	0	0.200	0.200	ND
2-Chlorotoluene	91	NA	0	0.200	0.200	ND
1,3,5-Trimethylbenzene	105	NA	0	0.200	0.200	ND
1,2,4-Trimethylbenzene	105	NA	0	0.200	0.200	ND
1,3-Dichlorobenzene	146	NA	0	0.200	0.200	ND
1,4-Dichlorobenzene	146	NA	0	0.200	0.200	ND
Benzyl chloride	91	NA	0	0.200	0.200	ND
1,2-Dichlorobenzene	146	NA	0	0.200	0.200	ND
1,2,4-Trichlorobenzene	180	NA	0	0.200	0.200	ND
Hexachlorobutadiene	225	NA	0	0.200	0.200	ND
Naphthalene	128	NA	0	0.200	0.200	ND

					Rec. (%)
Bromochloromethane (IS)	130	12.41	993,298	11.24	N/A
1,4-Difluorobenzene (IS)	114	14.21	2,977,691	11.93	N/A
Chlorobenzene-d5 (IS)	117	18.60	2,158,507	11.13	N/A

Internal Standard Acceptance Criteria (Area +/- 40%, RT +/- 20 sec.)

Internal Standard Name	Concal RT	Sample RT	Ave. ICal IS Area	Sample IS Area	Flag
Bromochloromethane (IS)	12.41	12.41	1,089,684	993,298	Pass
1,4-Difluorobenzene (IS)	14.20	14.21	3,198,975	2,977,691	Pass
Chlorobenzene-d5 (IS)	18.60	18.60	2,556,498	2,158,507	Pass

Company	ARCADIS-US: Durham
Analyst	TDD
Parameters	EPA Method TO-15
# Samples	1 Run & 1 FB

Client #	RN990271.0002
Job #	0211-49
PO #	RB68535
Report Date	2/22/2011

Sample ID: **system blank** DF: 1.00
Data File: L1100440.D Tank DF: 1.00
Tank/Misc ID: 500mL ConCal 1

Compound	Quant	Ret. Time (min)	Area	Conc. as Analyzed (ppbv)	Sample Conc. (ppbv)	Flags
Propylene	41	NA	0	0.200	0.200	ND
Freon 12 (CCl2F2)	85	NA	0	0.200	0.200	ND
Freon 114 (C2Cl2F4)	85	NA	0	0.200	0.200	ND
Chloromethane	50	NA	0	0.200	0.200	ND
Chloroethene (Vinyl chloride)	62	NA	0	0.200	0.200	ND
1,3-Butadiene	39	NA	0	0.200	0.200	ND
Bromomethane	94	NA	0	0.200	0.200	ND
Chloroethane	64	NA	0	0.200	0.200	ND
Bromoethene (Vinyl bromide)	106	NA	0	0.200	0.200	ND
Freon 11 (CCl3F)	101	NA	0	0.200	0.200	ND
Ethanol	45	NA	0	0.200	0.200	ND
Acrolein	56	NA	0	0.200	0.200	ND
Freon 113 (C2Cl3F3)	151	NA	0	0.200	0.200	ND
1,1-Dichloroethene	61	NA	0	0.200	0.200	ND
Acetone	43	8.24	23,834	0.519	0.519	
Carbon disulfide	76	NA	0	0.200	0.200	ND
Isopropyl alcohol	45	NA	0	0.200	0.200	ND
Allyl chloride (3-chloropropene)	76	NA	0	0.200	0.200	ND
Acetonitrile	41	NA	0	0.930	0.930	ND
Methylene chloride	49	NA	0	0.200	0.200	ND
trans-1,2-Dichloroethene	61	NA	0	0.200	0.200	ND
Methyl tert-butyl ether	73	NA	0	0.200	0.200	ND
Acrylonitrile	53	NA	0	0.200	0.200	ND
Hexane	57	NA	0	0.200	0.200	ND
1,1-Dichloroethane	63	NA	0	0.200	0.200	ND
Vinyl acetate	43	NA	0	0.200	0.200	ND
cis-1,2-Dichloroethylene	61	NA	0	0.200	0.200	ND
Methyl ethyl ketone (2-Butanone)	72	NA	0	0.200	0.200	ND
Ethyl acetate	45	NA	0	0.200	0.200	ND
Chloroform	83	NA	0	0.200	0.200	ND
Tetrahydrofuran	72	NA	0	0.200	0.200	ND
1,1,1-Trichloroethane	97	NA	0	0.200	0.200	ND
Cyclohexane	56	NA	0	0.200	0.200	ND
Carbon tetrachloride	117	NA	0	0.200	0.200	ND
Benzene	78	NA	0	0.200	0.200	ND
2,2,4-trimethylpentane	57	NA	0	0.200	0.200	ND
1,2-Dichloroethane	62	NA	0	0.200	0.200	ND
Heptane	57	NA	0	0.200	0.200	ND
Trichloroethene	130	NA	0	0.200	0.200	ND
1,2-Dichloropropane	63	NA	0	0.200	0.200	ND
Methyl methacrylate	69	NA	0	0.200	0.200	ND
1,4-Dioxane	88	NA	0	0.200	0.200	ND
Bromodichloromethane	83	NA	0	0.200	0.200	ND
cis-1,3-Dichloropropene	75	NA	0	0.200	0.200	ND
Methyl isobutyl ketone	43	NA	0	0.200	0.200	ND
Toluene	91	NA	0	0.200	0.200	ND
trans-1,3-Dichloropropene	75	NA	0	0.200	0.200	ND
1,1,2-Trichloroethane	97	NA	0	0.200	0.200	ND
Tetrachloroethene	166	NA	0	0.200	0.200	ND
2-Hexanone (Methyl butyl ketone)	43	NA	0	0.200	0.200	ND
Dibromochloromethane	129	NA	0	0.200	0.200	ND

Company	ARCADIS-US: Durham
Analyst	TDD
Parameters	EPA Method TO-15
# Samples	1 Run & 1 FB

Client #	RN990271.0002
Job #	0211-49
PO #	RB68535
Report Date	2/22/2011

Sample ID: **system blank** DF: 1.00
Data File: L1100440.D Tank DF: 1.00
Tank/Misc ID: 500mL ConCal 1

Compound	Quant	Ret. Time (min)	Area	Conc. as Analyzed (ppbv)	Sample Conc. (ppbv)	Flags
1,2-Dibromoethane	107	NA	0	0.200	0.200	ND
Chlorobenzene	112	NA	0	0.200	0.200	ND
Ethylbenzene	91	NA	0	0.200	0.200	ND
1,1,1,2-Tetrachloroethane	131	NA	0	0.200	0.200	ND
m-/p-Xylenes	91	NA	0	0.200	0.200	ND
o-Xylene	91	NA	0	0.200	0.200	ND
Styrene	104	NA	0	0.200	0.200	ND
Bromoform	173	NA	0	0.200	0.200	ND
1,1,2,2-Tetrachloroethane	83	NA	0	0.200	0.200	ND
4-Ethyltoluene	105	NA	0	0.200	0.200	ND
2-Chlorotoluene	91	NA	0	0.200	0.200	ND
1,3,5-Trimethylbenzene	105	NA	0	0.200	0.200	ND
1,2,4-Trimethylbenzene	105	NA	0	0.200	0.200	ND
1,3-Dichlorobenzene	146	NA	0	0.200	0.200	ND
1,4-Dichlorobenzene	146	NA	0	0.200	0.200	ND
Benzyl chloride	91	NA	0	0.200	0.200	ND
1,2-Dichlorobenzene	146	NA	0	0.200	0.200	ND
1,2,4-Trichlorobenzene	180	NA	0	0.200	0.200	ND
Hexachlorobutadiene	225	NA	0	0.200	0.200	ND
Naphthalene	128	NA	0	0.200	0.200	ND

					Rec. (%)
Bromochloromethane (IS)	130	12.41	853,741	11.24	N/A
1,4-Difluorobenzene (IS)	114	14.20	2,484,956	11.93	N/A
Chlorobenzene-d5 (IS)	117	18.60	1,881,446	11.13	N/A

Internal Standard Acceptance Criteria (Area +/- 40%, RT +/- 20 sec.)

Internal Standard Name	Concal RT	Sample RT	Ave. ICal IS Area	Sample IS Area	Flag
Bromochloromethane (IS)	12.41	12.41	1,089,684	853,741	Pass
1,4-Difluorobenzene (IS)	14.20	14.20	3,198,975	2,484,956	Pass
Chlorobenzene-d5 (IS)	18.60	18.60	2,556,498	1,881,446	Pass

Company	ARCADIS-US: Durham
Analyst	TDD
Parameters	EPA Method TO-15
# Samples	1 Run & 1 FB

Client #	RN990271.0002
Job #	0211-49
PO #	RB68535
Report Date	2/22/2011

Sample ID: **5ppbv LCS std A**
Data File: L1100437.D
Tank/Misc ID: Can #1434 "A", 125mL

DF: 1.00
Tank DF: 1.00
ConCal 1

Compound	Quant	Ret. Time (min)	Area	Conc. as Analyzed (ppbv)	Sample Conc. (ppbv)	Flags	Tag Value	% Diff. From Tag	Pass/Fail
Propylene	41	4.14	84,996	5.45	5.45		5.50	1.0	PASS
Freon 12 (CCl2F2)	85	4.23	781,732	5.04	5.04		4.90	2.8	PASS
Freon 114 (C2Cl2F4)	85	4.56	697,153	5.00	5.00		4.90	1.9	PASS
Chloromethane	50	4.74	114,387	5.03	5.03		4.95	1.5	PASS
Chloroethene (Vinyl chloride)	62	5.02	153,572	4.77	4.77		4.90	2.6	PASS
1,3-Butadiene	39	5.10	138,396	4.78	4.78		5.15	7.1	PASS
Bromomethane	94	5.88	406,642	4.81	4.81		4.90	1.9	PASS
Chloroethane	64	6.14	73,459	4.65	4.65		4.90	5.1	PASS
Bromoethene (Vinyl bromide)	106	6.56	428,632	5.26	5.26		5.10	3.1	PASS
Freon 11 (CCl3F)	101	6.66	1,005,355	5.32	5.32		5.05	5.3	PASS
Ethanol	45	7.40	53,647	5.27	5.27		5.35	1.5	PASS
Acrolein	56	7.87	38,903	5.20	5.20		5.15	0.9	PASS
Freon 113 (C2Cl3F3)	151	7.82	502,719	5.62	5.62		5.15	9.2	PASS
1,1-Dichloroethene	61	7.89	254,753	5.32	5.32		5.15	3.4	PASS
Acetone	43	8.22	295,479	5.58	5.58		5.30	5.2	PASS
Carbon disulfide	76	8.33	429,730	5.33	5.33		5.20	2.5	PASS
Isopropyl alcohol	45	8.58	264,146	5.69	5.69		5.50	3.4	PASS
Allyl chloride (3-chloropropene)	76	8.79	57,230	5.35	5.35		5.30	1.0	PASS
Acetonitrile	41	9.02	93,403	5.48	5.48		4.65	17.9	PASS
Methylene chloride	49	9.13	181,630	5.03	5.03		5.20	3.2	PASS
trans-1,2-Dichloroethene	61	9.60	217,768	5.36	5.36		5.15	4.1	PASS
Methyl tert-butyl ether	73	9.56	429,867	5.38	5.38		5.20	3.5	PASS
Acrylonitrile	53	9.84	67,630	5.34	5.34		5.05	5.8	PASS
Hexane	57	9.99	151,306	5.47	5.47		5.30	3.2	PASS
1,1-Dichloroethane	63	10.62	240,127	5.23	5.23		5.10	2.6	PASS
Vinyl acetate	43	10.70	399,838	5.43	5.43		5.25	3.4	PASS
cis-1,2-Dichloroethylene	61	11.90	202,090	5.38	5.38		5.15	4.4	PASS
Methyl ethyl ketone (2-Butanone)	72	11.98	58,433	5.80	5.80		5.30	9.3	PASS
Ethyl acetate	45	11.98	44,200	5.11	5.11		5.20	1.7	PASS
Chloroform	83	12.54	509,420	5.46	5.46		5.20	5.0	PASS
Tetrahydrofuran	72	12.42	56,800	5.55	5.55		5.35	3.7	PASS
1,1,1-Trichloroethane	97	12.80	681,089	5.44	5.44		5.10	6.7	PASS
Cyclohexane	56	12.75	155,414	5.22	5.22		5.15	1.3	PASS
Carbon tetrachloride	117	13.03	810,106	5.57	5.57		5.10	9.2	PASS
Benzene	78	13.49	397,347	5.42	5.42		5.10	6.2	PASS
2,2,4-trimethylpentane	57	13.41	487,392	5.21	5.21		4.90	6.2	PASS
1,2-Dichloroethane	62	13.68	298,769	5.55	5.55		5.10	8.8	PASS
Heptane	57	13.76	96,159	5.43	5.43		5.20	4.4	PASS
Trichloroethene	130	14.58	445,685	5.52	5.52		5.15	7.2	PASS
1,2-Dichloropropane	63	15.01	124,035	5.31	5.31		5.15	3.1	PASS
Methyl methacrylate	69	15.12	122,319	5.50	5.50		5.05	8.9	PASS
1,4-Dioxane	88	15.19	149,576	5.50	5.50		5.15	6.8	PASS
Bromodichloromethane	83	15.43	584,728	5.45	5.45		5.15	5.9	PASS
cis-1,3-Dichloropropene	75	16.15	276,490	5.75	5.75		5.30	8.5	PASS
Methyl isobutyl ketone	43	16.37	382,575	5.57	5.57		5.25	6.1	PASS
Toluene	91	16.62	690,229	5.48	5.48		5.20	5.4	PASS
trans-1,3-Dichloropropene	75	17.16	261,931	4.98	4.98		4.85	2.6	PASS
1,1,2-Trichloroethane	97	17.44	333,888	5.33	5.33		5.20	2.6	PASS
Tetrachloroethene	166	17.50	579,472	5.44	5.44		5.10	6.6	PASS
2-Hexanone (Methyl butyl ketone)	43	17.72	320,899	5.40	5.40		5.40	0.0	PASS
Dibromochloromethane	129	17.94	961,155	5.70	5.70		5.40	5.6	PASS

Company	ARCADIS-US: Durham
Analyst	TDD
Parameters	EPA Method TO-15
# Samples	1 Run & 1 FB

Client #	RN990271.0002
Job #	0211-49
PO #	RB68535
Report Date	2/22/2011

Sample ID: **5ppbv LCS std A** DF: 1.00
Data File: L1100437.D Tank DF: 1.00
Tank/Misc ID: Can #1434 "A", 125mL ConCal 1

Compound	Quant	Ret. Time (min)	Area	Conc. as Analyzed (ppbv)	Sample Conc. (ppbv)	Flags	Tag Value	% Diff. From Tag	Pass/Fail
1,2-Dibromoethane	107	18.11	696,177	5.12	5.12		5.10	0.5	PASS
Chlorobenzene	112	18.64	832,916	5.35	5.35		5.25	1.9	PASS
Ethylbenzene	91	18.70	990,575	5.24	5.24		5.20	0.8	PASS
1,1,1,2-Tetrachloroethane	131	18.73	534,955	5.50	5.50		5.20	5.7	PASS
m-/p-Xylenes	91	18.83	1,595,242	10.3	10.3		10.20	0.8	PASS
o-Xylene	91	19.25	829,103	5.39	5.39		5.30	1.8	PASS
Styrene	104	19.28	725,152	5.23	5.23		5.20	0.5	PASS
Bromoform	173	19.53	909,734	5.45	5.45		5.10	6.9	PASS
1,1,2,2-Tetrachloroethane	83	19.95	593,847	5.33	5.33		5.30	0.5	PASS
4-Ethyltoluene	105	20.07	1,421,831	5.23	5.23		5.20	0.7	PASS
2-Chlorotoluene	91	20.10	1,034,550	4.87	4.87		4.85	0.4	PASS
1,3,5-Trimethylbenzene	105	20.12	1,164,626	5.10	5.10		5.15	0.9	PASS
1,2,4-Trimethylbenzene	105	20.45	1,173,734	5.26	5.26		5.20	1.2	PASS
1,3-Dichlorobenzene	146	20.74	872,832	5.56	5.56		5.25	5.8	PASS
1,4-Dichlorobenzene	146	20.82	849,408	5.33	5.33		5.10	4.5	PASS
Benzyl chloride	91	20.93	814,865	5.46	5.46		5.25	4.0	PASS
1,2-Dichlorobenzene	146	21.13	864,405	5.38	5.38		5.15	4.4	PASS
1,2,4-Trichlorobenzene	180	22.45	371,405	4.44	4.44		5.10	13.0	PASS
Hexachlorobutadiene	225	22.50	553,005	4.82	4.82		5.15	6.4	PASS
Naphthalene	128	22.71	1,010,521	4.37	4.37		5.25	16.9	PASS

					Rec. (%)
Bromochloromethane (IS)	130	12.41	984,010	11.24	N/A
1,4-Difluorobenzene (IS)	114	14.21	2,904,255	11.93	N/A
Chlorobenzene-d5 (IS)	117	18.61	2,312,408	11.13	N/A

Internal Standard Acceptance Criteria (Area +/- 40%, RT +/- 20 sec.)

Internal Standard Name	Concal RT	Sample RT	Ave. ICal IS Area	Sample IS Area	Flag
Bromochloromethane (IS)	12.41	12.41	1,089,684	984,010	Pass
1,4-Difluorobenzene (IS)	14.20	14.21	3,198,975	2,904,255	Pass
Chlorobenzene-d5 (IS)	18.60	18.61	2,556,498	2,312,408	Pass

Narrative Summary



Enthalpy Analytical Narrative Summary

Company	ARCADIS-US: Durham
Analyst	TDD
Parameters	EPA Method TO-15
# Samples	1 Run & 1 FB (Tedlar Bags)

Client #	RN990271.0002
Job #	0211-49
PO #	RB68535
Report Date	February 22, 2011

Custody	Heather Tarjeft received the Tedlar bag samples on 2/17/11 after being relinquished by ARCADIS-US: Durham. The samples were received at ambient temperature and in good condition. Prior to, during, and after analysis, the sample was kept under lock with access only to authorized personnel by Enthalpy Analytical, Inc.
Analysis	The tedlar bag samples were analyzed for TO-15 Target Compound List using the analytical procedures in EPA Method TO-15*, Determination of Volatile Organic Compounds (VOCs) In Air Collected In Specially-Prepared Canisters And Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS)*. The samples were analyzed following the procedures in Section 10.0, Sample Analysis. The field blank was analyzed at a 50-fold GC/MS analytical dilution. Sample ***1R-ACB-M0040-02*** was analyzed at a 5,000-fold GC/MS analytical dilution to meet a client requested MLD of 1 ppmv. This sample was also analyzed at a 10,000-fold GC/MS analytical dilution to bring acetone within the calibration range. Only acetone is reported in the higher dilution-level analyses. The E-flagged result value for this compound should be disregarded in favor of the result in the more dilute analysis. The dilution factor is recorded on the Quantitation Report in the Sample field. A five thousand-fold dilution is indicated by: df=*5,000. The Hewlett Packard Model 5890, Gas Chromatograph ("Lurch" S/N 2750A15233) was equipped with a 5971A Mass Selective Detector and a Restek Rtx-624 60 m x 0.32 mm x 1.8 um (S/N 890248) capillary column. All samples and standards were introduced directly to the analyzer using an Entech 7100A Preconcentrator.
Calibration	The calibration curve is included in the Calibration Curve Chromatograms section of this report.
Chromatographic Conditions	A copy of the acquisition method (MM624-L.M) is included in the Calibration Curve Chromatograms section of this report.
QC Notes	All target compounds met the 30% initial calibration RSD criteria specified in the method.

Enthalpy Analytical Narrative Summary
(continued)

QC Notes (continued)	The ICV recovery values were within 30% of the expected value for all target compounds. The analysis of the LCS met the QC limits of within 30% of the expected value for all compounds. All internal standard responses met QC criteria. Ethanol and acetone were identified in the humid blank analyzed with these samples, at 0.224 ppbv and 0.455 ppbv respectively. The system blank also included an acetone result of 0.519 ppbv. These concentrations fall within the method's acceptable range for blank contamination of three times the method detection limit (3 x 0.2 ppbv = 0.6 ppbv). The lab duplicate associated with this data met QC criteria of less than 25% difference of the original analysis for reported compounds. The sample was analyzed within the 30 day holding time required by the method.
Reporting Notes	Acetonitrile is a known laboratory contaminant, therefore the MDL for this compound has been elevated to 0.930 ppbv. Enthalpy Analytical, Inc. is accredited to perform this method for compliance purposes by the National Environmental Laboratory Accreditation Conference (NELAC) through the Louisiana Environmental Laboratory Accreditation Program (LELAP), certificate number 04010. The results presented in this report are representative of the samples as provided to the laboratory.

General Reporting Notes

The following are general reporting notes that are applicable to all Enthalpy Analytical, Inc. data reports, unless specifically noted otherwise.

- The acronym ***MDL*** represents the Minimum Detection Limit. Below this value the laboratory cannot determine the presence of the analyte of interest reliably.
- The acronym ***LOQ*** represents the Limit of Quantification. Below this value the laboratory cannot quantitate the analyte of interest within the criteria of the method.
- The acronym ***ND*** following a value indicates a non-detect or analytical result below the MDL.
- The letter ***J*** following a value indicates an analytical result between the MDL and the LOQ. A J flag indicates that the laboratory can positively identify the analyte of interest as present, but the value should be considered an estimate.
- The letter ***E*** following a value indicates an analytical result exceeding 100% of the highest calibration point. The associated value should be considered as an estimate.
- The acronym ***DF*** represents Dilution Factor. This number represents dilution of the sample during the preparation and/or analysis process. The analytical result taken from a laboratory instrument is multiplied by the DF to determine the final undiluted sample results.
- The addition of ***MS*** to the Sample ID represents a Matrix Spike. An aliquot of an actual sample is spiked with a known amount of analyte so that a percent recovery value can be determined. This shows what effect the sample matrix may have on the target analyte, i.e. whether or not anything in the sample matrix interferes with the analysis of the analyte(s).
- The addition of ***MSD*** to the Sample ID represents a Matrix Spike Duplicate. Prepared in the same manner as an MS, the use of duplicate matrix spikes allows further confirmation of laboratory quality by showing the consistency of results gained by performing the same steps multiple times.
- The addition of ***LD*** to the Sample ID represents a Laboratory Duplicate. The analyst prepares an additional aliquot of sample for testing and the results of the duplicate analysis are compared to the initial result. The result should have a difference value of within 10% of the initial result (if the results of the original analysis are greater than the LOQ).
- The addition of ***AD*** to the Sample ID represents an Alternate Dilution. The analyst prepares an additional aliquot at a different dilution factor (usually double the initial factor). This analysis helps confirm that no additional compound is present and coeluting or sharing absorbance with the analyte of interest, as they would have a different response/absorbance than the analyte of interest.
- The Sample ID ***LCS*** represents a Laboratory Control Sample. Clean matrix, similar to the client sample matrix, prepared and analyzed by the laboratory using the same reagents, spiking standards and procedures used for the client samples. The LCS is used to assess the control of the laboratory's analytical system. Whenever spikes are prepared for our client projects, two extra spikes are prepared. The extras (randomly chosen) are labeled with the associated project number and kept in-house at the appropriate temperature conditions. When the project samples are received for analysis, the LCSs are analyzed to confirm that the analyte could be recovered from the media, separate from the samples which were used on the project and which may have been affected by source matrix, sample collection and/or sample transport.

General Reporting Notes

(continued)

- **Significant Figures**: Where the reported value is much greater than unity (1.00) in the units expressed, the number is rounded to a whole number of units, rather than to 3 significant figures. For example, a value of 10,456.45 ug catch is rounded to 10,456 ug. There are five significant digits displayed, but no confidence should be placed on more than two significant digits.
- **Manual Integration**: The data systems used for processing will flag manually integrated peaks with an "M". There are several reasons a peak may be manually integrated. These reasons will be identified by the following two letter designations. The peak was ***not integrated*** by the software **"NI"**, the peak was ***integrated incorrectly*** by the software **"II"** or the ***wrong peak*** was integrated by the software **"WP"**. These codes will accompany the analyst's manual integration stamp placed next to the compound name.

Method Detection Limits for EPA Method TO-14 and EPA Method TO-15

Enthalpy performs an annual Method Detection Limit (MDL) study to determine detection limits for each of the target analyte compounds for TO-14/TO-15. At least 7 injections are made of the low level standard (1 ppbv). The concentrations are pulled into an Excel spreadsheet and the standard deviation value is determined. This value is then multiplied by the appropriate Student's T value (based on the number of replicates analyzed) to determine the MDL value. Any calculated values below 0.200 ppbv are disregarded (and replaced with 0.200) because they are less than a fifth of the low standard. In 2007 nine injections of the low standard were analyzed and all but six (exceptions are shaded in the table below) of the target analytes had MDL values below 0.200, and so are reported using 0.200 as the MDL on the table below and in all reports. Any analyte which was not identified in a sample shows the MDL as the concentration as analyzed. Compounds present in samples have the measured concentration displayed. To determine the detection limit for a compound which was present in a sample multiply the MDL from the table below by any tank or analytical dilution factor.

Compound	MDL (ppbv)
Propylene	0.256
Freon 12 (CCl2F2)	0.202
Freon 114 (C2Cl2F4)	0.200
Chloromethane	0.200
Chloroethene (Vinyl chloride)	0.200
1,3-Butadiene	0.200
Bromomethane	0.200
Chloroethane	0.229
Bromoethene (Vinyl bromide)	0.200
Freon 11 (CCl3F)	0.200
Freon 113 (C2Cl3F3)	0.200
1,1-Dichloroethene	0.200
Acetone	0.200
Carbon disulfide	0.200
Isopropyl alcohol	0.200
Allyl chloride (3-chloropropene)	0.200
Methylene chloride	0.200
trans-1,2-Dichloroethene	0.200
Methyl tert-butyl ether	0.200
Hexane	0.200
1,1-Dichloroethane	0.200
Vinyl acetate	0.200
cis-1,2-Dichloroethylene	0.200
Methyl ethyl ketone (2-Butanone)	0.200
Ethyl acetate	0.200
Chloroform	0.200
Tetrahydrofuran	0.200
1,1,1-Trichloroethane	0.200
Cyclohexane	0.200
Carbon tetrachloride	0.200
Benzene	0.200
2,2,4-trimethylpentane	0.200

Compound	MDL (ppbv)
1,2-Dichloroethane	0.200
Heptane	0.200
Trichloroethene	0.200
1,2-Dichloropropane	0.200
1,4-Dioxane	0.200
Bromodichloromethane	0.200
cis-1,3-Dichloropropene	0.200
Methyl isobutyl ketone	0.200
Toluene	0.200
trans-1,3-Dichloropropene	0.200
1,1,2-Trichloroethane	0.200
Tetrachloroethene	0.200
2-Hexanone (Methyl butyl ketone)	0.201
Dibromochloromethane	0.200
1,2-Dibromoethane	0.200
Chlorobenzene	0.200
Ethylbenzene	0.200
m-/p-Xylenes	0.200
o-Xylene	0.200
Styrene	0.200
Bromoform	0.200
1,1,2,2-Tetrachloroethane	0.200
4-Ethyltoluene	0.200
1,3,5-Trimethylbenzene	0.200
1,2,4-Trimethylbenzene	0.200
1,3-Dichlorobenzene	0.200
1,4-Dichlorobenzene	0.200
Benzyl chloride	0.200
1,2-Dichlorobenzene	0.200
1,2,4-Trichlorobenzene	0.227
Hexachlorobutadiene	0.268

Sample Custody



CHAIN OF CUSTODY RECORD

Project Name	US EPA
Project Location	RTP, NC
Sampling Location	ACB Outlet Duct
Project Number	RN990271.0002
Laboratory	Enthalpy
Laboratory P.O. #	

Sample ID	Sample Matrix	Analysis Requested
1R-ACB-M0040-02	Tedlar bag	VOCs
ACB-M0040-FB	Tedlar bag filled with UHP nitrogen	VOCs

Rel. By: Erica Shepherd
Date/Time: 2-17-11 12:00
Received by: Brent Overcash
Date/Time: 2-17-11 / 12:05

Notes/Comments:
Field blank collected 2/9/11. Emission sample collected 2/16/11.

Relinquished By:	John Nash	Relinquished By:	FP Final Bourque
Date/Time:	2/17/11 10:20	Date/Time:	2-17-11 10:34
Received By:	FP Final Bourque	Received By:	Brent Overcash
Date/Time:	2/17/11 10:20	Date/Time:	2-17-11 10:34

Redi Heather Langdon 2/17/11 1:38pm
Temp=Ambient

ARCADIS U.S., Inc.
4915 Prospectus Drive, Suite F
Durham, North Carolina 27713

Phone Number: (919) 544-4535
Fax Number: (919) 544-5690

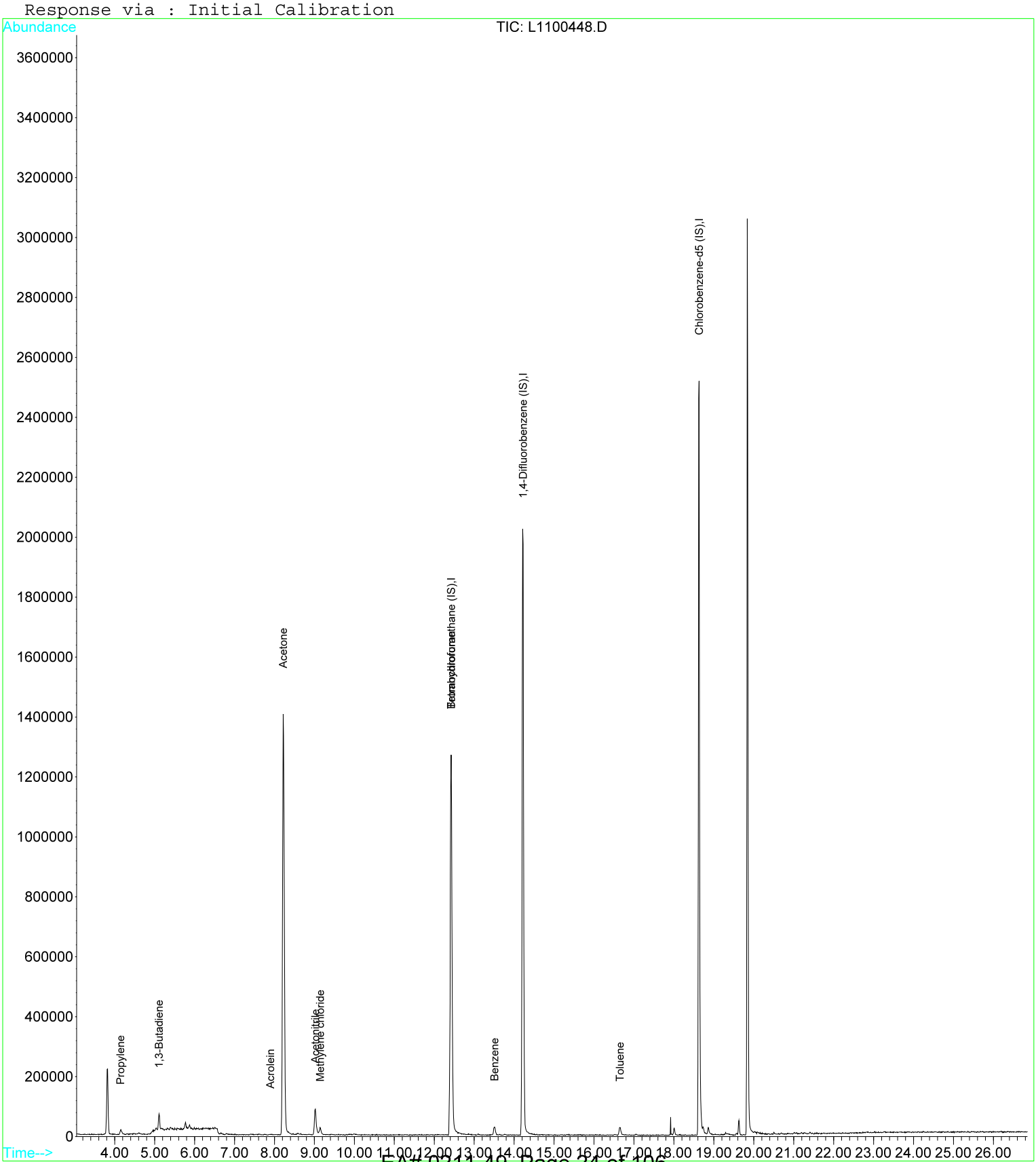
Sample Chromatograms



Quantitation Report

Data File : C:\MS2011Q1\LURCH\DATA\FEB11\L021711A\L1100448.D Vial: 1
Acq On : 18 Feb 2011 1:50 pm Operator: tdd/cld
Sample : 0211-49 1R-ACB-M0040-02 *5,000 Inst : Lurch
Misc : 10mL load of 100* Syr dil Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 18 15:06 2011 Quant Results File: L021111A.RES

Method : M:\MS2011\METHODS\LURCH\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MS2011Q1\LURCH\DATA\FEB11\L021711A\L1100448.D Vial: 1
Acq On : 18 Feb 2011 1:50 pm Operator: tdd/cld
Sample : 0211-49 1R-ACB-M0040-02 *5,000 Inst : Lurch
Misc : 10mL load of 100* Syr dil Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 18 15:06 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane (IS)	12.42	130	954897	11.24 PPBV	0.02
36) 1,4-Difluorobenzene (IS)	14.22	114	2810714	11.93 PPBV	0.02
48) Chlorobenzene-d5 (IS)	18.63	117	2090202	11.13 PPBV	0.04
Target Compounds					Qvalue
2) Propylene	4.14	41	8589	0.57 PPBV #	1
3) Freon 12 (CCl2F2)	0.00	85	0	N.D.	
4) Freon 114 (C2Cl2F4)	0.00	85	0	N.D.	
5) Chloromethane	0.00	50	0	N.D. d	
6) Chloroethene (Vinyl chlori	0.00	62	0	N.D. d	
7) 1,3-Butadiene	5.11	39	37224	1.33 PPBV	91
8) Bromomethane	0.00	94	0	N.D. d	
9) Chloroethane	0.00	64	0	N.D.	
10) Bromoethene (Vinyl bromide	0.00	106	0	N.D.	
11) Freon 11 (CCl3F)	0.00	101	0	N.D. d	
12) Ethanol	0.00	45	0	N.D.	
13) Acrolein	7.90	56	1964	0.27 PPBV #	10
14) Freon 113 (C2Cl3F3)	0.00	151	0	N.D.	
15) 1,1-Dichloroethene	0.00	61	0	N.D.	
16) Acetone	8.22	43	2962902	57.63 PPBV #	92
17) Carbon disulfide	0.00	76	0	N.D. d	
18) Isopropyl alcohol	0.00	45	0	N.D. d	
19) Allyl chloride (3-chloropr	0.00	76	0	N.D.	
20) Acetonitrile	9.02	41	138299	8.36 PPBV #	84
21) Methylene chloride	9.14	49	16188	0.46 PPBV	94
22) trans-1,2-Dichloroethene	0.00	61	0	N.D.	
23) Methyl tert-butyl ether	0.00	73	0	N.D.	
24) Acrylonitrile	0.00	53	0	N.D.	
25) Hexane	0.00	57	0	N.D. d	
26) 1,1-Dichloroethane	0.00	63	0	N.D.	
27) Vinyl acetate	0.00	43	0	N.D.	
28) cis-1,2-Dichloroethylene	0.00	61	0	N.D.	
29) Methyl ethyl ketone (2-But	0.00	72	0	N.D.	
30) Ethyl acetate	0.00	45	0	N.D.	
31) Chloroform	0.00	83	0	N.D.	
32) Tetrahydrofuran	12.42	72	15560	1.57 PPBV	89
33) 1,1,1-Trichloroethane	0.00	97	0	N.D.	
34) Cyclohexane	0.00	56	0	N.D.	
35) Carbon tetrachloride	0.00	117	0	N.D.	
37) Benzene	13.51	78	35829	0.50 PPBV	95
38) 2,2,4-trimethylpentane	0.00	57	0	N.D.	
39) 1,2-Dichloroethane	0.00	62	0	N.D.	
40) Heptane	0.00	57	0	N.D.	
41) Trichloroethene	0.00	130	0	N.D.	
42) 1,2-Dichloropropane	0.00	63	0	N.D.	
43) Methyl methacrylate	0.00	69	0	N.D.	
44) 1,4-Dioxane	0.00	88	0	N.D.	
45) Bromodichloromethane	0.00	83	0	N.D.	
46) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
47) Methyl isobutyl ketone	0.00	43	0	N.D.	
49) Toluene	16.65	91	35300	0.31 PPBV	98
50) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
51) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
52) Tetrachloroethene	0.00	166	0	N.D.	
53) 2-Hexanone (Methyl butyl k	0.00	43	0	N.D.	
54) Dibromochloromethane	0.00	129	0	N.D.	
55) 1,2-Dibromoethane	0.00	107	0	N.D.	
56) Chlorobenzene	0.00	112	0	N.D.	

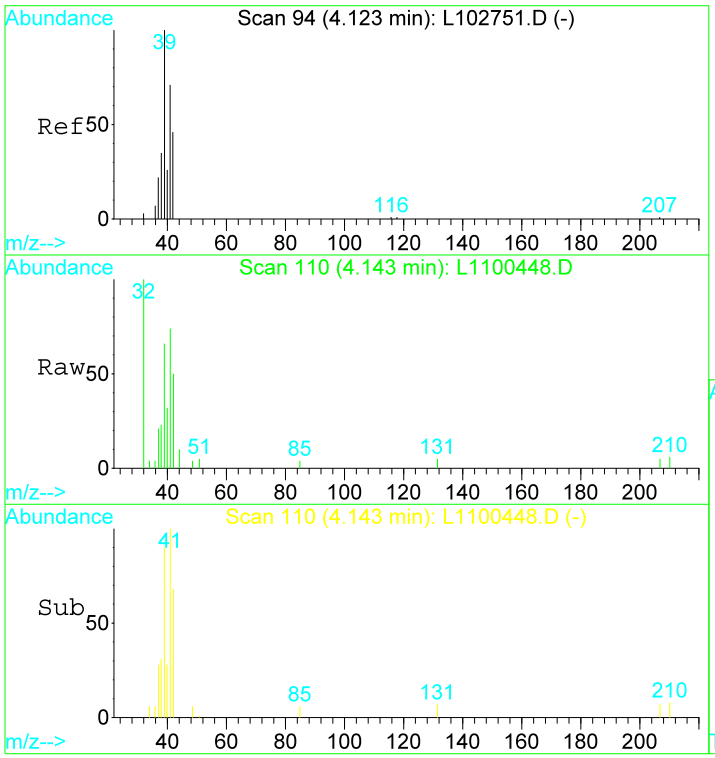
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MS2011Q1\LURCH\DATA\FEB11\L021711A\L1100448.D Vial: 1
Acq On : 18 Feb 2011 1:50 pm Operator: tdd/cld
Sample : 0211-49 1R-ACB-M0040-02 *5,000 Inst : Lurch
Misc : 10mL load of 100* Syr dil Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 18 15:06 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

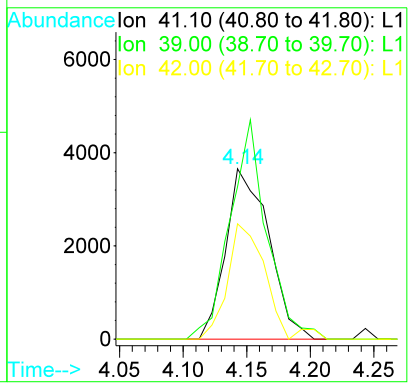
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
57)	Ethylbenzene	0.00	91	0	N.D. d	
58)	1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	
59)	m-/p-Xylenes	0.00	91	0	N.D. d	
60)	o-Xylene	0.00	91	0	N.D. d	
61)	Styrene	0.00	104	0	N.D. d	
62)	Bromoform	0.00	173	0	N.D.	
63)	1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.	
64)	4-Ethyltoluene	0.00	105	0	N.D. d	
65)	2-Chlorotoluene	0.00	91	0	N.D. d	
66)	1,3,5-Trimethylbenzene	0.00	105	0	N.D. d	
67)	1,2,4-Trimethylbenzene	0.00	105	0	N.D. d	
68)	1,3-Dichlorobenzene	0.00	146	0	N.D.	
69)	1,4-Dichlorobenzene	0.00	146	0	N.D.	
70)	Benzyl chloride	0.00	91	0	N.D.	
71)	1,2-Dichlorobenzene	0.00	146	0	N.D.	
72)	1,2,4-Trichlorobenzene	0.00	180	0	N.D.	
73)	Hexachlorobutadiene	0.00	225	0	N.D.	
74)	Naphthalene	0.00	128	0	N.D.	

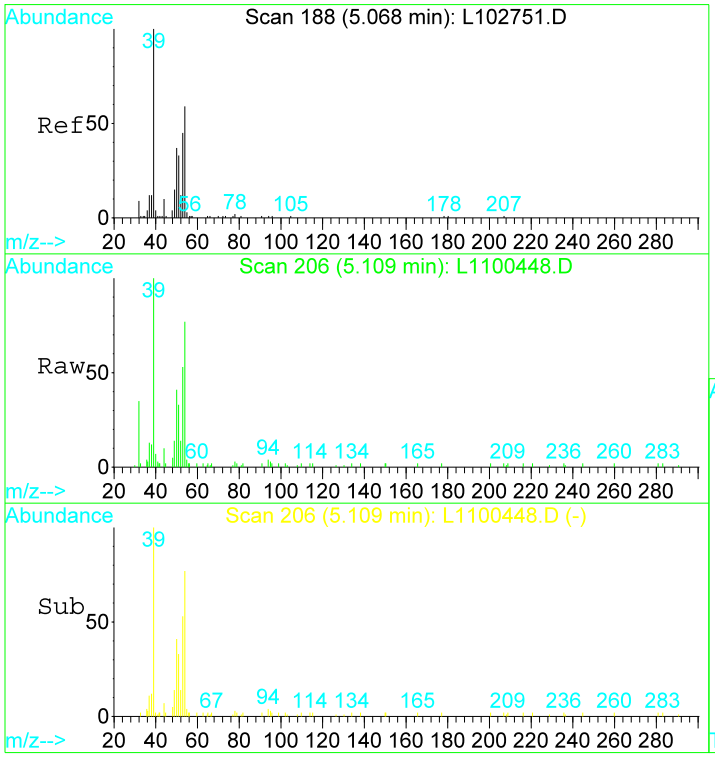


#2
Propylene
Concen: 0.57 PPBV
RT: 4.14 min Scan# 110
Delta R.T. 0.01 min
Lab File: L1100448.D
Acq: 18 Feb 2011 1:50 pm

Tgt Ion: 41 Resp: 8589

Ion	Ratio	Lower	Upper
41	100		
39	110.6	0.0	0.0#
42	60.2	1.7	2.5#

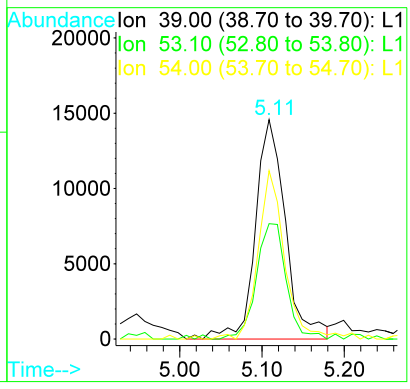


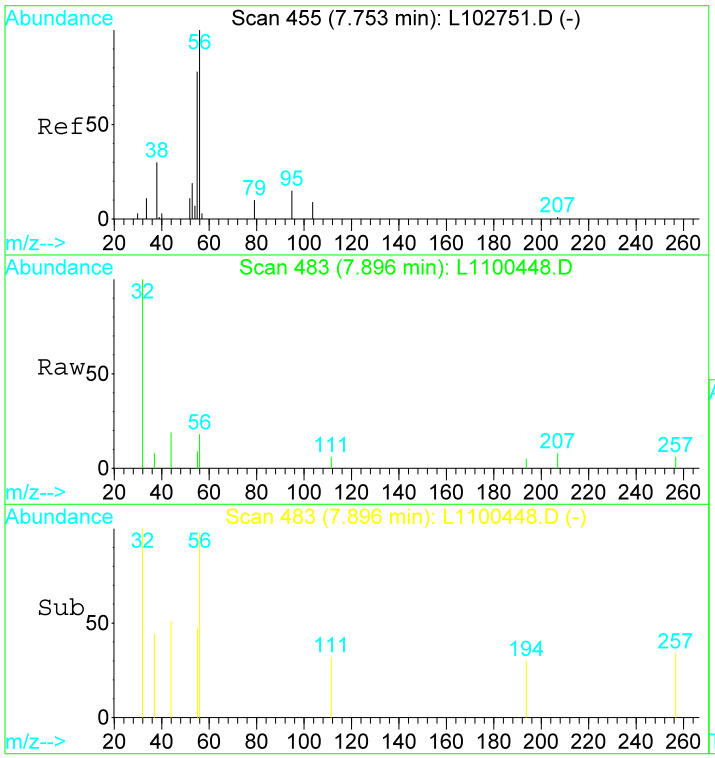


#7
1,3-Butadiene
Concen: 1.33 PPBV
RT: 5.11 min Scan# 206
Delta R.T. 0.02 min
Lab File: L1100448.D
Acq: 18 Feb 2011 1:50 pm

Tgt Ion: 39 Resp: 37224

Ion	Ratio	Lower	Upper
39	100		
53	51.8	37.7	56.5
54	68.4	48.5	72.7

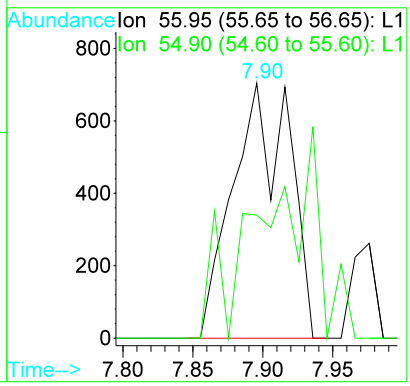


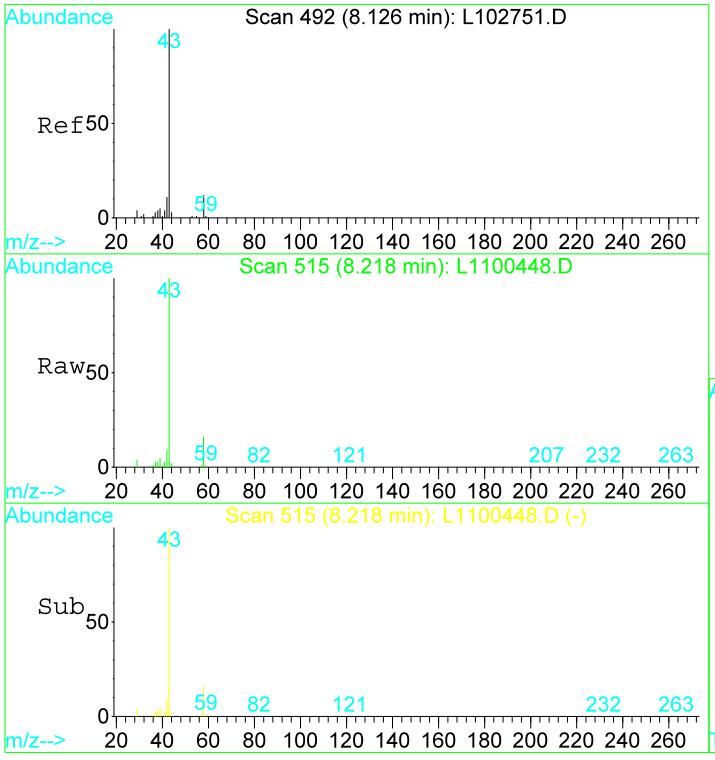


#13
Acrolein
Concen: 0.27 PPBV
RT: 7.90 min Scan# 483
Delta R.T. 0.03 min
Lab File: L1100448.D
Acq: 18 Feb 2011 1:50 pm

Tgt Ion: 56 Resp: 1964

Ion	Ratio	Lower	Upper
56	100		
55	0.0	62.6	93.8#

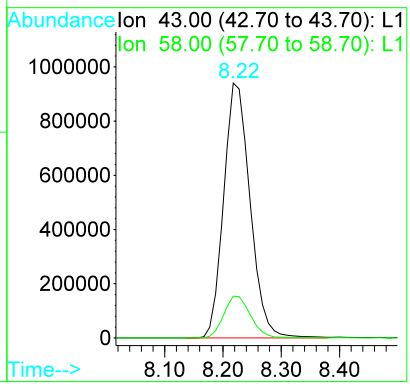


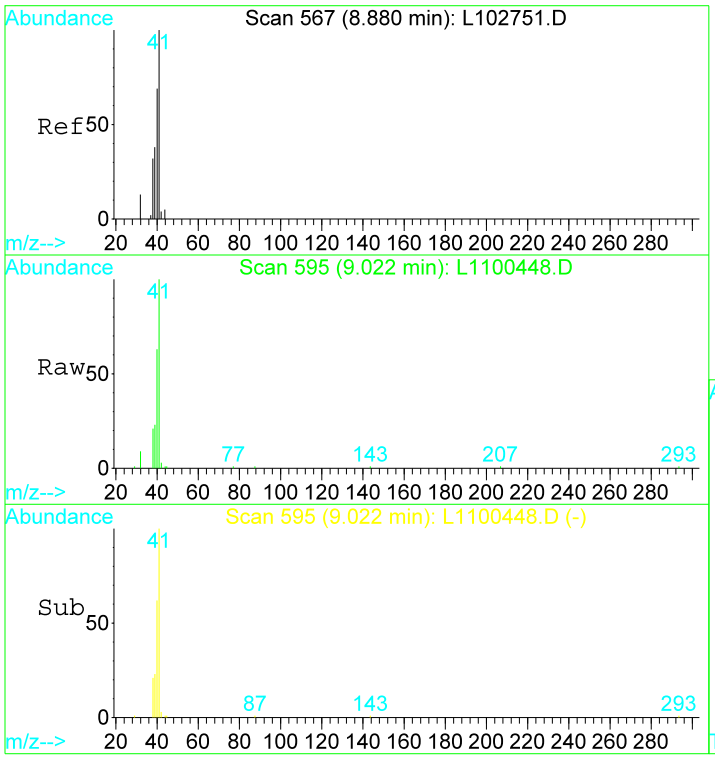


#16
Acetone
Concen: 57.63 PPBV
RT: 8.22 min Scan# 515
Delta R.T. -0.00 min
Lab File: L1100448.D
Acq: 18 Feb 2011 1:50 pm

Tgt Ion: 43 Resp: 2962902

Ion	Ratio	Lower	Upper
43	100		
58	16.7	10.7	16.1#

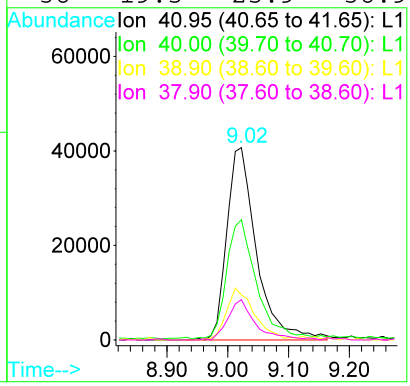


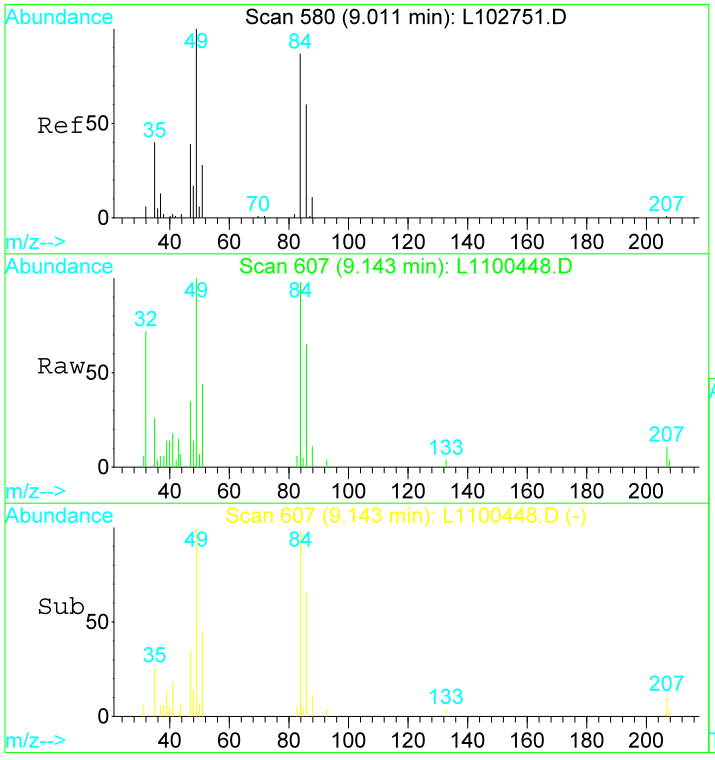


#20
Acetonitrile
Concen: 8.36 PPBV
RT: 9.02 min Scan# 595
Delta R.T. 0.02 min
Lab File: L1100448.D
Acq: 18 Feb 2011 1:50 pm

Tgt Ion: 41 Resp: 138299

Ion	Ratio	Lower	Upper
41	100		
40	61.9	55.4	83.2
39	25.6	30.6	45.8#
38	19.5	25.9	38.9#

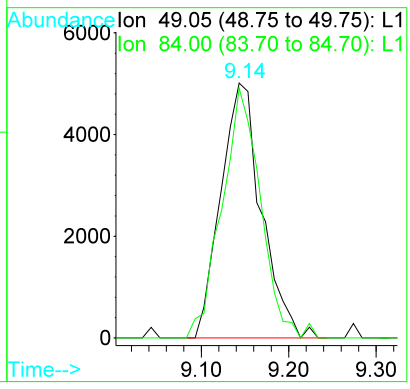


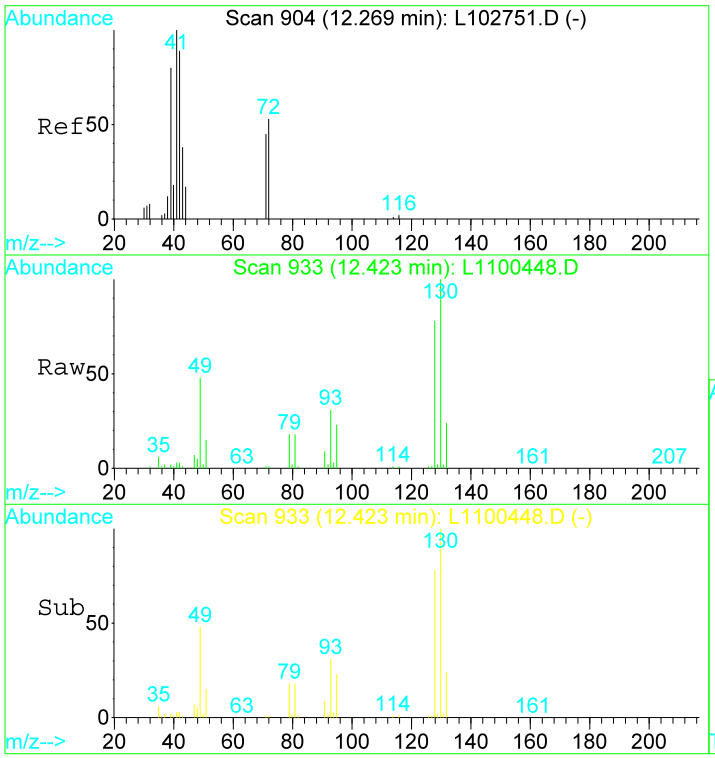


#21
Methylene chloride
Concen: 0.46 PPBV
RT: 9.14 min Scan# 607
Delta R.T. 0.02 min
Lab File: L1100448.D
Acq: 18 Feb 2011 1:50 pm

Tgt Ion: 49 Resp: 16188

Ion	Ratio	Lower	Upper
49	100		
84	93.5	70.2	105.4

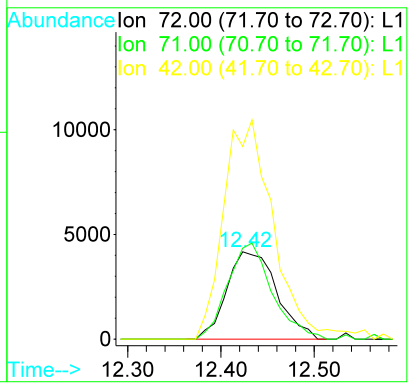


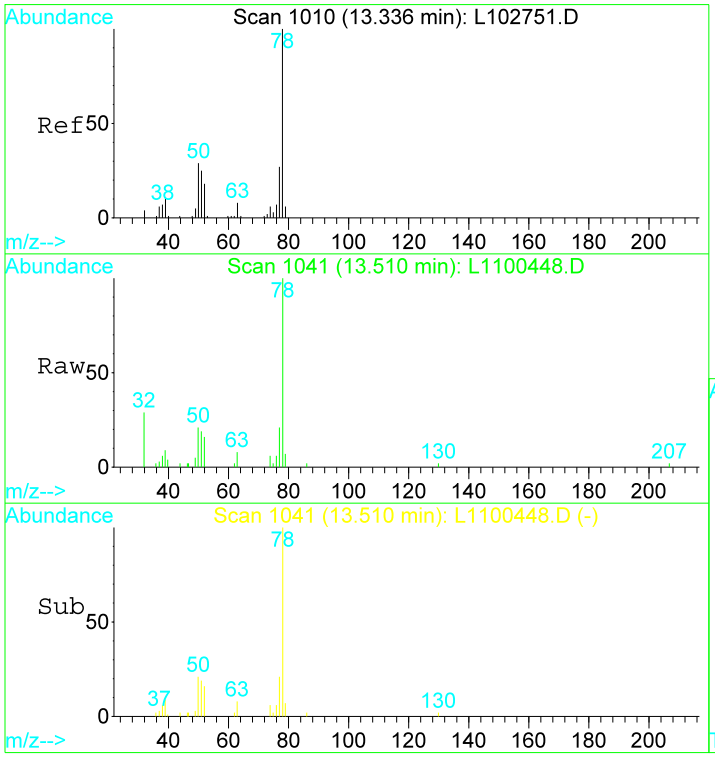


#32
Tetrahydrofuran
Concen: 1.57 PPBV
RT: 12.42 min Scan# 933
Delta R.T. 0.02 min
Lab File: L1100448.D
Acq: 18 Feb 2011 1:50 pm

Tgt Ion: 72 Resp: 15560

Ion	Ratio	Lower	Upper
72	100		
71	97.8	75.9	113.9
42	250.6	181.4	272.2

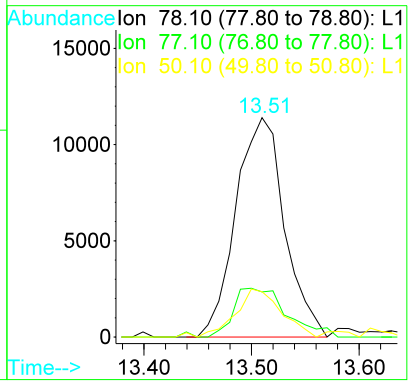


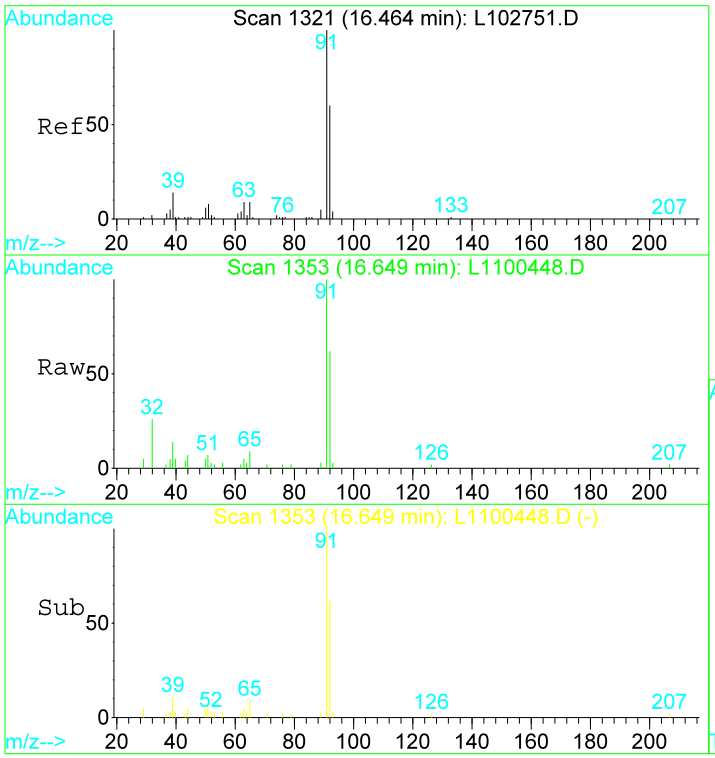


#37
Benzene
Concen: 0.50 PPBV
RT: 13.51 min Scan# 1041
Delta R.T. 0.03 min
Lab File: L1100448.D
Acq: 18 Feb 2011 1:50 pm

Tgt Ion: 78 Resp: 35829

Ion	Ratio	Lower	Upper
78	100		
77	24.4	19.9	29.9
50	20.6	20.2	30.4

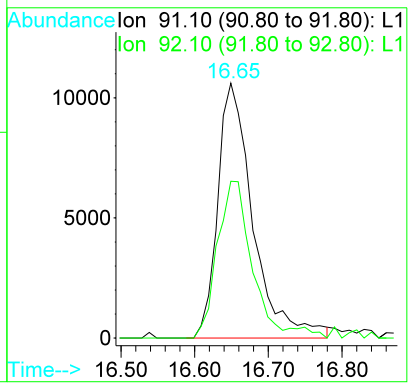




#49
Toluene
Concen: 0.31 PPBV
RT: 16.65 min Scan# 1353
Delta R.T. 0.03 min
Lab File: L1100448.D
Acq: 18 Feb 2011 1:50 pm

Tgt Ion: 91 Resp: 35300

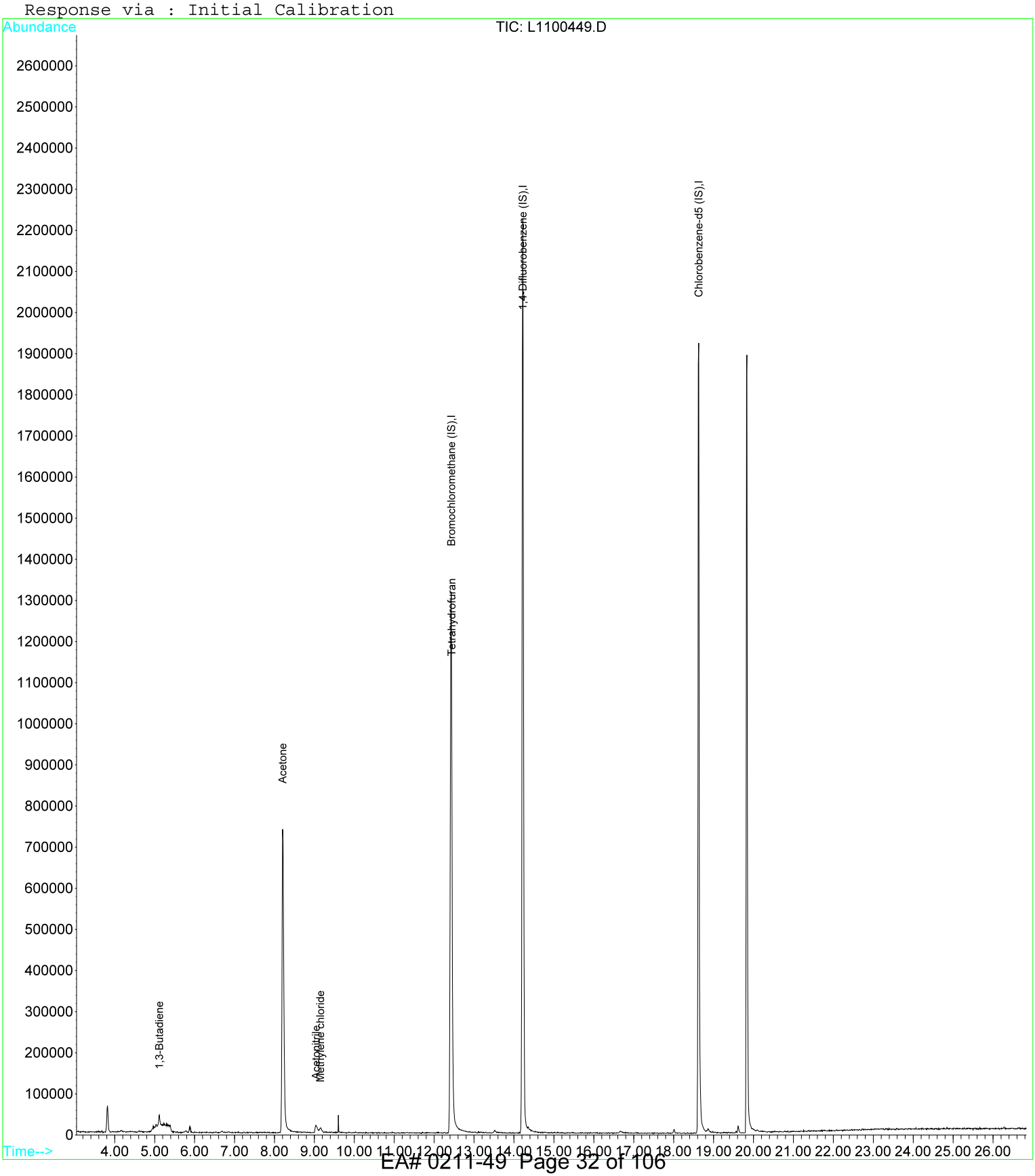
Ion	Ratio	Lower	Upper
91	100		
92	60.0	49.1	73.7



Quantitation Report

Data File : C:\MS2011Q1\LURCH\DATA\FEB11\L021711A\L1100449.D Vial: 1
Acq On : 18 Feb 2011 2:24 pm Operator: tdd/cld
Sample : 0211-49 1R-ACB-M0040-02 *10,000 Inst : Lurch
Misc : 5mL load of 100* Syr dil Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 18 15:08 2011 Quant Results File: L021111A.RES

Method : M:\MS2011\METHODS\LURCH\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MS2011Q1\LURCH\DATA\FEB11\L021711A\L1100449.D Vial: 1
Acq On : 18 Feb 2011 2:24 pm Operator: tdd/cld
Sample : 0211-49 1R-ACB-M0040-02 *10,000 Inst : Lurch
Misc : 5mL load of 100* Syr dil Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 18 15:08 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane (IS)	12.43	130	1039112	11.24 PPBV	0.02
36) 1,4-Difluorobenzene (IS)	14.22	114	3002647	11.93 PPBV	0.01
48) Chlorobenzene-d5 (IS)	18.63	117	1662386	11.13 PPBV	0.03
Target Compounds					Qvalue
2) Propylene	0.00	41	0	N.D. d	
3) Freon 12 (CCl2F2)	0.00	85	0	N.D.	
4) Freon 114 (C2Cl2F4)	0.00	85	0	N.D.	
5) Chloromethane	0.00	50	0	N.D.	
6) Chloroethene (Vinyl chlori	0.00	62	0	N.D. d	
7) 1,3-Butadiene	5.12	39	17051	0.56 PPBV #	88
8) Bromomethane	0.00	94	0	N.D.	
9) Chloroethane	0.00	64	0	N.D.	
10) Bromoethene (Vinyl bromide	0.00	106	0	N.D.	
11) Freon 11 (CCl3F)	0.00	101	0	N.D. d	
12) Ethanol	0.00	45	0	N.D.	
13) Acrolein	0.00	56	0	N.D.	
14) Freon 113 (C2Cl3F3)	0.00	151	0	N.D.	
15) 1,1-Dichloroethene	0.00	61	0	N.D.	
16) Acetone	8.20	43	1600353	28.60 PPBV #	92
17) Carbon disulfide	0.00	76	0	N.D. d	
18) Isopropyl alcohol	0.00	45	0	N.D. d	
19) Allyl chloride (3-chloropr	0.00	76	0	N.D.	
20) Acetonitrile	9.04	41	42660m	2.37 PPBV	
21) Methylene chloride	9.15	49	8054	0.21 PPBV	99
22) trans-1,2-Dichloroethene	0.00	61	0	N.D.	
23) Methyl tert-butyl ether	0.00	73	0	N.D.	
24) Acrylonitrile	0.00	53	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 1,1-Dichloroethane	0.00	63	0	N.D.	
27) Vinyl acetate	0.00	43	0	N.D.	
28) cis-1,2-Dichloroethylene	0.00	61	0	N.D.	
29) Methyl ethyl ketone (2-But	0.00	72	0	N.D.	
30) Ethyl acetate	0.00	45	0	N.D.	
31) Chloroform	0.00	83	0	N.D.	
32) Tetrahydrofuran	12.44	72	5479	0.51 PPBV #	72
33) 1,1,1-Trichloroethane	0.00	97	0	N.D.	
34) Cyclohexane	0.00	56	0	N.D.	
35) Carbon tetrachloride	0.00	117	0	N.D.	
37) Benzene	0.00	78	0	N.D. d	
38) 2,2,4-trimethylpentane	0.00	57	0	N.D.	
39) 1,2-Dichloroethane	0.00	62	0	N.D.	
40) Heptane	0.00	57	0	N.D.	
41) Trichloroethene	0.00	130	0	N.D.	
42) 1,2-Dichloropropane	0.00	63	0	N.D.	
43) Methyl methacrylate	0.00	69	0	N.D.	
44) 1,4-Dioxane	0.00	88	0	N.D.	
45) Bromodichloromethane	0.00	83	0	N.D.	
46) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
47) Methyl isobutyl ketone	0.00	43	0	N.D.	
49) Toluene	0.00	91	0	N.D. d	
50) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
51) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
52) Tetrachloroethene	0.00	166	0	N.D.	
53) 2-Hexanone (Methyl butyl k	0.00	43	0	N.D.	
54) Dibromochloromethane	0.00	129	0	N.D.	
55) 1,2-Dibromoethane	0.00	107	0	N.D.	
56) Chlorobenzene	0.00	112	0	N.D.	

(#) = qualifier out of range (m) = manual integration

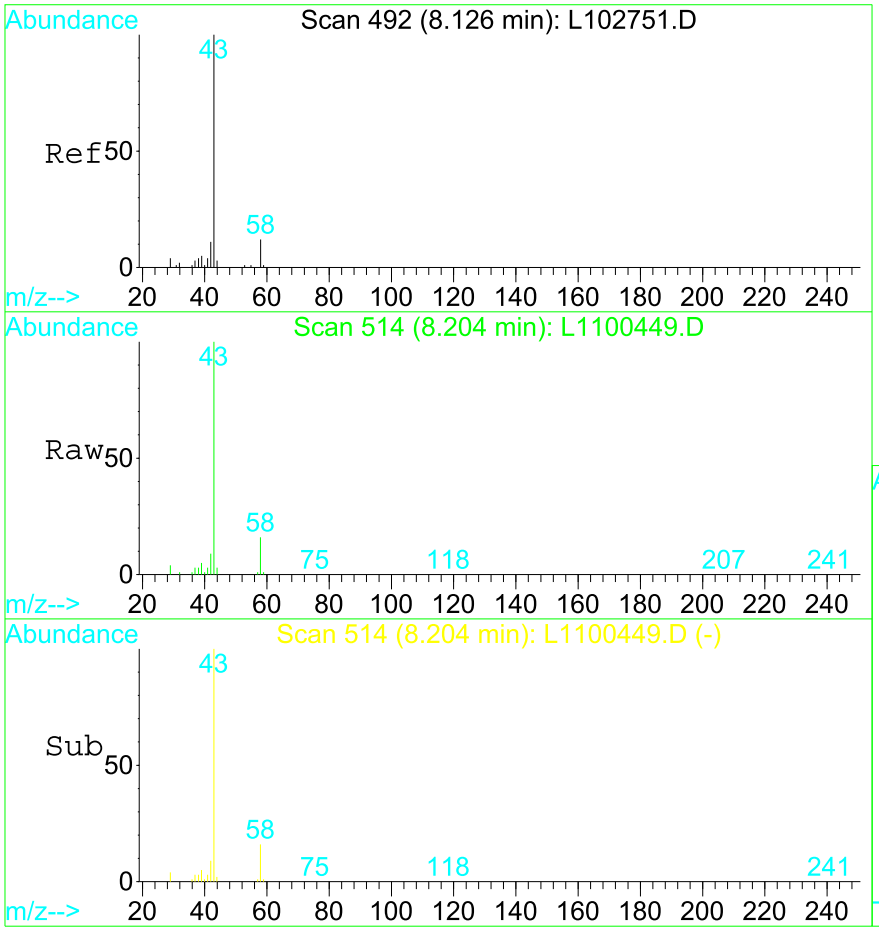
Quantitation Report (QT Reviewed)

Data File : C:\MS2011Q1\LURCH\DATA\FEB11\L021711A\L1100449.D Vial: 1
Acq On : 18 Feb 2011 2:24 pm Operator: tdd/cld
Sample : 0211-49 1R-ACB-M0040-02 *10,000 Inst : Lurch
Misc : 5mL load of 100* Syr dil Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 18 15:08 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
57)	Ethylbenzene	0.00	91	0	N.D. d	
58)	1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	
59)	m-/p-Xylenes	0.00	91	0	N.D. d	
60)	o-Xylene	0.00	91	0	N.D. d	
61)	Styrene	0.00	104	0	N.D.	
62)	Bromoform	0.00	173	0	N.D.	
63)	1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.	
64)	4-Ethyltoluene	0.00	105	0	N.D. d	
65)	2-Chlorotoluene	0.00	91	0	N.D.	
66)	1,3,5-Trimethylbenzene	0.00	105	0	N.D. d	
67)	1,2,4-Trimethylbenzene	0.00	105	0	N.D. d	
68)	1,3-Dichlorobenzene	0.00	146	0	N.D.	
69)	1,4-Dichlorobenzene	0.00	146	0	N.D.	
70)	Benzyl chloride	0.00	91	0	N.D.	
71)	1,2-Dichlorobenzene	0.00	146	0	N.D.	
72)	1,2,4-Trichlorobenzene	0.00	180	0	N.D.	
73)	Hexachlorobutadiene	0.00	225	0	N.D.	
74)	Naphthalene	0.00	128	0	N.D.	

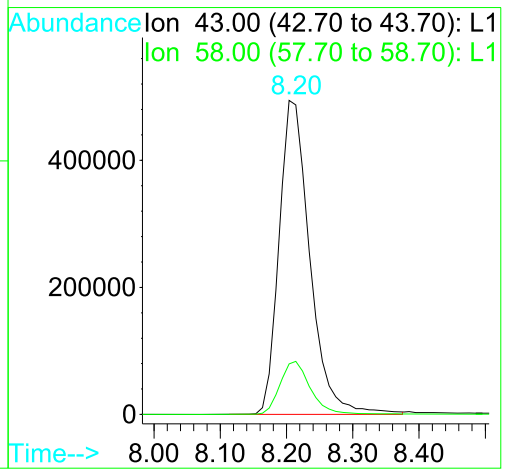
(#) = qualifier out of range (m) = manual integration



#16
Acetone
Concen: 28.60 PPBV
RT: 8.20 min Scan# 514
Delta R.T. -0.02 min
Lab File: L1100449.D
Acq: 18 Feb 2011 2:24 pm

Tgt Ion: 43 Resp: 1600353

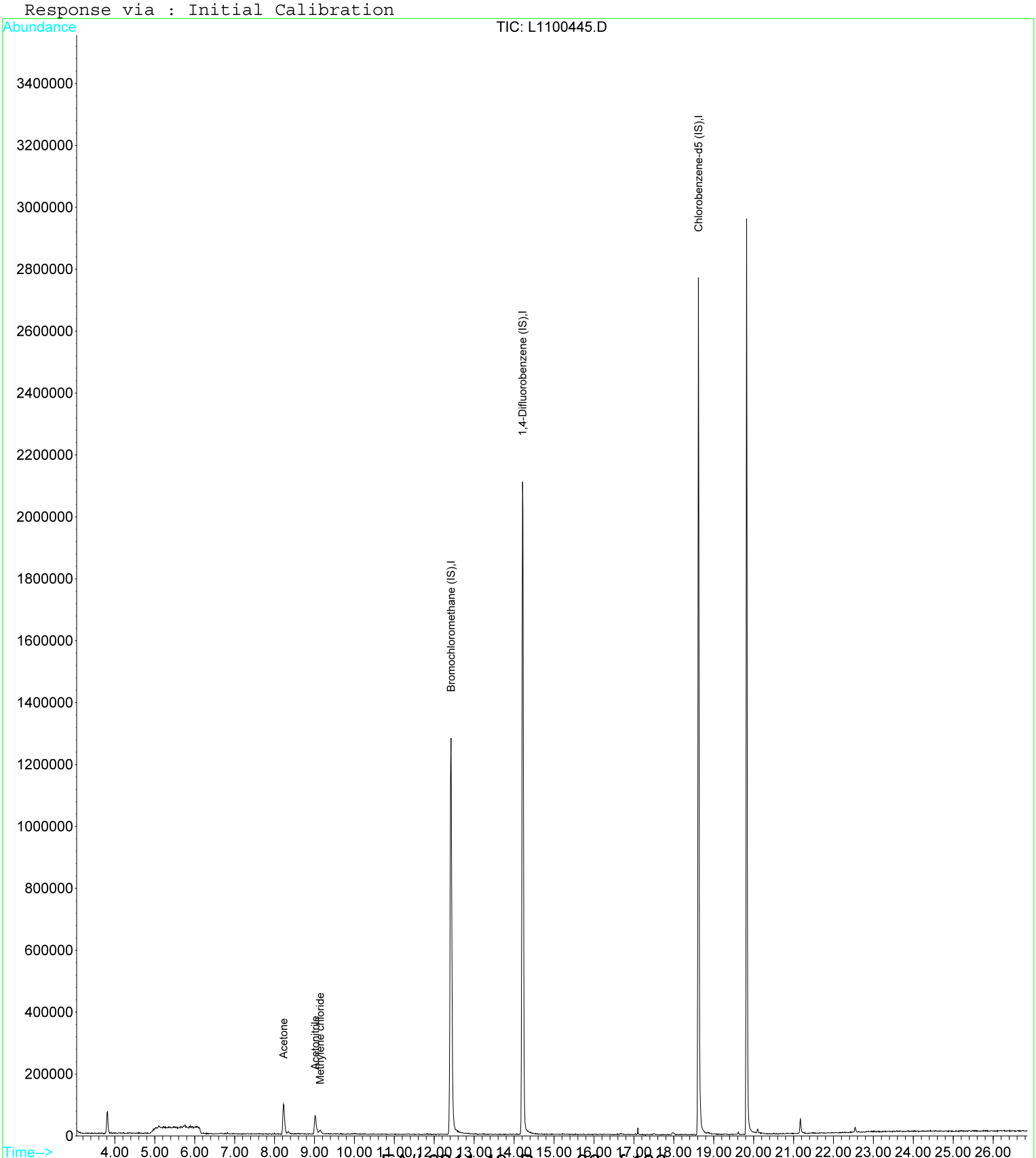
Ion	Ratio	Lower	Upper
43	100		
58	16.6	10.7	16.1#



Quantitation Report

Data File : C:\MS2011Q1\LURCH\DATA\FEB11\L021711A\L1100445.D Vial: 1
Acq On : 18 Feb 2011 12:02 pm Operator: tdd/cld
Sample : 0211-49 ACB-M0040-FB *50 Inst : Lurch
Misc : 10mL load Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 18 13:12 2011 Quant Results File: L021111A.RES

Method : M:\MS2011\METHODS\LURCH\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MS2011Q1\LURCH\DATA\FEB11\L021711A\L1100445.D Vial: 1
Acq On : 18 Feb 2011 12:02 pm Operator: tdd/cld
Sample : 0211-49 ACB-M0040-FB *50 Inst : Lurch
Misc : 10mL load Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 18 13:12 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane (IS)	12.42	130	990822	11.24 PPBV	0.01
36) 1,4-Difluorobenzene (IS)	14.21	114	2931311	11.93 PPBV	0.00
48) Chlorobenzene-d5 (IS)	18.62	117	2156026	11.13 PPBV	0.02
Target Compounds					Qvalue
2) Propylene	0.00	41	0	N.D.	
3) Freon 12 (CCl2F2)	0.00	85	0	N.D.	
4) Freon 114 (C2Cl2F4)	0.00	85	0	N.D.	
5) Chloromethane	0.00	50	0	N.D.	
6) Chloroethene (Vinyl chlori	0.00	62	0	N.D. d	
7) 1,3-Butadiene	0.00	39	0	N.D. d	
8) Bromomethane	0.00	94	0	N.D. d	
9) Chloroethane	0.00	64	0	N.D. d	
10) Bromoethene (Vinyl bromide	0.00	106	0	N.D.	
11) Freon 11 (CCl3F)	0.00	101	0	N.D. d	
12) Ethanol	0.00	45	0	N.D.	
13) Acrolein	0.00	56	0	N.D.	
14) Freon 113 (C2Cl3F3)	0.00	151	0	N.D.	
15) 1,1-Dichloroethene	0.00	61	0	N.D.	
16) Acetone	8.22	43	210422	3.94 PPBV #	90
17) Carbon disulfide	0.00	76	0	N.D. d	
18) Isopropyl alcohol	0.00	45	0	N.D. d	
19) Allyl chloride (3-chloropr	0.00	76	0	N.D.	
20) Acetonitrile	9.02	41	104678	6.10 PPBV #	81
21) Methylene chloride	9.14	49	8150	0.22 PPBV	98
22) trans-1,2-Dichloroethene	0.00	61	0	N.D.	
23) Methyl tert-butyl ether	0.00	73	0	N.D.	
24) Acrylonitrile	0.00	53	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 1,1-Dichloroethane	0.00	63	0	N.D.	
27) Vinyl acetate	0.00	43	0	N.D.	
28) cis-1,2-Dichloroethylene	0.00	61	0	N.D.	
29) Methyl ethyl ketone (2-But	0.00	72	0	N.D.	
30) Ethyl acetate	0.00	45	0	N.D.	
31) Chloroform	0.00	83	0	N.D.	
32) Tetrahydrofuran	0.00	72	0	N.D. d	
33) 1,1,1-Trichloroethane	0.00	97	0	N.D.	
34) Cyclohexane	0.00	56	0	N.D.	
35) Carbon tetrachloride	0.00	117	0	N.D.	
37) Benzene	0.00	78	0	N.D.	
38) 2,2,4-trimethylpentane	0.00	57	0	N.D.	
39) 1,2-Dichloroethane	0.00	62	0	N.D.	
40) Heptane	0.00	57	0	N.D.	
41) Trichloroethene	0.00	130	0	N.D.	
42) 1,2-Dichloropropane	0.00	63	0	N.D.	
43) Methyl methacrylate	0.00	69	0	N.D.	
44) 1,4-Dioxane	0.00	88	0	N.D.	
45) Bromodichloromethane	0.00	83	0	N.D.	
46) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
47) Methyl isobutyl ketone	0.00	43	0	N.D.	
49) Toluene	0.00	91	0	N.D. d	
50) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
51) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
52) Tetrachloroethene	0.00	166	0	N.D. d	
53) 2-Hexanone (Methyl butyl k	0.00	43	0	N.D.	
54) Dibromochloromethane	0.00	129	0	N.D. d	
55) 1,2-Dibromoethane	0.00	107	0	N.D.	
56) Chlorobenzene	0.00	112	0	N.D.	

(#) = qualifier out of range (m) = manual integration

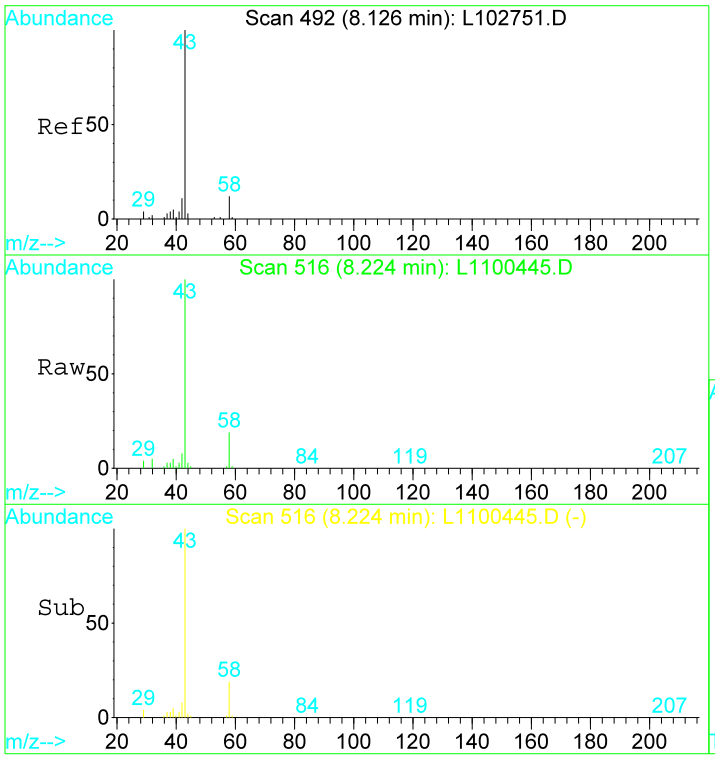
Quantitation Report (QT Reviewed)

Data File : C:\MS2011Q1\LURCH\DATA\FEB11\L021711A\L1100445.D Vial: 1
Acq On : 18 Feb 2011 12:02 pm Operator: tdd/cld
Sample : 0211-49 ACB-M0040-FB *50 Inst : Lurch
Misc : 10mL load Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 18 13:12 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
57)	Ethylbenzene	0.00	91	0	N.D. d	
58)	1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	
59)	m-/p-Xylenes	0.00	91	0	N.D. d	
60)	o-Xylene	0.00	91	0	N.D. d	
61)	Styrene	0.00	104	0	N.D.	
62)	Bromoform	0.00	173	0	N.D.	
63)	1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.	
64)	4-Ethyltoluene	0.00	105	0	N.D. d	
65)	2-Chlorotoluene	0.00	91	0	N.D. d	
66)	1,3,5-Trimethylbenzene	0.00	105	0	N.D. d	
67)	1,2,4-Trimethylbenzene	0.00	105	0	N.D. d	
68)	1,3-Dichlorobenzene	0.00	146	0	N.D.	
69)	1,4-Dichlorobenzene	0.00	146	0	N.D.	
70)	Benzyl chloride	0.00	91	0	N.D.	
71)	1,2-Dichlorobenzene	0.00	146	0	N.D. d	
72)	1,2,4-Trichlorobenzene	0.00	180	0	N.D.	
73)	Hexachlorobutadiene	0.00	225	0	N.D.	
74)	Naphthalene	0.00	128	0	N.D.	

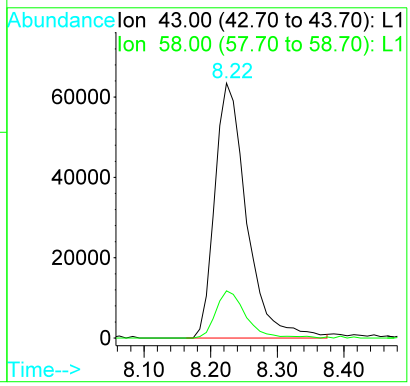
(#) = qualifier out of range (m) = manual integration

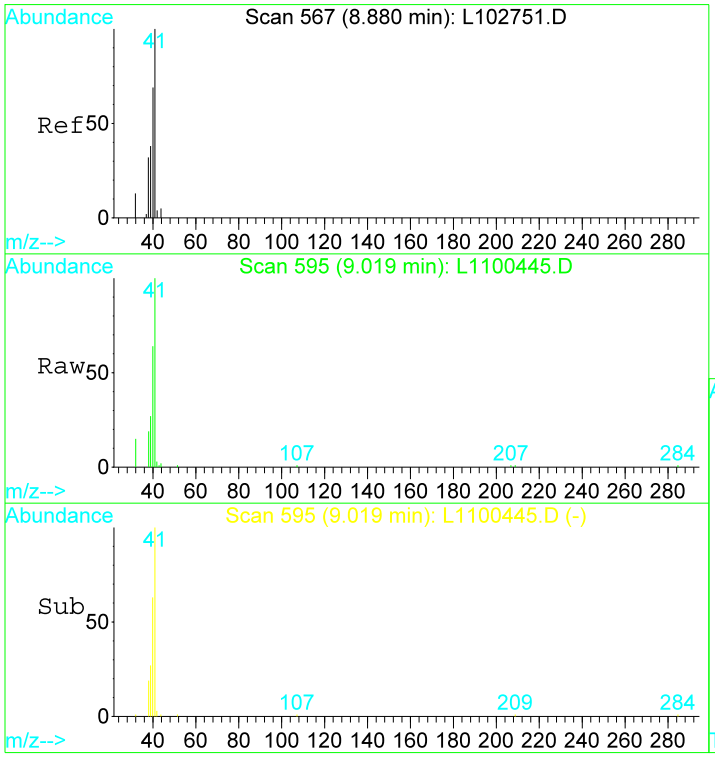


#16
Acetone
Concen: 3.94 PPBV
RT: 8.22 min Scan# 516
Delta R.T. 0.00 min
Lab File: L1100445.D
Acq: 18 Feb 2011 12:02 pm

Tgt Ion: 43 Resp: 210422

Ion	Ratio	Lower	Upper
43	100		
58	17.5	10.7	16.1#

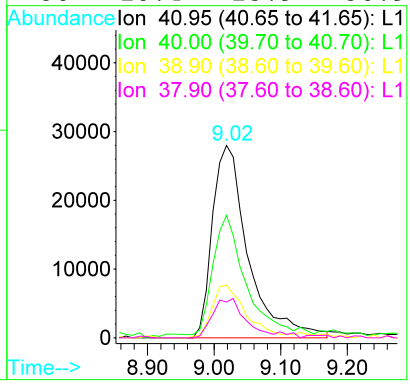


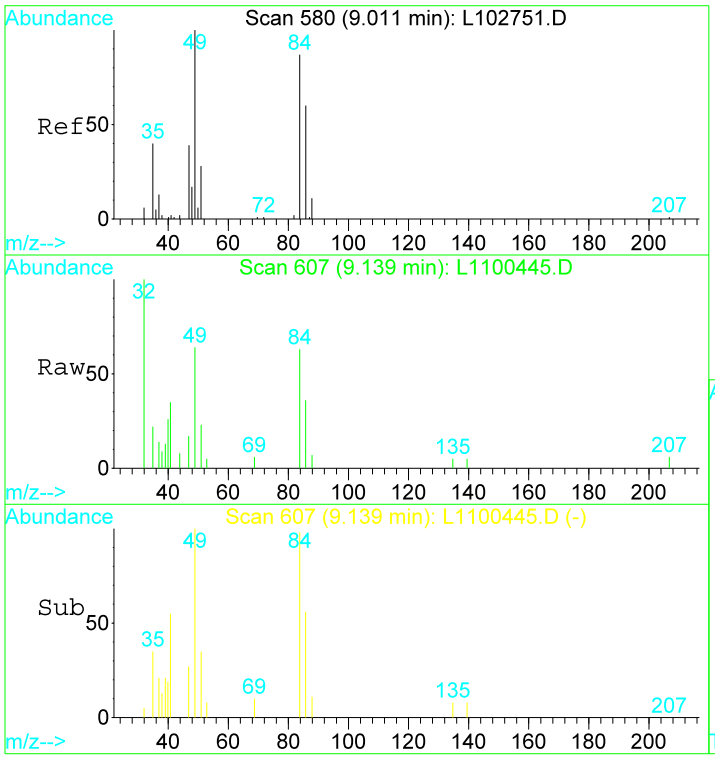


#20
Acetonitrile
Concen: 6.10 PPBV
RT: 9.02 min Scan# 595
Delta R.T. 0.01 min
Lab File: L1100445.D
Acq: 18 Feb 2011 12:02 pm

Tgt Ion: 41 Resp: 104678

Ion	Ratio	Lower	Upper
41	100		
40	57.2	55.4	83.2
39	26.1	30.6	45.8#
38	18.4	25.9	38.9#

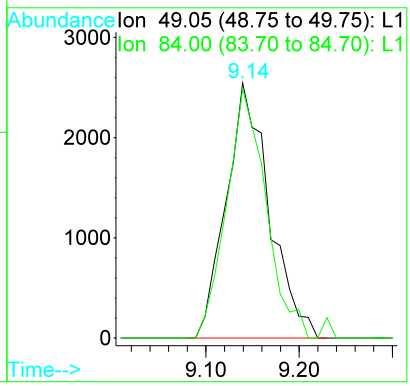




#21
Methylene chloride
Concen: 0.22 PPBV
RT: 9.14 min Scan# 607
Delta R.T. 0.01 min
Lab File: L1100445.D
Acq: 18 Feb 2011 12:02 pm

Tgt Ion: 49 Resp: 8150

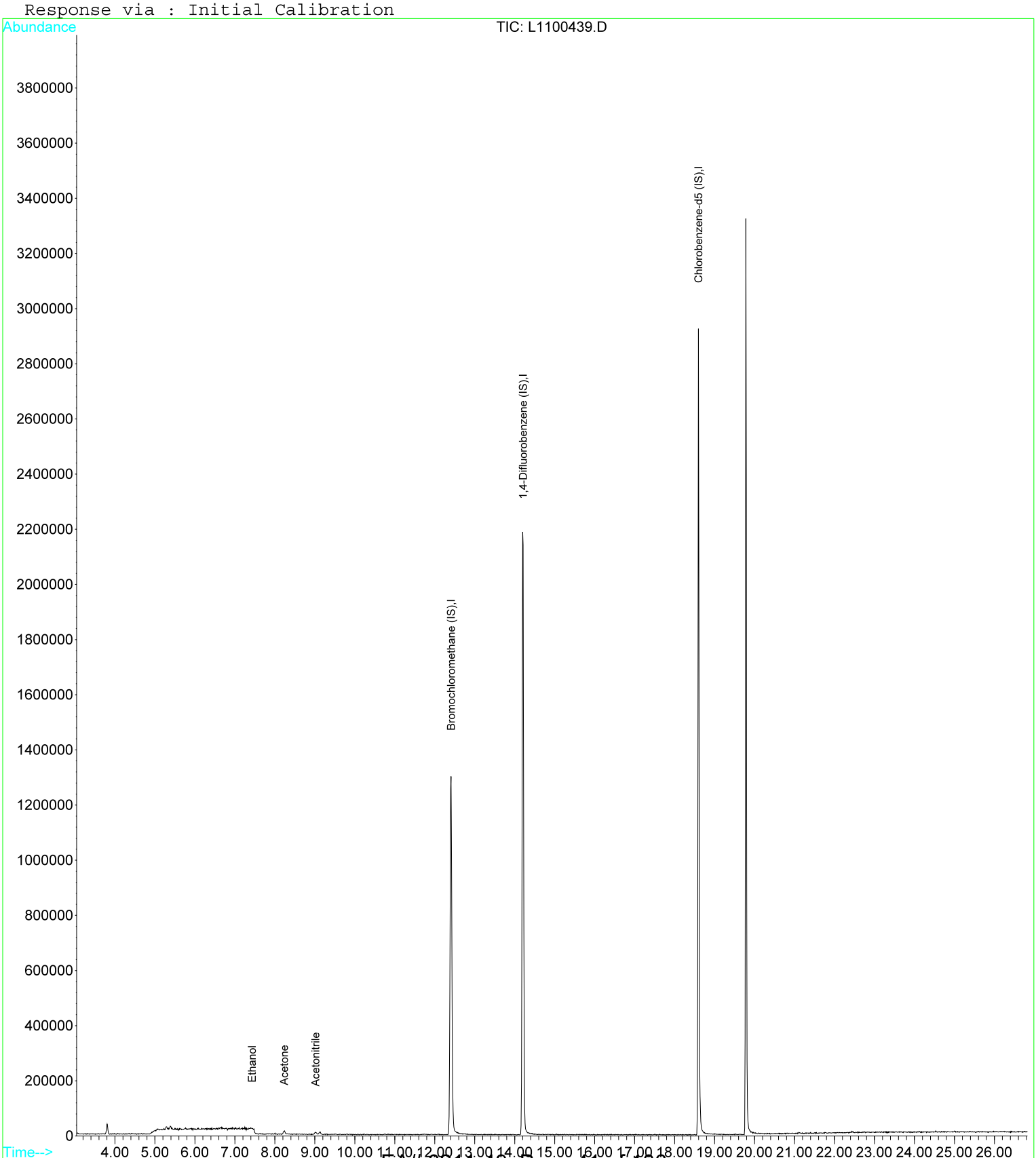
Ion	Ratio	Lower	Upper
49	100		
84	89.7	70.2	105.4



Quantitation Report

Data File : C:\MS2011Q1\LURCH\DATA\FEB11\L021711A\L1100439.D Vial: 1
Acq On : 17 Feb 2011 7:28 pm Operator: tdd/cld
Sample : humid blank Inst : Lurch
Misc : Can #1470, 500mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 18 12:47 2011 Quant Results File: L021111A.RES

Method : M:\MS2011\METHODS\LURCH\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MS2011Q1\LURCH\DATA\FEB11\L021711A\L1100439.D Vial: 1
Acq On : 17 Feb 2011 7:28 pm Operator: tdd/cld
Sample : humid blank Inst : Lurch
Misc : Can #1470, 500mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 18 12:47 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane (IS)	12.41	130	993298	11.24 PPBV	0.00
36) 1,4-Difluorobenzene (IS)	14.21	114	2977691	11.93 PPBV	0.00
48) Chlorobenzene-d5 (IS)	18.60	117	2158507	11.13 PPBV	0.00
Target Compounds					Qvalue
2) Propylene	0.00	41	0	N.D.	
3) Freon 12 (CCl2F2)	0.00	85	0	N.D.	
4) Freon 114 (C2Cl2F4)	0.00	85	0	N.D.	
5) Chloromethane	0.00	50	0	N.D.	
6) Chloroethene (Vinyl chlori	0.00	62	0	N.D.	
7) 1,3-Butadiene	0.00	39	0	N.D.	
8) Bromomethane	0.00	94	0	N.D. d	
9) Chloroethane	0.00	64	0	N.D.	
10) Bromoethene (Vinyl bromide	0.00	106	0	N.D.	
11) Freon 11 (CCl3F)	0.00	101	0	N.D. d	
12) Ethanol	7.43	45	2306	0.22 PPBV #	1
13) Acrolein	0.00	56	0	N.D.	
14) Freon 113 (C2Cl3F3)	0.00	151	0	N.D.	
15) 1,1-Dichloroethene	0.00	61	0	N.D.	
16) Acetone	8.23	43	24346	0.46 PPBV #	89
17) Carbon disulfide	0.00	76	0	N.D. d	
18) Isopropyl alcohol	0.00	45	0	N.D. d	
19) Allyl chloride (3-chloropr	0.00	76	0	N.D.	
20) Acetonitrile	9.02	41	13917	0.81 PPBV #	71
21) Methylene chloride	9.13	49	5812	N.D.	
22) trans-1,2-Dichloroethene	0.00	61	0	N.D.	
23) Methyl tert-butyl ether	0.00	73	0	N.D.	
24) Acrylonitrile	0.00	53	0	N.D.	
25) Hexane	0.00	57	0	N.D.	
26) 1,1-Dichloroethane	0.00	63	0	N.D.	
27) Vinyl acetate	0.00	43	0	N.D.	
28) cis-1,2-Dichloroethylene	0.00	61	0	N.D.	
29) Methyl ethyl ketone (2-But	0.00	72	0	N.D.	
30) Ethyl acetate	0.00	45	0	N.D.	
31) Chloroform	0.00	83	0	N.D.	
32) Tetrahydrofuran	0.00	72	0	N.D.	
33) 1,1,1-Trichloroethane	0.00	97	0	N.D.	
34) Cyclohexane	0.00	56	0	N.D.	
35) Carbon tetrachloride	0.00	117	0	N.D.	
37) Benzene	0.00	78	0	N.D.	
38) 2,2,4-trimethylpentane	0.00	57	0	N.D.	
39) 1,2-Dichloroethane	0.00	62	0	N.D.	
40) Heptane	0.00	57	0	N.D.	
41) Trichloroethene	0.00	130	0	N.D.	
42) 1,2-Dichloropropane	0.00	63	0	N.D.	
43) Methyl methacrylate	0.00	69	0	N.D.	
44) 1,4-Dioxane	0.00	88	0	N.D.	
45) Bromodichloromethane	0.00	83	0	N.D.	
46) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
47) Methyl isobutyl ketone	0.00	43	0	N.D.	
49) Toluene	0.00	91	0	N.D.	
50) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
51) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
52) Tetrachloroethene	0.00	166	0	N.D.	
53) 2-Hexanone (Methyl butyl k	0.00	43	0	N.D.	
54) Dibromochloromethane	0.00	129	0	N.D.	
55) 1,2-Dibromoethane	0.00	107	0	N.D.	
56) Chlorobenzene	0.00	112	0	N.D.	

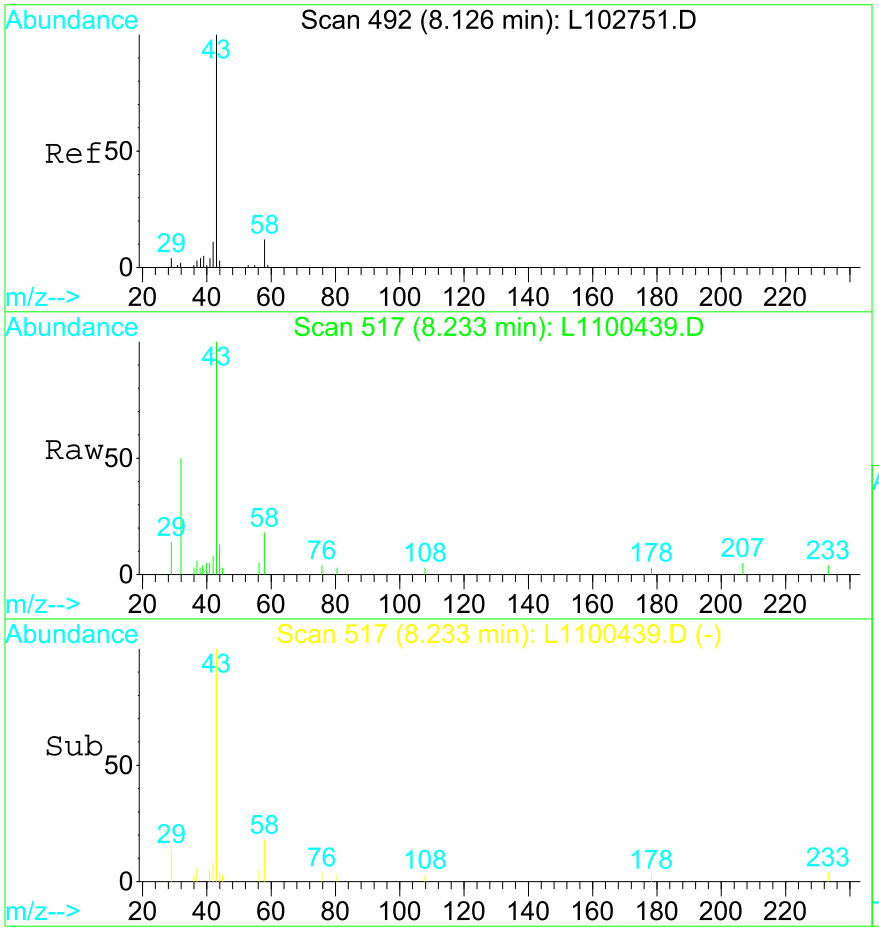
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MS2011Q1\LURCH\DATA\FEB11\L021711A\L1100439.D Vial: 1
Acq On : 17 Feb 2011 7:28 pm Operator: tdd/cld
Sample : humid blank Inst : Lurch
Misc : Can #1470, 500mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 18 12:47 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

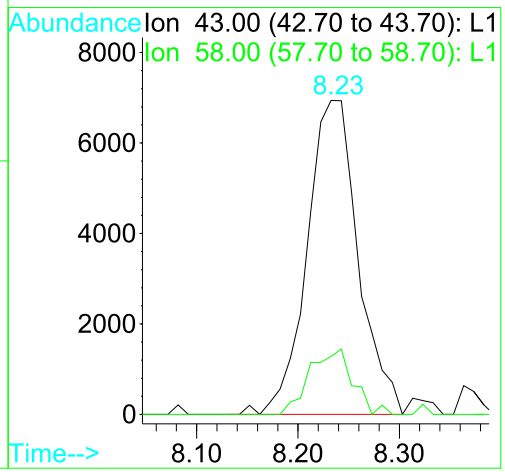
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
57)	Ethylbenzene	0.00	91	0	N.D. d	
58)	1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	
59)	m-/p-Xylenes	0.00	91	0	N.D.	
60)	o-Xylene	0.00	91	0	N.D.	
61)	Styrene	0.00	104	0	N.D.	
62)	Bromoform	0.00	173	0	N.D.	
63)	1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.	
64)	4-Ethyltoluene	0.00	105	0	N.D.	
65)	2-Chlorotoluene	0.00	91	0	N.D.	
66)	1,3,5-Trimethylbenzene	0.00	105	0	N.D.	
67)	1,2,4-Trimethylbenzene	0.00	105	0	N.D.	
68)	1,3-Dichlorobenzene	0.00	146	0	N.D.	
69)	1,4-Dichlorobenzene	0.00	146	0	N.D.	
70)	Benzyl chloride	0.00	91	0	N.D.	
71)	1,2-Dichlorobenzene	0.00	146	0	N.D. d	
72)	1,2,4-Trichlorobenzene	0.00	180	0	N.D. d	
73)	Hexachlorobutadiene	0.00	225	0	N.D.	
74)	Naphthalene	0.00	128	0	N.D. d	



#16
Acetone
Concen: 0.46 PPBV
RT: 8.23 min Scan# 517
Delta R.T. 0.01 min
Lab File: L1100439.D
Acq: 17 Feb 2011 7:28 pm

Tgt Ion: 43 Resp: 24346

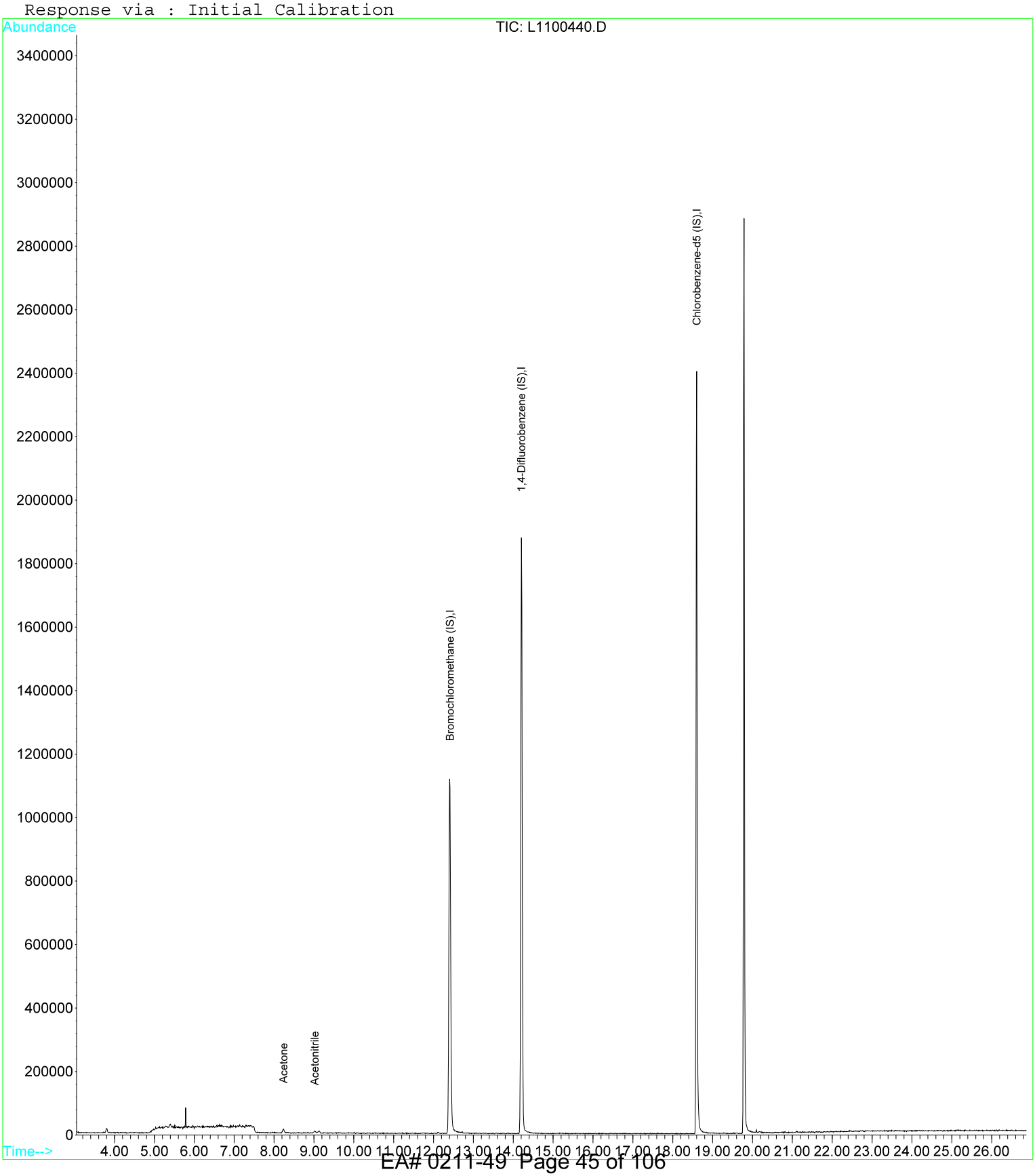
Ion	Ratio	Lower	Upper
43	100		
58	17.6	10.7	16.1#



Quantitation Report

Data File : C:\MS2011Q1\LURCH\DATA\FEB11\L021711A\L1100440.D Vial: 1
Acq On : 17 Feb 2011 8:15 pm Operator: tdd/cld
Sample : system blank Inst : Lurch
Misc : 500mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 18 7:17 2011 Quant Results File: L021111A.RES

Method : M:\MS2011\METHODS\LURCH\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MS2011Q1\LURCH\DATA\FEB11\L021711A\L1100440.D Vial: 1
Acq On : 17 Feb 2011 8:15 pm Operator: tdd/cld
Sample : system blank Inst : Lurch
Misc : 500mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 18 7:17 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS)	12.41	130	853741	11.24	PPBV		0.00
36) 1,4-Difluorobenzene (IS)	14.20	114	2484956	11.93	PPBV		0.00
48) Chlorobenzene-d5 (IS)	18.60	117	1881446	11.13	PPBV		0.00
Target Compounds							Qvalue
2) Propylene	0.00	41	0	N.D.			
3) Freon 12 (CCl2F2)	0.00	85	0	N.D.			
4) Freon 114 (C2Cl2F4)	0.00	85	0	N.D.			
5) Chloromethane	0.00	50	0	N.D.			
6) Chloroethene (Vinyl chlori	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	39	0	N.D.	d		
8) Bromomethane	0.00	94	0	N.D.	d		
9) Chloroethane	0.00	64	0	N.D.			
10) Bromoethene (Vinyl bromide	0.00	106	0	N.D.			
11) Freon 11 (CCl3F)	0.00	101	0	N.D.	d		
12) Ethanol	0.00	45	0	N.D.	d		
13) Acrolein	0.00	56	0	N.D.			
14) Freon 113 (C2Cl3F3)	0.00	151	0	N.D.			
15) 1,1-Dichloroethene	0.00	61	0	N.D.			
16) Acetone	8.24	43	23834	0.52	PPBV	#	67
17) Carbon disulfide	0.00	76	0	N.D.	d		
18) Isopropyl alcohol	0.00	45	0	N.D.			
19) Allyl chloride (3-chloropr	0.00	76	0	N.D.			
20) Acetonitrile	9.02	41	10631	0.72	PPBV	#	76
21) Methylene chloride	9.12	49	4814	N.D.			
22) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
23) Methyl tert-butyl ether	0.00	73	0	N.D.			
24) Acrylonitrile	0.00	53	0	N.D.			
25) Hexane	0.00	57	0	N.D.			
26) 1,1-Dichloroethane	0.00	63	0	N.D.			
27) Vinyl acetate	0.00	43	0	N.D.			
28) cis-1,2-Dichloroethylene	0.00	61	0	N.D.			
29) Methyl ethyl ketone (2-But	0.00	72	0	N.D.			
30) Ethyl acetate	0.00	45	0	N.D.			
31) Chloroform	0.00	83	0	N.D.			
32) Tetrahydrofuran	0.00	72	0	N.D.			
33) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
34) Cyclohexane	0.00	56	0	N.D.			
35) Carbon tetrachloride	0.00	117	0	N.D.			
37) Benzene	0.00	78	0	N.D.			
38) 2,2,4-trimethylpentane	0.00	57	0	N.D.			
39) 1,2-Dichloroethane	0.00	62	0	N.D.			
40) Heptane	0.00	57	0	N.D.			
41) Trichloroethene	0.00	130	0	N.D.			
42) 1,2-Dichloropropane	0.00	63	0	N.D.			
43) Methyl methacrylate	0.00	69	0	N.D.			
44) 1,4-Dioxane	0.00	88	0	N.D.			
45) Bromodichloromethane	0.00	83	0	N.D.			
46) cis-1,3-Dichloropropene	0.00	75	0	N.D.			
47) Methyl isobutyl ketone	0.00	43	0	N.D.			
49) Toluene	0.00	91	0	N.D.			
50) trans-1,3-Dichloropropene	0.00	75	0	N.D.			
51) 1,1,2-Trichloroethane	0.00	97	0	N.D.			
52) Tetrachloroethene	0.00	166	0	N.D.			
53) 2-Hexanone (Methyl butyl k	0.00	43	0	N.D.			
54) Dibromochloromethane	0.00	129	0	N.D.			
55) 1,2-Dibromoethane	0.00	107	0	N.D.			
56) Chlorobenzene	0.00	112	0	N.D.			

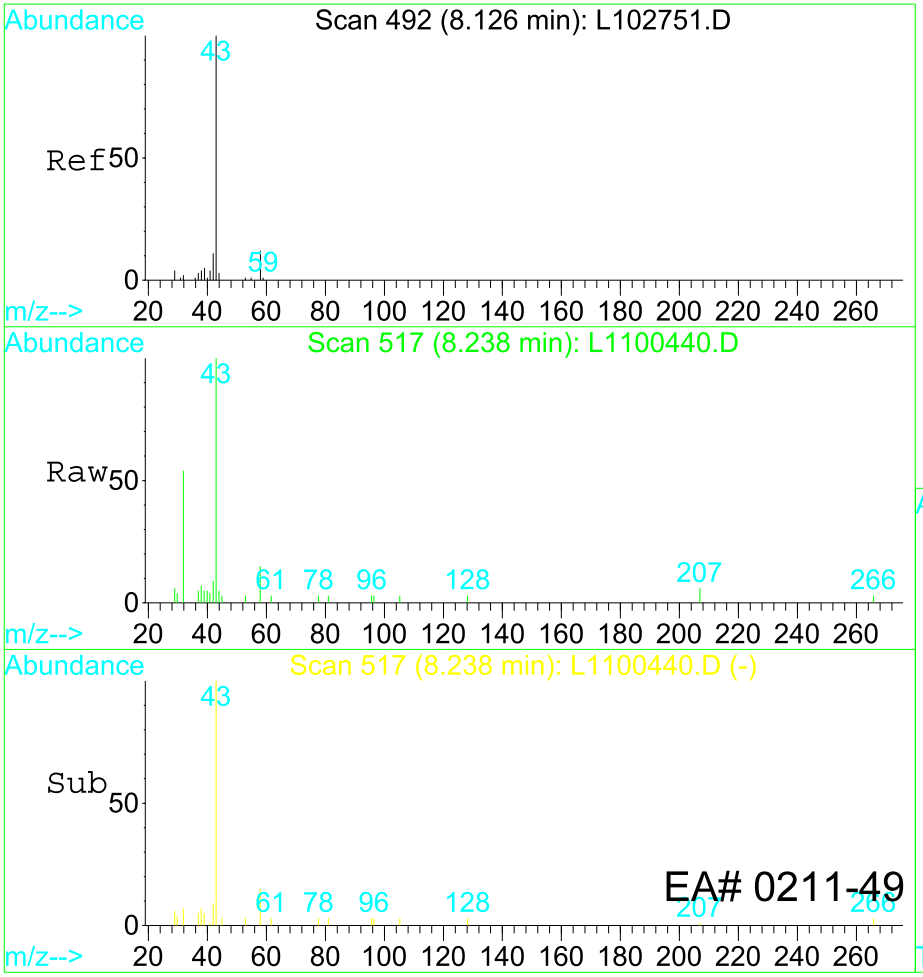
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MS2011Q1\LURCH\DATA\FEB11\L021711A\L1100440.D Vial: 1
Acq On : 17 Feb 2011 8:15 pm Operator: tdd/cld
Sample : system blank Inst : Lurch
Misc : 500mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 18 7:17 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

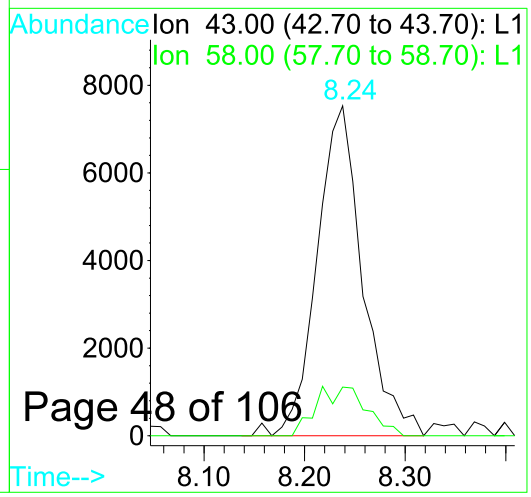
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
57)	Ethylbenzene	0.00	91	0	N.D. d	
58)	1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	
59)	m-/p-Xylenes	0.00	91	0	N.D. d	
60)	o-Xylene	0.00	91	0	N.D.	
61)	Styrene	0.00	104	0	N.D.	
62)	Bromoform	0.00	173	0	N.D.	
63)	1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.	
64)	4-Ethyltoluene	0.00	105	0	N.D. d	
65)	2-Chlorotoluene	0.00	91	0	N.D.	
66)	1,3,5-Trimethylbenzene	0.00	105	0	N.D. d	
67)	1,2,4-Trimethylbenzene	0.00	105	0	N.D.	
68)	1,3-Dichlorobenzene	0.00	146	0	N.D.	
69)	1,4-Dichlorobenzene	0.00	146	0	N.D.	
70)	Benzyl chloride	0.00	91	0	N.D.	
71)	1,2-Dichlorobenzene	0.00	146	0	N.D.	
72)	1,2,4-Trichlorobenzene	0.00	180	0	N.D.	
73)	Hexachlorobutadiene	0.00	225	0	N.D.	
74)	Naphthalene	0.00	128	0	N.D. d	



#16
Acetone
Concen: 0.52 PPBV
RT: 8.24 min Scan# 517
Delta R.T. 0.02 min
Lab File: L1100440.D
Acq: 17 Feb 2011 8:15 pm

Tgt Ion: 43 Resp: 23834

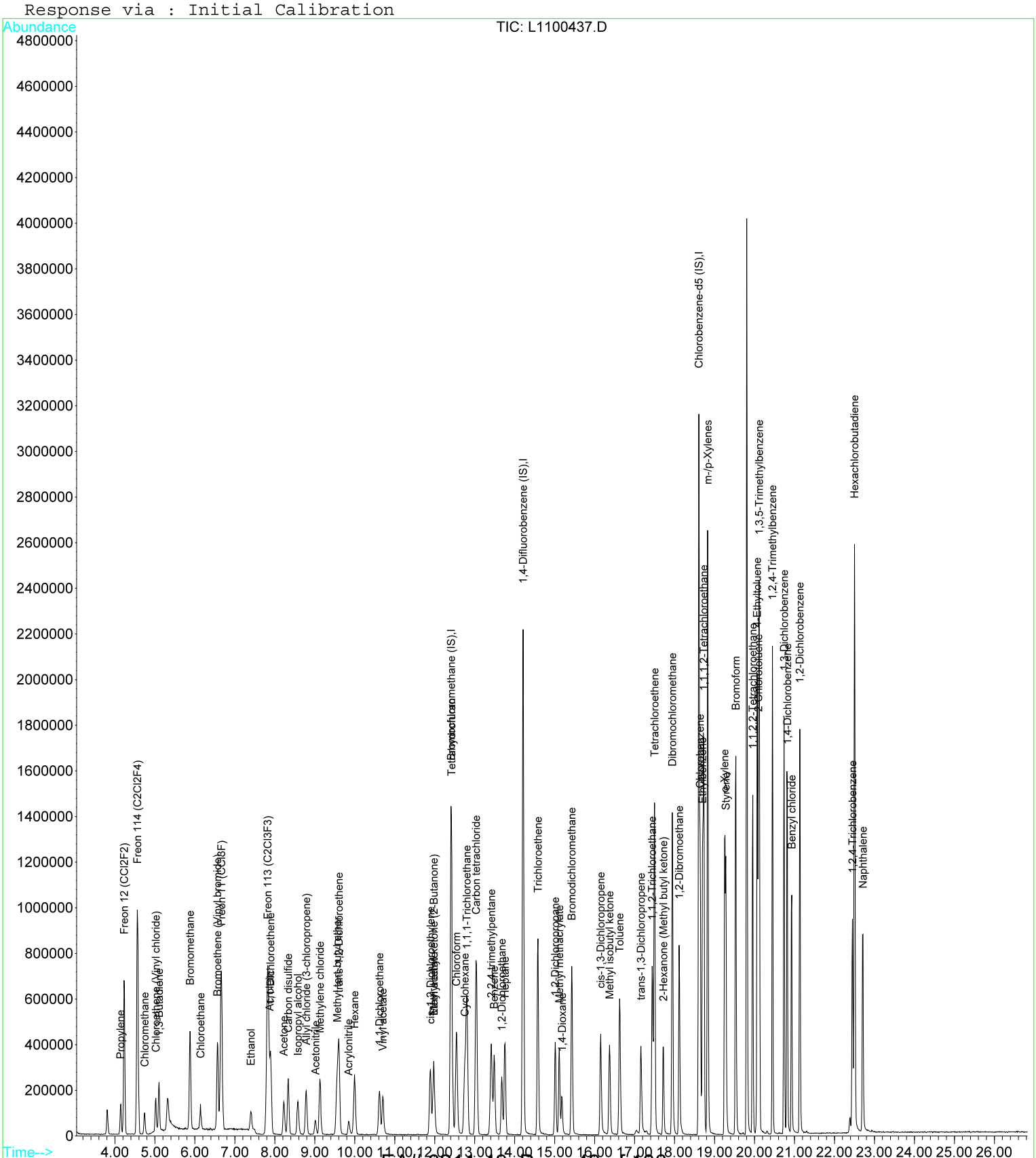
Ion	Ratio	Lower	Upper
43	100		
58	0.0	10.7	16.1#



Quantitation Report

Data File : C:\MS2011Q1\LURCH\DATA\FEB11\L021711A\L1100437.D Vial: 1
Acq On : 17 Feb 2011 5:55 pm Operator: tdd/cld
Sample : 5ppbv LCS std A Inst : Lurch
Misc : Can #1434 "A", 125mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 17 19:00 2011 Quant Results File: L021111A.RES

Method : M:\MS2011\METHODS\LURCH\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MS2011Q1\LURCH\DATA\FEB11\L021711A\L1100437.D Vial: 1
Acq On : 17 Feb 2011 5:55 pm Operator: tdd/cld
Sample : 5ppbv LCS std A Inst : Lurch
Misc : Can #1434 "A", 125mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 17 19:00 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS)	12.41	130	984010	11.24	PPBV		0.00
36) 1,4-Difluorobenzene (IS)	14.21	114	2904255	11.93	PPBV		0.00
48) Chlorobenzene-d5 (IS)	18.61	117	2312408	11.13	PPBV		0.01
Target Compounds							Qvalue
2) Propylene	4.14	41	84996	5.45	PPBV	#	1
3) Freon 12 (CCl2F2)	4.23	85	781732	5.04	PPBV		98
4) Freon 114 (C2Cl2F4)	4.56	85	697153	5.00	PPBV	#	94
5) Chloromethane	4.74	50	114387	5.03	PPBV		97
6) Chloroethene (Vinyl chlori	5.02	62	153572	4.77	PPBV		98
7) 1,3-Butadiene	5.10	39	138396	4.78	PPBV		88
8) Bromomethane	5.88	94	406642	4.81	PPBV		99
9) Chloroethane	6.14	64	73459	4.65	PPBV		97
10) Bromoethene (Vinyl bromide	6.56	106	428632	5.26	PPBV	#	98
11) Freon 11 (CCl3F)	6.66	101	1005355	5.32	PPBV		99
12) Ethanol	7.40	45	53647	5.27	PPBV	#	61
13) Acrolein	7.87	56	38903	5.20	PPBV		98
14) Freon 113 (C2Cl3F3)	7.82	151	502719	5.62	PPBV	#	100
15) 1,1-Dichloroethene	7.89	61	254753	5.32	PPBV	#	74
16) Acetone	8.22	43	295479	5.58	PPBV	#	91
17) Carbon disulfide	8.33	76	429730	5.33	PPBV		93
18) Isopropyl alcohol	8.58	45	264146	5.69	PPBV	#	100
19) Allyl chloride (3-chloropr	8.79	76	57230	5.35	PPBV		99
20) Acetonitrile	9.02	41	93403	5.48	PPBV	#	88
21) Methylene chloride	9.13	49	181630	5.03	PPBV		89
22) trans-1,2-Dichloroethene	9.60	61	217768	5.36	PPBV	#	79
23) Methyl tert-butyl ether	9.56	73	429867	5.38	PPBV		100
24) Acrylonitrile	9.84	53	67630	5.34	PPBV		93
25) Hexane	9.99	57	151306	5.47	PPBV		90
26) 1,1-Dichloroethane	10.62	63	240127	5.23	PPBV		99
27) Vinyl acetate	10.70	43	399838	5.43	PPBV		95
28) cis-1,2-Dichloroethylene	11.90	61	202090	5.38	PPBV	#	74
29) Methyl ethyl ketone (2-But	11.98	72	58433	5.80	PPBV		82
30) Ethyl acetate	11.98	45	44200	5.11	PPBV		95
31) Chloroform	12.54	83	509420	5.46	PPBV		99
32) Tetrahydrofuran	12.42	72	56800	5.55	PPBV		97
33) 1,1,1-Trichloroethane	12.80	97	681089	5.44	PPBV		95
34) Cyclohexane	12.75	56	155414	5.22	PPBV		95
35) Carbon tetrachloride	13.03	117	810106	5.57	PPBV		99
37) Benzene	13.49	78	397347	5.42	PPBV		95
38) 2,2,4-trimethylpentane	13.41	57	487392	5.21	PPBV		91
39) 1,2-Dichloroethane	13.68	62	298769	5.55	PPBV		100
40) Heptane	13.76	57	96159	5.43	PPBV		92
41) Trichloroethene	14.58	130	445685	5.52	PPBV		98
42) 1,2-Dichloropropane	15.01	63	124035	5.31	PPBV		98
43) Methyl methacrylate	15.12	69	122319	5.50	PPBV		90
44) 1,4-Dioxane	15.19	88	149576	5.50	PPBV		94
45) Bromodichloromethane	15.43	83	584728	5.45	PPBV		99
46) cis-1,3-Dichloropropene	16.15	75	276490	5.75	PPBV		99
47) Methyl isobutyl ketone	16.37	43	382575	5.57	PPBV		99
49) Toluene	16.62	91	690229	5.48	PPBV		99
50) trans-1,3-Dichloropropene	17.16	75	261931	4.98	PPBV	#	91
51) 1,1,2-Trichloroethane	17.44	97	333888	5.33	PPBV		92
52) Tetrachloroethene	17.50	166	579472	5.44	PPBV		96
53) 2-Hexanone (Methyl butyl k	17.72	43	320899	5.40	PPBV	#	94
54) Dibromochloromethane	17.94	129	961155	5.70	PPBV		100
55) 1,2-Dibromoethane	18.11	107	696177	5.12	PPBV		98
56) Chlorobenzene	18.64	112	832916	5.35	PPBV		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MS2011Q1\LURCH\DATA\FEB11\L021711A\L1100437.D Vial: 1
Acq On : 17 Feb 2011 5:55 pm Operator: tdd/cld
Sample : 5ppbv LCS std A Inst : Lurch
Misc : Can #1434 "A", 125mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 17 19:00 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
57)	Ethylbenzene	18.70	91	990575	5.24	PPBV		95
58)	1,1,1,2-Tetrachloroethane	18.73	131	534955	5.50	PPBV		91
59)	m-/p-Xylenes	18.83	91	1595242	10.28	PPBV		91
60)	o-Xylene	19.25	91	829103	5.39	PPBV		91
61)	Styrene	19.28	104	725152	5.23	PPBV	#	91
62)	Bromoform	19.53	173	909734	5.45	PPBV	#	99
63)	1,1,2,2-Tetrachloroethane	19.95	83	593847	5.33	PPBV		99
64)	4-Ethyltoluene	20.07	105	1421831	5.23	PPBV		100
65)	2-Chlorotoluene	20.10	91	1034550	4.87	PPBV		93
66)	1,3,5-Trimethylbenzene	20.12	105	1164626m	5.10	PPBV		Manual Int. "WP" (TDD)
67)	1,2,4-Trimethylbenzene	20.45	105	1173734	5.26	PPBV		99
68)	1,3-Dichlorobenzene	20.74	146	872832	5.56	PPBV		99
69)	1,4-Dichlorobenzene	20.82	146	849408m	5.33	PPBV		Manual Int. "WP" (TDD)
70)	Benzyl chloride	20.93	91	814865	5.46	PPBV		96
71)	1,2-Dichlorobenzene	21.13	146	864405	5.38	PPBV		99
72)	1,2,4-Trichlorobenzene	22.45	180	371405	4.44	PPBV		99
73)	Hexachlorobutadiene	22.50	225	553005m	4.82	PPBV		Manual Int. "II" (TDD)
74)	Naphthalene	22.71	128	1010521	4.37	PPBV		99

(#) = qualifier out of range (m) = manual integration

Calibration Curve Chromatograms

Response Factor Report

Sample ID	LID	FileName	Acq. Date		
0.4ppbv to15 std A	0.4	L1100398.D	02/11/11	14:40	
1ppbv to15 std A	1	L1100399.D	02/11/11	15:23	**Inst:** **Lurch**
2ppbv to15 std A	2	L1100400.D	02/11/11	16:42	
5ppbv to-15 std A	5	L1100386.D	02/10/11	20:50	**Curve:** **L021111A.M**
10ppbv to-15 std A	10	L1100387.D	02/10/11	21:32	
20ppbv to-15 std A	20	L1100388.D	02/10/11	22:19	
30ppbv to-15 std A	30	L1100389.D	02/10/11	23:10	

PASS

#	Name	0.4ppbv to15 std A	1ppbv to15 std A	2ppbv to15 std A	5ppbv to-15 std A	10ppbv to-15 std A	20ppbv to-15 std A	30ppbv to-15 std A	Average RF	%RSD
2)	Propylene	0.157	0.207	0.196	0.178	0.176	0.182	0.153	0.178	10.8%
3)	Freon 12 (CCl2F2)	1.57	1.91	1.92	1.71	1.77	1.88	1.65	1.77	7.74%
4)	Freon 114 (C2Cl2F4)	1.40	1.68	1.72	1.55	1.60	1.71	1.51	1.59	7.42%
5)	Chloromethane	0.248	0.285	0.280	0.248	0.259	0.270	0.230	0.260	7.50%
6)	Chloroethene (Vinyl chloride)	0.323	0.391	0.415	0.353	0.366	0.389	0.337	0.368	8.88%
7)	1,3-Butadiene	0.301	0.377	0.369	0.309	0.321	0.342	0.293	0.330	10.0%
8)	Bromomethane	0.890	1.06	1.04	0.930	0.928	1.01	0.912	0.968	7.14%
9)	Chloroethane	0.193	0.207	0.190	0.164	0.167	0.181	0.161	0.180	9.52%
10)	Bromoethene (Vinyl bromide)	0.858	1.05	0.976	0.904	0.914	0.969	0.851	0.932	7.63%
11)	Freon 11 (CCl3F)	2.16	2.51	2.40	2.07	2.05	2.12	1.81	2.16	10.9%
12)	Ethanol	0.103	0.169	0.132	0.112	0.107	0.0942	0.0970	0.116	22.5%
13)	Acrolein	0.0692	0.0984	0.0968	0.0826	0.0846	0.0876	0.0794	0.0855	11.8%
14)	Freon 113 (C2Cl3F3)	0.978	1.15	1.15	0.970	0.960	1.03	0.908	1.02	9.31%
15)	1,1-Dichloroethene	0.503	0.579	0.594	0.531	0.532	0.575	0.513	0.547	6.50%
16)	Acetone	0.629	0.669	0.670	0.576	0.556	0.603	0.534	0.605	8.86%
17)	Carbon disulfide	0.922	1.00	0.958	0.885	0.873	0.948	0.857	0.921	5.64%
18)	Isopropyl alcohol	0.535	0.600	0.565	0.523	0.491	0.526	0.472	0.530	8.12%
19)	Allyl chloride (3-chloropropene)	0.105	0.133	0.129	0.121	0.119	0.130	0.117	0.122	7.83%
20)	Acetonitrile		0.254	0.213	0.195	0.175	0.176	0.155	0.195	18.2%
21)	Methylene chloride	0.533	0.471	0.418	0.372	0.365	0.386	0.341	0.412	16.5%
22)	trans-1,2-Dichloroethene	0.414	0.511	0.506	0.449	0.448	0.483	0.438	0.464	7.91%
23)	Methyl tert-butyl ether	0.850	0.974	0.990	0.878	0.872	0.949	0.872	0.912	6.26%
24)	Acrylonitrile	0.104	0.147	0.159	0.145	0.151	0.163	0.144	0.145	13.4%
25)	Hexane	0.292	0.341	0.347	0.302	0.302	0.331	0.297	0.316	7.31%
26)	1,1-Dichloroethane	0.501	0.574	0.570	0.491	0.509	0.541	0.484	0.524	7.10%
27)	Vinyl acetate	0.634	0.875	0.916	0.839	0.862	0.929	0.833	0.841	11.7%
28)	cis-1,2-Dichloroethylene	0.384	0.450	0.459	0.419	0.422	0.457	0.413	0.429	6.43%
29)	Methyl ethyl ketone (2-Butanone)	0.0899	0.120	0.126	0.112	0.115	0.127	0.117	0.115	10.8%
30)	Ethyl acetate	0.0875	0.105	0.113	0.0975	0.0957	0.101	0.0906	0.0988	8.94%
31)	Chloroform	0.970	1.16	1.13	1.03	1.04	1.12	1.02	1.07	6.52%
32)	Tetrahydrofuran	0.105	0.126	0.128	0.110	0.115	0.123	0.112	0.117	7.48%
33)	1,1,1-Trichloroethane	1.33	1.61	1.54	1.37	1.38	1.47	1.31	1.43	7.76%
34)	Cyclohexane	0.315	0.347	0.382	0.335	0.333	0.353	0.319	0.340	6.75%
35)	Carbon tetrachloride	1.59	1.88	1.83	1.60	1.58	1.68	1.47	1.66	8.90%
37)	Benzene	0.267	0.325	0.333	0.291	0.295	0.315	0.284	0.301	7.94%
38)	2,2,4-trimethylpentane	0.344	0.429	0.412	0.379	0.376	0.397	0.355	0.385	7.85%
39)	1,2-Dichloroethane	0.202	0.235	0.241	0.215	0.216	0.233	0.207	0.221	6.80%
40)	Heptane	0.0675	0.0813	0.0788	0.0704	0.0710	0.0744	0.0659	0.0727	7.84%
41)	Trichloroethene	0.314	0.378	0.352	0.318	0.320	0.340	0.299	0.332	8.03%
42)	1,2-Dichloropropane	0.0928	0.107	0.101	0.0919	0.0931	0.100	0.0866	0.0960	7.08%
43)	Methyl methacrylate	0.0691	0.0979	0.102	0.0898	0.0919	0.100	0.0895	0.0914	12.0%
44)	1,4-Dioxane	0.108	0.115	0.119	0.108	0.109	0.118	0.106	0.112	4.91%
45)	Bromodichloromethane	0.404	0.478	0.468	0.417	0.431	0.468	0.416	0.440	6.90%
46)	cis-1,3-Dichloropropene	0.158	0.205	0.209	0.194	0.199	0.220	0.197	0.197	9.88%
47)	Methyl isobutyl ketone	0.234	0.308	0.313	0.281	0.281	0.299	0.260	0.282	9.90%
49)	Toluene	0.532	0.628	0.633	0.606	0.625	0.629	0.589	0.606	5.96%
50)	trans-1,3-Dichloropropene	0.215	0.247	0.264	0.254	0.274	0.269	0.251	0.253	7.74%
51)	1,1,2-Trichloroethane	0.266	0.317	0.314	0.300	0.311	0.311	0.290	0.301	6.00%
52)	Tetrachloroethene	0.495	0.561	0.545	0.497	0.521	0.510	0.464	0.513	6.31%
53)	2-Hexanone (Methyl butyl ketone)	0.187	0.260	0.310	0.293	0.323	0.330	0.300	0.286	17.2%
54)	Dibromochloromethane	0.768	0.893	0.870	0.795	0.829	0.805	0.721	0.812	7.25%
55)	1,2-Dibromoethane	0.580	0.682	0.679	0.638	0.679	0.683	0.636	0.654	5.90%
56)	Chlorobenzene	0.675	0.793	0.778	0.729	0.767	0.779	0.726	0.750	5.55%
57)	Ethylbenzene	0.811	0.955	0.933	0.884	0.932	0.954	0.896	0.909	5.61%
58)	1,1,1,2-Tetrachloroethane	0.441	0.515	0.499	0.466	0.478	0.464	0.414	0.468	7.25%
59)	m-/p-Xylenes	0.674	0.764	0.754	0.721	0.766	0.796	0.752	0.747	5.20%
60)	o-Xylene	0.663	0.787	0.764	0.716	0.757	0.767	0.723	0.740	5.67%
61)	Styrene	0.540	0.687	0.692	0.653	0.697	0.715	0.689	0.668	8.87%
62)	Bromoform	0.740	0.877	0.862	0.780	0.822	0.809	0.733	0.803	6.96%
63)	1,1,2,2-Tetrachloroethane	0.475	0.586	0.569	0.534	0.548	0.542	0.501	0.537	7.12%

Response Factor Report

Sample ID	LID	FileName	Acq. Date		
0.4ppbv to15 std A	0.4	L1100398.D	02/11/11 14:40		
1ppbv to15 std A	1	L1100399.D	02/11/11 15:23	**Inst:**	**Lurch**
2ppbv to15 std A	2	L1100400.D	02/11/11 16:42		
5ppbv to-15 std A	5	L1100386.D	02/10/11 20:50	**Curve:**	**L021111A.M**
10ppbv to-15 std A	10	L1100387.D	02/10/11 21:32		
20ppbv to-15 std A	20	L1100388.D	02/10/11 22:19		
30ppbv to-15 std A	30	L1100389.D	02/10/11 23:10		

PASS

#	Name	0.4ppbv to15 std A	1ppbv to15 std A	2ppbv to15 std A	5ppbv to-15 std A	10ppbv to-15 std A	20ppbv to-15 std A	30ppbv to-15 std A	Average RF	%RSD
64)	4-Ethyltoluene	1.05	1.41	1.33	1.27	1.38	1.40	1.31	1.31	9.54%
65)	2-Chlorotoluene	0.911	1.07	1.05	1.00	1.04	1.06	1.01	1.02	5.44%
66)	1,3,5-Trimethylbenzene	1.05	1.18	1.17	1.07	1.10	1.11	1.01	1.10	5.46%
67)	1,2,4-Trimethylbenzene	0.932	1.17	1.13	1.05	1.10	1.10	1.03	1.07	7.27%
68)	1,3-Dichlorobenzene	0.599	0.831	0.818	0.743	0.788	0.794	0.719	0.756	10.5%
69)	1,4-Dichlorobenzene	0.633	0.835	0.824	0.747	0.801	0.802	0.731	0.767	9.20%
70)	Benzyl chloride	0.474	0.738	0.750	0.717	0.774	0.803	0.771	0.718	15.5%
71)	1,2-Dichlorobenzene	0.675	0.897	0.838	0.755	0.780	0.773	0.698	0.774	9.91%
72)	1,2,4-Trichlorobenzene	0.158	0.435	0.461	0.338	0.432	0.493	0.503	0.403	30.0%
73)	Hexachlorobutadiene	0.474	0.815	0.651	0.478	0.490	0.499	0.456	0.552	24.1%
74)	Naphthalene	0.532	1.28	1.31	0.953	1.15	1.29	1.29	1.11	25.7%

= %RSD >30 and <40, two allowed
= %RSD >40, zero allowed

Relative Retention Time Report

Sample ID	LID	FileName	Acq. Date		
0.4ppbv to15 std A	0.4	L1100398.D	02/11/11 14:40		
1ppbv to15 std A	1	L1100399.D	02/11/11 15:23	**Inst:**	**Lurch**
2ppbv to15 std A	2	L1100400.D	02/11/11 16:42		
5ppbv to-15 std A	5	L1100386.D	02/10/11 20:50	**Curve:**	**L021111A.M**
10ppbv to-15 std A	10	L1100387.D	02/10/11 21:32		
20ppbv to-15 std A	20	L1100388.D	02/10/11 22:19		
30ppbv to-15 std A	30	L1100389.D	02/10/11 23:10		

#	Name	0.4ppbv to15 std A	1ppbv to15 std A	2ppbv to15 std A	5ppbv to-15 std A	10ppbv to-15 std A	20ppbv to-15 std A	30ppbv to-15 std A	Average RRT
2)	Propylene	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
3)	Freon 12 (CCl2F2)	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
4)	Freon 114 (C2Cl2F4)	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37
5)	Chloromethane	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38
6)	Chloroethene (Vinyl chloride)	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
7)	1,3-Butadiene	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41
8)	Bromomethane	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
9)	Chloroethane	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
10)	Bromoethene (Vinyl bromide)	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
11)	Freon 11 (CCl3F)	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
12)	Ethanol	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
13)	Acrolein	0.64	0.63	0.63	0.63	0.63	0.63	0.63	0.63
14)	Freon 113 (C2Cl3F3)	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63
15)	1,1-Dichloroethene	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
16)	Acetone	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
17)	Carbon disulfide	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
18)	Isopropyl alcohol	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
19)	Allyl chloride (3-chloropropene)	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
20)	Acetonitrile	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
21)	Methylene chloride	0.74	0.74	0.74	0.73	0.74	0.74	0.74	0.74
22)	trans-1,2-Dichloroethene	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
23)	Methyl tert-butyl ether	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
24)	Acrylonitrile	0.80	0.80	0.79	0.79	0.79	0.79	0.79	0.79
25)	Hexane	0.81	0.81	0.81	0.80	0.81	0.81	0.81	0.81
26)	1,1-Dichloroethane	0.86	0.86	0.86	0.85	0.86	0.86	0.85	0.86
27)	Vinyl acetate	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
28)	cis-1,2-Dichloroethylene	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
29)	Methyl ethyl ketone (2-Butanone)	0.97	0.97	0.97	0.96	0.96	0.96	0.96	0.96
30)	Ethyl acetate	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
31)	Chloroform	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
32)	Tetrahydrofuran	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
33)	1,1,1-Trichloroethane	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
34)	Cyclohexane	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
35)	Carbon tetrachloride	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
37)	Benzene	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
38)	2,2,4-trimethylpentane	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
39)	1,2-Dichloroethane	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
40)	Heptane	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
41)	Trichloroethene	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
42)	1,2-Dichloropropane	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
43)	Methyl methacrylate	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
44)	1,4-Dioxane	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
45)	Bromodichloromethane	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
46)	cis-1,3-Dichloropropene	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
47)	Methyl isobutyl ketone	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15
49)	Toluene	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
50)	trans-1,3-Dichloropropene	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
51)	1,1,2-Trichloroethane	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
52)	Tetrachloroethene	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
53)	2-Hexanone (Methyl butyl ketone)	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
54)	Dibromochloromethane	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
55)	1,2-Dibromoethane	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
56)	Chlorobenzene	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
57)	Ethylbenzene	1.01	1.00	1.01	1.01	1.00	1.01	1.00	1.01
58)	1,1,1,2-Tetrachloroethane	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
59)	m-/p-Xylenes	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
60)	o-Xylene	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
61)	Styrene	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
62)	Bromoform	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
63)	1,1,2,2-Tetrachloroethane	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
64)	4-Ethyltoluene	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08

Relative Retention Time Report

Sample ID	LID	FileName	Acq. Date
0.4ppbv to15 std A	0.4	L1100398.D	02/11/11 14:40
1ppbv to15 std A	1	L1100399.D	02/11/11 15:23
2ppbv to15 std A	2	L1100400.D	02/11/11 16:42
5ppbv to-15 std A	5	L1100386.D	02/10/11 20:50
10ppbv to-15 std A	10	L1100387.D	02/10/11 21:32
20ppbv to-15 std A	20	L1100388.D	02/10/11 22:19
30ppbv to-15 std A	30	L1100389.D	02/10/11 23:10

Inst: Lurch

Curve: L021111A.M

#	Name	0.4ppbv to15 std A	1ppbv to15 std A	2ppbv to15 std A	5ppbv to-15 std A	10ppbv to-15 std A	20ppbv to-15 std A	30ppbv to-15 std A	Average RRT
65)	2-Chlorotoluene	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
66)	1,3,5-Trimethylbenzene	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
67)	1,2,4-Trimethylbenzene	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
68)	1,3-Dichlorobenzene	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
69)	1,4-Dichlorobenzene	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
70)	Benzyl chloride	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
71)	1,2-Dichlorobenzene	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
72)	1,2,4-Trichlorobenzene	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
73)	Hexachlorobutadiene	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21
74)	Naphthalene	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22

= RRT outside 0.06 unit RRT window

Internal Standards Retention Time Report

Sample ID	LID	FileName	Acq. Date
0.4ppbv to15 std A	0.4	L1100398.D	02/11/11 14:40
1ppbv to15 std A	1	L1100399.D	02/11/11 15:23
2ppbv to15 std A	2	L1100400.D	02/11/11 16:42
5ppbv to-15 std A	5	L1100386.D	02/10/11 20:50
10ppbv to-15 std A	10	L1100387.D	02/10/11 21:32
20ppbv to-15 std A	20	L1100388.D	02/10/11 22:19
30ppbv to-15 std A	30	L1100389.D	02/10/11 23:10

Inst: **Lurch**

Curve: **L021111A.M**

#	Name	0.4ppbv to15 std A	1ppbv to15 std A	2ppbv to15 std A	5ppbv to-15 std A	10ppbv to-15 std A	20ppbv to-15 std A	30ppbv to-15 std A	Average
1)	Bromochloromethane (IS)	12.43	12.43	12.43	12.40	12.40	12.40	12.41	12.41
36)	1,4-Difluorobenzene (IS)	14.23	14.23	14.23	14.20	14.20	14.20	14.21	14.21
48)	Chlorobenzene-d5 (IS)	18.60	18.61	18.60	18.59	18.60	18.59	18.59	18.60

= ISTD retention time outside of 20 sec (0.33 min) window

Internal Standards Area Report

Sample ID	LID	FileName	Acq. Date		
0.4ppbv to15 std A	0.4	L1100398.D	02/11/11 14:40		
1ppbv to15 std A	1	L1100399.D	02/11/11 15:23	**Inst:**	**Lurch**
2ppbv to15 std A	2	L1100400.D	02/11/11 16:42		
5ppbv to-15 std A	5	L1100386.D	02/10/11 20:50	**Curve:**	**L021111A.M**
10ppbv to-15 std A	10	L1100387.D	02/10/11 21:32		
20ppbv to-15 std A	20	L1100388.D	02/10/11 22:19		
30ppbv to-15 std A	30	L1100389.D	02/10/11 23:10		

#	Name	0.4ppbv to15 std A	1ppbv to15 std A	2ppbv to15 std A	5ppbv to-15 std A	10ppbv to-15 std A	20ppbv to-15 std A	30ppbv to-15 std A	Average
1)	Bromochloromethane (IS)	873,087	763,953	786,578	857,643	839,895	835,157	981,377	848,241
36)	1,4-Difluorobenzene (IS)	2,565,767	2,258,222	2,307,213	2,579,573	2,550,701	2,566,607	3,055,944	2,554,861
48)	Chlorobenzene-d5 (IS)	1,934,152	1,764,107	1,820,826	1,951,915	1,906,841	2,123,122	2,445,621	1,992,369

= ISTD response outside of 40% window

Tag Values

#	Compound Name	30ppbv	20ppbv	10ppbv	5ppbv	4ppbv	2ppbv	1ppbv	0.4ppbv	0.2ppbv
2)	Propylene	33.0	22.0	11.0	5.50	4.40	2.20	1.10	0.44	
3)	Freon 12 (CCl2F2)	29.4	19.6	9.80	4.90	3.92	1.96	0.980	0.392	
4)	Freon 114 (C2Cl2F4)	29.4	19.6	9.80	4.90	3.92	1.96	0.980	0.392	
5)	Chloromethane	29.7	19.8	9.90	4.95	3.96	1.98	0.990	0.396	
6)	Chloroethene (Vinyl chloride)	29.4	19.6	9.80	4.90	3.92	1.96	0.980	0.392	
7)	1,3-Butadiene	30.9	20.6	10.3	5.15	4.12	2.06	1.03	0.412	
8)	Bromomethane	29.4	19.6	9.80	4.90	3.92	1.96	0.980	0.392	
9)	Chloroethane	29.4	19.6	9.80	4.90	3.92	1.96	0.980	0.392	
10)	Bromoethene (Vinyl bromide)	30.6	20.4	10.2	5.10	4.08	2.04	1.02	0.408	
11)	Freon 11 (CCl3F)	30.3	20.2	10.1	5.05	4.04	2.02	1.01	0.404	
12)	Ethanol	32.1	21.4	10.7	5.35	4.28	2.14	1.07	0.428	
13)	Acrolein	30.9	20.6	10.3	5.15	4.12	2.06	1.03	0.412	
14)	Freon 113 (C2Cl3F3)	30.9	20.6	10.3	5.15	4.12	2.06	1.03	0.412	
15)	1,1-Dichloroethene	30.9	20.6	10.3	5.15	4.12	2.06	1.03	0.412	
16)	Acetone	31.8	21.2	10.6	5.30	4.24	2.12	1.06	0.424	
17)	Carbon disulfide	31.2	20.8	10.4	5.20	4.16	2.08	1.04	0.416	
18)	Isopropyl alcohol	33.0	22.0	11.0	5.50	4.40	2.20	1.10	0.44	
19)	Allyl chloride (3-chloropropene)	31.8	21.2	10.6	5.30	4.24	2.12	1.06	0.424	
20)	Acetonitrile	27.9	18.6	9.30	4.65	3.72	1.86	0.930	0.372	
21)	Methylene chloride	31.2	20.8	10.4	5.20	4.16	2.08	1.04	0.416	
22)	trans-1,2-Dichloroethene	30.9	20.6	10.3	5.15	4.12	2.06	1.03	0.412	
23)	Methyl tert-butyl ether	31.2	20.8	10.4	5.20	4.16	2.08	1.04	0.416	
24)	Acrylonitrile	30.3	20.2	10.1	5.05	4.04	2.02	1.01	0.404	
25)	Hexane	31.8	21.2	10.6	5.30	4.24	2.12	1.06	0.424	
26)	1,1-Dichloroethane	30.6	20.4	10.2	5.10	4.08	2.04	1.02	0.408	
27)	Vinyl acetate	31.5	21.0	10.5	5.25	4.20	2.10	1.05	0.42	
28)	cis-1,2-Dichloroethylene	30.9	20.6	10.3	5.15	4.12	2.06	1.03	0.412	
29)	Methyl ethyl ketone (2-Butanone)	31.8	21.2	10.6	5.30	4.24	2.12	1.06	0.424	
30)	Ethyl acetate	31.2	20.8	10.4	5.20	4.16	2.08	1.04	0.416	
31)	Chloroform	31.2	20.8	10.4	5.20	4.16	2.08	1.04	0.416	
32)	Tetrahydrofuran	32.1	21.4	10.7	5.35	4.28	2.14	1.07	0.428	
33)	1,1,1-Trichloroethane	30.6	20.4	10.2	5.10	4.08	2.04	1.02	0.408	
34)	Cyclohexane	30.9	20.6	10.3	5.15	4.12	2.06	1.03	0.412	
35)	Carbon tetrachloride	30.6	20.4	10.2	5.10	4.08	2.04	1.02	0.408	
37)	Benzene	30.6	20.4	10.2	5.10	4.08	2.04	1.02	0.408	
38)	2,2,4-trimethylpentane	29.4	19.6	9.80	4.90	3.92	1.96	0.980	0.392	
39)	1,2-Dichloroethane	30.6	20.4	10.2	5.10	4.08	2.04	1.02	0.408	
40)	Heptane	31.2	20.8	10.4	5.20	4.16	2.08	1.04	0.416	
41)	Trichloroethene	30.9	20.6	10.3	5.15	4.12	2.06	1.03	0.412	
42)	1,2-Dichloropropane	30.9	20.6	10.3	5.15	4.12	2.06	1.03	0.412	
43)	Methyl methacrylate	30.3	20.2	10.1	5.05	4.04	2.02	1.01	0.404	
44)	1,4-Dioxane	30.9	20.6	10.3	5.15	4.12	2.06	1.03	0.412	
45)	Bromodichloromethane	30.9	20.6	10.3	5.15	4.12	2.06	1.03	0.412	
46)	cis-1,3-Dichloropropene	31.8	21.2	10.6	5.30	4.24	2.12	1.06	0.424	
47)	Methyl isobutyl ketone	31.5	21.0	10.5	5.25	4.20	2.10	1.05	0.42	
49)	Toluene	31.2	20.8	10.4	5.20	4.16	2.08	1.04	0.416	
50)	trans-1,3-Dichloropropene	29.1	19.4	9.70	4.85	3.88	1.94	0.970	0.388	
51)	1,1,2-Trichloroethane	31.2	20.8	10.4	5.20	4.16	2.08	1.04	0.416	
52)	Tetrachloroethene	30.6	20.4	10.2	5.10	4.08	2.04	1.02	0.408	
53)	2-Hexanone (Methyl butyl ketone)	32.4	21.6	10.8	5.40	4.32	2.16	1.08	0.432	
54)	Dibromochloromethane	32.4	21.6	10.8	5.40	4.32	2.16	1.08	0.432	
55)	1,2-Dibromoethane	30.6	20.4	10.2	5.10	4.08	2.04	1.02	0.408	
56)	Chlorobenzene	31.5	21.0	10.5	5.25	4.20	2.10	1.05	0.42	
57)	Ethylbenzene	31.2	20.8	10.4	5.20	4.16	2.08	1.04	0.416	
58)	1,1,1,2-Tetrachloroethane	31.2	20.8	10.4	5.20	4.16	2.08	1.04	0.416	
59)	m-/p-Xylenes	61.2	40.8	20.4	10.2	8.16	4.08	2.04	0.816	
60)	o-Xylene	31.8	21.2	10.6	5.30	4.24	2.12	1.06	0.424	
61)	Styrene	31.2	20.8	10.4	5.20	4.16	2.08	1.04	0.416	

Tag Values

#	Compound Name	30ppbv	20ppbv	10ppbv	5ppbv	4ppbv	2ppbv	1ppbv	0.4ppbv	0.2ppbv
62)	Bromoform	30.6	20.4	10.2	5.10	4.08	2.04	1.02	0.408	
63)	1,1,2,2-Tetrachloroethane	31.8	21.2	10.6	5.30	4.24	2.12	1.06	0.424	
64)	4-Ethyltoluene	31.2	20.8	10.4	5.20	4.16	2.08	1.04	0.416	
65)	2-Chlorotoluene	29.1	19.4	9.70	4.85	3.88	1.94	0.970	0.388	
66)	1,3,5-Trimethylbenzene	30.9	20.6	10.3	5.15	4.12	2.06	1.03	0.412	
67)	1,2,4-Trimethylbenzene	31.2	20.8	10.4	5.20	4.16	2.08	1.04	0.416	
68)	1,3-Dichlorobenzene	31.5	21.0	10.5	5.25	4.20	2.10	1.05	0.42	
69)	1,4-Dichlorobenzene	30.6	20.4	10.2	5.10	4.08	2.04	1.02	0.408	
70)	Benzyl chloride	31.5	21.0	10.5	5.25	4.20	2.10	1.05	0.42	
71)	1,2-Dichlorobenzene	30.9	20.6	10.3	5.15	4.12	2.06	1.03	0.412	
72)	1,2,4-Trichlorobenzene	30.6	20.4	10.2	5.10	4.08	2.04	1.02	0.408	
73)	Hexachlorobutadiene	30.9	20.6	10.3	5.15	4.12	2.06	1.03	0.412	
74)	Naphthalene	31.5	21.0	10.5	5.25	4.20	2.10	1.05	0.42	

Response Factor Report Lurch

Method : M:\MS2011\METHODS\LURCH\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration

Calibration Files
0.4 =L1100398.D 1.0 =L1100399.D 2 =L1100400.D
5 =L1100386.D 10 =L1100387.D 20 =L1100388.D

		Compound	0.4	1.0	2	5	10	20	Avg	%RSD
1)	I	Bromochloromethane (I	ISTD							
2)		Propylene	0.157	0.207	0.196	0.178	0.176	0.182	0.178	10.80
3)		Freon 12 (CCl2F2)	1.566	1.907	1.923	1.710	1.768	1.879	1.772	7.74
4)		Freon 114 (C2Cl2F4)	1.397	1.681	1.716	1.545	1.599	1.710	1.594	7.42
5)		Chloromethane	0.248	0.285	0.280	0.248	0.259	0.270	0.260	7.50
6)		Chloroethene (Vinyl	0.323	0.391	0.415	0.353	0.366	0.389	0.368	8.88
7)		1,3-Butadiene	0.301	0.377	0.369	0.309	0.321	0.342	0.330	10.03
8)		Bromomethane	0.890	1.065	1.037	0.915	0.928	1.015	0.966	7.32
9)		Chloroethane	0.193	0.207	0.190	0.164	0.167	0.181	0.180	9.52
10)		Bromoethene (Vinyl	0.858	1.049	0.976	0.904	0.914	0.969	0.932	7.63
11)		Freon 11 (CCl3F)	2.156	2.513	2.401	2.071	2.046	2.119	2.159	10.88
12)		Ethanol	0.103	0.169	0.132	0.112	0.107	0.094	0.116	22.53
13)		Acrolein	0.069	0.098	0.097	0.083	0.085	0.088	0.085	11.77
14)		Freon 113 (C2Cl3F3)	0.978	1.148	1.151	0.970	0.960	1.034	1.021	9.31
15)		1,1-Dichloroethene	0.503	0.579	0.594	0.531	0.532	0.575	0.547	6.50
16)		Acetone	0.629	0.669	0.670	0.576	0.556	0.603	0.605	8.86
17)		Carbon disulfide	0.922	1.001	0.958	0.885	0.873	0.948	0.921	5.64
18)		Isopropyl alcohol	0.535	0.600	0.565	0.523	0.491	0.526	0.530	8.12
19)		Allyl chloride (3-c	0.105	0.133	0.129	0.121	0.119	0.130	0.122	7.83
20)		Acetonitrile		0.254	0.213	0.195	0.175	0.176	0.195	18.18
21)		Methylene chloride	0.533	0.471	0.418	0.372	0.365	0.386	0.412	16.47
22)		trans-1,2-Dichloroe	0.414	0.511	0.506	0.449	0.448	0.483	0.464	7.91
23)		Methyl tert-butyl e	0.850	0.974	0.990	0.878	0.872	0.949	0.912	6.26
24)		Acrylonitrile	0.104	0.147	0.159	0.145	0.151	0.163	0.145	13.37
25)		Hexane	0.292	0.341	0.347	0.302	0.302	0.331	0.316	7.31
26)		1,1-Dichloroethane	0.501	0.574	0.570	0.491	0.509	0.541	0.524	7.10
27)		Vinyl acetate	0.634	0.875	0.916	0.839	0.862	0.929	0.841	11.69
28)		cis-1,2-Dichloroeth	0.384	0.450	0.459	0.419	0.422	0.457	0.429	6.43
29)		Methyl ethyl ketone	0.090	0.120	0.126	0.112	0.115	0.127	0.115	10.76
30)		Ethyl acetate	0.088	0.105	0.113	0.097	0.096	0.101	0.099	8.94
31)		Chloroform	0.970	1.159	1.128	1.027	1.036	1.121	1.066	6.52
32)		Tetrahydrofuran	0.105	0.126	0.128	0.110	0.115	0.123	0.117	7.48
33)		1,1,1-Trichloroetha	1.332	1.607	1.536	1.373	1.376	1.474	1.430	7.76
34)		Cyclohexane	0.315	0.347	0.382	0.335	0.333	0.353	0.340	6.75
35)		Carbon tetrachlorid	1.589	1.883	1.835	1.596	1.585	1.676	1.662	8.90
36)	I	1,4-Difluorobenzene (	ISTD							
37)		Benzene	0.267	0.325	0.333	0.291	0.295	0.315	0.301	7.94
38)		2,2,4-trimethylpent	0.344	0.429	0.412	0.379	0.376	0.397	0.385	7.85
39)		1,2-Dichloroethane	0.202	0.235	0.241	0.215	0.216	0.233	0.221	6.80
40)		Heptane	0.067	0.081	0.079	0.070	0.071	0.074	0.073	7.84
41)		Trichloroethene	0.314	0.378	0.352	0.318	0.320	0.340	0.332	8.03
42)		1,2-Dichloropropane	0.093	0.107	0.101	0.092	0.093	0.100	0.096	7.08
43)		Methyl methacrylate	0.069	0.098	0.102	0.090	0.092	0.100	0.091	11.97
44)		1,4-Dioxane	0.108	0.115	0.119	0.108	0.109	0.118	0.112	4.91
45)		Bromodichloromethan	0.404	0.478	0.468	0.417	0.431	0.468	0.440	6.90
46)		cis-1,3-Dichloropro	0.158	0.205	0.209	0.194	0.199	0.220	0.197	9.88
47)		Methyl isobutyl ket	0.234	0.308	0.313	0.281	0.281	0.299	0.282	9.90
48)	I	Chlorobenzene-d5 (IS)	ISTD							
49)		Toluene	0.532	0.628	0.633	0.606	0.625	0.629	0.606	5.96
50)		trans-1,3-Dichlorop	0.215	0.247	0.264	0.254	0.274	0.269	0.253	7.74
51)		1,1,2-Trichloroetha	0.266	0.317	0.314	0.300	0.311	0.311	0.301	6.00
52)		Tetrachloroethene	0.495	0.561	0.545	0.497	0.521	0.510	0.513	6.31
53)		2-Hexanone (Methyl	0.187	0.260	0.310	0.293	0.323	0.330	0.286	17.24
54)		Dibromochloromethan	0.768	0.893	0.870	0.795	0.829	0.805	0.812	7.25
55)		1,2-Dibromoethane	0.580	0.682	0.679	0.638	0.679	0.683	0.654	5.90
56)		Chlorobenzene	0.675	0.793	0.778	0.729	0.767	0.779	0.750	5.55
57)		Ethylbenzene	0.811	0.955	0.933	0.884	0.932	0.954	0.909	5.61

(#) = Out of Range ### Number of calibration levels exceeded format ###
L021111A.M Fri Feb 11 19:37:46 2011 Page 1

Method : M:\MS2011\METHODS\LURCH\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration

Calibration Files
0.4 =L1100398.D 1.0 =L1100399.D 2 =L1100400.D
5 =L1100386.D 10 =L1100387.D 20 =L1100388.D

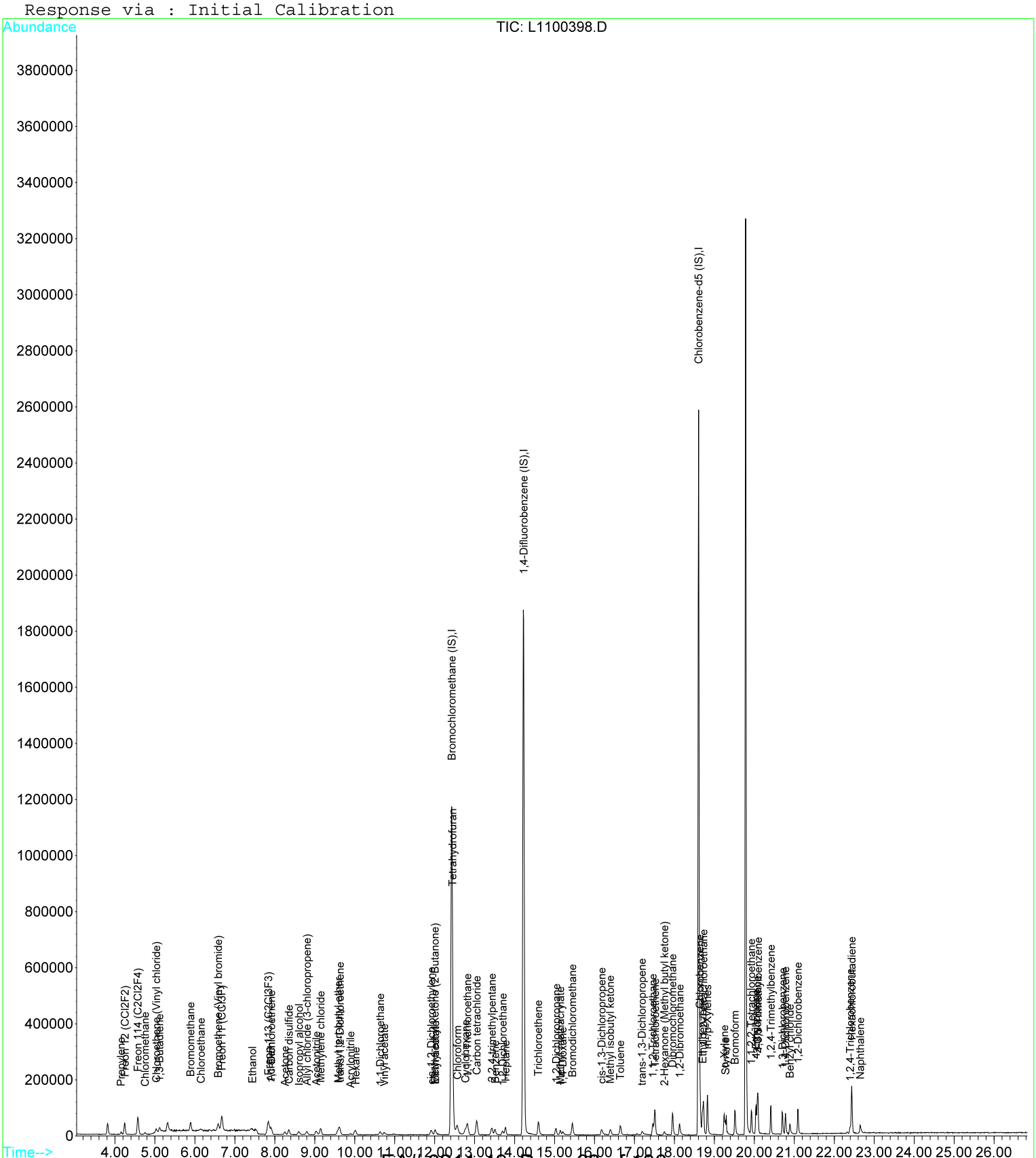
	Compound	0.4	1.0	2	5	10	20	Avg	%RSD
58)	1,1,1,2-Tetrachloro	0.441	0.515	0.499	0.466	0.478	0.464	0.468	7.25
59)	m-/p-Xylenes	0.674	0.764	0.754	0.721	0.766	0.796	0.747	5.20
60)	o-Xylene	0.663	0.787	0.764	0.716	0.757	0.767	0.740	5.67
61)	Styrene	0.540	0.687	0.692	0.653	0.697	0.715	0.668	8.87
62)	Bromoform	0.740	0.877	0.862	0.780	0.822	0.809	0.803	6.96
63)	1,1,2,2-Tetrachloro	0.475	0.586	0.569	0.534	0.548	0.542	0.537	7.12
64)	4-Ethyltoluene	1.047	1.406	1.332	1.272	1.376	1.404	1.307	9.54
65)	2-Chlorotoluene	0.911	1.071	1.054	1.002	1.044	1.065	1.022	5.44
66)	1,3,5-Trimethylbenz	1.054	1.180	1.168	1.070	1.095	1.111	1.099	5.46
67)	1,2,4-Trimethylbenz	0.932	1.172	1.131	1.047	1.102	1.096	1.074	7.27
68)	1,3-Dichlorobenzene	0.599	0.831	0.818	0.743	0.788	0.794	0.756	10.54
69)	1,4-Dichlorobenzene	0.633	0.835	0.824	0.747	0.801	0.802	0.767	9.20
70)	Benzyl chloride	0.474	0.738	0.750	0.717	0.774	0.803	0.718	15.46
71)	1,2-Dichlorobenzene	0.675	0.897	0.838	0.755	0.780	0.773	0.774	9.91
72)	1,2,4-Trichlorobenz	0.158	0.435	0.461	0.338	0.432	0.493	0.403	29.98
73)	Hexachlorobutadiene	0.474	0.815	0.651	0.478	0.490	0.499	0.552	24.11
74)	Naphthalene	0.532	1.284	1.307	0.953	1.148	1.288	1.114	25.71

(#) = Out of Range ### Number of calibration levels exceeded format ###
L021111A.M Fri Feb 11 19:37:46 2011

Quantitation Report

Data File : M:\MS2011Q1\LURCH\DATA\FEB11\L021011B\L1100398.D Vial: 1
Acq On : 11 Feb 2011 2:40 pm Operator: tdd/cld
Sample : 0.4ppbv to15 std A Inst : Lurch
Misc : Can #1420, 2ppbv to15 std, 100mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 11 19:08 2011 Quant Results File: L021111A.RES

Method : M:\MS2011\METHODS\LURCH\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 17:14:05 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MS2011Q1\LURCH\DATA\FEB11\L021011B\L1100398.D Vial: 1
Acq On : 11 Feb 2011 2:40 pm Operator: tdd/cld
Sample : 0.4ppbv to15 std A Inst : Lurch
Misc : Can #1420, 2ppbv to15 std, 100mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 11 19:08 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 12:03:10 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS)	12.43	130	873087	11.24	PPBV		0.02
36) 1,4-Difluorobenzene (IS)	14.23	114	2565767	11.93	PPBV		0.02
48) Chlorobenzene-d5 (IS)	18.60	117	1934152	11.13	PPBV		0.02
Target Compounds							Qvalue
2) Propylene	4.15	41	5352	0.35	PPBV	#	1
3) Freon 12 (CCl2F2)	4.25	85	47673	0.31	PPBV		98
4) Freon 114 (C2Cl2F4)	4.57	85	42527	0.31	PPBV	#	95
5) Chloromethane	4.75	50	7631	0.34	PPBV		97
6) Chloroethene (Vinyl chlori	5.03	62	9824	0.31	PPBV		89
7) 1,3-Butadiene	5.11	39	9643	0.35	PPBV	#	88
8) Bromomethane	5.89	94	27092	0.33	PPBV		95
9) Chloroethane	6.15	64	5877	0.38	PPBV	#	41
10) Bromoethene (Vinyl bromide	6.58	106	27180	0.34	PPBV		99
11) Freon 11 (CCl3F)	6.67	101	67648	0.37	PPBV		100
12) Ethanol	7.44	45	3412	0.36	PPBV	#	1
13) Acrolein	7.90	56	2216	0.30	PPBV		100
14) Freon 113 (C2Cl3F3)	7.84	151	31294	0.36	PPBV	#	100
15) 1,1-Dichloroethene	7.91	61	16102	0.34	PPBV	#	74
16) Acetone	8.25	43	20717	0.42	PPBV		94
17) Carbon disulfide	8.35	76	29785	0.38	PPBV	#	78
18) Isopropyl alcohol	8.60	45	18298	0.40	PPBV	#	91
19) Allyl chloride (3-chloropr	8.80	76	3472	0.32	PPBV	#	91
20) Acetonitrile	9.04	41	21677	1.06	PPBV	#	69
21) Methylene chloride	9.15	49	17227	0.49	PPBV		93
22) trans-1,2-Dichloroethene	9.63	61	13235	0.33	PPBV	#	67
23) Methyl tert-butyl ether	9.59	73	27471	0.36	PPBV	#	91
24) Acrylonitrile	9.89	53	3264	0.27	PPBV		91
25) Hexane	10.02	57	9606	0.36	PPBV		89
26) 1,1-Dichloroethane	10.64	63	15876	0.36	PPBV		94
27) Vinyl acetate	10.74	43	20668	0.30	PPBV		99
28) cis-1,2-Dichloroethylene	11.91	61	12275	0.33	PPBV	#	69
29) Methyl ethyl ketone (2-But	12.00	72	2961	0.31	PPBV		87
30) Ethyl acetate	12.01	45	2829	0.35	PPBV	#	78
31) Chloroform	12.57	83	31351	0.34	PPBV		99
32) Tetrahydrofuran	12.45	72	3486	0.36	PPBV		87
33) 1,1,1-Trichloroethane	12.82	97	42229	0.35	PPBV		95
34) Cyclohexane	12.77	56	10066	0.35	PPBV	#	93
35) Carbon tetrachloride	13.05	117	50352	0.36	PPBV		100
37) Benzene	13.51	78	23385	0.33	PPBV		97
38) 2,2,4-trimethylpentane	13.43	57	29012	0.31	PPBV		89
39) 1,2-Dichloroethane	13.70	62	17754	0.34	PPBV		98
40) Heptane	13.78	57	6038	0.35	PPBV	#	84
41) Trichloroethene	14.59	130	27860	0.36	PPBV		94
42) 1,2-Dichloropropane	15.04	63	8221	0.36	PPBV		98
43) Methyl methacrylate	15.14	69	6008	0.29	PPBV		95
44) 1,4-Dioxane	15.20	88	9526	0.36	PPBV	#	81
45) Bromodichloromethane	15.45	83	35812	0.35	PPBV		97
46) cis-1,3-Dichloropropene	16.18	75	14398	0.31	PPBV		99
47) Methyl isobutyl ketone	16.39	43	21150	0.32	PPBV		96
49) Toluene	16.64	91	38457	0.33	PPBV		98
50) trans-1,3-Dichloropropene	17.19	75	14484m	0.31	PPBV		
51) 1,1,2-Trichloroethane	17.46	97	19243	0.34	PPBV		94
52) Tetrachloroethene	17.52	166	35062	0.36	PPBV		97
53) 2-Hexanone (Methyl butyl k	17.75	43	14046	0.27	PPBV	#	61
54) Dibromochloromethane	17.95	129	57639	0.38	PPBV		99
55) 1,2-Dibromoethane	18.13	107	41134	0.34	PPBV		99
56) Chlorobenzene	18.63	112	49258	0.35	PPBV	#	82

Manual Int. "II" (CLD)

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\MS2011Q1\LURCH\DATA\FEB11\L021011B\L1100398.D Vial: 1
Acq On : 11 Feb 2011 2:40 pm Operator: tdd/cld
Sample : 0.4ppbv to15 std A Inst : Lurch
Misc : Can #1420, 2ppbv to15 std, 100mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 11 19:08 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 12:03:10 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
57)	Ethylbenzene	18.71	91	58623	0.35	PPBV		93
58)	1,1,1,2-Tetrachloroethane	18.73	131	31871	0.36	PPBV	#	76
59)	m-/p-Xylenes	18.83	91	95627	0.69	PPBV		91
60)	o-Xylene	19.25	91	48886	0.36	PPBV		88
61)	Styrene	19.28	104	39054	0.32	PPBV	#	92
62)	Bromoform	19.51	173	52456	0.36	PPBV	#	95
63)	1,1,2,2-Tetrachloroethane	19.92	83	35003	0.36	PPBV		99
64)	4-Ethyltoluene	20.04	105	75685	0.32	PPBV		99
65)	2-Chlorotoluene	20.07	91	61435	0.33	PPBV		94
66)	1,3,5-Trimethylbenzene	20.09	105	75467m	0.38	PPBV		
67)	1,2,4-Trimethylbenzene	20.42	105	67359	0.34	PPBV		98
68)	1,3-Dichlorobenzene	20.71	146	43740	0.33	PPBV		98
69)	1,4-Dichlorobenzene	20.78	146	44859	0.33	PPBV		93
70)	Benzyl chloride	20.89	91	34614	0.27	PPBV		99
71)	1,2-Dichlorobenzene	21.09	146	48335	0.35	PPBV		95
72)	1,2,4-Trichlorobenzene	22.40	180	11220	0.18	PPBV		98
73)	Hexachlorobutadiene	22.44	225	33956	0.37	PPBV		98
74)	Naphthalene	22.65	128	38842	0.22	PPBV		95

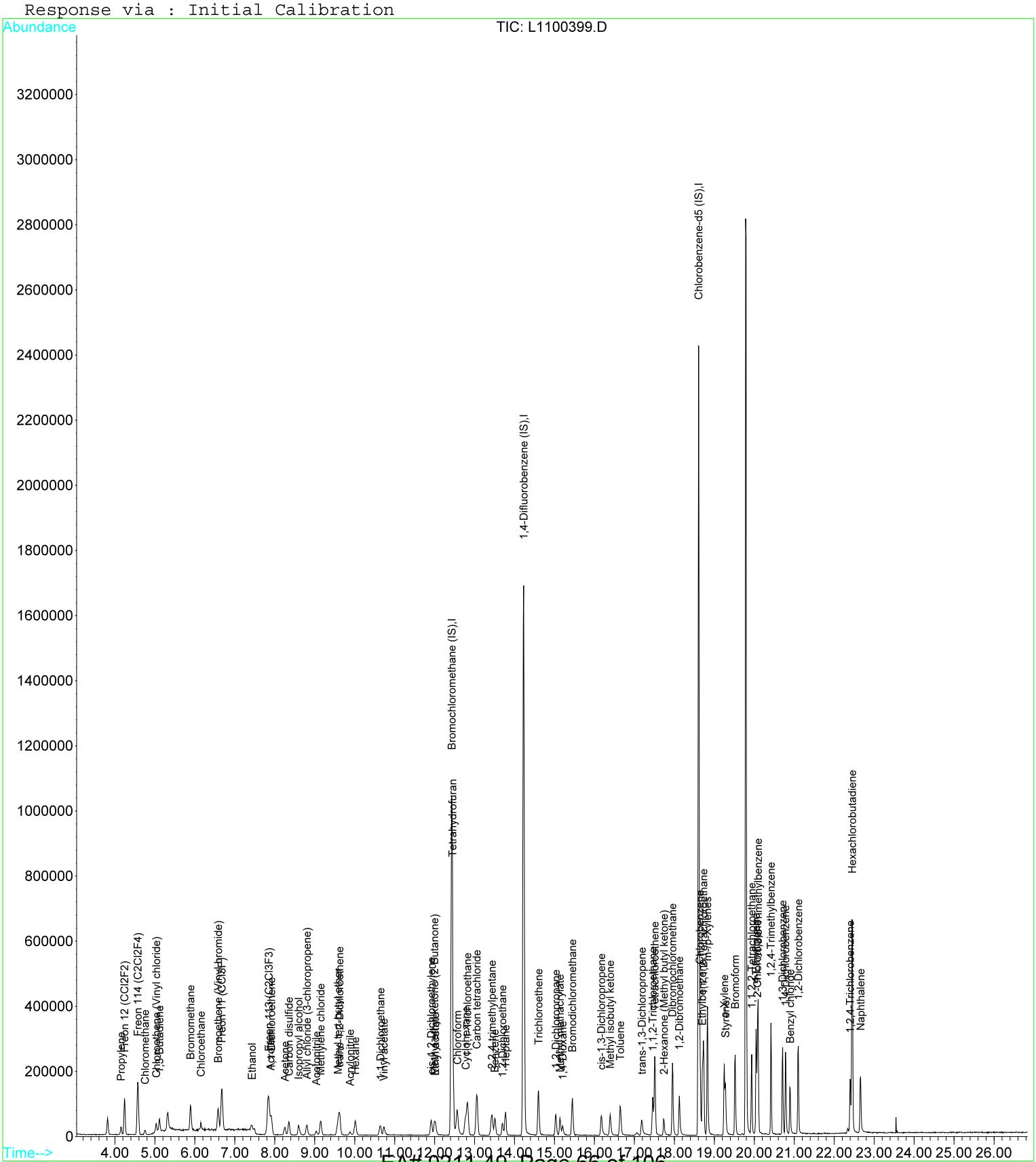
Manual Int. “II” (CLD)

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MS2011Q1\LURCH\DATA\FEB11\L021011B\L1100399.D Vial: 1
Acq On : 11 Feb 2011 3:23 pm Operator: tdd/cld
Sample : 1ppbv to15 std A Inst : Lurch
Misc : Can #1420, 2ppbv to15 std, 250mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 11 16:19 2011 Quant Results File: L021111A.RES

Method : M:\MS2011\METHODS\LURCH\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:10:11 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MS2011Q1\LURCH\DATA\FEB11\L021011B\L1100399.D Vial: 1
Acq On : 11 Feb 2011 3:23 pm Operator: tdd/cld
Sample : 1ppbv to15 std A Inst : Lurch
Misc : Can #1420, 2ppbv to15 std, 250mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 11 16:19 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 15:44:07 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS)	12.43	130	763953	11.24	PPBV		0.02
36) 1,4-Difluorobenzene (IS)	14.23	114	2258222	11.93	PPBV		0.02
48) Chlorobenzene-d5 (IS)	18.61	117	1764107	11.13	PPBV		0.01
Target Compounds							Qvalue
2) Propylene	4.15	41	15442	1.28	PPBV	#	1
3) Freon 12 (CCl2F2)	4.24	85	127024	1.04	PPBV		99
4) Freon 114 (C2Cl2F4)	4.57	85	111976	1.03	PPBV	#	95
5) Chloromethane	4.75	50	19147	1.09	PPBV		100
6) Chloroethene (Vinyl chlori	5.03	62	26073	1.05	PPBV		99
7) 1,3-Butadiene	5.11	39	26425	1.18	PPBV		97
8) Bromomethane	5.89	94	70915	1.08	PPBV		96
9) Chloroethane	6.15	64	13773	1.12	PPBV	#	81
10) Bromoethene (Vinyl bromide	6.58	106	72734	1.13	PPBV		97
11) Freon 11 (CCl3F)	6.67	101	172541	1.17	PPBV		98
12) Ethanol	7.43	45	12255	1.56	PPBV	#	31
13) Acrolein	7.89	56	6886	1.20	PPBV		94
14) Freon 113 (C2Cl3F3)	7.85	151	80367	1.15	PPBV	#	100
15) 1,1-Dichloroethene	7.91	61	40546	1.07	PPBV	#	71
16) Acetone	8.25	43	48182	1.17	PPBV	#	89
17) Carbon disulfide	8.35	76	70781	1.11	PPBV		99
18) Isopropyl alcohol	8.59	45	44894	1.23	PPBV	#	91
19) Allyl chloride (3-chloropr	8.81	76	9609	1.12	PPBV		94
20) Acetonitrile	9.04	41	16083	0.81	PPBV	#	87
21) Methylene chloride	9.15	49	33279	1.15	PPBV		94
22) trans-1,2-Dichloroethene	9.62	61	35797	1.13	PPBV	#	82
23) Methyl tert-butyl ether	9.58	73	68843	1.10	PPBV	#	95
24) Acrylonitrile	9.88	53	10064	1.02	PPBV		98
25) Hexane	10.01	57	24590	1.13	PPBV		89
26) 1,1-Dichloroethane	10.65	63	39769	1.11	PPBV		98
27) Vinyl acetate	10.73	43	62423	1.08	PPBV		98
28) cis-1,2-Dichloroethylene	11.92	61	31489	1.06	PPBV	#	67
29) Methyl ethyl ketone (2-But	12.00	72	8638	1.09	PPBV		96
30) Ethyl acetate	12.02	45	7457	1.11	PPBV	#	90
31) Chloroform	12.57	83	81937	1.12	PPBV		97
32) Tetrahydrofuran	12.45	72	9190	1.15	PPBV		93
33) 1,1,1-Trichloroethane	12.82	97	111442	1.14	PPBV		96
34) Cyclohexane	12.78	56	24327	1.04	PPBV	#	1
35) Carbon tetrachloride	13.05	117	130531	1.16	PPBV		99
37) Benzene	13.50	78	62711	1.09	PPBV		98
38) 2,2,4-trimethylpentane	13.43	57	79552	1.07	PPBV		91
39) 1,2-Dichloroethane	13.70	62	45459	1.08	PPBV		98
40) Heptane	13.78	57	16002	1.16	PPBV		97
41) Trichloroethene	14.60	130	73641	1.18	PPBV		99
42) 1,2-Dichloropropane	15.03	63	20808	1.13	PPBV		99
43) Methyl methacrylate	15.13	69	18725	1.09	PPBV		93
44) 1,4-Dioxane	15.21	88	22448	1.03	PPBV		97
45) Bromodichloromethane	15.45	83	93221	1.11	PPBV		98
46) cis-1,3-Dichloropropene	16.17	75	41176	1.09	PPBV		95
47) Methyl isobutyl ketone	16.39	43	61224	1.15	PPBV		98
49) Toluene	16.64	91	103481	1.06	PPBV		96
50) trans-1,3-Dichloropropene	17.19	75	37988	0.96	PPBV	#	91
51) 1,1,2-Trichloroethane	17.46	97	52246	1.07	PPBV		94
52) Tetrachloroethene	17.51	166	90647	1.10	PPBV		97
53) 2-Hexanone (Methyl butyl k	17.74	43	44479	1.00	PPBV		97
54) Dibromochloromethane	17.95	129	152850	1.19	PPBV		98
55) 1,2-Dibromoethane	18.12	107	110269	1.05	PPBV		100
56) Chlorobenzene	18.64	112	131933	1.10	PPBV		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\MS2011Q1\LURCH\DATA\FEB11\L021011B\L1100399.D Vial: 1
Acq On : 11 Feb 2011 3:23 pm Operator: tdd/cld
Sample : 1ppbv to15 std A Inst : Lurch
Misc : Can #1420, 2ppbv to15 std, 250mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 11 16:19 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 15:44:07 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
57)	Ethylbenzene	18.70	91	157404	1.08	PPBV		94
58)	1,1,1,2-Tetrachloroethane	18.73	131	84895	1.13	PPBV	#	88
59)	m-/p-Xylenes	18.83	91	246973	2.07	PPBV		89
60)	o-Xylene	19.25	91	132268	1.11	PPBV		91
61)	Styrene	19.28	104	113323	1.07	PPBV	#	91
62)	Bromoform	19.52	173	141747	1.13	PPBV	#	99
63)	1,1,2,2-Tetrachloroethane	19.93	83	98536	1.16	PPBV		100
64)	4-Ethyltoluene	20.04	105	231738	1.13	PPBV		97
65)	2-Chlorotoluene	20.07	91	164598	1.01	PPBV		94
66)	1,3,5-Trimethylbenzene	20.10	105	192627m	1.12	PPBV		
67)	1,2,4-Trimethylbenzene	20.42	105	193143	1.15	PPBV		98
68)	1,3-Dichlorobenzene	20.71	146	138305	1.20	PPBV		99
69)	1,4-Dichlorobenzene	20.78	146	134941	1.16	PPBV		98
70)	Benzyl chloride	20.90	91	122792	1.12	PPBV		97
71)	1,2-Dichlorobenzene	21.10	146	146463	1.24	PPBV		98
72)	1,2,4-Trichlorobenzene	22.40	180	70396	1.34	PPBV		99
73)	Hexachlorobutadiene	22.45	225	133043	1.78	PPBV		98
74)	Naphthalene	22.66	128	213773	1.47	PPBV		98

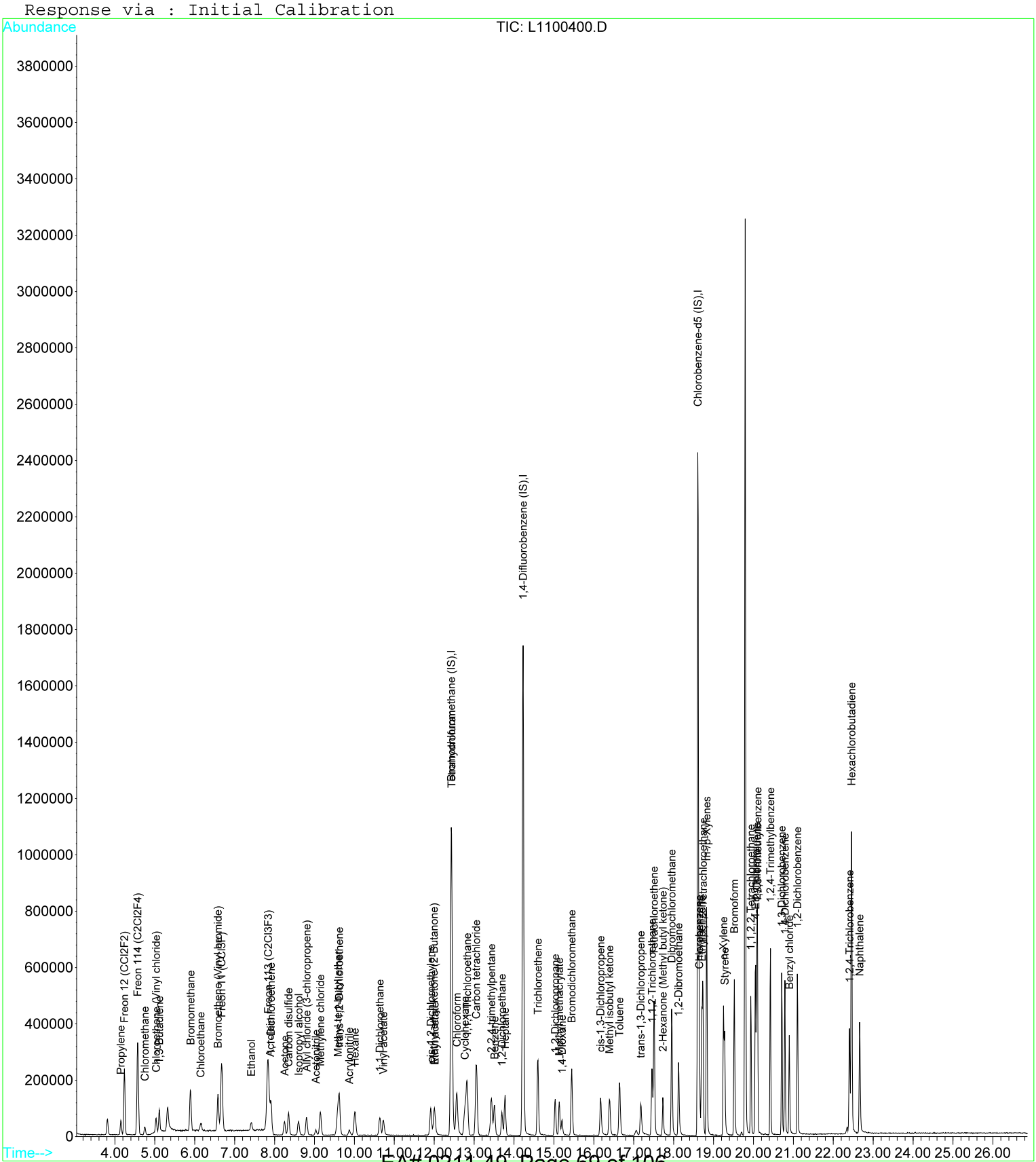
Manual Int. “II” (CLD)

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MS2011Q1\LURCH\DATA\FEB11\L021011B\L1100400.D Vial: 1
Acq On : 11 Feb 2011 4:42 pm Operator: tdd/cld
Sample : 2ppbv to15 std A Inst : Lurch
Misc : Can #1420, 2ppbv to15 std, 500mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 11 19:11 2011 Quant Results File: L021111A.RES

Method : M:\MS2011\METHODS\LURCH\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:13:02 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MS2011Q1\LURCH\DATA\FEB11\L021011B\L1100400.D Vial: 1
Acq On : 11 Feb 2011 4:42 pm Operator: tdd/cld
Sample : 2ppbv to15 std A Inst : Lurch
Misc : Can #1420, 2ppbv to15 std, 500mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 11 19:11 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:10:11 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS)	12.43	130	786578	11.24	PPBV		0.00
36) 1,4-Difluorobenzene (IS)	14.23	114	2307213	11.93	PPBV		0.00
48) Chlorobenzene-d5 (IS)	18.60	117	1820826	11.13	PPBV		0.00
Target Compounds							Qvalue
2) Propylene	4.15	41	30181	2.42	PPBV	#	1
3) Freon 12 (CCl2F2)	4.24	85	263706	2.13	PPBV		98
4) Freon 114 (C2Cl2F4)	4.57	85	235319	2.11	PPBV	#	95
5) Chloromethane	4.75	50	38824	2.13	PPBV		99
6) Chloroethene (Vinyl chlori	5.03	62	56862	2.21	PPBV		100
7) 1,3-Butadiene	5.11	39	53147	2.30	PPBV		90
8) Bromomethane	5.90	94	142275	2.10	PPBV		100
9) Chloroethane	6.15	64	26076	2.07	PPBV	#	88
10) Bromoethene (Vinyl bromide	6.58	106	139388	2.14	PPBV		96
11) Freon 11 (CCl3F)	6.67	101	339361	2.25	PPBV		99
12) Ethanol	7.42	45	19787	2.43	PPBV	#	51
13) Acrolein	7.89	56	13949	2.33	PPBV		93
14) Freon 113 (C2Cl3F3)	7.84	151	165920	2.32	PPBV	#	100
15) 1,1-Dichloroethene	7.91	61	85656	2.24	PPBV	#	74
16) Acetone	8.25	43	99451	2.35	PPBV	#	90
17) Carbon disulfide	8.35	76	139481	2.16	PPBV	#	92
18) Isopropyl alcohol	8.60	45	87016	2.34	PPBV	#	99
19) Allyl chloride (3-chloropr	8.81	76	19131	2.24	PPBV		100
20) Acetonitrile	9.04	41	27727	1.45	PPBV	#	77
21) Methylene chloride	9.15	49	60804	2.11	PPBV		89
22) trans-1,2-Dichloroethene	9.62	61	72943	2.25	PPBV	#	81
23) Methyl tert-butyl ether	9.59	73	144116	2.26	PPBV		99
24) Acrylonitrile	9.87	53	22435	2.22	PPBV		92
25) Hexane	10.01	57	51491	2.33	PPBV		84
26) 1,1-Dichloroethane	10.64	63	81423	2.22	PPBV		97
27) Vinyl acetate	10.73	43	134647	2.29	PPBV		97
28) cis-1,2-Dichloroethylene	11.91	61	66204	2.20	PPBV	#	72
29) Methyl ethyl ketone (2-But	11.99	72	18662	2.31	PPBV		97
30) Ethyl acetate	12.01	45	16491	2.38	PPBV	#	89
31) Chloroform	12.57	83	164159	2.20	PPBV		96
32) Tetrahydrofuran	12.44	72	19107	2.33	PPBV		96
33) 1,1,1-Trichloroethane	12.83	97	219254	2.19	PPBV		96
34) Cyclohexane	12.77	56	55078	2.31	PPBV		96
35) Carbon tetrachloride	13.05	117	261945	2.25	PPBV		99
37) Benzene	13.51	78	131545	2.26	PPBV		96
38) 2,2,4-trimethylpentane	13.43	57	156194	2.10	PPBV		92
39) 1,2-Dichloroethane	13.69	62	94982	2.22	PPBV		99
40) Heptane	13.78	57	31699	2.25	PPBV		93
41) Trichloroethene	14.60	130	140188	2.19	PPBV		96
42) 1,2-Dichloropropane	15.03	63	40204	2.17	PPBV		96
43) Methyl methacrylate	15.13	69	39686	2.25	PPBV		89
44) 1,4-Dioxane	15.20	88	47323	2.19	PPBV	#	85
45) Bromodichloromethane	15.45	83	186619	2.19	PPBV		98
46) cis-1,3-Dichloropropene	16.17	75	85747	2.25	PPBV		98
47) Methyl isobutyl ketone	16.39	43	127073	2.33	PPBV		99
49) Toluene	16.64	91	215232	2.17	PPBV		96
50) trans-1,3-Dichloropropene	17.18	75	83749	2.02	PPBV	#	90
51) 1,1,2-Trichloroethane	17.46	97	106769	2.17	PPBV		95
52) Tetrachloroethene	17.51	166	181727	2.17	PPBV		96
53) 2-Hexanone (Methyl butyl k	17.73	43	109412	2.34	PPBV		97
54) Dibromochloromethane	17.95	129	307500	2.32	PPBV		98
55) 1,2-Dibromoethane	18.12	107	226507	2.12	PPBV		100
56) Chlorobenzene	18.65	112	267138	2.18	PPBV		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\MS2011Q1\LURCH\DATA\FEB11\L021011B\L1100400.D Vial: 1
Acq On : 11 Feb 2011 4:42 pm Operator: tdd/cld
Sample : 2ppbv to15 std A Inst : Lurch
Misc : Can #1420, 2ppbv to15 std, 500mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 11 19:11 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:10:11 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

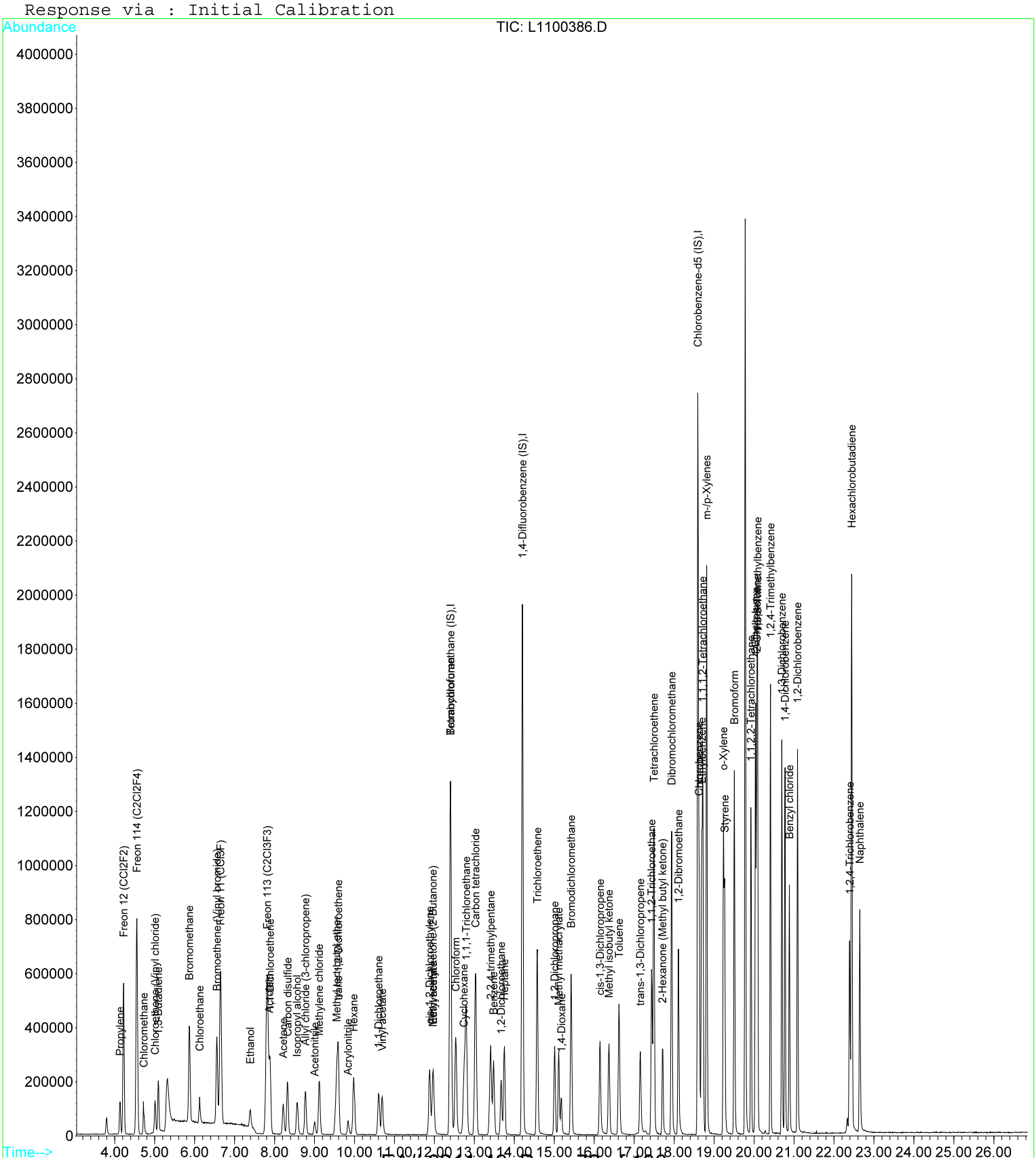
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
57)	Ethylbenzene	18.71	91	317456	2.13	PPBV		93
58)	1,1,1,2-Tetrachloroethane	18.74	131	169926	2.22	PPBV	#	91
59)	m-/p-Xylenes	18.83	91	503168	4.12	PPBV		91
60)	o-Xylene	19.25	91	265038	2.19	PPBV		89
61)	Styrene	19.28	104	235500	2.16	PPBV	#	90
62)	Bromoform	19.52	173	287645	2.19	PPBV	#	98
63)	1,1,2,2-Tetrachloroethane	19.93	83	197514	2.25	PPBV		99
64)	4-Ethyltoluene	20.05	105	453377	2.12	PPBV		100
65)	2-Chlorotoluene	20.08	91	334534	2.00	PPBV		94
66)	1,3,5-Trimethylbenzene	20.10	105	393566	2.19	PPBV	#	77
67)	1,2,4-Trimethylbenzene	20.43	105	384938	2.19	PPBV		100
68)	1,3-Dichlorobenzene	20.71	146	281108	2.27	PPBV		99
69)	1,4-Dichlorobenzene	20.79	146	275014	2.19	PPBV		97
70)	Benzyl chloride	20.90	91	257508	2.19	PPBV		96
71)	1,2-Dichlorobenzene	21.10	146	282342	2.23	PPBV		99
72)	1,2,4-Trichlorobenzene	22.41	180	153927	2.33	PPBV		98
73)	Hexachlorobutadiene	22.46	225	219405	2.43	PPBV		98
74)	Naphthalene	22.66	128	449004	2.46	PPBV		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MS2011Q1\LURCH\DATA\FEB11\L021011B\L1100386.D Vial: 1
Acq On : 10 Feb 2011 8:50 pm Operator: tdd/cld
Sample : 5ppbv to-15 std A Inst : Lurch
Misc : Can #1464 "A", 125mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 11 19:13 2011 Quant Results File: L021111A.RES

Method : M:\MS2011\METHODS\LURCH\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MS2011Q1\LURCH\DATA\FEB11\L021011B\L1100386.D Vial: 1
Acq On : 10 Feb 2011 8:50 pm Operator: tdd/cld
Sample : 5ppbv to-15 std A Inst : Lurch
Misc : Can #1464 "A", 125mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 11 19:13 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:13:02 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS)	12.40	130	857643	11.24	PPBV		-0.02
36) 1,4-Difluorobenzene (IS)	14.20	114	2579573	11.93	PPBV		-0.02
48) Chlorobenzene-d5 (IS)	18.59	117	1951915	11.13	PPBV		-0.01
Target Compounds							Qvalue
2) Propylene	4.13	41	74578	5.48	PPBV	#	1
3) Freon 12 (CCl2F2)	4.22	85	639354	4.73	PPBV		98
4) Freon 114 (C2Cl2F4)	4.56	85	577768	4.75	PPBV	#	95
5) Chloromethane	4.73	50	93813	4.73	PPBV		99
6) Chloroethene (Vinyl chlori	5.01	62	131933	4.70	PPBV		99
7) 1,3-Butadiene	5.09	39	121554	4.82	PPBV		89
8) Bromomethane	5.86	94	347733	4.72	PPBV		100
9) Chloroethane	6.13	64	61482	4.47	PPBV		100
10) Bromoethene (Vinyl bromide	6.56	106	351626	4.95	PPBV	#	98
11) Freon 11 (CCl3F)	6.65	101	797883	4.84	PPBV		99
12) Ethanol	7.39	45	45835	5.16	PPBV	#	57
13) Acrolein	7.87	56	32462	4.97	PPBV		95
14) Freon 113 (C2Cl3F3)	7.82	151	381056	4.89	PPBV	#	100
15) 1,1-Dichloroethene	7.89	61	208677	5.00	PPBV	#	75
16) Acetone	8.22	43	232736	5.04	PPBV	#	91
17) Carbon disulfide	8.33	76	351258	5.00	PPBV		93
18) Isopropyl alcohol	8.56	45	219327	5.42	PPBV	#	99
19) Allyl chloride (3-chloropr	8.77	76	49096	5.27	PPBV		98
20) Acetonitrile	9.00	41	69152	3.31	PPBV	#	85
21) Methylene chloride	9.11	49	147509	4.69	PPBV		88
22) trans-1,2-Dichloroethene	9.60	61	176362	4.98	PPBV	#	80
23) Methyl tert-butyl ether	9.56	73	348260	5.00	PPBV		98
24) Acrylonitrile	9.84	53	55782	5.06	PPBV		94
25) Hexane	9.98	57	121993	5.06	PPBV		90
26) 1,1-Dichloroethane	10.60	63	191137	4.78	PPBV		100
27) Vinyl acetate	10.69	43	336091	5.24	PPBV		97
28) cis-1,2-Dichloroethylene	11.88	61	164710	5.03	PPBV	#	75
29) Methyl ethyl ketone (2-But	11.96	72	45474	5.17	PPBV		97
30) Ethyl acetate	11.97	45	38682	5.13	PPBV	#	90
31) Chloroform	12.53	83	407354	5.01	PPBV		98
32) Tetrahydrofuran	12.40	72	45026	5.05	PPBV		91
33) 1,1,1-Trichloroethane	12.80	97	534217	4.89	PPBV		95
34) Cyclohexane	12.74	56	131494	5.06	PPBV		99
35) Carbon tetrachloride	13.03	117	621210	4.90	PPBV		99
37) Benzene	13.48	78	320692	4.92	PPBV		96
38) 2,2,4-trimethylpentane	13.41	57	401516	4.83	PPBV		90
39) 1,2-Dichloroethane	13.67	62	236711	4.95	PPBV		99
40) Heptane	13.75	57	79108	5.03	PPBV		96
41) Trichloroethene	14.58	130	354566	4.95	PPBV		98
42) 1,2-Dichloropropane	15.01	63	102322	4.93	PPBV		100
43) Methyl methacrylate	15.11	69	98082	4.97	PPBV		92
44) 1,4-Dioxane	15.18	88	120195	4.98	PPBV		96
45) Bromodichloromethane	15.42	83	463956	4.87	PPBV		98
46) cis-1,3-Dichloropropene	16.15	75	222413	5.21	PPBV		98
47) Methyl isobutyl ketone	16.37	43	318501	5.22	PPBV		98
49) Toluene	16.62	91	552808	5.20	PPBV		98
50) trans-1,3-Dichloropropene	17.15	75	215780	4.86	PPBV	#	92
51) 1,1,2-Trichloroethane	17.43	97	273964	5.18	PPBV		91
52) Tetrachloroethene	17.49	166	444270	4.94	PPBV		97
53) 2-Hexanone (Methyl butyl k	17.71	43	277166	5.52	PPBV		96
54) Dibromochloromethane	17.94	129	753062	5.29	PPBV		98
55) 1,2-Dibromoethane	18.11	107	570847	4.98	PPBV		100
56) Chlorobenzene	18.62	112	671543	5.11	PPBV		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\MS2011Q1\LURCH\DATA\FEB11\L021011B\L1100386.D Vial: 1
Acq On : 10 Feb 2011 8:50 pm Operator: tdd/cld
Sample : 5ppbv to-15 std A Inst : Lurch
Misc : Can #1464 "A", 125mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 11 19:13 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:13:02 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

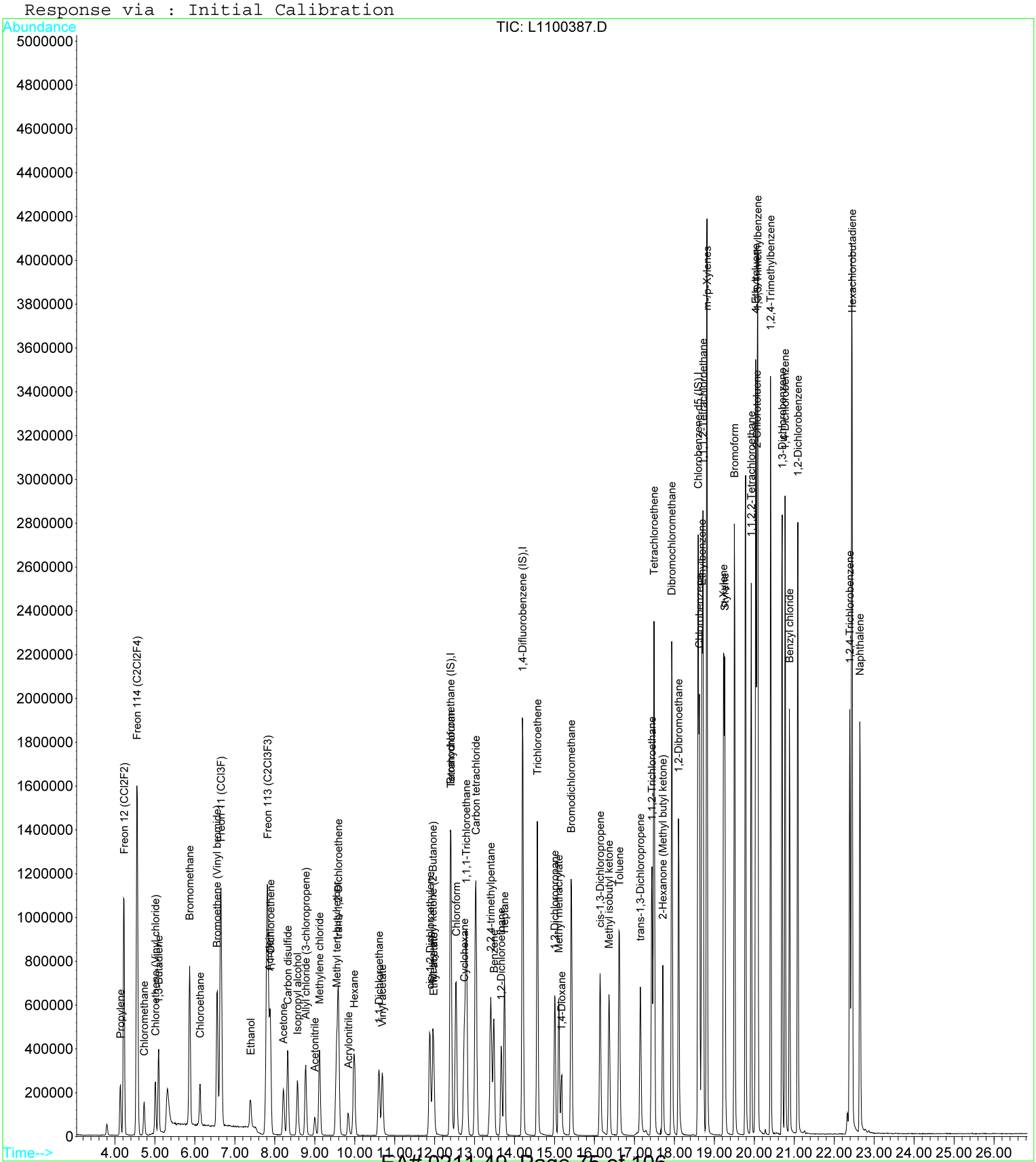
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
57)	Ethylbenzene	18.69	91	806263	5.06	PPBV		93
58)	1,1,1,2-Tetrachloroethane	18.71	131	424929	5.17	PPBV		90
59)	m-/p-Xylenes	18.81	91	1290395	9.85	PPBV		90
60)	o-Xylene	19.23	91	665689	5.13	PPBV		89
61)	Styrene	19.27	104	595122	5.08	PPBV	#	90
62)	Bromoform	19.51	173	698045	4.96	PPBV	#	98
63)	1,1,2,2-Tetrachloroethane	19.92	83	495982	5.27	PPBV		99
64)	4-Ethyltoluene	20.04	105	1160412	5.06	PPBV		99
65)	2-Chlorotoluene	20.07	91	852126	4.75	PPBV		94
66)	1,3,5-Trimethylbenzene	20.09	105	966196	5.01	PPBV	#	76
67)	1,2,4-Trimethylbenzene	20.41	105	954867	5.07	PPBV		99
68)	1,3-Dichlorobenzene	20.69	146	684417	5.16	PPBV		99
69)	1,4-Dichlorobenzene	20.77	146	667762	4.96	PPBV		99
70)	Benzyl chloride	20.89	91	660308	5.24	PPBV		96
71)	1,2-Dichlorobenzene	21.09	146	681925	5.03	PPBV		99
72)	1,2,4-Trichlorobenzene	22.39	180	302434	4.28	PPBV		98
73)	Hexachlorobutadiene	22.44	225	432135	4.46	PPBV		98
74)	Naphthalene	22.65	128	877150	4.49	PPBV		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MS2011Q1\LURCH\DATA\FEB11\L021011B\L1100387.D Vial: 1
Acq On : 10 Feb 2011 9:32 pm Operator: tdd/cld
Sample : 10ppbv to-15 std A Inst : Lurch
Misc : Can #1464 "A", 250mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 11 19:15 2011 Quant Results File: L021111A.RES

Method : M:\MS2011\METHODS\LURCH\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MS2011Q1\LURCH\DATA\FEB11\L021011B\L1100387.D Vial: 1
Acq On : 10 Feb 2011 9:32 pm Operator: tdd/cld
Sample : 10ppbv to-15 std A Inst : Lurch
Misc : Can #1464 "A", 250mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 11 19:15 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:15:20 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS)	12.40	130	839895	11.24	PPBV		0.00
36) 1,4-Difluorobenzene (IS)	14.20	114	2550701	11.93	PPBV		0.00
48) Chlorobenzene-d5 (IS)	18.60	117	1906841	11.13	PPBV		0.00
Target Compounds							Qvalue
2) Propylene	4.14	41	144461	10.84	PPBV	#	1
3) Freon 12 (CCl2F2)	4.23	85	1294838	9.78	PPBV		99
4) Freon 114 (C2Cl2F4)	4.55	85	1171236	9.83	PPBV	#	95
5) Chloromethane	4.73	50	191715	9.87	PPBV		98
6) Chloroethene (Vinyl chlori	5.01	62	268229	9.76	PPBV		98
7) 1,3-Butadiene	5.09	39	247335	10.02	PPBV		89
8) Bromomethane	5.87	94	679520	9.41	PPBV		99
9) Chloroethane	6.13	64	121958	9.05	PPBV		97
10) Bromoethene (Vinyl bromide	6.55	106	696507	10.01	PPBV	#	98
11) Freon 11 (CCl3F)	6.65	101	1544427	9.57	PPBV		100
12) Ethanol	7.40	45	85881	9.88	PPBV	#	60
13) Acrolein	7.86	56	65110	10.19	PPBV		93
14) Freon 113 (C2Cl3F3)	7.82	151	738602	9.68	PPBV	#	100
15) 1,1-Dichloroethene	7.89	61	409288	10.02	PPBV	#	75
16) Acetone	8.21	43	440278	9.74	PPBV	#	90
17) Carbon disulfide	8.32	76	678677	9.87	PPBV		93
18) Isopropyl alcohol	8.56	45	403713	10.18	PPBV	#	100
19) Allyl chloride (3-chloropr	8.78	76	94243	10.33	PPBV		98
20) Acetonitrile	9.00	41	121374	5.93	PPBV	#	83
21) Methylene chloride	9.12	49	283900	9.22	PPBV		89
22) trans-1,2-Dichloroethene	9.59	61	344459	9.94	PPBV	#	79
23) Methyl tert-butyl ether	9.55	73	677892	9.95	PPBV		99
24) Acrylonitrile	9.84	53	113797	10.54	PPBV		92
25) Hexane	9.98	57	239218	10.13	PPBV		89
26) 1,1-Dichloroethane	10.61	63	388259	9.91	PPBV		99
27) Vinyl acetate	10.69	43	676172	10.76	PPBV		96
28) cis-1,2-Dichloroethylene	11.88	61	325151	10.14	PPBV	#	73
29) Methyl ethyl ketone (2-But	11.95	72	90841	10.56	PPBV		95
30) Ethyl acetate	11.97	45	74340	10.07	PPBV		94
31) Chloroform	12.54	83	804970	10.10	PPBV		99
32) Tetrahydrofuran	12.41	72	91835	10.51	PPBV		96
33) 1,1,1-Trichloroethane	12.79	97	1049016	9.82	PPBV		96
34) Cyclohexane	12.74	56	256245	10.07	PPBV		98
35) Carbon tetrachloride	13.03	117	1208040	9.73	PPBV		100
37) Benzene	13.48	78	643306	9.99	PPBV		95
38) 2,2,4-trimethylpentane	13.40	57	786963	9.57	PPBV		90
39) 1,2-Dichloroethane	13.67	62	471019	9.96	PPBV		99
40) Heptane	13.75	57	157765	10.14	PPBV		94
41) Trichloroethene	14.57	130	703635	9.93	PPBV		97
42) 1,2-Dichloropropane	15.00	63	204995	9.99	PPBV		97
43) Methyl methacrylate	15.10	69	198378	10.16	PPBV		89
44) 1,4-Dioxane	15.17	88	239664	10.04	PPBV		92
45) Bromodichloromethane	15.42	83	949538	10.08	PPBV		99
46) cis-1,3-Dichloropropene	16.14	75	450149	10.66	PPBV		99
47) Methyl isobutyl ketone	16.36	43	629818	10.44	PPBV		99
49) Toluene	16.62	91	1113997	10.73	PPBV		98
50) trans-1,3-Dichloropropene	17.15	75	454904	10.48	PPBV	#	92
51) 1,1,2-Trichloroethane	17.44	97	554118	10.73	PPBV		92
52) Tetrachloroethene	17.49	166	909728	10.35	PPBV		96
53) 2-Hexanone (Methyl butyl k	17.71	43	598516	12.21	PPBV	#	94
54) Dibromochloromethane	17.93	129	1533709	11.03	PPBV		98
55) 1,2-Dibromoethane	18.10	107	1187353	10.60	PPBV		100
56) Chlorobenzene	18.63	112	1380622	10.75	PPBV		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\MS2011Q1\LURCH\DATA\FEB11\L021011B\L1100387.D Vial: 1
Acq On : 10 Feb 2011 9:32 pm Operator: tdd/cld
Sample : 10ppbv to-15 std A Inst : Lurch
Misc : Can #1464 "A", 250mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 11 19:15 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:15:20 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

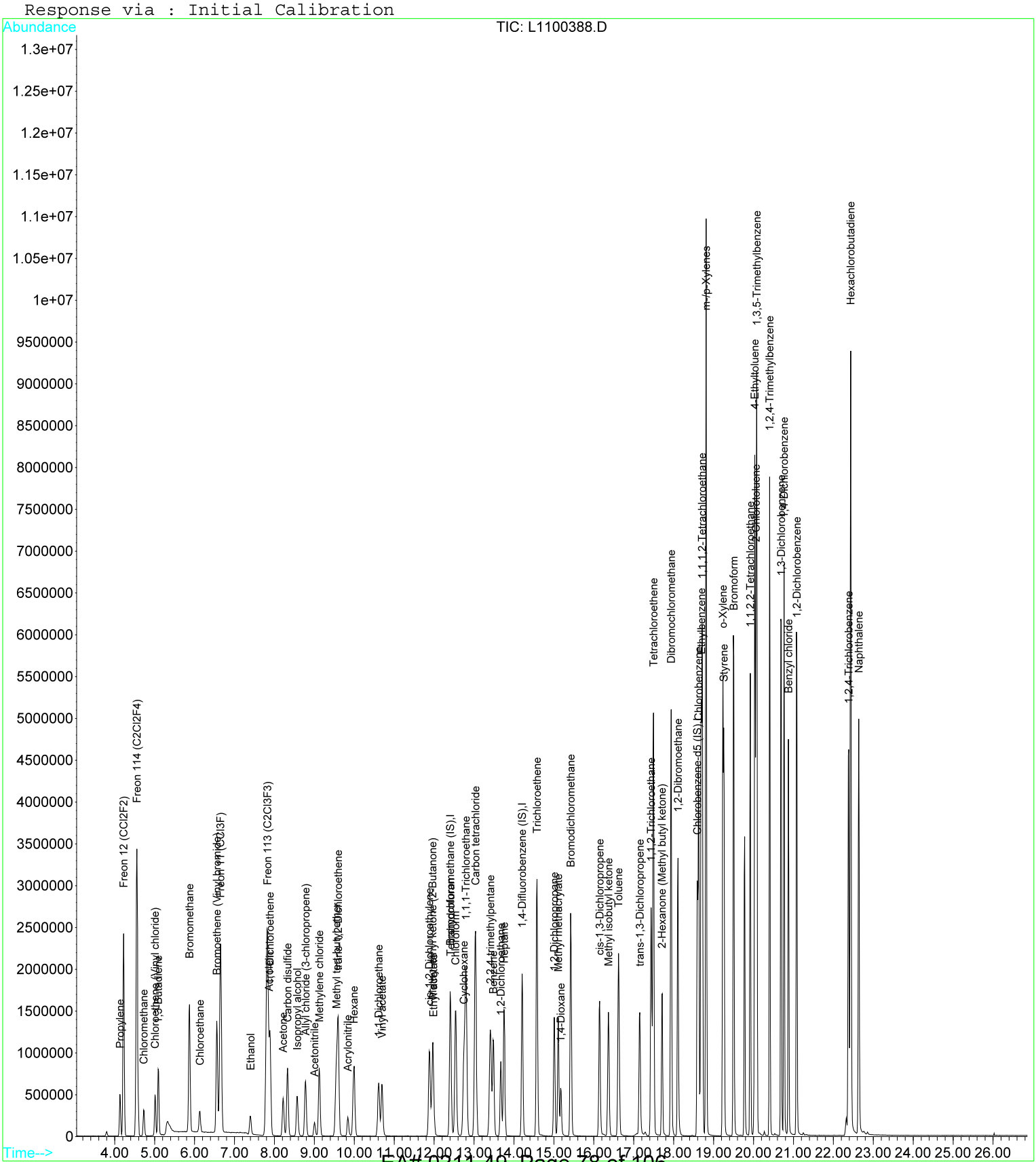
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
57)	Ethylbenzene	18.69	91	1661001	10.66	PPBV		93
58)	1,1,1,2-Tetrachloroethane	18.72	131	851994	10.62	PPBV		90
59)	m-/p-Xylenes	18.82	91	2675935	20.92	PPBV		90
60)	o-Xylene	19.23	91	1374559	10.85	PPBV		89
61)	Styrene	19.26	104	1242717	10.86	PPBV	#	90
62)	Bromoform	19.50	173	1436563	10.44	PPBV	#	99
63)	1,1,2,2-Tetrachloroethane	19.92	83	995481	10.83	PPBV		100
64)	4-Ethyltoluene	20.03	105	2451421	10.94	PPBV		99
65)	2-Chlorotoluene	20.06	91	1735073	9.91	PPBV		94
66)	1,3,5-Trimethylbenzene	20.08	105	1932307	10.27	PPBV	#	77
67)	1,2,4-Trimethylbenzene	20.41	105	1963897	10.68	PPBV		100
68)	1,3-Dichlorobenzene	20.70	146	1418418	10.95	PPBV		99
69)	1,4-Dichlorobenzene	20.77	146	1399159	10.64	PPBV		99
70)	Benzyl chloride	20.88	91	1392805	11.32	PPBV		97
71)	1,2-Dichlorobenzene	21.09	146	1376121	10.38	PPBV		99
72)	1,2,4-Trichlorobenzene	22.39	180	754475	10.93	PPBV		98
73)	Hexachlorobutadiene	22.45	225	864172	9.14	PPBV		98
74)	Naphthalene	22.64	128	2065957	10.82	PPBV		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MS2011Q1\LURCH\DATA\FEB11\L021011B\L1100388.D Vial: 1
Acq On : 10 Feb 2011 10:19 pm Operator: tdd/cld
Sample : 20ppbv to-15 std A Inst : Lurch
Misc : Can #1464 "A", 500mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 11 19:17 2011 Quant Results File: L021111A.RES

Method : M:\MS2011\METHODS\LURCH\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MS2011Q1\LURCH\DATA\FEB11\L021011B\L1100388.D Vial: 1
Acq On : 10 Feb 2011 10:19 pm Operator: tdd/cld
Sample : 20ppbv to-15 std A Inst : Lurch
Misc : Can #1464 "A", 500mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 11 19:17 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:17:25 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS)	12.40	130	835157	11.24	PPBV		0.00
36) 1,4-Difluorobenzene (IS)	14.20	114	2566607	11.93	PPBV		0.00
48) Chlorobenzene-d5 (IS)	18.59	117	2123122	11.13	PPBV		0.00
Target Compounds							Qvalue
2) Propylene	4.13	41	297583	22.46	PPBV	#	1
3) Freon 12 (CCl2F2)	4.22	85	2735999	20.78	PPBV		99
4) Freon 114 (C2Cl2F4)	4.55	85	2490606	21.03	PPBV	#	95
5) Chloromethane	4.73	50	396774	20.54	PPBV		99
6) Chloroethene (Vinyl chlori	5.01	62	565920	20.72	PPBV		100
7) 1,3-Butadiene	5.09	39	522994	21.30	PPBV		87
8) Bromomethane	5.87	94	1477730	20.59	PPBV		100
9) Chloroethane	6.13	64	262992	19.62	PPBV		100
10) Bromoethene (Vinyl bromide	6.56	106	1468999	21.22	PPBV	#	98
11) Freon 11 (CCl3F)	6.65	101	3181056	19.83	PPBV		100
12) Ethanol	7.40	45	149744	17.33	PPBV	#	60
13) Acrolein	7.86	56	134015	21.10	PPBV		95
14) Freon 113 (C2Cl3F3)	7.82	151	1582971	20.86	PPBV	#	100
15) 1,1-Dichloroethene	7.89	61	879351	21.65	PPBV	#	72
16) Acetone	8.22	43	949573	21.12	PPBV	#	90
17) Carbon disulfide	8.33	76	1464471	21.41	PPBV	#	92
18) Isopropyl alcohol	8.57	45	860082	21.82	PPBV	#	99
19) Allyl chloride (3-chloropr	8.78	76	204590	22.54	PPBV		96
20) Acetonitrile	9.00	41	243609	11.97	PPBV	#	81
21) Methylene chloride	9.12	49	596465	19.47	PPBV		89
22) trans-1,2-Dichloroethene	9.60	61	738552	21.43	PPBV	#	78
23) Methyl tert-butyl ether	9.56	73	1467247	21.65	PPBV		99
24) Acrylonitrile	9.84	53	245147	22.83	PPBV		92
25) Hexane	9.99	57	522180	22.24	PPBV		88
26) 1,1-Dichloroethane	10.61	63	820169	21.05	PPBV		99
27) Vinyl acetate	10.69	43	1448966	23.19	PPBV		96
28) cis-1,2-Dichloroethylene	11.88	61	699189	21.92	PPBV	#	72
29) Methyl ethyl ketone (2-But	11.96	72	199984	23.37	PPBV		89
30) Ethyl acetate	11.98	45	156757	21.36	PPBV	#	90
31) Chloroform	12.53	83	1731903	21.86	PPBV		99
32) Tetrahydrofuran	12.41	72	195271	22.48	PPBV		96
33) 1,1,1-Trichloroethane	12.80	97	2233549	21.02	PPBV		96
34) Cyclohexane	12.74	56	539802	21.34	PPBV		96
35) Carbon tetrachloride	13.04	117	2539972	20.57	PPBV		99
37) Benzene	13.48	78	1382099	21.32	PPBV		96
38) 2,2,4-trimethylpentane	13.41	57	1674600	20.24	PPBV		90
39) 1,2-Dichloroethane	13.67	62	1021984	21.47	PPBV		99
40) Heptane	13.75	57	332781	21.27	PPBV		93
41) Trichloroethene	14.58	130	1504650	21.09	PPBV		96
42) 1,2-Dichloropropane	15.01	63	442016	21.41	PPBV		98
43) Methyl methacrylate	15.11	69	433243	22.04	PPBV		91
44) 1,4-Dioxane	15.17	88	523277	21.78	PPBV		92
45) Bromodichloromethane	15.42	83	2076147	21.91	PPBV		99
46) cis-1,3-Dichloropropene	16.15	75	1003301	23.62	PPBV		99
47) Methyl isobutyl ketone	16.37	43	1349835	22.24	PPBV		98
49) Toluene	16.62	91	2494579	21.58	PPBV		98
50) trans-1,3-Dichloropropene	17.15	75	995591	20.61	PPBV	#	91
51) 1,1,2-Trichloroethane	17.43	97	1234939	21.48	PPBV		91
52) Tetrachloroethene	17.49	166	1984464	20.28	PPBV		95
53) 2-Hexanone (Methyl butyl k	17.70	43	1359875	24.92	PPBV	#	95
54) Dibromochloromethane	17.94	129	3315590	21.42	PPBV		98
55) 1,2-Dibromoethane	18.11	107	2659358	21.32	PPBV		100
56) Chlorobenzene	18.62	112	3121132	21.83	PPBV	#	92

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\MS2011Q1\LURCH\DATA\FEB11\L021011B\L1100388.D Vial: 1
Acq On : 10 Feb 2011 10:19 pm Operator: tdd/cld
Sample : 20ppbv to-15 std A Inst : Lurch
Misc : Can #1464 "A", 500mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 11 19:17 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:17:25 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

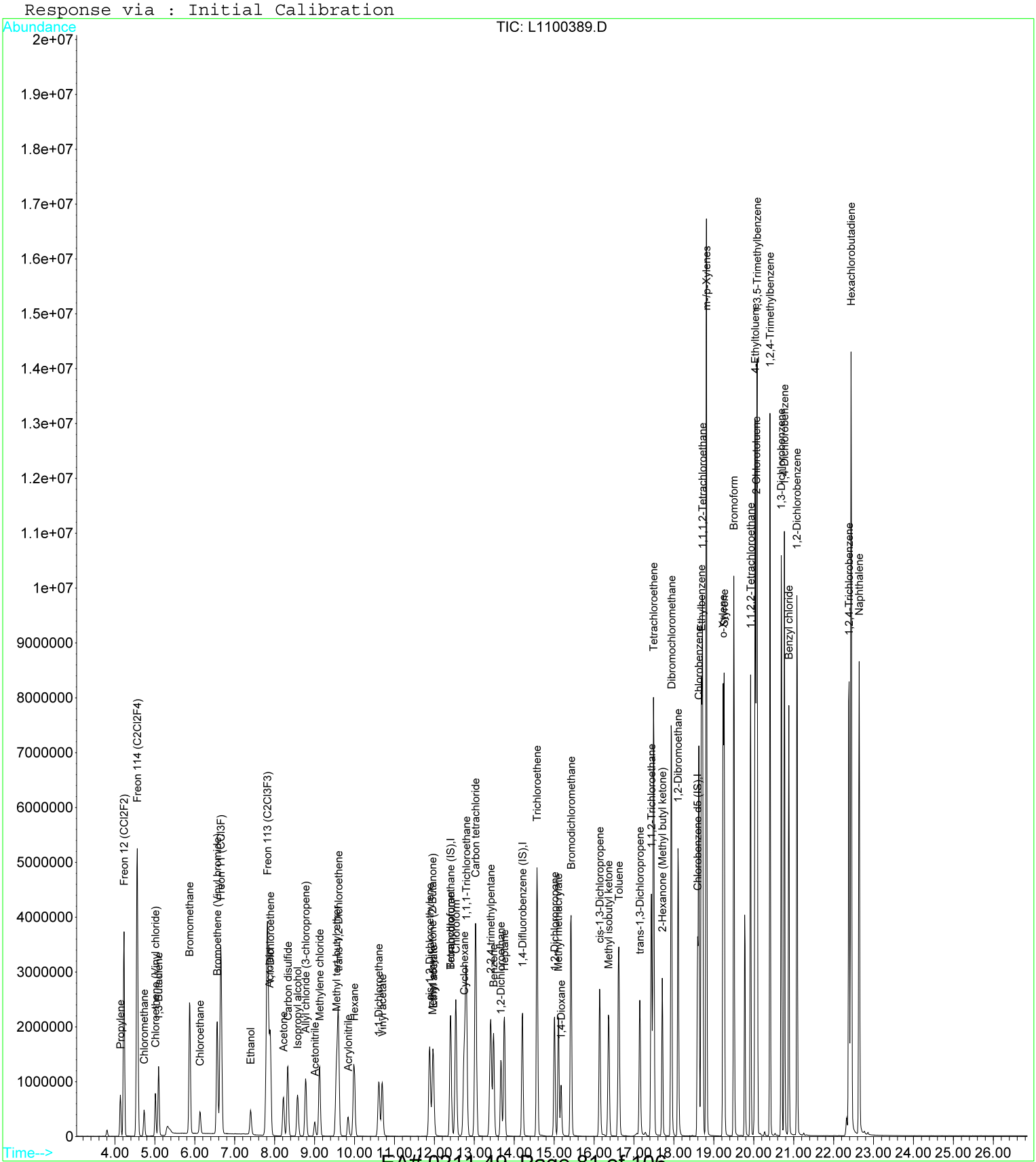
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
57)	Ethylbenzene	18.69	91	3784992	21.82	PPBV		93
58)	1,1,1,2-Tetrachloroethane	18.71	131	1840938	20.61	PPBV	#	89
59)	m-/p-Xylenes	18.81	91	6196219	43.50	PPBV		90
60)	o-Xylene	19.23	91	3103120	21.99	PPBV		89
61)	Styrene	19.25	104	2837590	22.28	PPBV	#	89
62)	Bromoform	19.51	173	3146491	20.54	PPBV	#	99
63)	1,1,2,2-Tetrachloroethane	19.92	83	2193013	21.42	PPBV		100
64)	4-Ethyltoluene	20.03	105	5570554	22.34	PPBV		98
65)	2-Chlorotoluene	20.06	91	3939741	20.20	PPBV		96
66)	1,3,5-Trimethylbenzene	20.08	105	4364478	20.82	PPBV	#	78
67)	1,2,4-Trimethylbenzene	20.40	105	4349938	21.24	PPBV		99
68)	1,3-Dichlorobenzene	20.69	146	3180292	22.05	PPBV		100
69)	1,4-Dichlorobenzene	20.76	146	3119122	21.31	PPBV		100
70)	Benzyl chloride	20.87	91	3215715	23.48	PPBV		97
71)	1,2-Dichlorobenzene	21.09	146	3036898	20.58	PPBV		100
72)	1,2,4-Trichlorobenzene	22.38	180	1919479	24.97	PPBV		98
73)	Hexachlorobutadiene	22.43	225	1961742	18.63	PPBV		98
74)	Naphthalene	22.64	128	5158679	24.27	PPBV		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MS2011Q1\LURCH\DATA\FEB11\L021011B\L1100389.D Vial: 1
Acq On : 10 Feb 2011 11:10 pm Operator: tdd/cld
Sample : 30ppbv to-15 std A Inst : Lurch
Misc : Can #1464 "A", 750mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 11 19:19 2011 Quant Results File: L021111A.RES

Method : M:\MS2011\METHODS\LURCH\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MS2011Q1\LURCH\DATA\FEB11\L021011B\L1100389.D Vial: 1
Acq On : 10 Feb 2011 11:10 pm Operator: tdd/cld
Sample : 30ppbv to-15 std A Inst : Lurch
Misc : Can #1464 "A", 750mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 11 19:19 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:19:41 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS)	12.41	130	981377	11.24	PPBV		0.00
36) 1,4-Difluorobenzene (IS)	14.21	114	3055944	11.93	PPBV		0.00
48) Chlorobenzene-d5 (IS)	18.59	117	2445621	11.13	PPBV		0.00
Target Compounds							Qvalue
2) Propylene	4.14	41	441898	28.39	PPBV	#	1
3) Freon 12 (CCl2F2)	4.23	85	4243083	27.42	PPBV		99
4) Freon 114 (C2Cl2F4)	4.56	85	3879623	27.87	PPBV	#	95
5) Chloromethane	4.73	50	596495	26.27	PPBV		100
6) Chloroethene (Vinyl chlori	5.01	62	864970	26.95	PPBV		100
7) 1,3-Butadiene	5.09	39	790240	27.39	PPBV	#	86
8) Bromomethane	5.87	94	2340960	27.76	PPBV		99
9) Chloroethane	6.13	64	413458	26.26	PPBV		99
10) Bromoethene (Vinyl bromide	6.56	106	2273225	27.95	PPBV	#	98
11) Freon 11 (CCl3F)	6.65	101	4775749	25.34	PPBV		99
12) Ethanol	7.40	45	271983	26.78	PPBV	#	61
13) Acrolein	7.87	56	214091	28.68	PPBV		90
14) Freon 113 (C2Cl3F3)	7.82	151	2449299	27.47	PPBV	#	100
15) 1,1-Dichloroethene	7.89	61	1384571	29.01	PPBV	#	70
16) Acetone	8.22	43	1482481	28.06	PPBV	#	90
17) Carbon disulfide	8.33	76	2334534	29.04	PPBV	#	91
18) Isopropyl alcohol	8.57	45	1360751	29.38	PPBV	#	100
19) Allyl chloride (3-chloropr	8.77	76	324964	30.47	PPBV		95
20) Acetonitrile	9.01	41	376404	15.73	PPBV	#	83
21) Methylene chloride	9.13	49	929060	25.81	PPBV		85
22) trans-1,2-Dichloroethene	9.60	61	1180762	29.15	PPBV	#	77
23) Methyl tert-butyl ether	9.55	73	2374473	29.81	PPBV	#	98
24) Acrylonitrile	9.84	53	379715	30.09	PPBV		94
25) Hexane	9.99	57	824425	29.88	PPBV		88
26) 1,1-Dichloroethane	10.61	63	1293675	28.25	PPBV		100
27) Vinyl acetate	10.70	43	2291824	31.21	PPBV		95
28) cis-1,2-Dichloroethylene	11.88	61	1115219	29.76	PPBV	#	70
29) Methyl ethyl ketone (2-But	11.95	72	323504	32.17	PPBV		83
30) Ethyl acetate	11.97	45	246734	28.61	PPBV	#	92
31) Chloroform	12.54	83	2785472	29.92	PPBV		99
32) Tetrahydrofuran	12.41	72	313075	30.67	PPBV		98
33) 1,1,1-Trichloroethane	12.80	97	3509049	28.10	PPBV		96
34) Cyclohexane	12.75	56	859404	28.92	PPBV		94
35) Carbon tetrachloride	13.03	117	3926940	27.06	PPBV		99
37) Benzene	13.48	78	2225237	28.83	PPBV		96
38) 2,2,4-trimethylpentane	13.41	57	2677149	27.17	PPBV		90
39) 1,2-Dichloroethane	13.66	62	1620141	28.59	PPBV		99
40) Heptane	13.76	57	526925	28.28	PPBV	#	90
41) Trichloroethene	14.57	130	2369852	27.90	PPBV		95
42) 1,2-Dichloropropane	15.01	63	685694	27.89	PPBV		96
43) Methyl methacrylate	15.10	69	694312	29.67	PPBV		89
44) 1,4-Dioxane	15.17	88	835482	29.20	PPBV		93
45) Bromodichloromethane	15.43	83	3294550	29.20	PPBV		99
46) cis-1,3-Dichloropropene	16.14	75	1605454	31.75	PPBV		99
47) Methyl isobutyl ketone	16.36	43	2099993	29.05	PPBV		96
49) Toluene	16.62	91	4040502	30.35	PPBV		98
50) trans-1,3-Dichloropropene	17.15	75	1602792	28.80	PPBV	#	91
51) 1,1,2-Trichloroethane	17.44	97	1986460	30.00	PPBV	#	90
52) Tetrachloroethene	17.49	166	3123027	27.70	PPBV		95
53) 2-Hexanone (Methyl butyl k	17.71	43	2134044	33.95	PPBV	#	94
54) Dibromochloromethane	17.94	129	5133499	28.79	PPBV		98
55) 1,2-Dibromoethane	18.10	107	4274708	29.75	PPBV		100
56) Chlorobenzene	18.62	112	5026949	30.52	PPBV	#	92

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\MS2011Q1\LURCH\DATA\FEB11\L021011B\L1100389.D Vial: 1
Acq On : 10 Feb 2011 11:10 pm Operator: tdd/cld
Sample : 30ppbv to-15 std A Inst : Lurch
Misc : Can #1464 "A", 750mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 11 19:19 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:19:41 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

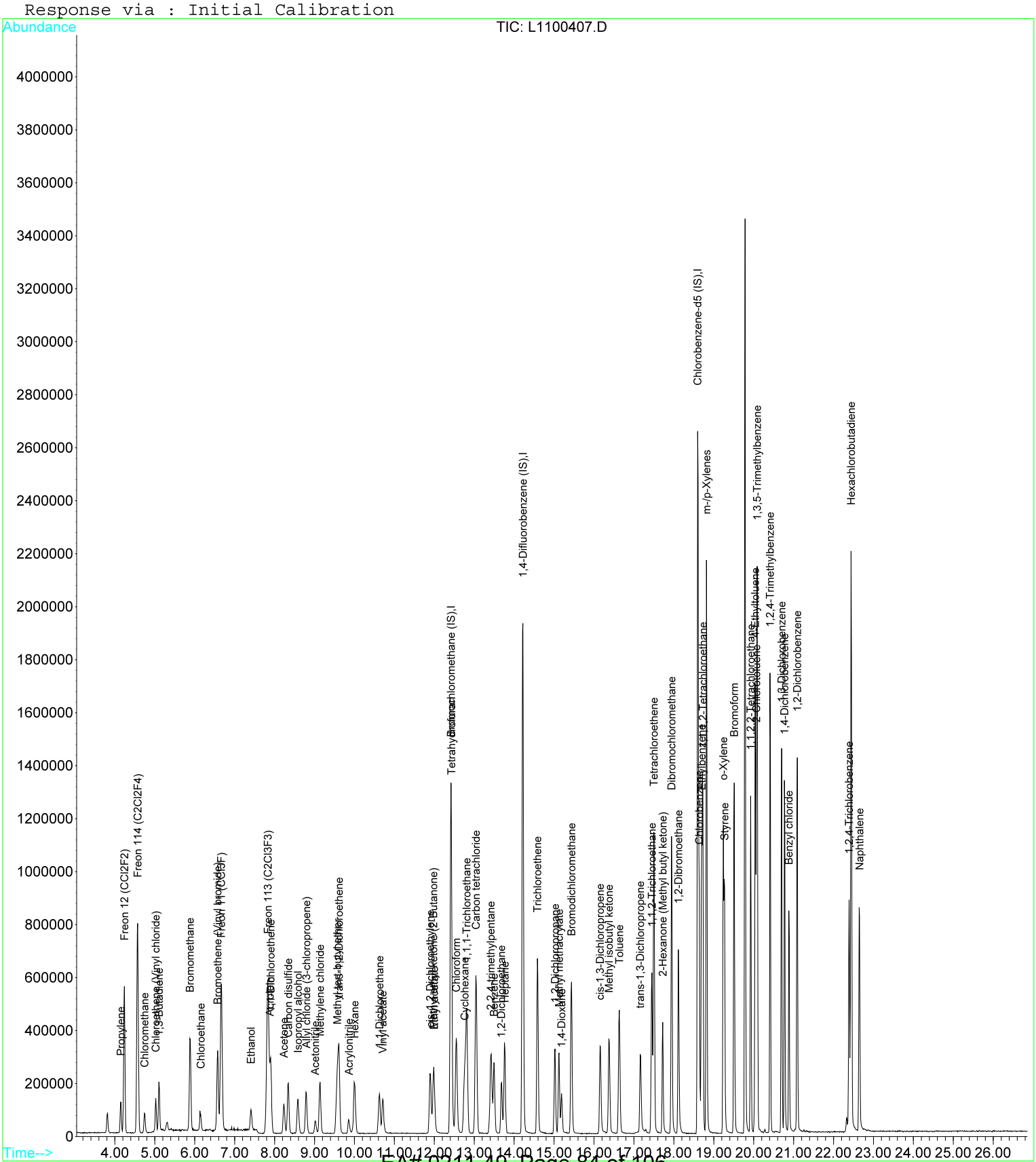
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
57)	Ethylbenzene	18.69	91	6145708	30.76	PPBV		94
58)	1,1,1,2-Tetrachloroethane	18.72	131	2841255	27.61	PPBV	#	87
59)	m-/p-Xylenes	18.82	91	10113083	61.63	PPBV		89
60)	o-Xylene	19.23	91	5050471	31.07	PPBV		89
61)	Styrene	19.26	104	4724566	32.20	PPBV	#	88
62)	Bromoform	19.50	173	4926186	27.91	PPBV	#	98
63)	1,1,2,2-Tetrachloroethane	19.92	83	3503985	29.72	PPBV		100
64)	4-Ethyltoluene	20.03	105	9008661	31.36	PPBV		99
65)	2-Chlorotoluene	20.06	91	6456394	28.74	PPBV		98
66)	1,3,5-Trimethylbenzene	20.08	105	6881840	28.51	PPBV	#	79
67)	1,2,4-Trimethylbenzene	20.41	105	7095395	30.08	PPBV		98
68)	1,3-Dichlorobenzene	20.69	146	4975003	29.94	PPBV		99
69)	1,4-Dichlorobenzene	20.77	146	4914828	29.15	PPBV		99
70)	Benzyl chloride	20.88	91	5333436	33.80	PPBV		98
71)	1,2-Dichlorobenzene	21.08	146	4736849	27.87	PPBV		100
72)	1,2,4-Trichlorobenzene	22.39	180	3384421	38.21	PPBV		99
73)	Hexachlorobutadiene	22.44	225	3097432	25.54	PPBV		98
74)	Naphthalene	22.64	128	8910079	36.39	PPBV		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\MS2011Q1\LURCH\DATA\FEB11\L021111A\L1100407.D Vial: 1
Acq On : 11 Feb 2011 9:43 pm Operator: tdd/cld
Sample : 5ppbv ICV/LCS std B Inst : Lurch
Misc : Can #1449 "B", 125mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 14 6:50 2011 Quant Results File: L021111A.RES

Method : M:\MS2011\METHODS\LURCH\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\MS2011Q1\LURCH\DATA\FEB11\L021111A\L1100407.D Vial: 1
Acq On : 11 Feb 2011 9:43 pm Operator: tdd/cld
Sample : 5ppbv ICV/LCS std B Inst : Lurch
Misc : Can #1449 "B", 125mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 14 6:50 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS)	12.42	130	865954	11.24	PPBV		0.01
36) 1,4-Difluorobenzene (IS)	14.22	114	2602128	11.93	PPBV		0.01
48) Chlorobenzene-d5 (IS)	18.60	117	1957945	11.13	PPBV		0.00
Target Compounds							Qvalue
2) Propylene	4.15	41	72263	5.26	PPBV	#	1
3) Freon 12 (CCl2F2)	4.24	85	641518	4.70	PPBV		98
4) Freon 114 (C2Cl2F4)	4.57	85	585561	4.77	PPBV	#	95
5) Chloromethane	4.74	50	94607	4.72	PPBV		99
6) Chloroethene (Vinyl chlori	5.02	62	134044	4.73	PPBV		99
7) 1,3-Butadiene	5.10	39	125460	4.93	PPBV		92
8) Bromomethane	5.88	94	342038	4.60	PPBV		100
9) Chloroethane	6.15	64	61312	4.41	PPBV		93
10) Bromoethene (Vinyl bromide	6.57	106	333752	4.65	PPBV	#	97
11) Freon 11 (CCl3F)	6.66	101	785912	4.73	PPBV		100
12) Ethanol	7.41	45	47947	5.35	PPBV	#	61
13) Acrolein	7.88	56	28072	4.26	PPBV		87
14) Freon 113 (C2Cl3F3)	7.83	151	364493	4.63	PPBV	#	100
15) 1,1-Dichloroethene	7.90	61	203178	4.82	PPBV	#	73
16) Acetone	8.23	43	230223	4.94	PPBV	#	90
17) Carbon disulfide	8.34	76	340681	4.80	PPBV		94
18) Isopropyl alcohol	8.59	45	228401	5.59	PPBV	#	100
19) Allyl chloride (3-chloropr	8.80	76	46832	4.98	PPBV		96
20) Acetonitrile	9.02	41	74465	4.97	PPBV	#	83
21) Methylene chloride	9.14	49	144484	4.55	PPBV		90
22) trans-1,2-Dichloroethene	9.61	61	171949	4.81	PPBV	#	80
23) Methyl tert-butyl ether	9.57	73	351222	5.00	PPBV		99
24) Acrylonitrile	9.86	53	58001	5.21	PPBV		96
25) Hexane	10.00	57	117966	4.85	PPBV		91
26) 1,1-Dichloroethane	10.63	63	190149	4.71	PPBV		99
27) Vinyl acetate	10.71	43	310945	4.80	PPBV		97
28) cis-1,2-Dichloroethylene	11.90	61	157758	4.77	PPBV	#	72
29) Methyl ethyl ketone (2-But	11.98	72	47508	5.35	PPBV		95
30) Ethyl acetate	12.00	45	39416	5.18	PPBV	#	88
31) Chloroform	12.55	83	401884	4.89	PPBV		99
32) Tetrahydrofuran	12.43	72	47016	5.22	PPBV		94
33) 1,1,1-Trichloroethane	12.81	97	516818	4.69	PPBV		96
34) Cyclohexane	12.76	56	124439	4.74	PPBV		97
35) Carbon tetrachloride	13.04	117	599590	4.68	PPBV		99
37) Benzene	13.49	78	314238	4.78	PPBV		95
38) 2,2,4-trimethylpentane	13.41	57	388071	4.63	PPBV		91
39) 1,2-Dichloroethane	13.68	62	230630	4.78	PPBV		99
40) Heptane	13.77	57	75630	4.77	PPBV	#	90
41) Trichloroethene	14.58	130	338588	4.68	PPBV		98
42) 1,2-Dichloropropane	15.02	63	99602	4.76	PPBV		99
43) Methyl methacrylate	15.12	69	97535	4.89	PPBV	#	92
44) 1,4-Dioxane	15.19	88	128867	5.29	PPBV		96
45) Bromodichloromethane	15.44	83	457516	4.76	PPBV		98
46) cis-1,3-Dichloropropene	16.15	75	215689	5.01	PPBV		97
47) Methyl isobutyl ketone	16.37	43	348639	5.66	PPBV		99
49) Toluene	16.63	91	530347	4.98	PPBV		96
50) trans-1,3-Dichloropropene	17.16	75	212055	4.76	PPBV	#	91
51) 1,1,2-Trichloroethane	17.45	97	263649	4.97	PPBV		94
52) Tetrachloroethene	17.50	166	426374	4.72	PPBV		96
53) 2-Hexanone (Methyl butyl k	17.72	43	321170	6.38	PPBV		97
54) Dibromochloromethane	17.94	129	740131	5.18	PPBV		97
55) 1,2-Dibromoethane	18.11	107	564549	4.91	PPBV		99
56) Chlorobenzene	18.64	112	650744	4.93	PPBV		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\MS2011Q1\LURCH\DATA\FEB11\L021111A\L1100407.D Vial: 1
Acq On : 11 Feb 2011 9:43 pm Operator: tdd/cld
Sample : 5ppbv ICV/LCS std B Inst : Lurch
Misc : Can #1449 "B", 125mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 14 6:50 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
57)	Ethylbenzene	18.70	91	794602	4.97	PPBV		94
58)	1,1,1,2-Tetrachloroethane	18.73	131	417405	5.07	PPBV		90
59)	m-/p-Xylenes	18.82	91	1290751	9.83	PPBV		91
60)	o-Xylene	19.24	91	660694	5.08	PPBV		88
61)	Styrene	19.27	104	590785	5.03	PPBV	#	91
62)	Bromoform	19.51	173	692762	4.90	PPBV	#	99
63)	1,1,2,2-Tetrachloroethane	19.92	83	497706	5.27	PPBV		100
64)	4-Ethyltoluene	20.03	105	1224996	5.33	PPBV		99
65)	2-Chlorotoluene	20.07	91	881154	4.90	PPBV		95
66)	1,3,5-Trimethylbenzene	20.09	105	1013359	5.24	PPBV	#	77
67)	1,2,4-Trimethylbenzene	20.41	105	1004976	5.32	PPBV		99
68)	1,3-Dichlorobenzene	20.70	146	694267	5.22	PPBV		99
69)	1,4-Dichlorobenzene	20.77	146	675098	5.00	PPBV		98
70)	Benzyl chloride	20.88	91	639495	5.06	PPBV		97
71)	1,2-Dichlorobenzene	21.09	146	695252	5.11	PPBV		99
72)	1,2,4-Trichlorobenzene	22.39	180	339162	4.78	PPBV		100
73)	Hexachlorobutadiene	22.44	225	448249	4.62	PPBV		98
74)	Naphthalene	22.65	128	973585	4.97	PPBV		99

(#) = qualifier out of range (m) = manual integration

Company	In-House
Analyst	CLD
Parameters	EPA Method TO-15
# Samples	

Client #	ICV for Curve L021111A
Job #	NA
PO #	NA
Report Date	2/14/2011

Sample ID: **5ppbv ICV/LCS std B**
Data File: L1100407.D
Tank/Misc ID: Can #1449 "B", 125mL

DF: 1.00
Tank DF: 1.00
ConCal 1

Compound	Quant	Ret. Time (min)	Area	Conc. as Analyzed (ppbv)	Sample Conc. (ppbv)	Flags	Tag Value	% Diff. From Tag	Pass/Fail
Propylene	41	4.15	72,263	5.26	5.26		5.50	4.3	PASS
Freon 12 (CCl2F2)	85	4.24	641,518	4.70	4.70		4.90	4.1	PASS
Freon 114 (C2Cl2F4)	85	4.57	585,561	4.77	4.77		4.90	2.7	PASS
Chloromethane	50	4.74	94,607	4.72	4.72		4.95	4.6	PASS
Chloroethene (Vinyl chloride)	62	5.02	134,044	4.73	4.73		4.90	3.4	PASS
1,3-Butadiene	39	5.10	125,460	4.93	4.93		5.15	4.3	PASS
Bromomethane	94	5.88	342,038	4.60	4.60		4.90	6.2	PASS
Chloroethane	64	6.15	61,312	4.41	4.41		4.85	9.0	PASS
Bromoethene (Vinyl bromide)	106	6.57	333,752	4.65	4.65		4.95	6.0	PASS
Freon 11 (CCl3F)	101	6.66	785,912	4.73	4.73		5.05	6.4	PASS
Ethanol	45	7.41	47,947	5.35	5.35		5.30	1.0	PASS
Acrolein	56	7.88	28,072	4.26	4.26		5.25	18.8	PASS
Freon 113 (C2Cl3F3)	151	7.83	364,493	4.63	4.63		5.15	10.0	PASS
1,1-Dichloroethene	61	7.90	203,178	4.82	4.82		5.20	7.2	PASS
Acetone	43	8.23	230,223	4.94	4.94		5.30	6.8	PASS
Carbon disulfide	76	8.34	340,681	4.80	4.80		5.10	5.8	PASS
Isopropyl alcohol	45	8.59	228,401	5.59	5.59		5.50	1.6	PASS
Allyl chloride (3-chloropropene)	76	8.80	46,832	4.98	4.98		5.15	3.4	PASS
Acetonitrile	41	9.02	74,465	4.97	4.97		4.55	9.1	PASS
Methylene chloride	49	9.14	144,484	4.55	4.55		5.20	12.5	PASS
trans-1,2-Dichloroethene	61	9.61	171,949	4.81	4.81		5.15	6.6	PASS
Methyl tert-butyl ether	73	9.57	351,222	5.00	5.00		5.20	3.9	PASS
Acrylonitrile	53	9.86	58,001	5.21	5.21		5.15	1.1	PASS
Hexane	57	10.00	117,966	4.85	4.85		5.37	9.8	PASS
1,1-Dichloroethane	63	10.63	190,149	4.71	4.71		5.10	7.7	PASS
Vinyl acetate	43	10.71	310,945	4.80	4.80		5.25	8.6	PASS
cis-1,2-Dichloroethylene	61	11.90	157,758	4.77	4.77		5.15	7.4	PASS
Methyl ethyl ketone (2-Butanone)	72	11.98	47,508	5.35	5.35		5.30	1.0	PASS
Ethyl acetate	45	12.00	39,416	5.18	5.18		5.10	1.6	PASS
Chloroform	83	12.55	401,884	4.89	4.89		5.10	4.1	PASS
Tetrahydrofuran	72	12.43	47,016	5.22	5.22		5.35	2.4	PASS
1,1,1-Trichloroethane	97	12.81	516,818	4.69	4.69		5.05	7.1	PASS
Cyclohexane	56	12.76	124,439	4.74	4.74		5.15	7.9	PASS
Carbon tetrachloride	117	13.04	599,590	4.68	4.68		5.10	8.2	PASS
Benzene	78	13.50	314,238	4.78	4.78		5.10	6.3	PASS
2,2,4-trimethylpentane	57	13.41	388,071	4.63	4.63		4.95	6.5	PASS
1,2-Dichloroethane	62	13.68	230,630	4.78	4.78		5.10	6.3	PASS
Heptane	57	13.77	75,630	4.77	4.77		5.20	8.3	PASS
Trichloroethene	130	14.58	338,588	4.68	4.68		5.10	8.2	PASS
1,2-Dichloropropane	63	15.02	99,602	4.76	4.76		5.15	7.6	PASS
Methyl methacrylate	69	15.12	97,535	4.89	4.89		5.00	2.1	PASS
1,4-Dioxane	88	15.19	128,867	5.29	5.29		5.10	3.7	PASS
Bromodichloromethane	83	15.44	457,516	4.76	4.76		5.10	6.6	PASS
cis-1,3-Dichloropropene	75	16.15	215,689	5.01	5.01		5.45	8.1	PASS
Methyl isobutyl ketone	43	16.37	348,639	5.66	5.66		5.05	12.2	PASS
Toluene	91	16.63	530,347	4.98	4.98		5.15	3.4	PASS
trans-1,3-Dichloropropene	75	17.16	212,055	4.76	4.76		4.85	1.9	PASS
1,1,2-Trichloroethane	97	17.45	263,649	4.97	4.97		5.15	3.4	PASS
Tetrachloroethene	166	17.50	426,374	4.72	4.72		5.05	6.5	PASS
2-Hexanone (Methyl butyl ketone)	43	17.72	321,170	6.38	6.38		5.35	19.3	PASS

Company	In-House
Analyst	CLD
Parameters	EPA Method TO-15
# Samples	

Client #	ICV for Curve L021111A
Job #	NA
PO #	NA
Report Date	2/14/2011

Sample ID: **5ppbv ICV/LCS std B**
Data File: L1100407.D
Tank/Misc ID: Can #1449 "B", 125mL

DF: 1.00
Tank DF: 1.00
ConCal 1

Compound	Quant	Ret. Time (min)	Area	Conc. as Analyzed (ppbv)	Sample Conc. (ppbv)	Flags	Tag Value	% Diff. From Tag	Pass/Fail
Dibromochloromethane	129	17.94	740,131	5.18	5.18		5.35	3.1	PASS
1,2-Dibromoethane	107	18.11	564,549	4.91	4.91		5.10	3.8	PASS
Chlorobenzene	112	18.64	650,744	4.93	4.93		5.25	6.0	PASS
Ethylbenzene	91	18.70	794,602	4.97	4.97		5.20	4.5	PASS
1,1,1,2-Tetrachloroethane	131	18.73	417,405	5.07	5.07		5.20	2.6	PASS
m-/p-Xylenes	91	18.82	1,290,751	9.83	9.83		10.2	3.7	PASS
o-Xylene	91	19.24	660,694	5.08	5.08		5.25	3.3	PASS
Styrene	104	19.27	590,785	5.03	5.03		5.20	3.3	PASS
Bromoform	173	19.51	692,762	4.90	4.90		5.10	3.9	PASS
1,1,2,2-Tetrachloroethane	83	19.92	497,706	5.27	5.27		5.25	0.4	PASS
4-Ethyltoluene	105	20.03	1,224,996	5.33	5.33		5.15	3.4	PASS
2-Chlorotoluene	91	20.07	881,154	4.90	4.90		4.95	1.0	PASS
1,3,5-Trimethylbenzene	105	20.09	1,013,359	5.24	5.24		5.15	1.8	PASS
1,2,4-Trimethylbenzene	105	20.41	1,004,976	5.32	5.32		5.15	3.3	PASS
1,3-Dichlorobenzene	146	20.70	694,267	5.22	5.22		5.20	0.4	PASS
1,4-Dichlorobenzene	146	20.77	675,098	5.00	5.00		5.05	1.0	PASS
Benzyl chloride	91	20.88	639,495	5.06	5.06		5.20	2.6	PASS
1,2-Dichlorobenzene	146	21.09	695,252	5.11	5.11		5.10	0.2	PASS
1,2,4-Trichlorobenzene	180	22.39	339,162	4.78	4.78		4.95	3.4	PASS
Hexachlorobutadiene	225	22.44	448,249	4.62	4.62		5.10	9.5	PASS
Naphthalene	128	22.65	973,585	4.97	4.97		5.21	4.6	PASS

					Rec. (%)	Flags
Bromochloromethane (IS)	130	12.42	865,954	11.24	N/A	
1,4-Difluorobenzene (IS)	114	14.22	2,602,128	11.93	N/A	
Chlorobenzene-d5 (IS)	117	18.60	1,957,945	11.13	N/A	

Internal Standard Acceptance Criteria (Area +/- 40%, RT +/- 20 sec.)

Internal Standard Name	Concal RT	Sample RT	Ave. ICal IS Area	Sample IS Area	Flag
Bromochloromethane (IS)	12.42	12.42	848,241	865,954	Pass
1,4-Difluorobenzene (IS)	14.22	14.22	2,554,861	2,602,128	Pass
Chlorobenzene-d5 (IS)	18.61	18.60	1,992,369	1,957,945	Pass

Evaluate Continuing Calibration Report

Data File : C:\MS2011Q1\LURCH\DATA\FEB11\L021711A\L1100435.D Vial: 1
Acq On : 17 Feb 2011 3:27 pm Operator: tdd/cld
Sample : 5ppbv to-15 std A Inst : Lurch
Misc : Can #1464 "A", 125mL Multiplr: 1.00
MS Integration Params: rteint.p

Method : M:\MS2011\METHODS\LURCH\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 40% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Bromochloromethane (IS)	1.000	1.000	0.0	127	0.00
2		Propylene	0.178	0.131	26.4	94	0.00
3		Freon 12 (CCl2F2)	1.772	1.574	11.2	117	0.00
4		Freon 114 (C2Cl2F4)	1.594	1.364	14.4	112	0.00
5		Chloromethane	0.260	0.195	25.0	100	0.02
6		Chloroethene (Vinyl chlorid	0.368	0.283	23.1	102	0.00
7		1,3-Butadiene	0.330	0.249	24.5	102	0.00
8		Bromomethane	0.966	0.795	17.7	110	0.02
9		Chloroethane	0.180	0.134	25.6	103	0.02
10		Bromoethene (Vinyl bromide)	0.932	0.819	12.1	115	0.00
11		Freon 11 (CCl3F)	2.159	1.970	8.8	121	0.00
12		Ethanol	0.116	0.093	19.8	106	0.00
13		Acrolein	0.085	0.071	16.5	110	0.00
14		Freon 113 (C2Cl3F3)	1.021	0.988	3.2	129	0.00
15		1,1-Dichloroethene	0.547	0.475	13.2	114	0.00
16		Acetone	0.605	0.502	17.0	111	0.00
17		Carbon disulfide	0.921	0.765	16.9	110	0.00
18		Isopropyl alcohol	0.530	0.446	15.8	109	0.00
19		Allyl chloride (3-chloropro	0.122	0.106	13.1	111	0.00
20		Acetonitrile	0.195	0.155	20.5	101	0.00
21		Methylene chloride	0.412	0.322	21.8	110	0.00
22		trans-1,2-Dichloroethene	0.464	0.407	12.3	115	0.00
23		Methyl tert-butyl ether	0.912	0.819	10.2	119	0.02
24		Acrylonitrile	0.145	0.119	17.9	104	0.00
25		Hexane	0.316	0.264	16.5	111	0.00
26		1,1-Dichloroethane	0.524	0.454	13.4	117	0.02
27		Vinyl acetate	0.841	0.703	16.4	107	0.00
28		cis-1,2-Dichloroethylene	0.429	0.377	12.1	114	0.00
29		Methyl ethyl ketone (2-Buta	0.115	0.098	14.8	110	0.02
30		Ethyl acetate	0.099	0.082	17.2	106	0.00
31		Chloroform	1.066	0.952	10.7	118	0.00
32		Tetrahydrofuran	0.117	0.100	14.5	115	0.02
33		1,1,1-Trichloroethane	1.430	1.319	7.8	122	0.00
34		Cyclohexane	0.340	0.287	15.6	109	0.00
35		Carbon tetrachloride	1.662	1.576	5.2	125	0.00
36	I	1,4-Difluorobenzene (IS)	1.000	1.000	0.0	124	0.00
37		Benzene	0.301	0.276	8.3	118	0.00
38		2,2,4-trimethylpentane	0.385	0.337	12.5	110	0.00
39		1,2-Dichloroethane	0.221	0.209	5.4	121	0.02
40		Heptane	0.073	0.062	15.1	109	0.00
41		Trichloroethene	0.332	0.328	1.2	128	0.00
42		1,2-Dichloropropane	0.096	0.083	13.5	112	0.00
43		Methyl methacrylate	0.091	0.080	12.1	110	0.00
44		1,4-Dioxane	0.112	0.103	8.0	118	0.00
45		Bromodichloromethane	0.440	0.402	8.6	120	0.00
46		cis-1,3-Dichloropropene	0.197	0.184	6.6	117	0.00
47		Methyl isobutyl ketone	0.282	0.244	13.5	108	0.00
48	I	Chlorobenzene-d5 (IS)	1.000	1.000	0.0	131	0.00
49		Toluene	0.606	0.552	8.9	119	0.00
50		trans-1,3-Dichloropropene	0.253	0.231	8.7	119	0.00
51		1,1,2-Trichloroethane	0.301	0.270	10.3	118	0.00
52		Tetrachloroethene	0.513	0.484	5.7	128	0.00
53		2-Hexanone (Methyl butyl ke	0.286	0.245	14.3	110	0.00
54		Dibromochloromethane	0.812	0.757	6.8	125	0.00
55		1,2-Dibromoethane	0.654	0.577	11.8	118	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\MS2011Q1\LURCH\DATA\FEB11\L021711A\L1100435.D Vial: 1
Acq On : 17 Feb 2011 3:27 pm Operator: tdd/cld
Sample : 5ppbv to-15 std A Inst : Lurch
Misc : Can #1464 "A", 125mL Multiplr: 1.00
MS Integration Params: rteint.p

Method : M:\MS2011\METHODS\LURCH\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Multiple Level Calibration

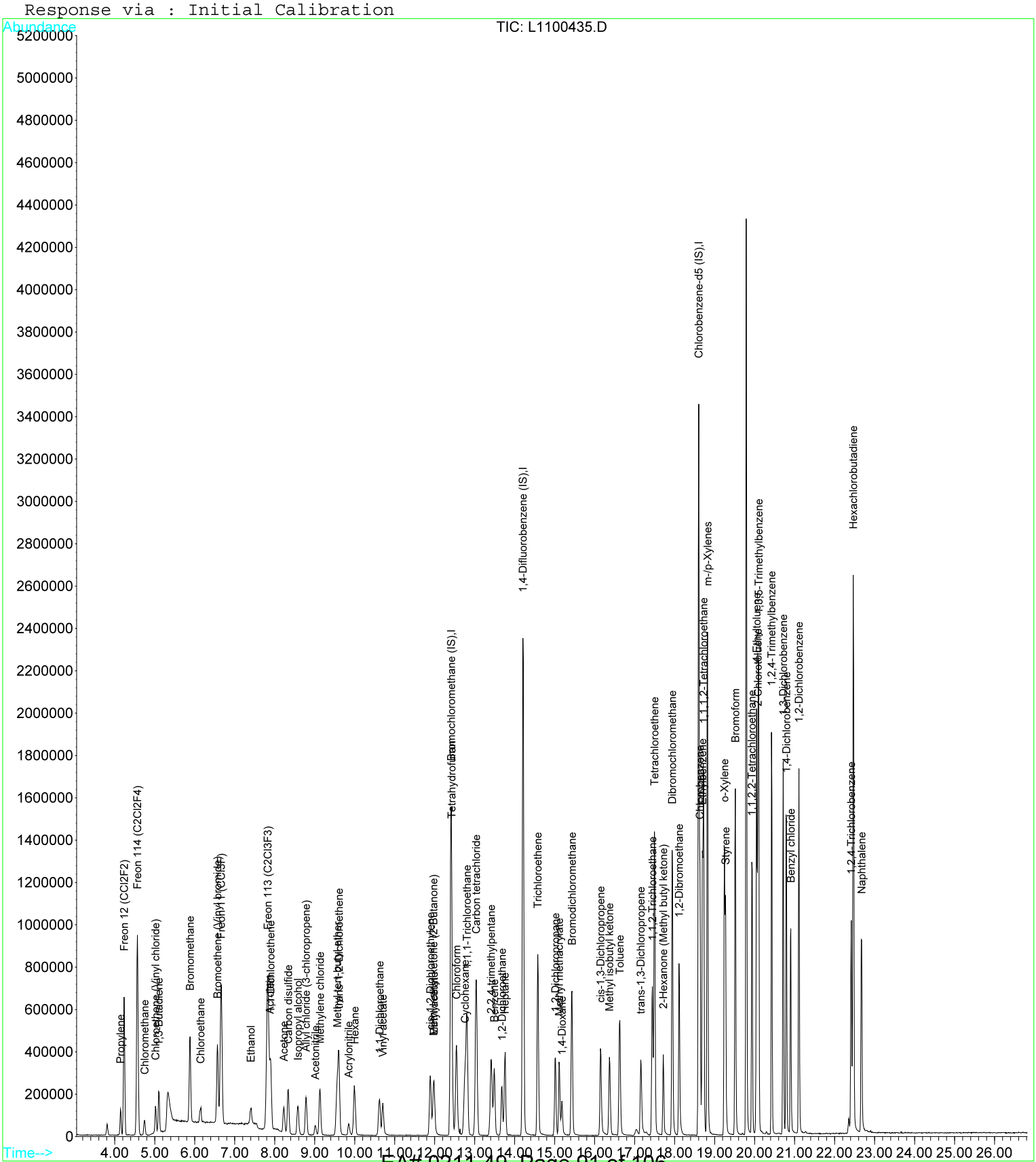
Min. RRF : 0.000 Min. Rel. Area : 40% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
56	Chlorobenzene	0.750	0.680	9.3	122	0.00
57	Ethylbenzene	0.909	0.811	10.8	120	0.00
58	1,1,1,2-Tetrachloroethane	0.468	0.438	6.4	123	0.00
59	m-/p-Xylenes	0.747	0.654	12.4	119	0.00
60	o-Xylene	0.740	0.664	10.3	121	0.02
61	Styrene	0.668	0.602	9.9	121	0.02
62	Bromoform	0.803	0.746	7.1	125	0.02
63	1,1,2,2-Tetrachloroethane	0.537	0.448	16.6	110	0.00
64	4-Ethyltoluene	1.307	1.127	13.8	116	0.02
65	2-Chlorotoluene	1.022	0.892	12.7	117	0.02
66	1,3,5-Trimethylbenzene	1.099	0.982	10.6	120	0.02
67	1,2,4-Trimethylbenzene	1.074	0.940	12.5	118	0.02
68	1,3-Dichlorobenzene	0.756	0.707	6.5	125	0.03
69	1,4-Dichlorobenzene	0.767	0.709	7.6	124	0.03
70	Benzyl chloride	0.718	0.629	12.4	115	0.03
71	1,2-Dichlorobenzene	0.774	0.719	7.1	125	0.03
72	1,2,4-Trichlorobenzene	0.403	0.338	16.1	131	0.03
73	Hexachlorobutadiene	0.552	0.481	12.9	132	0.03
74	Naphthalene	1.114	0.898	19.4	124	0.04

Quantitation Report

Data File : C:\MS2011Q1\LURCH\DATA\FEB11\L021711A\L1100435.D Vial: 1
Acq On : 17 Feb 2011 3:27 pm Operator: tdd/cld
Sample : 5ppbv to-15 std A Inst : Lurch
Misc : Can #1464 "A", 125mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 17 16:39 2011 Quant Results File: L021111A.RES

Method : M:\MS2011\METHODS\LURCH\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MS2011Q1\LURCH\DATA\FEB11\L021711A\L1100435.D Vial: 1
Acq On : 17 Feb 2011 3:27 pm Operator: tdd/cld
Sample : 5ppbv to-15 std A Inst : Lurch
Misc : Can #1464 "A", 125mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 17 16:39 2011 Quant Results File: L021111A.RES

Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS)	12.41	130	1089684	11.24	PPBV		0.00
36) 1,4-Difluorobenzene (IS)	14.20	114	3198975	11.93	PPBV		0.00
48) Chlorobenzene-d5 (IS)	18.60	117	2556498	11.13	PPBV		0.00
Target Compounds							Qvalue
2) Propylene	4.14	41	70075	4.05	PPBV	#	1
3) Freon 12 (CCl2F2)	4.23	85	747554	4.35	PPBV		99
4) Freon 114 (C2Cl2F4)	4.57	85	647953	4.19	PPBV	#	93
5) Chloromethane	4.75	50	93491	3.71	PPBV		99
6) Chloroethene (Vinyl chlori	5.02	62	134552	3.78	PPBV		99
7) 1,3-Butadiene	5.10	39	124371	3.88	PPBV		89
8) Bromomethane	5.88	94	383628	4.10	PPBV		99
9) Chloroethane	6.15	64	63617	3.64	PPBV		98
10) Bromoethene (Vinyl bromide	6.57	106	404797	4.48	PPBV	#	98
11) Freon 11 (CCl3F)	6.66	101	964601	4.61	PPBV		100
12) Ethanol	7.40	45	48439	4.30	PPBV	#	58
13) Acrolein	7.88	56	35616	4.30	PPBV		93
14) Freon 113 (C2Cl3F3)	7.83	151	493434	4.98	PPBV	#	100
15) 1,1-Dichloroethene	7.90	61	237342	4.48	PPBV	#	70
16) Acetone	8.23	43	257955	4.40	PPBV	#	90
17) Carbon disulfide	8.34	76	385622	4.32	PPBV		94
18) Isopropyl alcohol	8.58	45	237981	4.63	PPBV	#	99
19) Allyl chloride (3-chloropr	8.78	76	54419	4.60	PPBV		93
20) Acetonitrile	9.01	41	69821	3.70	PPBV	#	87
21) Methylene chloride	9.13	49	162257	4.06	PPBV		88
22) trans-1,2-Dichloroethene	9.61	61	203222	4.52	PPBV	#	77
23) Methyl tert-butyl ether	9.57	73	412930	4.67	PPBV		98
24) Acrylonitrile	9.85	53	58284	4.16	PPBV		97
25) Hexane	10.00	57	135567	4.42	PPBV		91
26) 1,1-Dichloroethane	10.62	63	224493	4.42	PPBV		98
27) Vinyl acetate	10.70	43	357968	4.39	PPBV	#	94
28) cis-1,2-Dichloroethylene	11.89	61	188143	4.52	PPBV	#	67
29) Methyl ethyl ketone (2-But	11.97	72	50115	4.49	PPBV		94
30) Ethyl acetate	11.98	45	41151	4.30	PPBV		92
31) Chloroform	12.54	83	479899	4.64	PPBV		99
32) Tetrahydrofuran	12.42	72	51994	4.59	PPBV		98
33) 1,1,1-Trichloroethane	12.81	97	652203	4.70	PPBV		95
34) Cyclohexane	12.76	56	143182	4.34	PPBV		93
35) Carbon tetrachloride	13.04	117	779395	4.84	PPBV		100
37) Benzene	13.49	78	377540	4.67	PPBV		96
38) 2,2,4-trimethylpentane	13.41	57	442627	4.29	PPBV		92
39) 1,2-Dichloroethane	13.68	62	286389	4.83	PPBV		99
40) Heptane	13.75	57	86221	4.42	PPBV	#	89
41) Trichloroethene	14.58	130	452300	5.09	PPBV		98
42) 1,2-Dichloropropane	15.02	63	114538	4.45	PPBV		97
43) Methyl methacrylate	15.11	69	108357	4.42	PPBV	#	89
44) 1,4-Dioxane	15.18	88	141924	4.74	PPBV		92
45) Bromodichloromethane	15.43	83	554826	4.70	PPBV		98
46) cis-1,3-Dichloropropene	16.15	75	260912	4.93	PPBV		100
47) Methyl isobutyl ketone	16.37	43	343025	4.53	PPBV		98
49) Toluene	16.63	91	659293	4.74	PPBV		100
50) trans-1,3-Dichloropropene	17.15	75	256948	4.42	PPBV	#	90
51) 1,1,2-Trichloroethane	17.44	97	323021	4.67	PPBV		91
52) Tetrachloroethene	17.49	166	566685	4.81	PPBV		96
53) 2-Hexanone (Methyl butyl k	17.72	43	303711	4.62	PPBV	#	95
54) Dibromochloromethane	17.94	129	939020	5.04	PPBV		99
55) 1,2-Dibromoethane	18.11	107	676414	4.50	PPBV		100
56) Chlorobenzene	18.63	112	820053	4.76	PPBV		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MS2011Q1\LURCH\DATA\FEB11\L021711A\L1100435.D Vial: 1
Acq On : 17 Feb 2011 3:27 pm Operator: tdd/cld
Sample : 5ppbv to-15 std A Inst : Lurch
Misc : Can #1464 "A", 125mL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 17 16:39 2011 Quant Results File: L021111A.RES

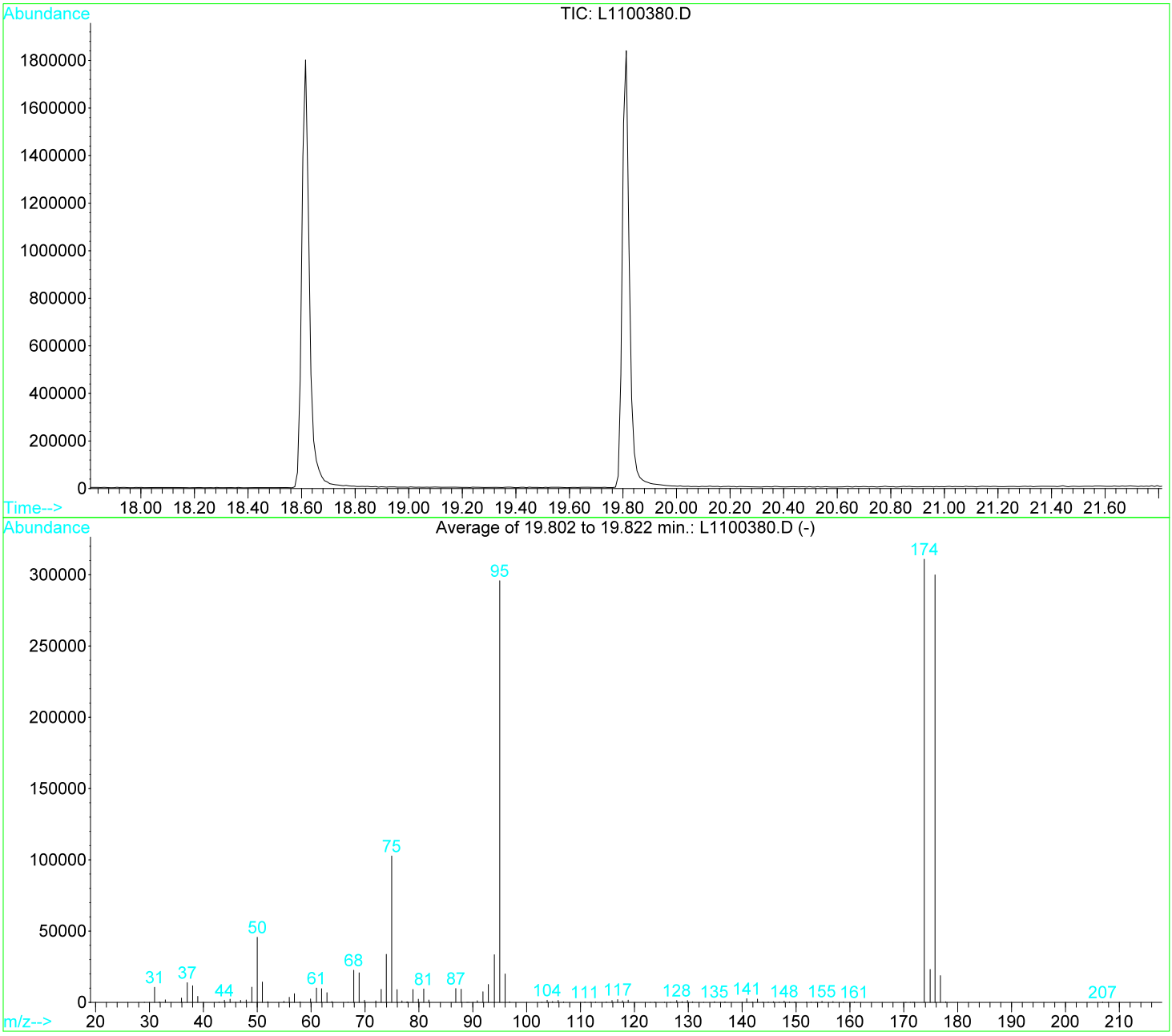
Quant Method : M:\MS2011\M...\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"
Last Update : Fri Feb 11 19:26:13 2011
Response via : Initial Calibration
DataAcq Meth : MM624-L

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
57)	Ethylbenzene	18.69	91	968967	4.64	PPBV		93
58)	1,1,1,2-Tetrachloroethane	18.72	131	523528	4.87	PPBV		91
59)	m-/p-Xylenes	18.82	91	1532698	8.94	PPBV		90
60)	o-Xylene	19.25	91	808185	4.76	PPBV		91
61)	Styrene	19.28	104	719207	4.69	PPBV	#	90
62)	Bromoform	19.52	173	873646	4.74	PPBV	#	98
63)	1,1,2,2-Tetrachloroethane	19.93	83	544884	4.42	PPBV		99
64)	4-Ethyltoluene	20.05	105	1346645	4.48	PPBV		99
65)	2-Chlorotoluene	20.08	91	993996	4.23	PPBV		91
66)	1,3,5-Trimethylbenzene	20.10	105	1161808m	4.60	PPBV		97
67)	1,2,4-Trimethylbenzene	20.42	105	1122908	4.55	PPBV		97
68)	1,3-Dichlorobenzene	20.71	146	852279	4.91	PPBV		99
69)	1,4-Dichlorobenzene	20.80	146	830531	4.71	PPBV		99
70)	Benzyl chloride	20.91	91	758135	4.60	PPBV		95
71)	1,2-Dichlorobenzene	21.11	146	850502	4.79	PPBV		98
72)	1,2,4-Trichlorobenzene	22.41	180	395778	4.28	PPBV		99
73)	Hexachlorobutadiene	22.47	225	568651	4.49	PPBV		98
74)	Naphthalene	22.68	128	1083407	4.23	PPBV		99

Manual Int. "WP" (TDD)

(#) = qualifier out of range (m) = manual integration

Data File : M:\MS2011Q1\LURCH\DATA\FEB11\L021011B\L1100380.D Vial: 1
Acq On : 10 Feb 2011 4:58 pm Operator: tdd/cld
Sample : bfb Inst : Lurch
Misc : Can #1454 "A", 10mL Multiplr: 1.00
MS Integration Params: rteint.p
Method : M:\MS2011\METHODS\LURCH\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"



AutoFind: Scans 1667, 1668, 1669; Background Corrected with Scan 1661

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	15.5	45731	PASS
75	95	30	66	34.7	102693	PASS
95	95	100	100	100.0	295829	PASS
96	95	5	9	6.8	20002	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	105.1	310933	PASS
175	174	4	9	7.4	23128	PASS
176	174	93	101	96.5	299989	PASS
177	176	5	9	6.3	18774	PASS

L1100380.D L021111A.M Fri Feb 11 19:06:00 2011

Average of 19.802 to 19.822 min.: L1100380.D

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
29.05	93	44.95	2256	57.95	423	73.00	9157
30.95	10660	46.00	104	59.90	2424	73.95	33755
31.85	401	46.90	1456	61.00	10055	74.95	102693
32.95	1773	47.95	1750	61.95	9629	75.95	9007
35.95	3100	49.00	10693	62.95	6835	76.85	1090
37.00	13900	50.00	45731	63.85	621	77.75	295
38.00	11678	50.95	14315	66.85	175	77.90	480
38.95	4273	51.95	581	67.90	22590	78.90	9056
39.85	20	54.95	799	68.90	20791	79.90	2245
42.90	248	55.95	3600	69.90	1496	80.90	9432
43.90	1518	56.90	6121	72.00	1077	81.85	1737

Average of 19.802 to 19.822 min.: L1100380.D

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
86.85	9731	102.80	89	117.80	1224	134.85	574
87.85	9295	103.80	1554	118.85	1629	135.95	72
88.95	73	104.80	632	122.95	94	136.80	497
89.25	72	105.85	1463	123.80	163	140.00	114
90.85	1196	106.85	378	125.60	88	140.85	2668
91.90	7505	110.80	262	126.70	102	141.90	283
92.90	12589	111.85	190	127.85	1365	142.85	2398
94.00	33445	112.80	282	128.85	529	143.80	193
95.00	295829	114.80	352	129.85	1338	144.85	285
96.00	20002	115.85	1362	130.80	426	145.80	551
96.85	496	116.90	2020	132.85	78	146.90	287

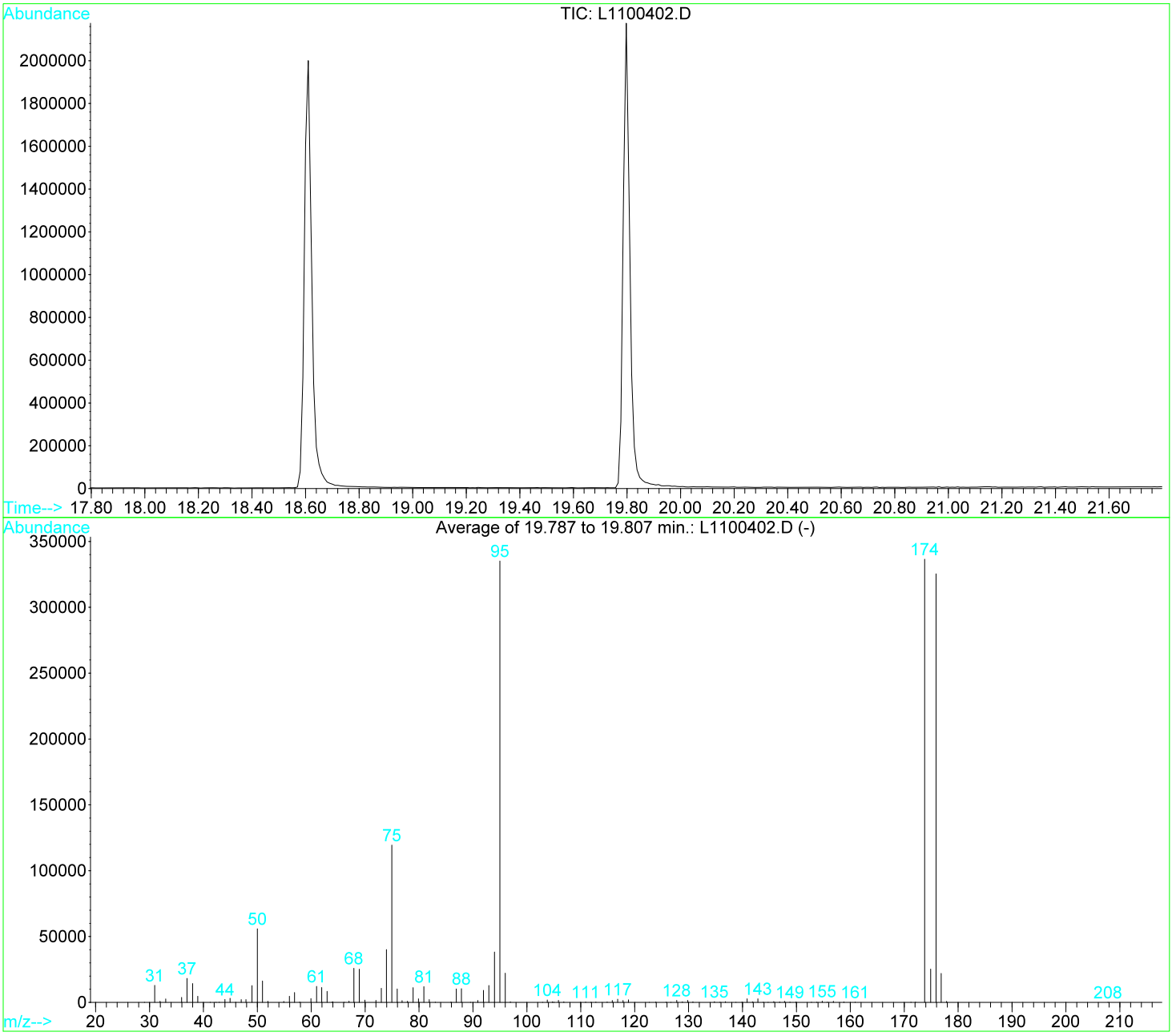
Average of 19.802 to 19.822 min.: L1100380.D

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
147.80	896	171.20	72				
148.80	310	171.60	118				
149.75	289	171.90	165				
151.90	162	173.80	310933				
152.80	189	174.90	23128				
153.75	162	175.80	299989				
154.80	856	176.80	18774				
156.85	683	177.80	429				
158.80	286	206.90	256				
160.80	355	207.90	84				
170.40	77						

Data File : C:\MS2011Q1\LURCH\DATA\FEB11\L021111A\L1100402.D Vial: 1
Acq On : 11 Feb 2011 6:20 pm Operator: tdd/cld
Sample : bfb Inst : Lurch
Misc : Can #1454 "A", 10mL Multiplr: 1.00
MS Integration Params: rteint.p
Method : M:\MS2011\METHODS\LURCH\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"



AutoFind: Scans 1668, 1669, 1670; Background Corrected with Scan 1662

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	16.7	55899	PASS
75	95	30	66	35.6	119432	PASS
95	95	100	100	100.0	335189	PASS
96	95	5	9	6.6	22186	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	100.4	336555	PASS
175	174	4	9	7.5	25304	PASS
176	174	93	101	96.7	325397	PASS
177	176	5	9	6.8	22028	PASS

L1100402.D L021111A.M Fri Feb 11 19:33:10 2011

Average of 19.787 to 19.807 min.: L1100402.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
29.05	114	42.95	244	55.95	4643	67.90	25947
30.95	12914	44.00	2250	56.90	7477	68.90	25200
31.95	897	44.95	3143	57.85	279	69.95	1744
33.00	2614	46.00	108	59.95	2911	72.00	1597
35.95	3765	47.00	2124	61.00	12188	73.00	10737
36.95	18237	47.90	2145	61.95	11345	73.95	40157
38.00	14345	49.00	12745	62.95	8410	74.95	119432
38.95	4711	50.00	55899	63.85	242	75.95	10205
39.90	60	50.95	16242	64.00	476	76.85	1387
41.25	67	51.95	841	66.15	109	77.85	893
42.35	72	54.90	828	67.00	1008	78.90	11226

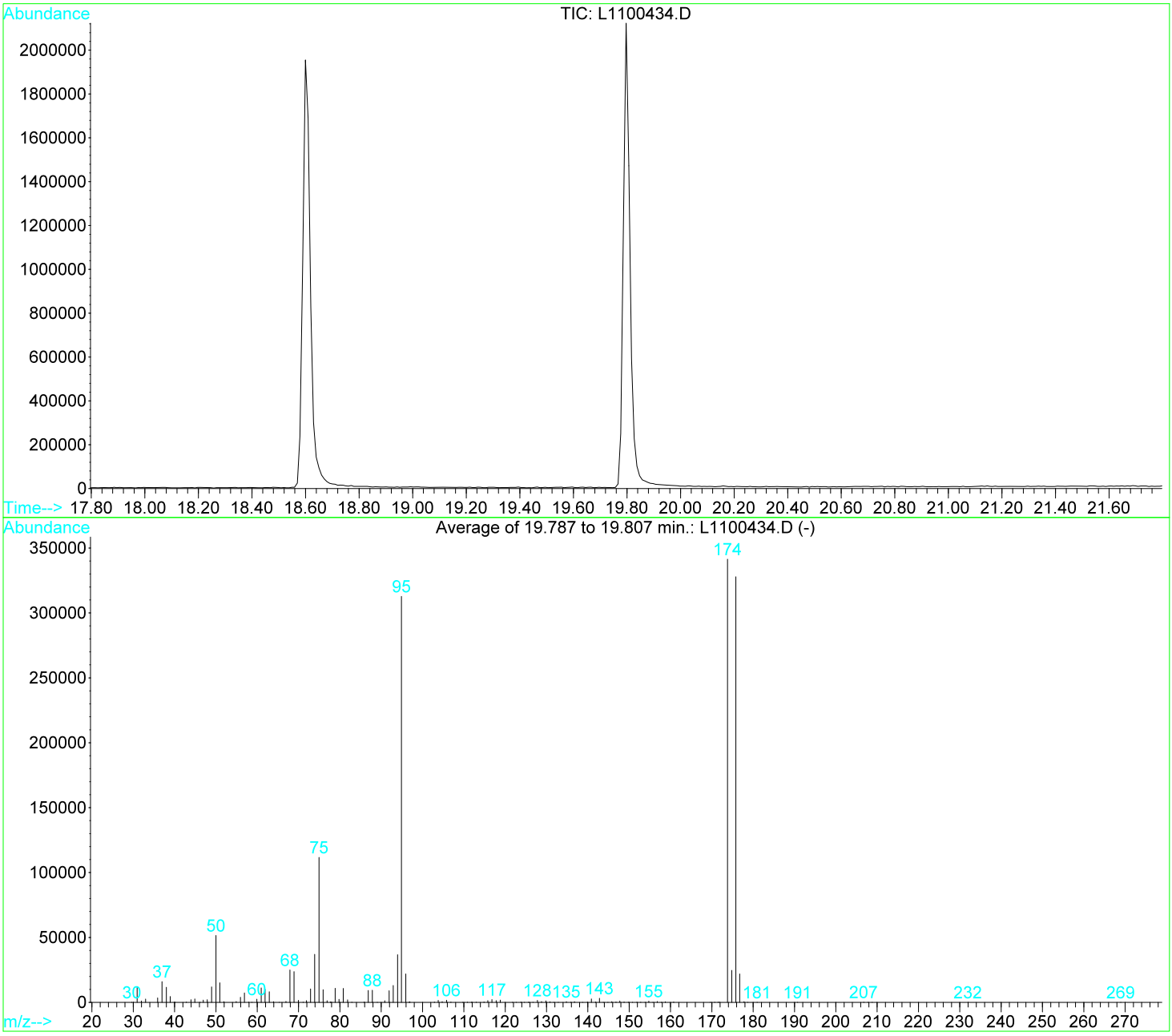
Average of 19.787 to 19.807 min.: L1100402.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
79.90	2774	94.00	38229	110.90	311	126.70	84
80.90	12022	95.00	335189	111.85	140	127.80	1604
81.90	2167	96.00	22186	112.80	321	128.85	474
83.00	233	96.95	505	114.90	439	129.85	1571
85.90	307	102.90	77	115.85	1439	130.80	517
86.90	10280	103.80	1873	116.85	2423	134.80	597
87.85	10469	104.75	521	117.85	1476	135.85	202
89.55	71	105.00	189	118.85	1971	136.85	597
90.90	1469	105.85	1606	122.75	70	138.80	68
91.95	9139	106.85	451	123.90	282	139.90	325
92.95	12902	109.95	75	125.80	164	140.85	2739

Average of 19.787 to 19.807 min.: L1100402.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
141.85	506	154.80	928	177.85	754		
142.85	2781	155.75	200	207.80	97		
143.85	103	156.85	840				
144.75	130	158.80	388				
145.80	642	160.90	221				
146.90	402	171.25	171				
147.80	837	172.10	209				
148.80	262	173.80	336555				
149.90	338	174.90	25304				
152.80	203	175.90	325397				
153.80	241	176.85	22028				

Data File : C:\MS2011Q1\LURCH\DATA\FEB11\L021711A\L1100434.D Vial: 1
Acq On : 17 Feb 2011 2:47 pm Operator: tdd/cld
Sample : bfb Inst : Lurch
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Method : M:\MS2011\METHODS\LURCH\L021111A.M (RTE Integrator)
Title : TO15 - 72 TCL - Primary "A"



AutoFind: Scans 1665, 1666, 1667; Background Corrected with Scan 1660

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	16.5	51523	PASS
75	95	30	66	35.7	111720	PASS
95	95	100	100	100.0	312811	PASS
96	95	5	9	7.0	21914	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	109.1	341419	PASS
175	174	4	9	7.2	24741	PASS
176	174	93	101	96.0	327915	PASS
177	176	5	9	6.7	21907	PASS

L1100434.D L021111A.M Fri Feb 18 13:09:17 2011

Average of 19.787 to 19.807 min.: L1100434.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
29.65	89	42.85	284	55.95	3967	67.90	24989
30.05	93	43.95	2072	56.90	7357	68.90	23728
30.95	11443	44.90	2663	57.95	229	69.95	1604
31.95	1148	46.20	109	58.70	74	71.10	165
33.00	2531	46.95	1832	59.90	2481	71.90	1422
35.90	3452	47.90	2075	60.95	11145	72.90	10369
36.95	16031	48.95	11925	61.90	10206	73.90	37013
38.00	11660	50.00	51523	62.90	8183	74.95	111720
38.95	4555	50.95	15119	63.95	651	75.95	9829
39.95	176	51.95	645	65.35	74	76.90	1258
40.15	76	54.90	687	66.95	793	77.70	383

Average of 19.787 to 19.807 min.: L1100434.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
77.95	318	91.90	9012	106.85	332	121.75	90
78.85	10906	92.90	13022	109.75	158	122.65	81
79.80	2351	93.95	36723	110.85	234	123.80	305
80.80	10811	94.90	312811	111.85	167	124.65	155
81.85	1961	95.95	21914	112.05	88	125.60	116
82.90	168	96.75	188	113.00	252	125.80	71
85.85	271	96.95	512	114.85	388	126.70	106
86.85	9183	102.85	347	115.80	1404	127.80	1598
87.85	9345	103.80	1577	116.80	2171	128.80	704
89.05	82	104.75	637	117.80	1419	129.85	1234
90.85	1310	105.80	1713	118.80	1813	130.85	485

Average of 19.787 to 19.807 min.: L1100434.D
bfb
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
131.75	69	144.85	89	155.75	71	175.80	327915
132.85	76	145.80	645	156.80	669	176.75	21907
134.80	632	146.80	415	157.75	87	177.80	578
135.90	164	147.75	1066	158.75	465	178.65	87
136.75	583	148.75	400	160.75	392	180.95	74
138.70	93	149.80	254	169.65	78	190.75	77
139.90	300	150.80	70	170.70	171	206.75	227
140.85	2690	151.85	168	171.50	171	207.80	84
141.85	366	152.80	173	171.85	261	208.80	77
142.80	3199	153.85	149	173.80	341419	232.00	75
143.75	78	154.75	956	174.80	24741	268.95	103

Sequence Name: M:\MS2011Q1\LURCH\SEQUENCE\L021011B.S
Comment:
Operator: tdd/cld
Data Path: c:\ms2011q1\lurch\data\feb11\L021011B\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	BFB	1	L1100379	MM624-L	bfb
2	BFB	1	L1100380	MM624-L	bfb
3	Calibration	1	L1100381	MM624-L	0.4ppbv to-15 std A
4	Calibration	1	L1100382	MM624-L	0.4ppbv to-15 std A
5	Calibration	1	L1100383	MM624-L	0.4ppbv to-15 std A
6	Calibration	1	L1100384	MM624-L	1ppbv to-15 std A
7	Calibration	1	L1100385	MM624-L	2ppbv to-15 std A
8	Calibration	1	L1100386	MM624-L	5ppbv to-15 std A
9	Calibration	1	L1100387	MM624-L	10ppbv to-15 std A
10	Calibration	1	L1100388	MM624-L	20ppbv to-15 std A
11	Calibration	1	L1100389	MM624-L	30ppbv to-15 std A
12	Spike	10	L1100390	MM624-L	5ppbv ICV std B
13	Spike	10	L1100391	MM624-L	5ppbv ICV std B
14	Blank	1	L1100392	MM624-L	humid blank
15	Blank	1	L1100393	MM624-L	humid blank
16	Blank	13	L1100394	MM624-L	AZ gas 038442795
17	Blank	13	L1100395	MM624-L	AZ gas 038442795
18	Calibration	1	L1100396	MM624-L	0.4ppbv to-15 std A
19	Blank	1	L1100397	MM624-L	humid blank
20	Calibration	1	L1100398	MM624-L	0.4ppbv to15 std A
21	Calibration	1	L1100399	MM624-L	1ppbv to15 std A
22	Calibration	1	L1100400	MM624-L	2ppbv to15 std A
23	Blank	1	BAKEOUT	BAKEOUT	BAKEOUT

Sequence Name: M:\MS2011Q1\LURCH\SEQUENCE\L021111A.S
Comment:
Operator: tdd/cld
Data Path: c:\ms2011q1\lurch\data\feb11\L021111A\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	BFB	1	L1100401	MM624-L	bfb
2	BFB	1	L1100402	MM624-L	bfb
3	Calibration	1	L1100403	MM624-L	5ppbv to-15 std A
4	Spike	10	L1100404	MM624-L	5ppbv ICV std B
5	Spike	10	L1100405	MM624-L	5ppbv ICV/LCS std B
6	Spike	1	L1100406	MM624-L	5ppbv ICV/LCS std B
7	Spike	1	L1100407	MM624-L	5ppbv ICV/LCS std B
8	Blank	1	L1100408	MM624-L	humid blank
9	Blank	1	L1100409	MM624-L	humid blank
10	Blank	1	BAKEOUT	BAKEOUT	BAKEOUT

Sequence Name: M:\MS2011Q1\LURCH\SEQUENCE\L021711A.S
Comment:
Operator: tdd/cld
Data Path: c:\ms2011q1\lurch\data\feb11\L021711A\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	BFB	1	L1100429	MM624-L	bfb
2	BFB	1	L1100430	MM624-L	bfb
3	BFB	1	L1100431	MM624-L	bfb
4	BFB	1	L1100432	MM624-L	bfb
5	BFB	1	L1100433	MM624-L	bfb
6	BFB	1	L1100434	MM624-L	bfb
7	Calibration	1	L1100435	MM624-L	5ppbv to-15 std A
8	Spike	10	L1100436	MM624-L	5ppbv LCS std A
9	Spike	1	L1100437	MM624-L	5ppbv LCS std A
10	Blank	1	L1100438	MM624-L	humid blank
11	Blank	1	L1100439	MM624-L	humid blank
12	Blank	1	L1100440	MM624-L	system blank
13	Sample	1	L1100441	MM624-L	0211-74 AE-101
14	Sample	1	L1100442	MM624-L	0211-74 AE-101
15	Sample	1	L1100443	MM624-L	0211-74 AE-101
16	Sample	1	L1100444	MM624-L	0211-74 AE-101 LD
17	Sample	1	L1100445	MM624-L	0211-49 ACB-M0040-FB *5000
18	Sample	1	L1100446	MM624-L	0211-49 1R-ACB-M0040-02 *5000
19	Sample	1	L1100447	MM624-L	0211-49 1R-ACB-M0040-02 *10,0
20	Sample	1	L1100448	MM624-L	0211-49 1R-ACB-M0040-02 *5,00
21	Sample	1	L1100449	MM624-L	0211-49 1R-ACB-M0040-02 *10,0
22	Blank	1	BAKEOUT	BAKEOUT	BAKEOUT
23					

TOPLEVEL PARAMETERS

Method Information For: M:\MS2008Q3\LURCH\METHODS\MM624-L.M

Method Sections To Run:

( ) Save Copy of Method With Data
(X) Pre-Run Cmd/Macro = MPVGotoVialDDE
(X) Data Acquisition
( ) Data Analysis
(X) Post-Run Cmd/Macro = macro "postmsd.mac"

Method Comments:
This is the acquisition method for Method TO-15 with Bromochloromethane, 1,4-Difluorobenzene & Chlorobenzene-d5 as the internal standards being used to quantitate analytes.

END OF TOPLEVEL PARAMETERS

INSTRUMENT CONTROL PARAMETERS

Sample Inlet: GC
Injection Source: External Device
Injection Location: Rear
Mass Spectrometer: Enabled

HP5890 Temperature Parameters

Zone Temperatures:	State	Setpoint
Inlet A:	On	250 C
Inlet B:	Off	50 C
Detector A:	Off	50 C
Detector B:	On	280 C
Auxiliary:	Off	50 C

Oven Parameters:

Oven Equib Time:	0.20 minutes
Oven Max:	325 C
Oven State:	On
Cryo State:	On
Cryo Blast:	On
Ambient:	25 C

Oven Program:

Initial Temperature:	30 C
Initial Time:	3.00 minutes

Level	Rate (C/minute)	Final Temperature (C)	Final Time (minutes)
1	5.0	75	0.00
2(A)	15.0	120	2.00
3(B)	70.0	240	8.00

Next Run Time: 26.71 minutes

HP5890 Inlet Pressure Programs

GC Pressure Units: psi

Inlet A:

Constant Flow:	On
Constant Flow Pressure:	8.7 psi
Constant Flow Temperature:	35 C
Initial Pressure:	0.0 psi

1	Testplot	0.053	5.000	0.00	1.00
2	Testplot	0.053	5.000	0.00	1.00

MS ACQUISITION PARAMETERS

General Information

Tune File : bfb.u
Acquistion Mode : Scan

MS Information

Solvent Delay : 3.00 min

EM Absolute : False
EM Offset : 0
Resulting EM Voltage : 1717.6

[Scan Parameters]

Low Mass : 29
High Mass : 300
Threshold : 200
Sample # : 3 A/D Samples 8

END OF MS ACQUISITION PARAMETERS

END OF INSTRUMENT CONTROL PARAMETERS

Initial Time: 650.00 minutes

Level	Rate (psi/minute)	Final Pressure (psi)	Final Time (minutes)
1	0.00	0.0	0.00
2(A)	0.00	0.0	0.00
3(B)	0.00	0.0	0.00

Total Program Time: 650.00 minutes

Column Length: 60.00 m
Column Diameter: 0.320 mm
Gas: He
Vacuum Compensation: On

Inlet B:
Constant Flow: Off
Constant Flow Pressure: 0.0 psi
Constant Flow Temperature: 50 C
Initial Pressure: 0.0 psi
Initial Time: 650.00 minutes

Level	Rate (psi/minute)	Final Pressure (psi)	Final Time (minutes)
1	0.00	0.0	0.00
2(A)	0.00	0.0	0.00
3(B)	0.00	0.0	0.00

Total Program Time: 650.00 minutes

Column Length: 30.00 m
Column Diameter: 0.530 mm
Gas: He
Vacuum Compensation: Off

HP5890 Packed Column Flow Control

Inlet A not used to control packed column flow.

Inlet B not used to control packed column flow.

HP5890 Purge Valve Settings

Inlet Purge	Init Value	On Time	Off Time	Splitless Injection
A	Off	0.00	0.00	Yes
B	Off	0.00	0.00	Yes

HP5890 Valve and Relay Information

Initial Setpoints:
5890 Valves:
Valve 1: Off Valve 2: Off Valve 3: Off Valve 4: Off
19405 Valves:
Valve 5: Off Valve 6: Off Valve 7: Off Valve 8: Off
19405 Relays:
Relay 1: Off Relay 2: Off Relay 3: Off Relay 4: Off

HP5890 Detector Information

Detector	Type	State
A	---	Off
B	---	Off

HP5890 Signal Information

Not saving signal data.

Signal	Source	Peak Width	Data Rate	Start Data	Stop Data

This Is The Last Page Of This Report.



APPENDIX C: BIOLAB RESULTS

Serial Dilution/Plating Results Sheet

Test Information

EPA Project No.	1-2	PI	Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	10/26/2010
Counters Name	Nicole Griffin Gatchalian	Test No.	Burn Hut Wipes

Results

Date	10/29/2010	Volume Plated:	100 µL	Extraction Volume:	20 mL

Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
C1	A	0					
	B	0					
	C	0					
C2	A	0					
	B	0					
	C	0					
W1	A	0					
	B	0					
	C	0					
W2	A	0					
	B	0					
	C	0					
W3	A	0					
	B	0					
	C	0					
W4	A	0					
	B	0					
	C	0					
FB	A	0					
	B	0					
	C	0					
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						

Notes: post Spec-Klenz, incubated at 35°C

Serial Dilution/Plating Results Sheet

Test Information

EPA Project No.	1-2	PI	Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	11/2/2010
Counters Name	Nicole Griffin Gatchalian	Test No.	Burn Hut Wipes

Results

Date	11/3/2010	Volume Plated:	100 µL	Extraction Volume:	20 mL

Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
C1	A	0					
	B	0					
	C	0					
C2	A	0					
	B	0					
	C	0					
W1	A	0					
	B	0					
	C	0					
W2	A	0					
	B	0					
	C	0					
W3	A	0					
	B	0					
	C	0					
W4	A	0					
	B	0					
	C	0					
FB	A	0					
	B	0					
	C	0					
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						

Notes: Post spor-klenz, incubated at 55° C.

Serial Dilution/Plating Results Sheet

Page 1 of 1 NGG

Test Information

EPA Project No.	1-2	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	11/17/2010
Counters Name	Jason Levine	Test No.	Burn Hut Dry Run

recorded by Nicole Griffin Gatchalian

Results

Date	11/18/2010	Volume Plated:	100µL	Extraction Volume:	varied, see comments

Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
Gs Spike	A	tntc	tntc	398			1mL
	B	↓	↓	434			
	C	↓	↓	513			
Front Rinse	A	0	0	0	0		100mL collected
	B	0	0	0	0		extracted from 25mL
	C	0	0	0	0		
Water Fraction	A	0	0	0	0		5mL
	B	0	0	0	0		
	C	0	0	0	0		
Spike Oil	A	tntc	37	3	0		~~10mL~~ 5mL NGG
	B	↓	30	2	0		
	C	↓	33	0	0		
Plain Oil	A	0	0	0	0		~~10mL~~ 5mL NGG
	B	0	0	0	0		
	C	0	0	0	0		
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						

Notes: Qced as recorded; verified numbers for Spike oil NGG

Serial Dilution/Plating Results Sheet

NGG

Test Information

EPA Project No.	1-2	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	11/17/2010
Counters Name	Jason Levine	Test No.	Burn Hut Dry Run

recorded by Nicole Griffin Gatchalian

Results

Date	11/18/2010	Volume Plated:	100µL	Extraction Volume:	varied, see comments

Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
Gs Spike	A	tntc	tntc	398			1mL
	B	↓	↓	434			
	C	↓	↓	513			
Front Rinse	A	0	0	0	0		100mL collected
	B	0	0	0	0		extracted from 25mL
	C	0	0	0	0		
Water Fraction	A	0	0	0	0		5mL
	B	0	0	0	0		
	C	0	0	0	0		
Spike Oil	A	tntc	37	3	0		10mL
	B	↓	30	2	0		
	C	↓	33	0	0		
Plain Oil	A	0	0	0	0		10mL
	B	0	0	0	0		
	C	0	0	0	0		
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						

Notes: Read as recorded; verified numbers for Spike oil NGG

Serial Dilution/Plating Results Sheet

Test Information

EPA Project No.	1-2	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	plated 11/22/2010
Counters Name	Nicole Griffin Gatchalian	Test No.	Burn Hut Dry Run 11/17 samples

Results

Date	11/23/2010	Volume Plated:	100µL	Extraction Volume:	varied, see comments

Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
Gs Spike	A		TNTC	TNTC	49		1mL
	B		TNTC	TNTC	42		
	C		TNTC	TNTC	36		
Bones	A	0	0	0			1.54g of bones
	B	0	0	0			in 10mL PBST
	C	0	0	0			
Spike Ash	A	TNTC	68	7	1		0.67g of ash
	B	TNTC	70	5	1		in 10mL PBST
	C	TNTC	63	7	0		
Plain Ash	A	0	0	0			0.82g of ash
	B	0	0	0			in 10mL PBST
	C	0	0	0			
Negative plates	A	0					QC media check
	B	0					at 55C
	C	0					
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						

Notes: Spike Ash sample had 100µL of the GS Spike added to the 10mL PBST + 0.67g of ash; no contamination noted for any of the samples

Serial Dilution/Plating Results Sheet

Test Information

EPA Project No.	1-2	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	plated 11/22/2010
Counters Name	Nicole Griffin Gatchalian	Test No.	Burn Hut Dry Run 11/17 samples

Results

Date	11/23/2010	Volume Plated:	100µL	Extraction Volume:	varied, see comments

Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
Gs Spike	A		TNTC	TNTC	49		1mL
	B		TNTC	TNTC	42		
	C		TNTC	TNTC	36		
Bones	A	0	0	0			1.54g of bones
	B	0	0	0			in 10mL PBST
	C	0	0	0			
Spike Ash	A	TNTC	68	7	1		0.67g of ash
	B	TNTC	70	5	1		in 10mL PBST
	C	TNTC	63	7	0		
Plain Ash	A	0	0	0			0.82g of ash
	B	0	0	0			in 10mL PBST
	C	0	0	0			
Negative plates	A	0					QC media check
	B	0					at 55C
	C	0					
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						

Notes: Spike ash sample had 100µL of the GS spike added to the 10mL PBST + 0.67g of ash; no contamination noted for any of the samples

Serial Dilution/Plating Results Sheet

Test Information

EPA Project No.	1-2	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	plated 11/22/2010
Counters Name	Nicole Griffin Gatchalian	Test No.	Burn Hut Dry Run 11/17 samples

Results

Date	11/23/2010	Volume Plated:		100µL	Extraction Volume:		varied, see comments
		Tube Dilution					
Sample ID	Plate Repl.	1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
Gs Spike	A		TNTC	TNTC	49		1mL
	B		TNTC	TNTC	42		
	C		TNTC	TNTC	36		
Bones	A	0	0	0			1.54g of bones
	B	0	0	0			in 10mL PBST
	C	0	0	0			
Spike Ash	A	TNTC	68	7	1		0.67g of ash
	B	TNTC	70	5	1		in 10mL PBST
	C	TNTC	63	7	0		
Plain Ash	A	0	0	0			0.82g of ash
	B	0	0	0			in 10mL PBST
	C	0	0	0			
Negative plates	A	0					QC media check
	B	0					at 55C
	C	0					
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						

Notes: no contamination seen

Serial Dilution/Plating Results Sheet

Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	1/25/2011
Counters Name	Nicole Griffin Gatchalian	Test No.	1/20/2011 ACB Test

ngg

Results

Date	1/26/2011	Volume Plated:	100 µL	Extraction Volume:	varies

pH	Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
7.55	012011-WIPE-W1	A	0	0	0	0	0	used 20mL PBST
		B	0	0	0	0	0	for extraction
		C	0	0	0	0	0	
7.45	012011-WIPE-W2	A	0	0	0	0	0	used 20mL PBST
		B	0	0	0	0	0	for extraction
		C	0	0	0	0	0	
12.38	012011-FL-ASH1	A	2	3	0	0	0	used 40mL PBST
		B	12	2	0	0	0	for extraction
		C	15	2	0	0	0	
12.68	012011-FL-ASH2	A	6	1	0	0	0	used 40mL PBST
		B	9	0	1	0	0	for extraction
		C	3	cont$^{\Delta}$	0	0	0	Δlawn of fungus
12.32	012111-ACB-ASH	A	0	0	0	0	0	3.02g of ash in
		B	0	0	0	0	0	20mL PBST
		C	0	0	0	0	0	for extraction
11.9	012111-ACB-CC	A	0	1	0	0	0	2.55g of bones
		B	0	1	0	0	0	in 20mL PBST
		C	1	1	0	0	0	for extraction
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						

Notes: Incubated at 55°C for *Geobacillus stearothermophilus* ; growth seen was counted, colonies were enumerated, but colony type/organism genus/species could not be determined, pictures were taken ngg

Serial Dilution/Plating Results Sheet

Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	2/17/2011
Counters Name	Nicole Griffin Gatchalian	Test No.	2/16/2011 ACB Test

Results

Date plated	2/18/2011	Volume Plated:	100 µL	Extraction Volume:	varies

pH	Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
7.38	021711-WIPE-W1	A	0	0	0			20mL PBST
		B	0	0	0			for extraction
		C	0	0	0			
7.34	021711-WIPE-W3	A	0	0	0			20mL PBST
		B	0 cont	0	0			for extraction
		C	0	0	0			
11.84	021711-FL-ASH1	A	0	0	0			40mL PBST
		B	0	0	0			for extraction
		C	0	0	0			1.61g of ash
12.41	021711-FL-ASH2	A	0 cont	0	0			40mL PBST
		B	0 cont	0	0			for extraction
		C	0 cont	0	0			1.01g of ash
11.87	021711-ACB-ASH	A	0	0	0			20mL PBST
		B	0	0	0			for extraction
		C	0	0	0			1.44g of ash
10.76	021711-ACB-CC	A	0	0	0			20mL PBST
		B	0	0	0			for extraction
		C	0	0	0			1.57g of bones
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

contamination seen on some plates, but no target ~~org~~ colonies

mgs

Serial Dilution/Plating Results Sheet

Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	2/24/2011
Counters Name	Nicole Griffin Gatchalian	Test No.	2/23/2011 ACB Test

Results

Date plated	2/24/2011	Volume Plated:	100 µL	Extraction Volume:	varies

Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
022411-WIPE-W1	A	0	0	0			20mL PBST
	B	0	0	0			
	C	0	0	0			
022411-WIPE-W3	A	0	0	0			20mL PBST
	B	0	0	0			
	C	0	0	0			
022411-WipeBlank	A	0					20mL PBST
	B	0					
	C	0					
022411-RINSE	A	0	0	0			100mL glassware rinse
	B	0	0	0			with sterile DI water
	C	0	0	0			
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

Serial Dilution/Plating Results Sheet

1758

Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	2/22/2011
Counters Name	Nicole Griffin Gatchalian	Test No.	2/22/2011 sterility check

Results

Date plated	2/22/2011	Volume Plated:	100 µL	Extraction Volume:	varies

Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
022211-WIPE-W1	A	0					dilution plate
	B	0					
	C	0					
022211-WIPE-W1	A	0					1mL filter plate
	B						
	C						
022211-WIPE-W1	A	0					10mL filter plate
	B						
	C						
022211-WIPE-W2	A	0					dilution plate
	B	0					
	C	0					
022211-WIPE-W2	A	0					1mL filter plate
	B						
	C						
022211-WIPE-W2	A	0					10mL filter plate
	B						
	C						
022211-WIPE-W3	A	0					dilution plate
	B	0					
	C	0					
022211-WIPE-W3	A	0					1mL filter plate
	B						
	C						
022211-WIPE-W3	A	0					10mL filter plate
	B						
	C						
022211-VialTrap Neg Control	A	0					
	B	0					
	C	0					
	A						
	B						
	C						
	A						
	B						
	C						

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

Serial Dilution/Plating Results Sheet

Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	2/24/2011
Counters Name	Nicole Griffin Gatchalian	Test No.	022411 ACB Test

2/25/2011

Results

Date plated NGG	~~2/24/2011~~	Volume Plated:	100 µL	Extraction Volume:	varies
Date counted	2/26/2011 NGG			Tube Dilution	

pH	Sample ID	Plate Repl.	1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
	ViaTrap sterility check	A	0					
		B	0					
		C	0					
	Oil Sample 2-ACB-BS-01	A	0	0	0			13mL of oil
		B	0	0	0			were recovered
		C	0	0	0			
12.39	022411-FL-ASH-1	A	0	0	0			no wt.
		B	0	0	0			in 40mL PBST
		C	0	0	0			
12.40	022411-FL-ASH-2	A	0	0	0			no wt.
		B	0	0	0			in 40mL PBST
		C	0	0	0			
11.84	022411-ACB-ASH	A	0	0	0			1.23g of ash
		B	0	0	0			in 20mL PBST
		C	0	0	0			
11.44	022411-ACB-CC	A	0	0	0			3.13g of bone
		B	0	0	0			in 20mL PBST
		C	0	0	0			
6.96	022511-WIPE-W2	A	0	0	0			
		B	0	0	0			20mL PBST
		C	0	0	0			
7.27	022511-WIPE-W4	A	0	0	0			
		B	0	0	0			20 mL PBST
		C	0	0	0			
	022511-WIPE-BLANK	A	0					
		B	0					20 mL PBST
		C	0					
	Rinse 2-ACB-BS-01	A	0					100mL of DDW
		B	0					rinsed through
		C	0					glassware
		A						
		B						
		C						
		A						
		B						
		C						

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

Serial Dilution/Plating Results Sheet

 ngg

Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	2/28/11
Counters Name	Nicole Griffin Gatchalian	Test No.	2-ACB-BS-02

Results

Date plated	3/1/11	Volume Plated:	100uL	Extraction Volume:	varied
counted	3/2/11				

Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
2-ACB-BS-02 Oil	A	0	0	0			11.5mL recovered
	B	0	0	0			
	C	0	0	0			
2-ACB-BS-02 Rinse	A	0	0	0			100mL DDW rinse collected
	B	0	0	0			
	C	0	0	0			
Neg. Oil	A	0					
	B	0					
	C	0					
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

Serial Dilution/Plating Results Sheet

 4799

Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	3/1/2011
Counters Name	Nicole Griffin Gatchalian	Test No.	030111 ACB Test

Results

Date plated	3/2/11	Volume Plated:	100 µL	Extraction Volume:	varies

pH	Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
12.00	030111 ACB ASH	A	0	0	0			1.00g ash in 20mL PBST
		B	0	0	0			
		C	0	0	0			
12.37	030111 ACB CC	A	0	0	0			3.17g bone in 20mL PBST
		B	0	0	0			
		C	0	0	0			
12.52	030111 FLYASH 1	A	0 cont	0	0			1.04g ash w/ HEPA in 40mL PBST
		B	0 cont	0 cont	0			
		C	0 cont	0 cont	0			
11.33	030111 FLYASH 2	A	3 cont	0 cont	0			1.57g ash w/ HEPA in 40mL PBST
		B	5 cont	0	0			
		C	2 cont	0 cont	0			
7.64	030111 WIPE W1	A	0	0	0			20mL PBST
		B	0	0	0			
		C	0	0	0			
10.12	030111 WIPE W3	A	0	0	0			20mL PBST
		B	0	0	0			
		C	0	0	0			
7.67	030111 WIPE BLANK	A	0					20mL PBST
		B	0					
		C	0					
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

Contamination seen on some plates, but target colonies also seen.

Serial Dilution/Plating Results Sheet

4ngg

Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	3/2/11
Counters Name	Nicole Griffin Gatchalian	Test No.	2-ACB-BS-03

Results

Date plated	3/4/11	Volume Plated:	100 µL	Extraction Volume:	Varied
counted	3/5/11				

Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
2-ACB-BS-03 Oil	A	0	0	0			12mL recovered
	B	0	0	0			
	C	0	0	0			
2-ACB-BS-03 Rinse	A	0	0	0			100mL DDW
	B	0	0	0			rinse collected
	C	0	0	0			
Oil Neg	A	0					by NGG
	B	0					ViaTrap
	C	0					sterility check
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

Serial Dilution/Plating Results Sheet

Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name	~~Nicole Griffin Gatchalian~~ CS	Test Date	3/2/2011
Counters Name	Nicole Griffin Gatchalian	Test No.	030211

Results

Date plated	3/3/11	Volume Plated:	100 µL	Extraction Volume:	~~varies~~ 20 mL PBST

Tube Dilution

pH	Sample ID	Plate Repl.	1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
7.57	030211 WIPE W2	A	0	0	0			
		B	0	0	0			
		C	0	0	0			
7.70	030211 WIPE W4	A	0	0	0			
		B	0	0	0			
		C	0	0	0			
7.52	030211 WIPE BLANK	A	0					
		B	0					
		C	0					
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

extracted and plated by Christina Slone

Serial Dilution/Plating Results Sheet

Test Information

EPA Project No.	WA 1-2 NGG &	PI	Paul Lemieux
Technicians Name	~~Nicole Griffin Gatchalian~~ CS	Test Date	3/3/2011
Counters Name	Nicole Griffin Gatchalian	Test No.	030311 ACB Test

Results

Date plated	3/3/11 & 3/4/11	Volume Plated:	100 µL	Extraction Volume:	varies

pH	Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments	
12.62	030311 ACB ASH	A	0	0	0			1.09g of ash in 20mL PBST	NGG
		B	0	0	0				
		C	0	0	0				
11.59	030311 ACB CC	A	0	0	6			4.11g of bones in 20mL PBST	NGG
		B	0	0	0				
		C	0	0	0				
12.52	030311 FLYASH 1	A	14 cont	0	0			1.25g w/ HEPA in 40mL PBST	NGG
		B	21 cont	0	0				
		C	11 cont	2	0				
12.18	030311 FLYASH 2	A	0	0	0			1.54g w/ HEPA in 40mL PBST	NGG
		B	0 cont	0	0				
		C	0	0	0				
7.57	030311 WIPE W1	A	0	0	0			20mL PBST	CS
		B	0	0	0				
		C	0	0	0				
7.92	030311 WIPE W3	A	0	0	0			20mL PBST	CS
		B	0	0	0				
		C	0	0	0				
7.47	030311 WIPE BLANK	A	0					20mL PBST	CS
		B	0						
		C	0						
		A							
		B							
		C							
		A							
		B							
		C							
		A							
		B							
		C							
		A							
		B							
		C							
		A							
		B							
		C							

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

extracted and plated by Christina Slone and Nicole Griffin Gatchalian

Serial Dilution/Plating Results Sheet ngg

Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	3/4/2011
Counters Name	Nicole Griffin Gatchalian	Test No.	030411

Results

Date plated	3/4/11	Volume Plated:	100 µL	Extraction Volume:	~~varies~~ 20mL PBST

PH	Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments	
		A	0	0	0				
7.39		B	0	0	0				NGG
	030411 WIPE W2	C	0	0	0				
		A	0	0	0				
7.42		B	0	0	0				NGG
	030411 WIPE W4	C	0	0	0				
		A	0						
7.45		B	0						NGG
	030411 WIPE BLANK	C	0						
		A							
		B							
		C							
		A							
		B							
		C							
		A							
		B							
		C							
		A							
		B							
		C							
		A							
		B							
		C							
		A							
		B							
		C							
		A							
		B							
		C							
		A							
		B							
		C							
		A							
		B							
		C							

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

Serial Dilution/Plating Results Sheet ngg

Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	3/8/11
Counters Name	N. Griffin Gatchalian	Test No.	2-ACB-BS-04

Results

Date	3/10/11	Volume Plated:	100 µL	Extraction Volume:	varies

Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments	
2-ACB-BS-04 Oil	A	0	0	0			11.5 mL oil	
	B	0	0	0			recovered	NGG
	C	0	0	0				
2-ACB-BS-04 Rinse	A	0	0	0			100 mL DDW	NGG
	B	0	0	0			rinse	
	C	0	0	0				
Neg Oil	A	0					by CS	
	B	0					ViaTrap	CS
	C	0					sterility check	
	A							
	B							
	C							
	A							
	B							
	C							
	A							
	B							
	C							
	A							
	B							
	C							
	A							
	B							
	C							
	A							
	B							
	C							
	A							
	B							
	C							
	A							
	B							
	C							
	A							
	B							
	C							

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

ViaTrap check done by Christina Slone

Serial Dilution/Plating Results Sheet

Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name	N. Griffin Gatchalian	Test Date	3/9/11
Counters Name	N. Griffin Gatchalian	Test No.	ViaTrap Sterility check

Results

Date plated	3/9/11	Volume Plated:	100 µL	Extraction Volume:	~~varies~~ ViaTrap oil stock

Sample ID	Plate Repl.	1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
Oil Neg	A	0					ViaTrap
	B	0					sterility
	C	0					check
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
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	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

Serial Dilution/Plating Results Sheet

Page 1 of 1 mgg

Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name	Christina Slone	Test Date	3/9/2011
Counters Name	Nicole Griffin Gatchalian	Test No.	030911 ACB Test

Results

Date plated	3/10/11	Volume Plated:	100 µL	Extraction Volume:	varies

pH	Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments	
		A	0	0	0			1.05g ash	CS
11.83	030911 ACB ASH	B	0	0	0			in 20mL PBST	
		C	0	0	0				
		A	0	0	0			2.05g ~~ash~~ bone	
11.39	030911 ACB CC	B	0	0	0			in 20mL PBST	mgg
		C	0	0	0				CS
		A	0	0	0			1.70g ash and	
2.36	030911 FLYASH 1	B	1	0	0			HEPA sock in	CS
		C	0	0	0			40mL PBST	
		A	1	0	0			1.39g ash and	
12.51	030911 FLYASH 2	B	0	0	0			HEPA sock in	CS
		C	0	0	0			40mL PBST	
		A	0	0	0				
7.61	030911 WIPE W1	B	0	0	0			20mL PBST	CS
		C	0	0	0				
		A	0	0	0				
7.52	030911 WIPE W3	B	0	0	0			20mL PBST	CS
		C	0	0	0				
		A	0						
7.56	030911 WIPE BLANK	B	0					20mL PBST	CS
		C	0						
		A							
		B							
		C							
		A							
		B							
		C							
		A							
		B							
		C							
		A							
		B							
		C							
		A							
		B							
		C							

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

Serial Dilution/Plating Results Sheet

hgg

Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name	Nicole G Gatchalian	Test Date	3/10/11
Counters Name	Nicole G Gatchalian	Test No.	031011

Results

Date plated	3/11/11	Volume Plated:	100 µL	Extraction Volume:	~~varies~~ 20 mL PBST

pH	Sample ID	Plate Repl.	1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
7.40	031011 Wipe W2	A	0	0	0			
		B	0	0	0			
		C	0	0	0			
7.37	031011 Wipe W4	A	0	0	0			
		B	0	0	0			
		C	0	0	0			
7.43	031011 Wipe Blank	A	0					
		B	0					
		C	0					
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

Serial Dilution/Plating Results Sheet

ngg

Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	3/10/11
Counters Name	Nicole Griffin Gatchalian	Test No.	2-ACB-BS-05

Results

Date	3/10/11	Volume Plated:	100 µL	Extraction Volume:	varies

Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
2ACB-BS-05 oil	A	0	0	0			12.5mL oil recovered
	B	0	0	0			
	C	0	0	0			
2-ACB-BS-05 Rinse	A	0	0	0			100mL DDW rinse
	B	0	0	0			
	C	0	0	0			
oil negative	A	0					
	B	0					
	C	0					
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						

ngg

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

Serial Dilution/Plating Results Sheet

NSS

Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name	Christina Slone	Test Date	3/11/2011
Counters Name	Nicole Griffin Gatchalian	Test No.	031111 ACB Test

Results

Date plated	3/11/11	Volume Plated:	100 µL	Extraction Volume:	varies

pH	Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
11.29	031111 ACB ASH	A	0	0	0			1.05g ash in 20mL PBST
		B	0	0	0			
		C	0	0	0			
11.13	031111 ACB CC	A	0	0	0			2.80g bone in 20mL PBST
		B	0	0	0			
		C	0	0	0			
11.00	031111 FLYASH 1	A	0	0	0			1.16g ash w/ HEPA SOCK in 40mL PBST
		B	0	0	0			
		C	0	0	0			
11.71	031111 FLYASH 2	A	0	0	0			1.41g ash w/ HEPA SOCK in 40mL PBST
		B	0	0	0			
		C	0	0	0			
7.43	031111 WIPE W1	A	0	0	0			
		B	0	0	0			20mL PBST
		C	0	0	0			
7.28	031111 WIPE W3	A	0	0	0			
		B	0	0	0			20mL PBST
		C	0	0	0			
7.38	031111 WIPE BLANK	A	0					
		B	0					20mL PBST
		C	0					
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

Serial Dilution/Plating Results Sheet

 ngg

Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name	~~Nicole Griffin Gatchalian~~ CS	Test Date	3/14/2011
Counters Name	Nicole Griffin Gatchalian	Test No.	2-ACB-BS-06

Results

Date plated	3/15/11	Volume Plated:	100 μL	Extraction Volume:	varies

Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
2-ACB-BS-06 Oil	A	0	0	0			~12.5mL oil
	B	0	0	0			recovered
	C	0	0	0			
2-ACB-BS-06 Rinse	A	0	0	0			100mL DDW
	B	0	0	0			rinse
	C	0	0	0			
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
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	A						
	B						
	C						
	A						
	B						
	C						

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

plated by Christina Slone

Serial Dilution/Plating Results Sheet

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Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name	Christina Stone	Test Date	3/14/2011
Counters Name	Nicole Griffin Gatchalian	Test No.	031411

Results

Date plated	3/15/11	Volume Plated:	100 µL	Extraction Volume:	20mL PBST

PH	Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
7.39	031411 WIPE W2	A	0	0	0			
		B	0	0	0			
		C	0	0	0			
7.31	031411 WIPE W4	A	1	0	0			
		B	0	1	0			
		C	2	0	0			
7.46	031411 WIPE BLANK	A	0					
		B	0					
		C	0					
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

target ~~organisms~~ seen

colonies

4pg9

Serial Dilution/Plating Results Sheet

Page 1 of 1 hgg

Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name	Christina Stone	Test Date	3/15/2011
Counters Name	Nicole Griffin Gatchalian	Test No.	031511 ACB Test

Results

Date plated	3/15/11	Volume Plated:	100 µL	Extraction Volume:	varies

pH	Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
12.44	031511 ACB ASH	A	0	0	0			0.916g ash in 20mL PBST
		B	0	0	0			
		C	0	0	0			
11.77	031511 ACB CC	A	0	0	0			4.10g bone in 20mL PBST
		B	0	0	0			
		C	0	0	0			
12.34	031511 FLYASH 1	A	0 cont	0	0			1.35g in 40mL PBST (w/ sock)
		B	0 cont	0	0			
		C	0 cont	0	0			
11.96	031511 FLYASH 2	A	0 cont	0	0			1.28g in 40mL PBST (w/ sock)
		B	0 cont	0	0			
		C	0 cont	0 cont	0			
7.30	031511 WIPE W1	A	0 cont	0	0			
		B	1 cont	0	0			20mL PBST
		C	2 cont	0	0			
7.40	031511 WIPE W3	A	0	0	0			
		B	0	0	0			20mL PBST
		C	0	0	0			
7.43	031511 WIPE BLANK	A	0					
		B	0					20mL PBST
		C	0					
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

contamination seen, but also target ~~organ~~ seen colonies

hgg

Serial Dilution/Plating Results Sheet

hgg

Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	3/16/2011
Counters Name	Nicole Griffin Gatchalian	Test No.	031611

Results

Date plated	3/22/11	Volume Plated:	100 µL	Extraction Volume:	20mL PBST

pH

Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
7.30 (7.30) 031611 WIPE W2	A	0	0	0			
	B	0	0	0			
	C	0	0	0			
7.31 031611 WIPE W4	A	0	0	0			
	B	0	0	0			
	C	0	0	0			
7.34 031611 WIPE BLANK	A	0					
	B	0					
	C	0					
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
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	A						
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	C						
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	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

Serial Dilution/Plating Results Sheet

 ngg

Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	3/16/2011
Counters Name	Nicole Griffin Gatchalian	Test No.	2-ACB-BS-07

Results

Date plated	3/22/2011	Volume Plated:	100 µL	Extraction Volume:	varies

Sample ID	Plate Repl.	1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
		Tube Dilution					
2-ACB-BS-07 Oil	A	0	0	0			~12.5 mL
	B	0	0	0			recovered
	C	0	0	0			
2-ACB-BS-07 Rinse	A	0	0	0			100 mL DDW
	B	0	0	0			rinse
	C	0	0	0			
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
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	A						
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	A						
	B						
	C						
	A						
	B						
	C						

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

Serial Dilution/Plating Results Sheet

Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	3/17/2011
Counters Name	Nicole Griffin Gatchalian	Test No.	031711 ACB Test

Results

Date plated	3/22/11	Volume Plated:	100 µL	Extraction Volume:	varies

pH	Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
12.06	031711 ACB ASH	A	0	0	0			0.88g ash in 20mL PBST
		B	0	0	0			
		C	0	0	0			
11.69	031711 ACB CC	A	~~12~~ 13	24	0			3.45g bone in 20 mL PBST
		B	38	6	0			
		C	TCTC	12	0			
12.02	031711 FLYASH 1	A	0	0	0			1.74g ash in 40mL PBST (w/ HEPA sock)
		B	0	0	0			
		C	0	0	0			
11.97	031711 FLYASH 2	A	5	1	0			1.67g ash in 40 mL PBST (w/ HEPA sock)
		B	10	0	0			
		C	3	2	0			
7.24	031711 WIPE W1	A	0	0	0			20mL PBST
		B	0	0	0			
		C	0	0	0			
7.25	031711 WIPE W3	A	0	0	0			20mL PBST
		B	0	0	0			
		C	0	0	0			
7.33	031711 WIPE BLANK	A	0					20mL PBST
		B	0					
		C	0					
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

- extracted by Christina Slone -

TCTC= too contaminated too count

target colonies seen

Serial Dilution/Plating Results Sheet

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Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	3/18/2011
Counters Name	Nicole Griffin Gatchalian	Test No.	031811

Results

Date plated	3/22/11	Volume Plated:	100 µL	Extraction Volume:	20mL PBST

pH	Sample ID	Plate Repl.	1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
		A	0	0	0			
		B	0	0	0			
7.43	031811 WIPE W2	C	0	0	0			
		A	0	0	0			
		B	0	0	0			
7.37	031811 WIPE W4	C	0	0	0			
		A	0					
		B	0					
7.39	031811 WIPE BLANK	C	0					
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
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		C						
		A						
		B						
		C						
		A						
		B						
		C						

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

Serial Dilution/Plating Results Sheet

Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	3/21/2011
Counters Name	Nicole Griffin Gatchalian	Test No.	2-ACB-BS-08

Results

Date plated	3/22/2011	Volume Plated:	100 μL	Extraction Volume:	varies

Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
2-ACB-BS-08 Oil	A	0	0	0			~12.5 mL
	B	0	0	0			recovered
	C	0	0	0			
2-ACB-BS-08 Rinse	A	0	0	0			100 mL DDW
	B	0	0	0			rinse
	C	0	0	0			
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

Serial Dilution/Plating Results Sheet

Page 1 of 1 NGG

Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name CS + NGG ~~Nicole~~ Griffin Gatchalian		Test Date	3/22/2011
Counters Name	Nicole Griffin Gatchalian	Test No.	032211 ACB Test

Results

Date plated		Volume Plated:	100 µL	Extraction Volume:	varies

Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments	
032211 ACB ASH	A	0	0	0			0.80g ash in 20mL PBST	CS
	B	0	0	0				
	C	0	0	0				
032211 ACB CC	A	0	0	0			2.35g bone in 20mL PBST	CS
	B	0	0	0				
	C	0	0	0				
032211 FLYASH 1	A	0	0	0			2.03g of ash + HEPA sock in 40mL PBST	CS
	B	0	0	0				
	C	0	0	0				
032211 FLYASH 2	A	0	0	0			1.75g of ash + HEPA sock in 40mL PBST	CS
	B	0	0	0				
	C	0	0	0				
032211 WIPE W1	A	0	0	0			plated 3/22/11 20mL PBST	NGG
	B	0	0	0				
	C	0	0	0				
032211 WIPE W3	A	0	0	0			plated 3/22/11 20mL PBST	NGG
	B	0	0	0				
	C	0	0	0				
032211 WIPE BLANK	A	0					plated 3/22/11 20mL PBST	NGG
	B	0						
	C	0						
	A							
	B							
	C							
	A							
	B							
	C							
	A							
	B							
	C							
	A							
	B							
	C							
	A							
	B							
	C							

pH
0.91
11.43
12.15
12.22
7.38
7.30
7.38

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

plated by both CS and NGG

Serial Dilution/Plating Results Sheet

 ngg

Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name	Christina Stone	Test Date	3/23/2011
Counters Name	Nicole Griffin Gatchalian	Test No.	032311

Results

Date plated	3/29/11	Volume Plated:	100 µL	Extraction Volume:	20mL PBST	

pH	Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
7.30	032311 WIPE W2	A	0	0	0			20 mL PBST
		B	0	0	0			
		C	0	0	0			
7.33	032311 WIPE W4	A	1	0	0			20 mL PBST
		B	0 cont	0	0			
		C	1	0	0			
7.40	032311 WIPE BLANK	A	0					20mL PBST
		B	0					
		C	0					
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						
		A						
		B						
		C						

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

target colonies seen on sample 032311 Wipe W4

Serial Dilution/Plating Results Sheet

 4788

Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name	Jason Levine	Test Date	3/29/11 filter plated
Counters Name	Nicole Griffin Gatchalian	Test No.	wipe filter plates

Results

Date plated	3/29/2011	Volume Plated:	varies	Extraction Volume:	20 mL

Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
~~022811-~~ 030111 Wipe-W1	A	0					1mL
	B	0 cont.					13mL
	C						
~~022811-~~ 030111 Wipe-W3	A	0 cont					1mL
	B	0 cont					12mL
	C						
030211-Wipe-W2	A	0 cont					1mL
	B	0 cont					11mL
	C						
030211-Wipe-W4	A	0					1mL
	B	0 cont					13mL
	C						
030311-Wipe-W1	A	0					1mL
	B	0 cont					13mL
	C						
030311-Wipe-W3	A	0 cont					1mL
	B	0 cont					13mL
	C						
030411-Wipe-W2	A	0 cont					1mL
	B	0 cont					12mL
	C						
030411-Wipe-W4	A	0					1mL
	B	0 cont					13mL
	C						
030911-Wipe-W1	A	0 cont					1mL
	B	0 cont					14mL
	C						
030911-Wipe-W3	A	0 cont					1mL
	B	0 cont					13.5mL
	C						
031011-Wipe-W2	A	0 cont					1mL
	B	0 cont					13mL
	C						
031011-Wipe-W4	A	26					1mL
	B	TNTC					13.5mL
	C						

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

Serial Dilution/Plating Results Sheet

 4858

Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name	Jason Levine	Test Date	3/29/11 filter plated
Counters Name	Nicole Griffin Gatchalian	Test No.	wipe filter plates

Results

Date plated	3/29/2011	Volume Plated:	varies	Extraction Volume:	20 mL

Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
031111-Wipe-W1	A	0					1mL
	B	0					10mL
	C						
031111-Wipe-W3	A	0 cont.					1mL
	B	0 cont.					11mL
	C						
031411-Wipe-W2	A	6					1mL
	B	25					10mL
	C						
031411-Wipe-W4	A	11					1mL
	B	68					9mL
	C						
031511-Wipe-W1	A	TCTC					1mL
	B	TCTC					9mL
	C						
031511-Wipe-W3	A	0 cont					1mL
	B	6 cont					10mL
	C						
031611-Wipe-W2	A	0 cont					1mL
	B	0 cont					9.5mL
	C						
031611-Wipe-W4	A	0 cont					1mL
	B	0 cont					9.5mL
	C						
031711-Wipe-W1	A	0 cont					1mL
	B	0 cont					9.5mL
	C						
031711-Wipe-W3	A	0 cont					1mL
	B	0 cont					10.5mL
	C						
031811-Wipe-W2	A	0 cont					1mL
	B	0 cont					10mL
	C						
031811-Wipe-W4	A	0 cont					1mL
	B	0 cont					9.5mL
	C						

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

031411 grew target colonies.

031511 grew target colonies, but 031511-Wipe-W1 was too contaminated to count.

Serial Dilution/Plating Results Sheet

 1588

Test Information

EPA Project No.	WA 1-2	PI	Paul Lemieux
Technicians Name	Jason Levine	Test Date	3/29/2011 filter plated
Counters Name	Nicole Griffin Gatchalian	Test No.	wipe filter plates

Results

Date plated	3/29/2011	Volume Plated:	varies	Extraction Volume:	20 mL

Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
032211-Wipe-W1	A	0 cont					1mL
	B	0 cont					10mL
	C						
032211-Wipe-W3	A	0 cont					1mL
	B	0 cont					12mL
	C						
032311-Wipe-W2	A	0 cont					1mL
	B	0 cont					9mL
	C						
032311-Wipe-W4	A	0 cont					1mL
	B	0 cont					11mL
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						

Notes: Incubated at 55°C for *Geobacillus stearothermophilus*

Serial Dilution/Plating Results Sheet

 ngg

Test Information

EPA Project No.	2-14	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	10/20/2011
Counters Name	Christina Slone	Test No.	SKC viatrap oil spike

Results

Date Plated	**10/20/2011**	**Organism**	**Gs**	**Temperature**	55 °C
Date Counted	10/21/2011	Volume Plated:	100 µl	Extraction Volume:	15 mL

Sample ID	Plate Repl.	Tube Dilution 1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
	A	168	18				15mL of viatrap oil
	B	137	12				in SKC biosampler
SKC-E4	C	199	10				spiked at E4
	A	146	2				15mL of viatrap oil
	B	152	8				in a conical tube
VT-E4	C	194	6				spiked at E4
	A	246	23				15mL of PBST
	B	235	25				in a conical tube
PBST-E4	C	224	22				spiked at E4
	A		TNTC	TNTC	230		6mL prep of 29%
	B		↓	↓	220		ethanol E6 prep
E6 inoculum	C				238		
	A	0					viatrap oil stock
	B	0					sterility check plated
sterile VT	C	0					
	A	0					sterile ethanol stock
	B	0					sterility check plated
sterile EtOH	C	0					
	A	0					15mL PBST
	B						sterility check filtered
sterile PBST	C						

Notes: The ViaTrap Oil was difficult to plate and the viscosity caused some minor clumping on the plates; however, the colonies were still discernable.

recorded by Nicole Griffin Gatchalian

Gs lot #923201 Exp 30NOV 11
Apex Laboratories, Inc.

Serial Dilution/Plating Results Sheet

hgg

Test Information

EPA Project No.	2-14	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	11/19/2011
Counters Name	Nicole Griffin Gatchalian	Test No.	Inoculum 1 and 2

Date Plated:	11/19/2011	Organism:	*Gs*	Temperature:	55°C
Date Counted:	11/21/2011	Volume Plated:	100µl	Extraction Volume:	20 mL

Tube Dilution

Sample ID	Plate Repl.	1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
Inoculum #1	A			TNTC	131	14	
	B			↓	141	19	
	C			↓	143	16	
Inoculum #2	A			TNTC	156	10	
	B			↓	175	15	
	C			↓	167	19	
Negative ViaTrap	A	0					
	B	0					
	C	0					
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						

Notes:

Serial Dilution/Plating Results Sheet

Test Information

EPA Project No.	2-14	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	11/28/2011
Counters Name	Nicole Griffin Gatchalian	Test No.	Inoculum 3

Date Plated:	11/28/2011	Organism:	*Gs*	Temperature:	55°C
Date Counted:	11/29/2011	Volume Plated:	100µl	Extraction Volume:	20 mL

Tube Dilution

Sample ID	Plate Repl.	1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
Inoculum #3	A			TNTC	97		
	B			↓	111		
	C			↓	84		
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						

Notes:

Serial Dilution/Plating Results Sheet

hgg

Test Information

EPA Project No.	2-14	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	11/19/2011
Counters Name	Nicole Griffin Gatchalian	Test No.	Inoculum 1 and 2

Date Plated:	11/19/2011	Organism:	*Gs*	Temperature:	55°C
Date Counted:	11/21/2011	Volume Plated:	100µl	Extraction Volume:	20 mL

Tube Dilution

Sample ID	Plate Repl.	1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
Inoculum #1	A			TNTC	131	14	
	B			↓	141	19	
	C			↓	143	16	
Inoculum #2	A			TNTC	156	10	
	B			↓	175	15	
	C			↓	167	19	
Negative ViaTrap	A	0					
	B	0					
	C	0					
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						

Notes:

CHAIN OF CUSTODY RECORD

Project Name	USEPA
Project Location	RTP, NC
Sampling Location	Burnhut Exhaust Duct
Project Number	RN990272.0014
Laboratory	BioLab
Laboratory P.O. #	

Sample ID	Sample Matrix	Analysis Requested
VC-1	Via Cell	spores
BS-1	Bio Sampler	spores
Wipe1-112111		spores
Wipe2-112111		spores
Wipe3-112111		spores
Wipe4-112111		spores
BlankWipe-112111		spores
Rinsate-1	From glassware	40ml PBST rinse for spores

Notes/Comments:
all sampling done 11/21/11

Relinquished By:	John Nash	Relinquished By:	
Date/Time:	1451 11/21/11	Date/Time:	
Received By:	[signature]	Received By:	
Date/Time:	1515 11/21/11	Date/Time:	

ARCADIS U.S., Inc.
4915 Prospectus Drive, Suite F
Durham, North Carolina 27713

Phone Number: (919) 544-4535
Fax Number: (919) 544-5690

Serial Dilution/Plating Results Sheet

 4ngg

Test Information

EPA Project No.	2-14	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	11/21/2011
Counters Name	Nicole Griffin Gatchalian	Test No.	Test 1

Date Plated:	11/21/2011	Organism:	*Gs*	Temperature:	55°C
Date Counted:	11/22/2011	Volume Plated:	100µl	Extraction Volume:	20 mL

Tube Dilution

Sample ID	Plate Repl.	1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
VC-1	A	2					
	B	0					
	C	1					
BS-1	A	5	0				
	B	7	0				
	C	5	0				
Wipe1-112111	A	0	0				
	B	0	0				
	C	0	0				
Wipe2-112111	A	0	0				
	B	0	0				
	C	0	0				
Wipe3-112111	A	0	0				
	B	0	0				
	C	0	0				
Wipe4-112111	A 4ngg	~~0~~ 1	0				
	B	0	0				
	C	0	0				
Blank Wipe-112111	A	0					
	B	0					
	C	0					
Rinsate- 1	A	0					40mL PBST
	B	0					
	C	0					
ViaTrap Negative	A	0					100µL viatrap
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						

Notes:

CHAIN OF CUSTODY RECORD

Project Name	USEPA
Project Location	RTP, NC
Sampling Location	Burnhut Exhaust Duct
Project Number	RN990272.0014
Laboratory	BioLab
Laboratory P.O. #	

Sample ID	Sample Matrix	Analysis Requested
VC-2	Via Cell	spores
BS-2	Bio Sampler	spores
Wipe1-112211		spores
Wipe2-112211		spores
Wipe3-112211		spores
Wipe4-112211		spores
BlankWipe-112211		spores
Rinsate-2	From glassware	40mL PBST rinse for Spores

Notes/Comments:
all sampling conducted on 11/22/11

Relinquished By:	John Nash	Relinquished By:	
Date/Time:	11/22/11	Date/Time:	
Received By:	Nick Nagy	Received By:	
Date/Time:	11/22/11 2:30pm	Date/Time:	

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Phone Number: (919) 544-4535
Fax Number: (919) 544-5690

Serial Dilution/Plating Results Sheet

 ngg

Test Information

EPA Project No.	2-14	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	11/22/2011
Counters Name	Nicole Griffin Gatchalian	Test No.	Test 2

Date Plated:	11/22/2011	Organism:	*Gs*	Temperature:	55°C
Date Counted:	11/23/2011	Volume Plated:	100µl	Extraction Volume:	20 mL

Tube Dilution

Sample ID	Plate Repl.	1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
VC-2	A	3					
	B	3					
	C	1					
BS-2	A	5	0				
	B	3	0				
	C	2	0				
Wipe1-112211	A	0	0				
	B	0	0				
	C	0	0				
Wipe2-112211	A	0	0				
	B	2	0				
	C	0	0				
Wipe3-112211	A	1	0				
	B	0	0				
	C	0	0				
Wipe4-112211	A	1	0				
	B	0	0				
	C	0	0				
Blank Wipe-112211	A	0					
	B	0					
	C	0					
Rinsate- 2	A	0					
	B	0					
	C	0					
ViaTrap Negative	A	0					100µl viatrap 01
	B	0					
	C	0					
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						

Notes:

Serial Dilution/Plating Results Sheet

 ngg

Test Information

EPA Project No.	2-14	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	11/28/2011
Counters Name	Nicole Griffin Gatchalian	Test No.	Inoculum 3

Date Plated:	11/28/2011	Organism:	*Gs*	Temperature:	55°C
Date Counted:	11/29/2011	Volume Plated:	100µl	Extraction Volume:	20 mL

Tube Dilution

Sample ID	Plate Repl.	1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
Inoculum #3	A			TNTC	97		
	B			↓	111		
	C			↓	84		
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						
	A						
	B						
	C						

Notes:

CHAIN OF CUSTODY RECORD

Project Name	USEPA
Project Location	RTP, NC
Sampling Location	Burnhut Exhaust Duct
Project Number	RN990272.0014
Laboratory	BioLab
Laboratory P.O. #	

Sample ID	Sample Matrix	Analysis Requested
VC-13	Via Cell	spores
BS-13	Bio Sampler	spores

Notes/Comments:
Via-Cell has extra parts to it this time. All portions of the sample collection train are in the same bag.

Relinquished By:	John Nash	Relinquished By:	
Date/Time:	11/29/11	Date/Time:	
Received By:		Received By:	
Date/Time:	11/29/11	Date/Time:	

ARCADIS U.S., Inc.
4915 Prospectus Drive, Suite F
Durham, North Carolina 27713

Phone Number: (919) 544-4535
Fax Number: (919) 544-5690

CHAIN OF CUSTODY RECORD

Project Name	USEPA
Project Location	RTP, NC
Sampling Location	Burnhut Exhaust Duct
Project Number	RN990272.0014
Laboratory	BioLab
Laboratory P.O. #	

Sample ID	Sample Matrix	Analysis Requested
Wipe1-112911		spores
Wipe2-112911		spores
Wipe3-112911		spores
Wipe4-112911		spores
BlankWipe-112911		spores

Notes/Comments:

Relinquished By:		Relinquished By:	
Date/Time:	11/30/11	Date/Time:	
Received By:		Received By:	
Date/Time:	11-30-11 8:25	Date/Time:	

ARCADIS U.S., Inc.
4915 Prospectus Drive, Suite F
Durham, North Carolina 27713

Phone Number: (919) 544-4535
Fax Number: (919) 544-5690

Serial Dilution/Plating Results Sheet

 MDG

Test Information

EPA Project No.	2-14	PI	Paul Lemieux
Technicians Name	Nicole Griffin Gatchalian	Test Date	11/29/2011-11/30/2011
Counters Name	Nicole Griffin Gatchalian	Test No.	Test 3

Date Plated:	11/29/2011	Organism:	*Gs*	Temperature:	55°C
Date Counted:	11/22/2011	Volume Plated:	100µl	Extraction Volume:	20 mL

Tube Dilution

Sample ID	Plate Repl.	1.E+00	1.E-01	1.E-02	1.E-03	1.E-04	Comments
VC-3	A	0					viacell
	B	0					
	C	1					
BS-3	A	3	0				biosampler
	B	2	0				
	C	0	0				
Wipe1-112911	A	0	0				
	B	0	0				
	C	0	0				
Wipe2-112911	A	0	0				
	B	0	0				
	C	0	0				
Wipe3-112911	A	0	0				
	B	0	0				
	C	0	0				
Wipe4-112911	A	0	0				
	B	0	0				
	C	0	0				
Blank Wipe-112911	A	0					
	B	0					
	C	0					
Rinsate- 3	A	0					40mL PBST
	B	0					
	C	0					
ViaTrap Negative 3	A	0					100µL viatrap
	B	0					
	C	0					
Neg TSA	A	0					
	B	0					
	C	0					
	A						
	B						
	C						
	A						
	B						
	C						

Notes:

APPENDIX D: METROLOGY LAB CALIBRATION REPORTS

US EPA APPCD Metrology Lab

Flow Rate Evaluation Report

Device Under Test	Bio Sampler #3	**Calibration Date**	12/17/2010
Mfr., Model	SKC, Bio-Sampler	**Location**	High Bay
Serial Number	5250	**Notebook, page**	2273, p. 24
Met. Lab ID	03661		
Affiliation & PI	NHSRC, DCMD, Paul Lemieux	**Ambient Conditions During Calibration**	
Requestor	Brent Hall	Temperature between 20 °C and 24 °C	
Report File	bio-sampler 03661 2010-12-17 qa.xls	RH between 5 % and 40 %	
MOP #		Pressure between 1,003 hPa and 1,008 hPa	

Comments

Flow rate was evaluated at 2 different vacuum pressures within the devices operational range, with and without bio-sampler fluid, and with 2 different pumps. All of the different conditions performed without any significant difference. Flow rates under all the conditions averaged about 13.1 LPM.

Data and Results

	Measured Flow Rate, LPM	Target Flow Rate, LPM	Difference, LPM
	13.09	12.50	0.59
	13.00	12.50	0.50
	13.05	12.50	0.55
	13.05	12.50	0.55
	13.05	12.50	0.55
	13.04	12.50	0.54
	12.99	12.50	0.49
	13.00	12.50	0.50
	13.01	12.50	0.51
	12.97	12.50	0.47
Average	13.03	12.50	0.53
Stdev	0.04	0.00	0.04

Difference from Target was 4.2 %

Test Equipment

Device	Calibration Due	SN	Uncertainty (2K)
Gilibrator 2 30 LPM cell	10/12/2011	1010018-H	±1.0 % Reading
Hart 1560/2564 Thermistor Readout	3/19/2010	A35278	N/A
Thermometrics Thermistor #5	3/15/2011	107	±0.051 °C
Heise HQS-2, 0-15 PSIA #1	1/13/2011	16760	±0.19 mmHg
Heise HQS-2, 0-15 PSIA #2	3/16/2011	30066	±0.19 mmHg

Evaluated by Mike Tufts

US EPA APPCD Metrology Lab

Flow Rate Evaluation Report

Device Under Test	Bio Sampler #4	**Calibration Date**	12/20/2010
Mfr., Model	SKC, Bio-Sampler	**Location**	High Bay
Serial Number	5276	**Notebook, page**	2273, p. 25
Met. Lab ID	03662		
Affiliation & PI	NHSRC, DCMD, Paul Lemieux	**Ambient Conditions During Calibration**	
Requestor	Brent Hall	Temperature between 20 °C and 24 °C	
Report File	bio-sampler 03662 2010-12-20 qa.xls	RH between 5 % and 40 %	
MOP #		Pressure between 1,005 hPa and 1,011 hPa	

Comments

Flow rate was evaluated at 2 different vacuum pressures within the devices operational range with 2 different pumps. All of the different conditions performed without any significant difference. Flow rates under all the conditions averaged about 13.0 LPM.

Data and Results

	Measured Flow Rate, LPM	Target Flow Rate, LPM	Difference, LPM
	13.07	12.50	0.57
	13.07	12.50	0.57
	13.10	12.50	0.60
	12.98	12.50	0.48
	12.97	12.50	0.47
	13.02	12.50	0.52
	13.03	12.50	0.53
	12.98	12.50	0.48
	13.06	12.50	0.56
	13.01	12.50	0.51
Average	13.03	12.50	0.53
Stdev	0.04	0.00	0.04

Difference from Target was 4.2 %

Test Equipment

Device	Calibration Due	SN	Uncertainty (2K)
Gilibrator 2 30 LPM cell	10/12/2011	1010018-H	±1.0 % Reading
Hart 1560/2564 Thermistor Readout	3/19/2010	A35278	N/A
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Heise HQS-2, 0-15 PSIA #2	3/16/2011	30066	±0.19 mmHg

Evaluated by Mike Tufts



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