

3,3-Dimethylbenzidine; CASRN 119-93-7

Human health assessment information on a chemical substance is included in the IRIS database only after a comprehensive review of toxicity data, as outlined in the [IRIS assessment development process](#). Sections I (Health Hazard Assessments for Noncarcinogenic Effects) and II (Carcinogenicity Assessment for Lifetime Exposure) present the conclusions that were reached during the assessment development process. Supporting information and explanations of the methods used to derive the values given in IRIS are provided in the [guidance documents located on the IRIS website](#).

STATUS OF DATA FOR 3,3-Dimethylbenzidine

File First On-Line 07/01/1991

Category (section)	Assessment Available?	Last Revised
Oral RfD (I.A.)	not evaluated	
Inhalation RfC (I.B.)	message	07/01/1991
Carcinogenicity Assessment (II.)	not evaluated	

I. Chronic Health Hazard Assessments for Noncarcinogenic Effects

I.A. Reference Dose for Chronic Oral Exposure (RfD)

Substance Name — 3,3-Dimethylbenzidine
CASRN — 119-93-7

Not available at this time.

I.B. Reference Concentration for Chronic Inhalation Exposure (RfC)

Substance Name — 3,3-Dimethylbenzidine
CASRN — 119-93-7

The health effects data for 3,3'-dimethylbenzidine were reviewed by the U.S. EPA RfD/RfC Work Group and determined to be inadequate for derivation of an inhalation RfC. For additional information on the health effects of this chemical, interested parties are referred to the EPA documentation listed below.

U.S. EPA. 1987. Health and Environmental Effects Profile for 3,3'- Dimethylbenzidine. Prepared by the Office of Health and Environmental Assessment, Environmental Criteria and Assessment Office, Cincinnati, OH for the Office of Solid Waste and Emergency Response, Washington, DC.

Agency Work Group Review — 03/28/1991

EPA Contacts:

Please contact the IRIS Hotline for all questions concerning this assessment or IRIS, in general, at (202)566-1676 (phone), (202)566-1749 (FAX) or hotline.iris@epa.gov (internet address).

Screening-Level Literature Review Findings — A screening-level review conducted by an EPA contractor of the more recent toxicology literature pertinent to the RfC for 3,3-Dimethylbenzidine conducted in August 2003 did not identify any critical new studies. IRIS users who know of important new studies may provide that information to the IRIS Hotline at hotline.iris@epa.gov or 202-566-1676.

II. Carcinogenicity Assessment for Lifetime Exposure

Substance Name — 3,3-Dimethylbenzidine
CASRN — 119-93-7

This substance/agent has not undergone a complete evaluation and determination under US EPA's IRIS program for evidence of human carcinogenic potential.

III. [reserved]

IV. [reserved]

V. [reserved]

VI. Bibliography

Substance Name — 3,3-Dimethylbenzidine
CASRN — 119-93-7

VI.A. Oral RfD References

None

VI.B. Inhalation RfC References

U.S. EPA. 1987. Health and Environmental Effects Profile for 3,3'- Dimethylbenzidine. Prepared by the Office of Health and Environmental Assessment, Environmental Criteria and Assessment Office, Cincinnati, OH for the Office of Solid Waste and Emergency Response, Washington, DC.

VI.C. Carcinogenicity Assessment References

None

VII. Revision History

Substance Name — 3,3-Dimethylbenzidine
CASRN — 119-93-7

Date	Section	Description
07/01/1991	I.B.	Inhalation RfC message on-line
10/28/2003	I.B.	Screening-Level Literature Review Findings message has been added.

VIII. Synonyms

Substance Name — 3,3-Dimethylbenzidine

CASRN — 119-93-7

Last Revised — 07/01/1991

- 119-93-7
- (1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethyl-
- Benzidine, 3,3'-dimethyl-
- Bianisidine
- C.I. AZOIC DIAZO COMPONENT 113
- C.I. 37230
- Diaminoditolyl
- FAST DARK BLUE BASE R
- HSDB 1640
- o-TOLIDIN
- o-Tolidine
- o,o'-TOLIDINE
- Orthotolidine
- RCRA WASTE NUMBER U095
- 2-TOLIDIN [German]
- 2-TOLIDINA [Italian]
- 2-tolidine
- 3,3'-Dimethyl-(1,1'-biphenyl)-4,4'-diamine
- 3,3'-DIMETHYL-4,4'-BIPHENYLDIAMINE
- 3,3'-DIMETHYL-4,4'-DIAMINOBI-PHENYL
- 3,3'-DIMETHYL-4,4'-DIPHENYLDIAMINE
- 3,3'-DIMETHYLBENZIDIN
- 3,3'-dimethylbenzidine
- 3,3'-DIMETHYLBIPHENYL-4,4'-DIAMINE
- 3,3'-DIMETHYLDIPHENYL-4,4'-DIAMINE
- 3,3'-TOLIDINE
- 4,4'-BI-o-TOLUIDINE
- 4,4'-DI-o-TOLUIDINE
- 4,4'-DIAMINO-3,3'-DIMETHYLBIPHENYL
- 4,4'-DIAMINO-3,3'-DIMETHYLDIPHENYL