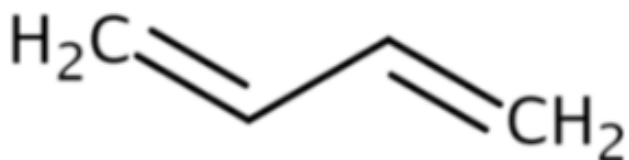


**Data Extraction Information for
General Population, Consumer, and Environmental Exposure for
1,3-Butadiene**

Systematic Review Support Document for the Risk Evaluation

CASRN: 106-99-0



December 2025

This supplemental file contains information regarding the data extraction results for data sources that met the PECO screening criteria for [Risk Evaluation for 1,3-Butadiene](#). EPA performs data extraction as part of the TSCA systematic review process described in the [Draft Systematic Review Protocol Supporting TSCA Risk Evaluations for Chemical Substances](#). The systematic review steps are further described in the [Risk Evaluation for 1,3-Butadiene](#).

EPA conducted data quality evaluation and extraction based on author-reported descriptions and results; additional analyses (e.g., statistical analyses) potentially conducted by EPA are not contained in this supplemental file. The data extraction results herein are organized by evidence streams and media types. A reference may contain data for multiple evidence streams and/or media types and will be cited in different tables if appropriate. The media type “All Applicable Media” refers to modeled doses or intakes calculated from human biomonitoring data (e.g., urine, blood, etc.) or when the media specific to the modeled route (e.g., inhalation, oral, etc.) are not clearly defined. In the data extraction results, “POINT VALUE(S)” denotes when the author(s) did not report a minimum, maximum, mean, or any other summary statistics, but rather single reported level(s) (e.g., chemical concentration). Summary statistic values that were less than the analytical limit were substituted with “0,” “ND,” “<LOD,” and “<LOQ,” as reported by the study. For further details about extraction criteria, review the [Risk Evaluation for 1,3-Butadiene](#).

Acronyms and abbreviations used within this supplemental file are defined in the table at the end of this file. The two letter country codes defined herein are consistent with those used in the searchable International Standardization Organization (ISO) 3166 standard for country codes. Finally, “NR” preceding a country code indicates that the author(s) did not report the city, state and region. This supplemental file may also be referred to as “1,3-Butadiene Data Extraction Information for General Population, Consumer, and Environmental Exposure.”

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Table 1: Data Extraction Tables of Exposure Monitoring Studies for Ambient Air

Citation Information	Site and Data Description	Limit (LOD/LOQ)	Min	Max	Mean	Percentile	Variance
Delfino et al. 2003 HERO ID: 50460 <i>OQD:</i> Medium	Huntington Park Region, CA, US Scenario: Ambient air in Huntington Park (n = 69; DF = <1; Sampling Period: Nov., 1999 - Jan., 2000)	LOD: 0.05 ppb LOQ: Not Reported	<LOD	1.50 ppb	0.51 ppb (AM)	90th: 1.00 ppb;	0.28 ppb (ASD)
Yazar et al. 2011 HERO ID: 836290 <i>OQD:</i> High	Stockholm, SE Scenario: Urban background site near traffic (n = 9; DF = 1; Sampling Period: Sept., 2009 - Dec., 2009)	LOD: 0.01 $\mu\text{g}/\text{m}^3$ LOQ: Not Reported	0.02 $\mu\text{g}/\text{m}^3$	0.2 $\mu\text{g}/\text{m}^3$	0.09 $\mu\text{g}/\text{m}^3$ (AM)	50th: 0.08 $\mu\text{g}/\text{m}^3$;	0.04 $\mu\text{g}/\text{m}^3$ (ASD)
Gordon et al. 1999 HERO ID: 1065862 <i>OQD:</i> Medium	Arizona, US Scenario: Outdoor air near residential homes (n = 14; DF = 0; Sampling Period: Jan., 1998 - Dec., 1998)	LOD: 0.38 $\mu\text{g}/\text{m}^3$ LOQ: Not Reported	NR	<LOD	NR	50th: <LOD; 75th: <LOD; 90th: <LOD;	NR
Dodson et al. 2007 HERO ID: 1067092 <i>OQD:</i> High	Boston, MA, US Scenario: Outdoor residential air in Boston area (n = 89; DF = 0.38; Sampling Period: 2007)	LOD: 0.358-0.874 $\mu\text{g}/\text{m}^3$ LOQ: Not Reported	NR	NR	0.27 $\mu\text{g}/\text{m}^3$ (AM)	50th: 0.18 $\mu\text{g}/\text{m}^3$; 95th: 0.48 $\mu\text{g}/\text{m}^3$;	0.36 $\mu\text{g}/\text{m}^3$ (ASD)
Zhou et al. 2011 HERO ID: 1255292 * <i>OQD:</i> Medium	Tianjin, China, CN Scenario: Residential outdoor air in Tianjin (n = 8; DF = NR; Sampling Period: May, 2008)	LOD: Not Reported LOQ: Not Reported	NR	NR	0.36 $\mu\text{g}/\text{m}^3$ (AM)	NR	0.63 $\mu\text{g}/\text{m}^3$ (ASD)
Bereznicki et al. 2012 HERO ID: 1526164 <i>OQD:</i> Medium	Detroit, MI, US Scenario: 24-hr average; passive samples collected near 95 urban residences and 1 regional monitoring site in summer and/or winter (DEARS) (n = 992; DF = 0.79; Sampling Period: Summer, 2004 - Winter, 2007)	LOD: 0.174 $\mu\text{g}/\text{m}^3$ LOQ: Not Reported	ND	1.91 $\mu\text{g}/\text{m}^3$	NR	5th: ND; 25th: 0.189 $\mu\text{g}/\text{m}^3$; 50th: 0.410 $\mu\text{g}/\text{m}^3$; 75th: 0.650 $\mu\text{g}/\text{m}^3$; 95th: 0.984 $\mu\text{g}/\text{m}^3$;	NR
Harrison et al. 2009 HERO ID: 1940869 <i>OQD:</i> High	London, Birmingham, West Midlands, and South Wales, United Kingdom, GB Scenario: Ambient Air from United Kingdom streets (n = 97; DF = NR; Sampling Period: May, 2005 - May, 2007)	LOD: Not Reported LOQ: Not Reported	NR	NR	0.04 $\mu\text{g}/\text{m}^3$ (GM)	NR	6.06 $\mu\text{g}/\text{m}^3$ (ASD)
Harrison et al. 2009 HERO ID: 1940869 <i>OQD:</i> High	London, Birmingham, West Midlands, and South Wales, United Kingdom, GB Scenario: Ambient Air from transport stations in the United Kingdom (n = 31; DF = NR; Sampling Period: May, 2005 - May, 2007)	LOD: Not Reported LOQ: Not Reported	NR	NR	0.09 $\mu\text{g}/\text{m}^3$ (GM)	NR	3.06 $\mu\text{g}/\text{m}^3$ (ASD)
Heck et al. 2015 HERO ID: 2369182 <i>OQD:</i> Uninformative	California, US Scenario: Ambient air measured by California Air Resources Board (n = 30,601; DF = NR; Sampling Period: 1990 - 2007)	LOD: Not Reported LOQ: Not Reported	NR	NR	0.30 ppbv (AM)	NR	0.18 ppbv (ASD)
Gallego et al. 2016 HERO ID: 3449325 <i>OQD:</i> High	Barcelona, Catalonia, ES Scenario: Ambient air at Site 8 near Waste Treatment Plant 2-BTD (n = 9; DF = 1; Sampling Period: Jan., 2015 - Feb., 2015)	LOD: .01 $\mu\text{g}/\text{mL}$ LOQ: Not Reported	NR	NR	0.8 $\mu\text{g}/\text{Nm}^3$ (AM)	NR	0.5 $\mu\text{g}/\text{Nm}^3$ (ASD)

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Table 1 – continued from previous page

Citation Information	Site and Data Description	Limit (LOD/LOQ)	Min	Max	Mean	Percentile	Variance
Gallego et al. 2016 HERO ID: 3449325 <i>OQD:</i> High	Barcelona, Catalonia, ES Scenario: Ambient air at Site 7 near Waste Treatment Plant 2- BTD (n = 8; DF = 1; Sampling Period: Jan., 2015 - Feb., 2015)	LOD: .01 $\mu\text{g/mL}$ LOQ: Not Reported	NR	NR	0.8 $\mu\text{g/Nm}^3$ (AM)	NR	0.4 $\mu\text{g/Nm}^3$ (ASD)
Gallego et al. 2016 HERO ID: 3449325 <i>OQD:</i> High	Barcelona, Catalonia, ES Scenario: Ambient air at Site 9 near Waste Treatment Plant 2- BTD (n = 9; DF = 1; Sampling Period: Jan., 2015 - Feb., 2015)	LOD: .01 $\mu\text{g/mL}$ LOQ: Not Reported	NR	NR	0.8 $\mu\text{g/Nm}^3$ (AM)	NR	0.4 $\mu\text{g/Nm}^3$ (ASD)
Gallego et al. 2016 HERO ID: 3449325 <i>OQD:</i> High	Barcelona, Catalonia, ES Scenario: Ambient air at Site 10 near Waste Treatment Plant 2- BTD (n = 8; DF = 1; Sampling Period: Jan., 2015 - Feb., 2015)	LOD: .01 $\mu\text{g/mL}$ LOQ: Not Reported	NR	NR	0.7 $\mu\text{g/Nm}^3$ (AM)	NR	0.3 $\mu\text{g/Nm}^3$ (ASD)
Gallego et al. 2016 HERO ID: 3449325 <i>OQD:</i> High	Barcelona, Catalonia, ES Scenario: Ambient air at Site 6 near Waste Treatment Plant 2- BTD (n = 7; DF = 1; Sampling Period: Jan., 2015 - Feb., 2015)	LOD: .01 $\mu\text{g/mL}$ LOQ: Not Reported	NR	NR	1.1 $\mu\text{g/Nm}^3$ (AM)	NR	0.7 $\mu\text{g/Nm}^3$ (ASD)
Gallego et al. 2016 HERO ID: 3449325 <i>OQD:</i> High	Barcelona, Catalonia, ES Scenario: Ambient air in the Chimney of Waste Treatment Plant 2- BTD (n = 12; DF = 1; Sampling Period: Jul., 2014 - Sept., 2014)	LOD: .01 $\mu\text{g/mL}$ LOQ: Not Reported	2 $\mu\text{g/Nm}^3$	14 $\mu\text{g/Nm}^3$	7 $\mu\text{g/Nm}^3$ (AM)	NR	4 $\mu\text{g/Nm}^3$ (ASD)
U.S. EPA et al. 2015 HERO ID: 5113338* <i>OQD:</i> High	Various counties, US Scenario: Ambient air from nationwide network background sampling (n = 121; DF = >0; Sampling Period: 2010 - 2012)	LOD: Not Reported LOQ: Not Reported	0.002 $\mu\text{g/m}^3$	NR	0.0063 $\mu\text{g/m}^3$ (AM)	10th: 0.002 $\mu\text{g/m}^3$; 25th: 0.002 $\mu\text{g/m}^3$; 50th: 0.002 $\mu\text{g/m}^3$;	NR
Huang et al. 2019 HERO ID: 5431563 <i>OQD:</i> High	Xi'an, northwest China, CN Scenario: Air outside of dwellings in northwest China (n = 37; DF = NR; Sampling Period: Nov., 2016 - Feb., 2017)	LOD: 0.1- 0.158 ppbv LOQ: Not Reported	NR	NR	3.89 $\mu\text{g/m}^3$ (AM)	NR	0.64 $\mu\text{g/m}^3$ (ASD)
Karman et al. 2003 HERO ID: 6174199 <i>OQD:</i> Medium	Ottawa, CA Scenario: Ambient air measured in the morning, Summer (n = 2; DF = 1; Sampling Period: Summer, 2000 - Winter, 2000)	LOD: Not Reported LOQ: 0.5 $\mu\text{g/m}^3$	NR	NR	NR	75th: 0.279 ng/L;	NR
Karman et al. 2003 HERO ID: 6174199 <i>OQD:</i> Medium	Ottawa, CA Scenario: Ambient air measured in the afternoon, Summer (n = 2; DF = 1; Sampling Period: Summer, 2000 - Winter, 2000)	LOD: Not Reported LOQ: 0.5 $\mu\text{g/m}^3$	NR	NR	NR	75th: 0.727 ng/L;	NR
Karman et al. 2003 HERO ID: 6174199 <i>OQD:</i> Medium	Ottawa, CA Scenario: Ambient air measured in the evening, Summer (n = 2; DF = 1; Sampling Period: Summer, 2000 - Winter, 2000)	LOD: Not Reported LOQ: 0.5 $\mu\text{g/m}^3$	NR	NR	NR	50th: 1.096 ng/L;	NR

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Citation Information	Site and Data Description	Limit (LOD/LOQ)	Min	Max	Mean	Percentile	Variance
Karman et al. 2003 HERO ID: 6174199 <i>OQD:</i> Medium	Ottawa, CA Scenario: Ambient air measured in the morning, Winter (n = 2; DF = 1; Sampling Period: Summer, 2000 - Winter, 2000)	LOD: Not Reported LOQ: 0.5 $\mu\text{g}/\text{m}^3$	NR	NR	NR	50th: 0.643 ng/L;	NR
Karman et al. 2003 HERO ID: 6174199 <i>OQD:</i> Medium	Ottawa, CA Scenario: Ambient air measured in the afternoon, Winter (n = 2; DF = 1; Sampling Period: Summer, 2000 - Winter, 2000)	LOD: Not Reported LOQ: 0.5 $\mu\text{g}/\text{m}^3$	NR	NR	NR	50th: 0.296 ng/L;	NR
Karman et al. 2003 HERO ID: 6174199 <i>OQD:</i> Medium	Ottawa, CA Scenario: Ambient air measured in the evening, Winter (n = 2; DF = 1; Sampling Period: Summer, 2000 - Winter, 2000)	LOD: Not Reported LOQ: 0.5 $\mu\text{g}/\text{m}^3$	NR	NR	NR	50th: 0.872 ng/L;	NR
Logue et al. 2010 HERO ID: 1255270 <i>OQD:</i> High	Pittsburgh, PA, US Scenario: 24-hr average; samples collected via Summa canisters from downtown residential area with high traffic (Flag Plaza site) (n = 122; DF = >0.95; Sampling Period: Feb., 2006 - Jan., 2008)	LOD: Not Reported LOQ: Not Reported	NR	NR	0.16 $\mu\text{g}/\text{m}^3$ (AM)	5th: 0.04 $\mu\text{g}/\text{m}^3$; 25th: 0.09 $\mu\text{g}/\text{m}^3$; 50th: 0.11 $\mu\text{g}/\text{m}^3$; 75th: 0.20 $\mu\text{g}/\text{m}^3$; 95th: 0.35 $\mu\text{g}/\text{m}^3$;	0.11 $\mu\text{g}/\text{m}^3$ (ASD)
Logue et al. 2010 HERO ID: 1255270 <i>OQD:</i> High	Pittsburgh, PA, US Scenario: 24-hr average; samples collected via Summa canisters from suburban residential area air located 0.8 km from chemical and industrial facilities (Stowe site) (n = 122; DF = >0.95; Sampling Period: Feb., 2006 - Jan., 2008)	LOD: Not Reported LOQ: Not Reported	NR	NR	0.10 $\mu\text{g}/\text{m}^3$ (AM)	5th: 0.01 $\mu\text{g}/\text{m}^3$; 25th: 0.04 $\mu\text{g}/\text{m}^3$; 50th: 0.07 $\mu\text{g}/\text{m}^3$; 75th: 0.11 $\mu\text{g}/\text{m}^3$; 95th: 0.30 $\mu\text{g}/\text{m}^3$;	0.09 $\mu\text{g}/\text{m}^3$ (ASD)
Logue et al. 2010 HERO ID: 1255270 <i>OQD:</i> High	Pittsburgh, PA, US Scenario: 24-hr average; samples collected via Summa canisters from suburban residential area considered a regional background site (South Fayette site) (n = 122; DF = <0.75; Sampling Period: Feb., 2006 - Jan., 2008)	LOD: Not Reported LOQ: Not Reported	NR	NR	0.05 $\mu\text{g}/\text{m}^3$ (AM)	5th: 0 $\mu\text{g}/\text{m}^3$; 25th: 0 $\mu\text{g}/\text{m}^3$; 50th: 0.04 $\mu\text{g}/\text{m}^3$; 75th: 0.07 $\mu\text{g}/\text{m}^3$; 95th: 0.12 $\mu\text{g}/\text{m}^3$;	0.05 $\mu\text{g}/\text{m}^3$ (ASD)
Logue et al. 2010 HERO ID: 1255270 <i>OQD:</i> High	Pittsburgh, PA, US Scenario: 24-hr average; samples collected via Summa canisters from suburban residential area located 0.8 km from chemical and industrial facilities (Avalon site) (n = 122; DF = >0.95; Sampling Period: Feb., 2006 - Jan., 2008)	LOD: Not Reported LOQ: Not Reported	NR	NR	0.15 $\mu\text{g}/\text{m}^3$ (AM)	5th: 0.02 $\mu\text{g}/\text{m}^3$; 25th: 0.07 $\mu\text{g}/\text{m}^3$; 50th: 0.11 $\mu\text{g}/\text{m}^3$; 75th: 0.20 $\mu\text{g}/\text{m}^3$; 95th: 0.33 $\mu\text{g}/\text{m}^3$;	0.13 $\mu\text{g}/\text{m}^3$ (ASD)
Yu et al. 2014 HERO ID: 2382561 <i>OQD:</i> Medium	Paterson, NJ; Chester, NJ, US Scenario: 24-hour averaged; samples collected in canisters from rooftop at a commercial, industrial, mobile, and background site. (n = 209; DF = 0.84; Sampling Period: Nov., 2005 - Dec., 2006)	LOD: 0.01 $\mu\text{g}/\text{m}^3$ LOQ: Not Reported	<LOD	1.35 $\mu\text{g}/\text{m}^3$	0.15 $\mu\text{g}/\text{m}^3$ (AM)	50th: 0.11 $\mu\text{g}/\text{m}^3$;	0.18 $\mu\text{g}/\text{m}^3$ (ASD)

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Citation Information	Site and Data Description	Limit (LOD/LOQ)	Min	Max	Mean	Percentile	Variance
Domingo et al. 2015 HERO ID: 2919960 <i>OQD:</i> Low	Barcelona, ES Scenario: Air near a waste management facility (n = 6; DF = 0; Sampling Period: May, 2014 - Jun., 2014)	LOD: 2.78 $\mu\text{g}/\text{m}^3$ LOQ: Not Reported	NR	NR	<LOD	NR	NR
Back et al. 2020 HERO ID: 6950643 <i>OQD:</i> Medium	Ulsan, KR Scenario: Ambient air from residential area in Ulsan (n = 384; DF = 0.27; Sampling Period: Spring, 2009 - winter, 2010)	LOD: 0.01 - 0.12 ppb LOQ: Not Reported	NR	1.84 $\mu\text{g}/\text{m}^3$	0.01 $\mu\text{g}/\text{m}^3$ (AM)	NR	NR
Back et al. 2020 HERO ID: 6950643 <i>OQD:</i> Medium	Ulsan, KR Scenario: Ambient air from multi-industrial city of Ulsan (n = 384; DF = 0.27; Sampling Period: Spring, 2009 - winter, 2010)	LOD: 0.01 - 0.12 ppb LOQ: Not Reported	NR	9.23 $\mu\text{g}/\text{m}^3$	0.18 $\mu\text{g}/\text{m}^3$ (AM)	NR	NR

* Reference is a completed exposure assessment and risk characterization that was evaluated using the completed exposure assessment and risk characterization data quality criteria. Depending on the type of data the reference contains, primary or secondary data from completed exposure assessments or risk characterizations may be extracted using the template(s) for monitoring, modeling, and/or experimental data and are grouped with other data from the applicable evidence stream(s).

Table 2: Data Extraction Tables of Exposure Monitoring Studies for Indoor Air

Citation Information	Site and Data Description	Limit (LOD/LOQ)	Min	Max	Mean	Percentile	Variance
Sax et al. 2006 HERO ID: 156950 * <i>OQD:</i> High	New York City, NY, US Scenario: Indoor air in residences of New York City teens (n = 41; DF = 0.65; Sampling Period: Feb., 1999 - Oct., 2000)	LOD: 1 $\mu\text{g}/\text{m}^3$ LOQ: Not Reported	NR	9.02 $\mu\text{g}/\text{m}^3$	1.01 $\mu\text{g}/\text{m}^3$ (AM)	50th: <LOD;	NR
Sax et al. 2006 HERO ID: 156950 * <i>OQD:</i> High	Los Angeles, CA, US Scenario: Indoor air in residences of Los Angeles teens (n = 40; DF = 0.68; Sampling Period: Feb., 1999 - Oct., 2000)	LOD: 1 $\mu\text{g}/\text{m}^3$ LOQ: Not Reported	NR	1.47 $\mu\text{g}/\text{m}^3$	<LOD	50th: <LOD;	NR
Gordon et al. 1999 HERO ID: 1065862 <i>OQD:</i> Medium	Arizona, US Scenario: Indoor air from residential homes (n = 24; DF = 0.04; Sampling Period: Jan., 1998 - Dec., 1998)	LOD: 0.38 $\mu\text{g}/\text{m}^3$ LOQ: Not Reported	NR	0.6 $\mu\text{g}/\text{m}^3$	NR	50th: <LOD; 75th: <LOD; 90th: <LOD;	NR
Dodson et al. 2007 HERO ID: 1067092 <i>OQD:</i> High	Boston, MA, US Scenario: Indoor air from offices in Boston area (n = 89; DF = 0.27; Sampling Period: 2007)	LOD: 0.358-0.874 $\mu\text{g}/\text{m}^3$ LOQ: Not Reported	NR	NR	0.63 $\mu\text{g}/\text{m}^3$ (AM)	50th: 0.22 $\mu\text{g}/\text{m}^3$; 95th: 0.9 $\mu\text{g}/\text{m}^3$;	2.5 $\mu\text{g}/\text{m}^3$ (ASD)
Dodson et al. 2007 HERO ID: 1067092 <i>OQD:</i> High	Boston, MA, US Scenario: Indoor air from schools in Boston area (n = 89; DF = 0.29; Sampling Period: 2007)	LOD: 0.358-0.874 $\mu\text{g}/\text{m}^3$ LOQ: Not Reported	NR	NR	0.29 $\mu\text{g}/\text{m}^3$ (AM)	50th: 0.20 $\mu\text{g}/\text{m}^3$; 95th: 1.5 $\mu\text{g}/\text{m}^3$;	0.37 $\mu\text{g}/\text{m}^3$ (ASD)
Dodson et al. 2007 HERO ID: 1067092 <i>OQD:</i> High	Boston, MA, US Scenario: Indoor air from residences in Boston area (n = 89; DF = 0.32; Sampling Period: 2007)	LOD: 0.358-0.874 $\mu\text{g}/\text{m}^3$ LOQ: Not Reported	NR	NR	0.54 $\mu\text{g}/\text{m}^3$ (AM)	50th: 0.23 $\mu\text{g}/\text{m}^3$; 95th: 1.5 $\mu\text{g}/\text{m}^3$;	1.1 $\mu\text{g}/\text{m}^3$ (ASD)
Zhou et al. 2011 HERO ID: 1255292 * <i>OQD:</i> Medium	Tianjin, China, CN Scenario: Residential indoor air in Tianjin (n = 10; DF = 0.875; Sampling Period: May, 2008)	LOD: Not Reported LOQ: Not Reported	NR	NR	0.54 $\mu\text{g}/\text{m}^3$ (AM)	NR	0.30 $\mu\text{g}/\text{m}^3$ (ASD)
Zhou et al. 2011 HERO ID: 1255292 * <i>OQD:</i> Medium	Tianjin, China, CN Scenario: Office indoor air in Tianjin (n = 6; DF = NR; Sampling Period: May, 2008)	LOD: Not Reported LOQ: Not Reported	NR	NR	0.25 $\mu\text{g}/\text{m}^3$ (AM)	NR	0.11 $\mu\text{g}/\text{m}^3$ (ASD)
Zhou et al. 2011 HERO ID: 1255292 * <i>OQD:</i> Medium	Tianjin, China, CN Scenario: Vehicle indoor air in Tianjin (n = 6; DF = NR; Sampling Period: May, 2008)	LOD: Not Reported LOQ: Not Reported	NR	NR	0.62 $\mu\text{g}/\text{m}^3$ (AM)	NR	0.34 $\mu\text{g}/\text{m}^3$ (ASD)
Delgado-Saborit et al. 2011 HERO ID: 1788464 <i>OQD:</i> High	London, West Midlands, South Wales, GB Scenario: Indoor air from living rooms in homes in United Kingdom (n = 155; DF = NR; Sampling Period: May, 2005 - May, 2007)	LOD: 5.1 ng/m^3 LOQ: Not Reported	ND	2.04 $\mu\text{g}/\text{m}^3$	0.24 $\mu\text{g}/\text{m}^3$ (AM)	NR	0.31 $\mu\text{g}/\text{m}^3$ (ASD)
Delgado-Saborit et al. 2011 HERO ID: 1788464 <i>OQD:</i> High	London, West Midlands, South Wales, GB Scenario: Indoor air from 40 workplaces in United Kingdom (n = 40; DF = NR; Sampling Period: May, 2005 - May, 2007)	LOD: 5.1 ng/m^3 LOQ: Not Reported	0.01 $\mu\text{g}/\text{m}^3$	0.39 $\mu\text{g}/\text{m}^3$	0.08 $\mu\text{g}/\text{m}^3$ (AM)	NR	0.08 $\mu\text{g}/\text{m}^3$ (ASD)

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Table 2 – continued from previous page

Citation Information	Site and Data Description	Limit (LOD/LOQ)	Min	Max	Mean	Percentile	Variance
Harrison et al. 2009 HERO ID: 1940869 <i>OQD:</i> High	London, Birmingham, West Midlands, and South Wales, United Kingdom, GB Scenario: Indoor Air from homes in the United Kingdom (n = 152; DF = NR; Sampling Period: May, 2005 - May, 2007)	LOD: Not Reported LOQ: Not Reported	NR	NR	0.12 $\mu\text{g}/\text{m}^3$ (GM)	NR	4.37 $\mu\text{g}/\text{m}^3$ (ASD)
Harrison et al. 2009 HERO ID: 1940869 <i>OQD:</i> High	London, Birmingham, West Midlands, and South Wales, United Kingdom, GB Scenario: Indoor Air from workplaces in the United Kingdom (n = 38; DF = NR; Sampling Period: May, 2005 - May, 2007)	LOD: Not Reported LOQ: Not Reported	NR	NR	0.05 $\mu\text{g}/\text{m}^3$ (GM)	NR	2.85 $\mu\text{g}/\text{m}^3$ (ASD)
Harrison et al. 2009 HERO ID: 1940869 <i>OQD:</i> High	London, Birmingham, West Midlands, and South Wales, United Kingdom, GB Scenario: Indoor Air from transport vehicles in the United Kingdom (n = 43; DF = NR; Sampling Period: May, 2005 - May, 2007)	LOD: Not Reported LOQ: Not Reported	NR	NR	0.13 $\mu\text{g}/\text{m}^3$ (GM)	NR	3.62 $\mu\text{g}/\text{m}^3$ (ASD)
Harrison et al. 2009 HERO ID: 1940869 <i>OQD:</i> High	London, Birmingham, West Midlands, and South Wales, United Kingdom, GB Scenario: Indoor Air from Pubs and Restaurants in the United Kingdom (n = 24; DF = NR; Sampling Period: May, 2005 - May, 2007)	LOD: Not Reported LOQ: Not Reported	NR	NR	0.70 $\mu\text{g}/\text{m}^3$ (GM)	NR	12.18 $\mu\text{g}/\text{m}^3$ (ASD)
Harrison et al. 2009 HERO ID: 1940869 <i>OQD:</i> High	London, Birmingham, West Midlands, and South Wales, United Kingdom, GB Scenario: Indoor Air from Public Locations in the United Kingdom (n = 15; DF = NR; Sampling Period: May, 2005 - May, 2007)	LOD: Not Reported LOQ: Not Reported	NR	NR	0.05 $\mu\text{g}/\text{m}^3$ (GM)	NR	8.81 $\mu\text{g}/\text{m}^3$ (ASD)
Vainiotalo et al. 2008 HERO ID: 2331385 <i>OQD:</i> Medium	Helsinki, Finland, FI Scenario: Indoor Air from non-smoking section of restaurants (n = 10; DF = 1; Sampling Period: Nov., 2005 - May, 2006)	LOD: Not Reported LOQ: 0.02 $\mu\text{g}/\text{m}^3$	0.11 $\mu\text{g}/\text{m}^3$	3.9 $\mu\text{g}/\text{m}^3$	1.1 $\mu\text{g}/\text{m}^3$ (AM); 0.52 $\mu\text{g}/\text{m}^3$ (GM)	NR	1.3 $\mu\text{g}/\text{m}^3$ (ASD)
Loh et al. 2006 HERO ID: 2442846 <i>OQD:</i> High	Boston, MA, US Scenario: Indoor air from 20 dining stores, winter (n = 20; DF = 0.89; Sampling Period: Winter, 2004)	LOD: 0.17 $\mu\text{g}/\text{m}^3$ LOQ: Not Reported	NR	35.5 $\mu\text{g}/\text{m}^3$	1.05 $\mu\text{g}/\text{m}^3$ (GM)	L95thCI (AM): 0.48 $\mu\text{g}/\text{m}^3$; U95thCI (AM): 2.20 $\mu\text{g}/\text{m}^3$;	4.73 $\mu\text{g}/\text{m}^3$ (CV)
Loh et al. 2006 HERO ID: 2442846 <i>OQD:</i> High	Boston, MA, US Scenario: Indoor air from 48 retail stores, winter (n = 51; DF = 0.89; Sampling Period: Winter, 2004)	LOD: 0.17 $\mu\text{g}/\text{m}^3$ LOQ: Not Reported	NR	2.20 $\mu\text{g}/\text{m}^3$	0.21 $\mu\text{g}/\text{m}^3$ (GM)	L95thCI (AM): 0.14 $\mu\text{g}/\text{m}^3$; U95thCI (AM): 0.30 $\mu\text{g}/\text{m}^3$;	1.74 $\mu\text{g}/\text{m}^3$ (CV)
Huang et al. 2019 HERO ID: 5431563 <i>OQD:</i> High	Xi'an, northwest China, CN Scenario: Dwellings in northwest China without usage of air purifier (n = 44; DF = NR; Sampling Period: Nov., 2016 - Feb., 2017)	LOD: 0.1-0.158 ppbv LOQ: Not Reported	NR	NR	7.4 $\mu\text{g}/\text{m}^3$ (AM)	NR	1.8 $\mu\text{g}/\text{m}^3$ (ASD)

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Table 2 – continued from previous page

Citation Information	Site and Data Description	Limit (LOD/LOQ)	Min	Max	Mean	Percentile	Variance
Huang et al. 2019 HERO ID: 5431563 <i>OQD:</i> High	Xi'an, northwest China, CN Scenario: Dwellings in northwest China with usage of air purifier (n = 44; DF = NR; Sampling Period: Nov., 2016 - Feb., 2017)	LOD: 0.1-0.158 ppbv LOQ: Not Reported	NR	NR	1.2 $\mu\text{g}/\text{m}^3$ (AM)	NR	0.3 $\mu\text{g}/\text{m}^3$ (ASD)

* Reference is a completed exposure assessment and risk characterization that was evaluated using the completed exposure assessment and risk characterization data quality criteria. Depending on the type of data the reference contains, primary or secondary data from completed exposure assessments or risk characterizations may be extracted using the template(s) for monitoring, modeling, and/or experimental data and are grouped with other data from the applicable evidence stream(s).

Table 3: Data Extraction Tables of Exposure Monitoring Studies for Other

Citation Information	Site and Data Description	Limit (LOD/LOQ)	Min	Max	Mean	Percentile	Variance
Eklund et al. 1998 HERO ID: 1487387 <i>OQD:</i> High	New York City, NY, US Scenario: Landfill gas from Fresh Kills Municipal Solid-Waste Landfill - 1,3-butadiene (n = 12; DF = NR; Sampling Period: 1998)	LOD: Not Reported LOQ: Not Reported	NR	NR	3.98 ppm (AM)	NR	NR

Table 4: Data Extraction Tables of Exposure Monitoring Studies for Personal Inhalation

Citation Information	Site and Data Description	Limit (LOD/LOQ)	Min	Max	Mean	Percentile	Variance
Sax et al. 2006 HERO ID: 156950 * <i>OQD:</i> High	New York City, NY, US Scenario: Personal inhalation of New York City teens (n = 41; DF = 0.61; Sampling Period: Feb., 1999 - Oct., 2000)	LOD: 1 $\mu\text{g}/\text{m}^3$ LOQ: Not Reported	ND	5.25 $\mu\text{g}/\text{m}^3$	<LOD	50th: <LOD;	1.15 $\mu\text{g}/\text{m}^3$ (ASD)
Sax et al. 2006 HERO ID: 156950 * <i>OQD:</i> High	Los Angeles, CA, US Scenario: Personal sampling of Los Angeles teens (n = 40; DF = 0.80; Sampling Period: Feb., 1999 - Oct., 2000)	LOD: 1 $\mu\text{g}/\text{m}^3$ LOQ: Not Reported	ND	1.89 $\mu\text{g}/\text{m}^3$	<LOD	50th: <LOD;	<LOD
Yazar et al. 2011 HERO ID: 836290 <i>OQD:</i> High	Stockholm, SE Scenario: Stockholm residents personal inhalation (n = 39; DF = 1; Sampling Period: Sept., 2009 - Dec., 2009)	LOD: 0.01 $\mu\text{g}/\text{m}^3$ LOQ: Not Reported	0.08 $\mu\text{g}/\text{m}^3$	2.3 $\mu\text{g}/\text{m}^3$	0.5 $\mu\text{g}/\text{m}^3$ (AM)	50th: 0.3 $\mu\text{g}/\text{m}^3$;	0.5 $\mu\text{g}/\text{m}^3$ (ASD)
Saborit et al. 2009 HERO ID: 1058014 <i>OQD:</i> Medium	Birmingham and London, GB Scenario: Personal inhalation from United Kingdom urban residents (n = 191; DF = NR; Sampling Period: 2005 - 2007)	LOD: Not Reported LOQ: Not Reported	ND	5.9 $\mu\text{g}/\text{m}^3$	0.4 $\mu\text{g}/\text{m}^3$ (AM); 0.1 $\mu\text{g}/\text{m}^3$ (GM)	NR	5.5 $\mu\text{g}/\text{m}^3$ (ASD)
Saborit et al. 2009 HERO ID: 1058014 <i>OQD:</i> Medium	Not reported, GB Scenario: Personal inhalation from United Kingdom suburban residents (n = 209; DF = NR; Sampling Period: 2005 - 2007)	LOD: Not Reported LOQ: Not Reported	ND	6.3 $\mu\text{g}/\text{m}^3$	0.4 $\mu\text{g}/\text{m}^3$ (AM); 0.1 $\mu\text{g}/\text{m}^3$ (GM)	NR	5.8 $\mu\text{g}/\text{m}^3$ (ASD)
Saborit et al. 2009 HERO ID: 1058014 <i>OQD:</i> Medium	West Midlands and Wales, GB Scenario: Personal inhalation from United Kingdom rural residents (n = 100; DF = 1; Sampling Period: 2005 - 2007)	LOD: Not Reported LOQ: Not Reported	0.1 $\mu\text{g}/\text{m}^3$	4.0 $\mu\text{g}/\text{m}^3$	0.4 $\mu\text{g}/\text{m}^3$ (AM); 0.2 $\mu\text{g}/\text{m}^3$ (GM)	NR	3.9 $\mu\text{g}/\text{m}^3$ (ASD)
Dodson et al. 2007 HERO ID: 1067092 <i>OQD:</i> High	Boston, MA, US Scenario: Personal inhalation teachers and office workers in Boston area (n = 89; DF = 0.25; Sampling Period: 2007)	LOD: 0.358-0.874 $\mu\text{g}/\text{m}^3$ LOQ: Not Reported	NR	NR	0.41 $\mu\text{g}/\text{m}^3$ (AM)	50th: 0.24 $\mu\text{g}/\text{m}^3$; 95th: 1.1 $\mu\text{g}/\text{m}^3$;	0.45 $\mu\text{g}/\text{m}^3$ (ASD)
Zhou et al. 2011 HERO ID: 1255292 * <i>OQD:</i> Medium	Tianjin, China, CN Scenario: Measured personal air from Tianjin residents (n = 10; DF = 0.875; Sampling Period: May, 2008)	LOD: Not Reported LOQ: Not Reported	NR	NR	0.67 $\mu\text{g}/\text{m}^3$ (AM)	NR	0.70 $\mu\text{g}/\text{m}^3$ (ASD)
Zhou et al. 2011 HERO ID: 1255292 * <i>OQD:</i> Medium	Tianjin, China, CN Scenario: Estimated time weighted average personal air from Tianjin residents (n = 10; DF = NR; Sampling Period: May, 2008)	LOD: Not Reported LOQ: Not Reported	NR	NR	0.15 $\mu\text{g}/\text{m}^3$ (AM)	NR	0.04 $\mu\text{g}/\text{m}^3$ (ASD)

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Table 4 – continued from previous page

Citation Information	Site and Data Description	Limit (LOD/LOQ)	Min	Max	Mean	Percentile	Variance
Delgado-Saborit et al. 2011 HERO ID: 1788464 <i>OQD:</i> High	London, West Midlands, South Wales, GB Scenario: Personal exposure from 100 individuals in United Kingdom (n = 500; DF = NR; Sampling Period: May, 2005 - May, 2007)	LOD: 5.1 ng/m ³ LOQ: Not Reported	ND	6.31 µg/m ³	0.4 µg/m ³ (AM)	NR	0.71 µg/m ³ (ASD)
Harrison et al. 2009 HERO ID: 1940869 <i>OQD:</i> High	London, Birmingham, West Midlands, and South Wales, United Kingdom, GB Scenario: Personal Exposure concentrations from 95 United Kingdom residents (n = 500; DF = NR; Sampling Period: May, 2005 - May, 2007)	LOD: Not Reported LOQ: Not Reported	NR	NR	0.40 µg/m ³ (AM); 0.14 µg/m ³ (GM)	25th: 0.05 µg/m ³ ; 75th: 0.42 µg/m ³ ;	5.24 µg/m ³ (ASD)
Hagenbjörk-Gustafsson et al. 2014 HERO ID: 2234069 <i>OQD:</i> Medium	Umeå, SE Scenario: Diffusive samples collected from 20-50 year olds over 7 days in Umea (Um) in 2001 (n = 39; DF = NR; Sampling Period: Fall, 2001)	LOD: Not Reported LOQ: Not Reported	0.2 µg/m ³	2.1 µg/m ³	0.6 µg/m ³ (AM)	50th: 0.4 µg/m ³ ;	NR
Hagenbjörk-Gustafsson et al. 2014 HERO ID: 2234069 <i>OQD:</i> Medium	Stockholm, SE Scenario: Diffusive samples collected from 20-50 year olds over 7 days in Stockholm (Sthlm) in 2003 (n = 40; DF = NR; Sampling Period: Spring, 2003)	LOD: Not Reported LOQ: Not Reported	0.2 µg/m ³	2.9 µg/m ³	0.6 µg/m ³ (AM)	50th: 0.4 µg/m ³ ;	NR
Hagenbjörk-Gustafsson et al. 2014 HERO ID: 2234069 <i>OQD:</i> Medium	Stockholm, SE Scenario: Diffusive samples collected from 20-50 year olds over 7 days in Malmo (Ma) in 2003 (n = 40; DF = NR; Sampling Period: Fall, 2003)	LOD: Not Reported LOQ: Not Reported	0.1 µg/m ³	4.0 µg/m ³	0.9 µg/m ³ (AM)	50th: 0.6 µg/m ³ ;	NR
Hagenbjörk-Gustafsson et al. 2014 HERO ID: 2234069 <i>OQD:</i> Medium	Lindesberg, SE Scenario: Diffusive samples collected from 20-50 year olds over 7 days in Lindesberg (Lbg) in 2005 (n = 40; DF = NR; Sampling Period: Fall, 2005)	LOD: Not Reported LOQ: Not Reported	0.1 µg/m ³	3.5 µg/m ³	0.7 µg/m ³ (AM)	50th: 0.5 µg/m ³ ;	NR
Hagenbjörk-Gustafsson et al. 2014 HERO ID: 2234069 <i>OQD:</i> Medium	Gothenburg, SE Scenario: Diffusive samples collected from 20-50 year olds over 7 days in Gothenburg (Gtb) in 2006/2007 (n = 35; DF = NR; Sampling Period: Fall, 2006 - Fall, 2007)	LOD: Not Reported LOQ: Not Reported	0.02 µg/m ³	0.6 µg/m ³	0.2 µg/m ³ (AM)	50th: 0.1 µg/m ³ ;	NR
Hagenbjörk-Gustafsson et al. 2014 HERO ID: 2234069 <i>OQD:</i> Medium	Umeå, SE Scenario: Diffusive samples collected from 20-50 year olds over 7 days in Umea (Um) in 2007 (n = 40; DF = NR; Sampling Period: Fall, 2007)	LOD: Not Reported LOQ: Not Reported	0.07 µg/m ³	4.4 µg/m ³	0.6 µg/m ³ (AM)	50th: 0.3 µg/m ³ ;	NR
Hagenbjörk-Gustafsson et al. 2014 HERO ID: 2234069 <i>OQD:</i> Medium	Malmö, SE Scenario: Diffusive samples collected from 20-50 year olds over 7 days in Malmo (Ma) in 2008 (n = 41; DF = NR; Sampling Period: Fall, 2008)	LOD: Not Reported LOQ: Not Reported	0.06 µg/m ³	4.3 µg/m ³	0.7 µg/m ³ (AM)	50th: 0.4 µg/m ³ ;	NR

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Citation Information	Site and Data Description	Limit (LOD/LOQ)	Min	Max	Mean	Percentile	Variance
Shin et al. 2015 HERO ID: 2845868 <i>OQD:</i> Medium	Detroit, MI, US Scenario: Personal monitoring of nonsmoking adult residents for industrial pollution source (DEARS study) (n = 239; DF = NR; Sampling Period: Winter, 2005 - Winter, 2007)	LOD: Not Reported LOQ: Not Reported	0.13 $\mu\text{g}/\text{m}^3$	14.82 $\mu\text{g}/\text{m}^3$	1.38 $\mu\text{g}/\text{m}^3$ (AM)	25th: 0.66 $\mu\text{g}/\text{m}^3$; 50th: 0.99 $\mu\text{g}/\text{m}^3$; 75th: 1.55 $\mu\text{g}/\text{m}^3$;	1.46 $\mu\text{g}/\text{m}^3$ (ASD)
Heavner et al. 1996 HERO ID: 5544873 <i>OQD:</i> Medium	Philadelphia, PA, US Scenario: Personal air from nonsmoking home (n = 60; DF = >0.5; Sampling Period: Nov., 1992)	LOD: Not Reported LOQ: Not Reported	0.00 $\mu\text{g}/\text{m}^3$	12.07 $\mu\text{g}/\text{m}^3$	0.86 $\mu\text{g}/\text{m}^3$ (AM)	50th: 0.54 $\mu\text{g}/\text{m}^3$;	1.62 $\mu\text{g}/\text{m}^3$ (ASD)
Heavner et al. 1996 HERO ID: 5544873 <i>OQD:</i> Medium	Philadelphia, PA, US Scenario: Personal air from smoking home (n = 29; DF = >0.5; Sampling Period: Nov., 1992)	LOD: Not Reported LOQ: Not Reported	0.00 $\mu\text{g}/\text{m}^3$	4.14 $\mu\text{g}/\text{m}^3$	1.15 $\mu\text{g}/\text{m}^3$ (AM)	50th: 0.93 $\mu\text{g}/\text{m}^3$;	1.11 $\mu\text{g}/\text{m}^3$ (ASD)
Heavner et al. 1996 HERO ID: 5544873 <i>OQD:</i> Medium	Philadelphia, PA, US Scenario: Personal air from nonsmoking workplace (n = 51; DF = >0.5; Sampling Period: Nov., 1992)	LOD: Not Reported LOQ: Not Reported	0.00 $\mu\text{g}/\text{m}^3$	1.63 $\mu\text{g}/\text{m}^3$	0.60 $\mu\text{g}/\text{m}^3$ (AM)	50th: 0.57 $\mu\text{g}/\text{m}^3$;	0.38 $\mu\text{g}/\text{m}^3$ (ASD)
Heavner et al. 1996 HERO ID: 5544873 <i>OQD:</i> Medium	Philadelphia, PA, US Scenario: Personal air from smoking workplace (n = 28; DF = >0.5; Sampling Period: Nov., 1992)	LOD: Not Reported LOQ: Not Reported	0.00 $\mu\text{g}/\text{m}^3$	3.86 $\mu\text{g}/\text{m}^3$	1.29 $\mu\text{g}/\text{m}^3$ (AM)	50th: 1.18 $\mu\text{g}/\text{m}^3$;	0.94 $\mu\text{g}/\text{m}^3$ (ASD)

* Reference is a completed exposure assessment and risk characterization that was evaluated using the completed exposure assessment and risk characterization data quality criteria. Depending on the type of data the reference contains, primary or secondary data from completed exposure assessments or risk characterizations may be extracted using the template(s) for monitoring, modeling, and/or experimental data and are grouped with other data from the applicable evidence stream(s).

Table 5: Data Extraction Tables of Exposure Experimental Studies for Other

Citation Information	Site and Data Description	Limit (LOD/LOQ)	Min	Max	Mean	Percentile	Variance
Sallsten et al. 2006 HERO ID: 97958 <i>OQD:</i> Medium	SE (Testing Location) Scenario: Concentration of chemical 1 in personal and stationary environments during wood burning session 1 (n = 5; DF = 1)	LOD: Not Reported LOQ: Not Reported	NR	NR	NR	50th: 6.3 $\mu\text{g}/\text{m}^3$;	NR
Sallsten et al. 2006 HERO ID: 97958 <i>OQD:</i> Medium	SE (Testing Location) Scenario: Concentration of chemical 1 in personal and stationary environments during wood burning session 2 (n = 5; DF = 1)	LOD: Not Reported LOQ: Not Reported	NR	NR	NR	50th: 3.9 $\mu\text{g}/\text{m}^3$;	NR

Table 6: Data Extraction Tables of Exposure Experimental Studies for Consumer Products

Citation Information	Site and Data Description	Limit (LOD/LOQ)	Min	Max	Mean	Percentile	Variance
Carteret et al. 2012 HERO ID: 1290538 <i>OQD:</i> Medium	FR (Product source) Scenario: Measured emission factor, chemical 2 emitted from wick kerosene space heater, fuel 1 (n = 1; DF = 1)	LOD: Not Reported LOQ: Not Reported	NR	NR	4.0 µg/g (AM)	NR	NR
Carteret et al. 2012 HERO ID: 1290538 <i>OQD:</i> Medium	FR (Product source) Scenario: Measured emission factor, chemical 2 emitted from wick kerosene space heater, fuel 3 (n = 1; DF = 1)	LOD: Not Reported LOQ: Not Reported	NR	NR	4.8 µg/g (AM)	NR	NR
Carteret et al. 2012 HERO ID: 1290538 <i>OQD:</i> Medium	FR (Product source) Scenario: Measured emission factor, chemical 2 emitted from injection kerosene space heater, fuel 4 (n = 1; DF = 1)	LOD: Not Reported LOQ: Not Reported	NR	NR	1.8 µg/g (AM)	NR	NR
Carteret et al. 2012 HERO ID: 1290538 <i>OQD:</i> Medium	FR (Product source) Scenario: Measured concentration, chemical 2 emitted from wick kerosene space heater, fuel 1 (n = 1; DF = 1)	LOD: Not Reported LOQ: Not Reported	NR	NR	5.02 ppb (AM)	NR	NR
Carteret et al. 2012 HERO ID: 1290538 <i>OQD:</i> Medium	FR (Product source) Scenario: Measured concentration, chemical 2 emitted from injection kerosene space heater, fuel 4 (n = 1; DF = 1)	LOD: Not Reported LOQ: Not Reported	NR	NR	1.10 ppb (AM)	NR	NR
Carteret et al. 2012 HERO ID: 1290538 <i>OQD:</i> Medium	FR (Product source) Scenario: Measured concentration, chemical 2 emitted from wick kerosene space heater, fuel 3 (n = 1; DF = 1)	LOD: Not Reported LOQ: Not Reported	NR	NR	6.16 ppb (AM)	NR	NR
Lee et al. 1997 HERO ID: 2529910 <i>OQD:</i> High	Research Triangle Park, NC, US (Testing Location) Scenario: Measured concentration from test 1 of untreated wood waste for fuel burning (n = 3; DF = NR)	LOD: Not Reported LOQ: Not Reported	POINT VALUE(S): [0.6 µg/dscm]				
Lee et al. 1997 HERO ID: 2529910 <i>OQD:</i> High	Research Triangle Park, NC, US (Testing Location) Scenario: Measured concentration from test 2 of untreated wood waste for fuel burning (n = 3; DF = NR)	LOD: Not Reported LOQ: Not Reported	POINT VALUE(S): [0.2 µg/dscm]				
Lee et al. 1997 HERO ID: 2529910 <i>OQD:</i> High	Research Triangle Park, NC, US (Testing Location) Scenario: Measured concentration from test 3 of untreated wood waste for fuel burning (n = 3; DF = NR)	LOD: Not Reported LOQ: Not Reported	POINT VALUE(S): [1.2 µg/dscm]				
Lee et al. 1997 HERO ID: 2529910 <i>OQD:</i> High	Research Triangle Park, NC, US (Testing Location) Scenario: Measured concentration from test 1 of treated wood waste for fuel burning (n = 3; DF = NR)	LOD: Not Reported LOQ: Not Reported	POINT VALUE(S): [0.1 µg/dscm]				

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Table 6 – continued from previous page

Citation Information	Site and Data Description	Limit (LOD/LOQ)	Min	Max	Mean	Percentile	Variance
Lee et al. 1997 HERO ID: 2529910 <i>OQD:</i> High	Research Triangle Park, NC, US (Testing Location) Scenario: Measured concentration from test 2 of treated wood waste for fuel burning (n = 3; DF = NR)	LOD: Not Reported LOQ: Not Reported	POINT VALUE(S): [0.1 µg/dscm]				
Lee et al. 1997 HERO ID: 2529910 <i>OQD:</i> High	Research Triangle Park, NC, US (Testing Location) Scenario: Measured concentration from test 3 of treated wood waste for fuel burning (n = 3; DF = NR)	LOD: Not Reported LOQ: Not Reported	POINT VALUE(S): [0.1 µg/dscm]				
Abe et al. 2014 HERO ID: 2857233 <i>OQD:</i> Medium	JP (Product source) Scenario: Measured concentration in ABS1 Kitchen Utensil (n = 2; DF = 1)	LOD: Not Reported LOQ: 0.025 µg/g	NR	NR	0.59 µg/g (AM)	NR	NR
Abe et al. 2014 HERO ID: 2857233 <i>OQD:</i> Medium	JP (Product source) Scenario: Measured concentration in ABS2 Kitchen Utensil (n = 2; DF = 1)	LOD: Not Reported LOQ: 0.025 µg/g	NR	NR	0.69 µg/g (AM)	NR	NR
Abe et al. 2014 HERO ID: 2857233 <i>OQD:</i> Medium	JP (Product source) Scenario: Measured concentration in ABS3 Kitchen Utensil (n = 2; DF = 1)	LOD: Not Reported LOQ: 0.025 µg/g	NR	NR	0.10 µg/g (AM)	NR	NR
Abe et al. 2014 HERO ID: 2857233 <i>OQD:</i> Medium	JP (Product source) Scenario: Measured concentration in ABS4 Kitchen Utensil (n = 2; DF = 1)	LOD: Not Reported LOQ: 0.025 µg/g	NR	NR	0.39 µg/g (AM)	NR	NR
Abe et al. 2014 HERO ID: 2857233 <i>OQD:</i> Medium	JP (Product source) Scenario: Measured concentration in ABS5 Kitchen Utensil (n = 2; DF = 1)	LOD: Not Reported LOQ: 0.025 µg/g	NR	NR	0.97 µg/g (AM)	NR	NR
Abe et al. 2014 HERO ID: 2857233 <i>OQD:</i> Medium	JP (Product source) Scenario: Measured concentration in ABS6 Kitchen Utensil (n = 2; DF = 1)	LOD: Not Reported LOQ: 0.025 µg/g	NR	NR	1.2 µg/g (AM)	NR	NR
Abe et al. 2014 HERO ID: 2857233 <i>OQD:</i> Medium	JP (Product source) Scenario: Measured concentration in ABS7 Kitchen Utensil (n = 2; DF = 1)	LOD: Not Reported LOQ: 0.025 µg/g	NR	NR	0.20 µg/g (AM)	NR	NR
Abe et al. 2014 HERO ID: 2857233 <i>OQD:</i> Medium	JP (Product source) Scenario: Measured concentration in ABS8 Kitchen Utensil (n = 2; DF = 1)	LOD: Not Reported LOQ: 0.025 µg/g	NR	NR	0.21 µg/g (AM)	NR	NR
Abe et al. 2014 HERO ID: 2857233 <i>OQD:</i> Medium	JP (Product source) Scenario: Measured concentration in ABS9 Kitchen Utensil (n = 2; DF = 1)	LOD: Not Reported LOQ: 0.025 µg/g	NR	NR	0.36 µg/g (AM)	NR	NR
Abe et al. 2014 HERO ID: 2857233 <i>OQD:</i> Medium	JP (Product source) Scenario: Measured concentration in ABS10 Kitchen Utensil (n = 2; DF = 1)	LOD: Not Reported LOQ: 0.025 µg/g	NR	NR	0.79 µg/g (AM)	NR	NR

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Table 6 – continued from previous page

Citation Information	Site and Data Description	Limit (LOD/LOQ)	Min	Max	Mean	Percentile	Variance
Abe et al. 2014 HERO ID: 2857233 <i>OQD:</i> Medium	JP (Product source) Scenario: Measured concentration in ABS11 Kitchen Utensil (n = 2; DF = 1)	LOD: Not Reported LOQ: 0.025 $\mu\text{g/g}$	NR	NR	0.73 $\mu\text{g/g}$ (AM)	NR	NR
Abe et al. 2014 HERO ID: 2857233 <i>OQD:</i> Medium	JP (Product source) Scenario: Measured concentration in ABS12 Kitchen Utensil (n = 2; DF = 1)	LOD: Not Reported LOQ: 0.025 $\mu\text{g/g}$	NR	NR	1.3 $\mu\text{g/g}$ (AM)	NR	NR
Abe et al. 2014 HERO ID: 2857233 <i>OQD:</i> Medium	JP (Product source) Scenario: Measured concentration in ABS13 Kitchen Utensil (n = 2; DF = 1)	LOD: Not Reported LOQ: 0.025 $\mu\text{g/g}$	NR	NR	1.7 $\mu\text{g/g}$ (AM)	NR	NR
Abe et al. 2014 HERO ID: 2857233 <i>OQD:</i> Medium	JP (Product source) Scenario: Measured concentration in ABS14 Kitchen Utensil (n = 2; DF = 1)	LOD: Not Reported LOQ: 0.025 $\mu\text{g/g}$	NR	NR	0.06 $\mu\text{g/g}$ (AM)	NR	NR
Abe et al. 2014 HERO ID: 2857233 <i>OQD:</i> Medium	JP (Product source) Scenario: Measured concentration in ABS15 Kitchen Utensil (n = 2; DF = 1)	LOD: Not Reported LOQ: 0.025 $\mu\text{g/g}$	NR	NR	0.62 $\mu\text{g/g}$ (AM)	NR	NR
Abe et al. 2013 HERO ID: 12392230 <i>OQD:</i> Medium	JP (Testing Location) Scenario: Measured residual level in acrylonitrile-butadiene-styrene copolymer toys (n = 59; DF = 0.88)	LOD: Not Reported LOQ: 0.025 $\mu\text{g/g}$	0.04 $\mu\text{g/g}$	5.3 $\mu\text{g/g}$	0.04 $\mu\text{g/g}$ (AM)	NR	NR
Abe et al. 2013 HERO ID: 12392230 <i>OQD:</i> Medium	JP (Testing Location) Scenario: Measured residual level in thermoplastic elastomer and rubber toys (n = 14; DF = 0)	LOD: Not Reported LOQ: 0.1 $\mu\text{g/g}$	NR	NR	<LOQ	NR	NR
Abe et al. 2013 HERO ID: 12392230 <i>OQD:</i> Medium	JP (Testing Location) Scenario: Amount migrated from ABS toys into water (hermetically sealed vial heated at 40°C for 30 min) (n = 10; DF = 0)	LOD: Not Reported LOQ: Not Reported	NR	NR	<LOQ	NR	NR

Table 7: Data Extraction Tables of Exposure Modeling Studies for Ambient Air

Citation Information	Site and Data Description	Min	Max	Mean	Percentile	Variance
Suzuki et al. 2004 HERO ID: 198786 <i>OQD:</i> High	JP (Modeled Location) Scenario: Modeled ambient air concentration	1 percentile: 0.000011 $\mu\text{g}/\text{m}^3$; Exposure Weighted Averaged Concentration: 0.14 $\mu\text{g}/\text{m}^3$				
Loh et al. 2007 HERO ID: 632519 * <i>OQD:</i> High	US (Modeled Location) Scenario: Concentration distribution in nongrocery ambient air	NR	NR	0.2 $\mu\text{g}/\text{m}^3$ (GM)	NR	3.4 $\mu\text{g}/\text{m}^3$ (GSD)
Loh et al. 2007 HERO ID: 632519 * <i>OQD:</i> High	US (Modeled Location) Scenario: Concentration distribution in outdoor/other ambient air	NR	NR	0.1 $\mu\text{g}/\text{m}^3$ (GM)	NR	3.6 $\mu\text{g}/\text{m}^3$ (GSD)
Yu et al. 2016 HERO ID: 3276086 <i>OQD:</i> High	Hillsborough County, FL, US (Modeled Location) Scenario: Modeled ambient air concentration, annual average	1%: 0.00317 $\mu\text{g}/\text{m}^3$				
Radian Engineering et al. 1997 HERO ID: 5665035 <i>OQD:</i> Medium	Ontario, CA, US (Modeled Location) Scenario: Modeled ambient air concentration in residential MEI around GE facility, hourly	NR	0.21 $\mu\text{g}/\text{m}^3$	NR	NR	NR
Radian Engineering et al. 1997 HERO ID: 5665035 <i>OQD:</i> Medium	Ontario, CA, US (Modeled Location) Scenario: Modeled ambient air concentration in residential MEI around GE facility, annual	NR	NR	0.000014 $\mu\text{g}/\text{m}^3$ (AM)	NR	NR
Radian Engineering et al. 1997 HERO ID: 5665035 <i>OQD:</i> Medium	Ontario, CA, US (Modeled Location) Scenario: Modeled ambient air concentration in commercial MEI around GE facility, hourly	NR	5.2 $\mu\text{g}/\text{m}^3$	NR	NR	NR
Radian Engineering et al. 1997 HERO ID: 5665035 <i>OQD:</i> Medium	Ontario, CA, US (Modeled Location) Scenario: Modeled ambient air concentration in commercial MEI around GE facility, annual	NR	NR	0.00086 $\mu\text{g}/\text{m}^3$ (AM)	NR	NR

* Reference is a completed exposure assessment and risk characterization that was evaluated using the completed exposure assessment and risk characterization data quality criteria. Depending on the type of data the reference contains, primary or secondary data from completed exposure assessments or risk characterizations may be extracted using the template(s) for monitoring, modeling, and/or experimental data and are grouped with other data from the applicable evidence stream(s).

Table 8: Data Extraction Tables of Exposure Modeling Studies for Indoor Air

Citation Information	Site and Data Description	Min	Max	Mean	Percentile	Variance
Loh et al. 2007 HERO ID: 632519 * OQD: High	US (Modeled Location) Scenario: Concentration distribution in home indoor air	NR	NR	0.3 $\mu\text{g}/\text{m}^3$ (GM)	NR	3.7 $\mu\text{g}/\text{m}^3$ (GSD)
Loh et al. 2007 HERO ID: 632519 * OQD: High	US (Modeled Location) Scenario: Concentration distribution in office indoor air	NR	NR	0.2 $\mu\text{g}/\text{m}^3$ (GM)	NR	3.4 $\mu\text{g}/\text{m}^3$ (GSD)
Loh et al. 2007 HERO ID: 632519 * OQD: High	US (Modeled Location) Scenario: Concentration distribution in commute indoor air	NR	NR	1.5 $\mu\text{g}/\text{m}^3$ (GM)	NR	2.1 $\mu\text{g}/\text{m}^3$ (GSD)
Loh et al. 2007 HERO ID: 632519 * OQD: High	US (Modeled Location) Scenario: Concentration distribution in dining indoor air	NR	NR	1.0 $\mu\text{g}/\text{m}^3$ (GM)	NR	6.3 $\mu\text{g}/\text{m}^3$ (GSD)
Loh et al. 2007 HERO ID: 632519 * OQD: High	US (Modeled Location) Scenario: Concentration distribution in grocery indoor air	NR	NR	0.2 $\mu\text{g}/\text{m}^3$ (GM)	NR	3.4 $\mu\text{g}/\text{m}^3$ (GSD)

* Reference is a completed exposure assessment and risk characterization that was evaluated using the completed exposure assessment and risk characterization data quality criteria. Depending on the type of data the reference contains, primary or secondary data from completed exposure assessments or risk characterizations may be extracted using the template(s) for monitoring, modeling, and/or experimental data and are grouped with other data from the applicable evidence stream(s).

Table 9: Data Extraction Tables of Exposure Modeling Studies for Sediment

Citation Information	Site and Data Description	Min	Max	Mean	Percentile	Variance
Suzuki et al. 2004 HERO ID: 198786 <i>OQD:</i> High	JP (Modeled Location) Scenario: Modeled sediment concentration				1 percentile: 0.0000003 ng/g	

Table 10: Data Extraction Tables of Exposure Modeling Studies for Soil

Citation Information	Site and Data Description	Min	Max	Mean	Percentile	Variance
Suzuki et al. 2004 HERO ID: 198786 <i>OQD:</i> High	JP (Modeled Location) Scenario: Modeled soil concentration				1 percentile: 0.0000001 ng/g	

Table 11: Data Extraction Tables of Exposure Modeling Studies for Surface Water

Citation Information	Site and Data Description	Min	Max	Mean	Percentile	Variance
Suzuki et al. 2004 HERO ID: 198786 <i>OQD:</i> High	JP (Modeled Location) Scenario: Modeled river concentration				1 percentile: 0.000019 ng/L	

Table 12: Glossary of Select Terms for Data Extraction

Term	Definition
ABS	Acrylonitrile Butadiene Styrene copolymer
ACC	American Chemistry Council
ACGIH	American Conference of Governmental Industrial Hygienists
AEGL	Acute Exposure Guideline Level
ATSDR	Agency for Toxic Substances and Disease Registry
BCF	Bioconcentration factor
CAA	Clean Air Act
CASRN	Chemical Abstracts Service Registry Number
CBI	Confidential Business Information
CCL	Contaminant Candidate List
CDR	Chemical Data Reporting
CEPA	Canadian Environmental Protection Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
COU	Condition of Use
CSCL	Chemical Substances Control Law
DMR	Discharge Monitoring Report
ECB	European Chemicals Bureau
ECHA	European Chemicals Agency
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ESD	Emission Scenario Document
GACT	Generally Available Control Technology
ECEL	Existing Chemical Exposure Limit
ERG	Eastern Research Group
EU	European Union
EV	Exposure Value
GS	Generic Scenario
HAP	Hazardous Air Pollutant
HEC	Human Equivalent Concentration
IMAP	Inventory Multi-Tiered Assessment and Prioritization
IUR	Inhalation Unit Risk
IRIS	Integrated Risk Information System
ISHA	Industrial Safety and Health Act
KOC	Organic Carbon: Water Partition Coefficient
KOW	Octanol:: Water partition Coefficient
LCD	Life Cycle Diagram
MACT	Maximum Achievable Control Technology
MOA	Mode of Action
MOE	Margin of Exposure
NAICS	North American Industry Classification System
NEI	National Emissions Inventory
NICNAS	National Industrial Chemicals Notification and Assessment Scheme (Australia)
NIOSH	National Institute for Occupational Safety and Health
NPL	National Priorities List
NPRI	National Pollutant Release Inventory
NTP	National Toxicology Program
OCSPP	Office of Chemical Safety and Pollution Prevention
OECD	Organisation for Economic Co-operation and Development
OES	Occupational Exposure Scenario

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Term	Definition
ONU	Occupational Non-User
OPPT	Office of Pollution Prevention and Toxics
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
PECO	Populations, Exposures, Comparators, and Outcomes
PESS	Potentially Exposed or Susceptible Subpopulations
POD	Point of Departure
POTW	Publicly Owned Treatment Works
PV	Production Volume
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals (European Union)
SARA	Superfund Amendments and Reauthorization Act
SBR	Styrene-Butadiene Rubber
SDS	Safety Data Sheet
SDWA	Safe Drinking Water Act
SRC	Syracuse Research Corporation
STEL	Short-term Exposure Limit
TSCA	Toxic Substances Control Act
TLV	Threshold Limit Value
TRI	Toxics Release Inventory
TWA	Time-weighted Average
UCMR	Unregulated Contaminants Monitoring Rule
UF	Uncertainty Factor
VOC	Volatile Organic Compound
WWT	Waste Water Treatment