



Dichloroacetic Acid

Environmental estimates (circa 2011): Supplemental data

Table of Contents

1. Data for lifetime excess cancer risk estimates.....	2
Overview	2
i. Environmental Concentrations.....	2
ii. Calculated Lifetime Daily Intake	2
iii. Cancer Potency Factors.....	2
iv. Lifetime Excess Cancer Risk (per million people)	2
Supporting data by exposure pathway	3
i. Outdoor air	3
ii. Indoor air	3
iii. Dust	3
iv. Drinking water	3
v. Food and Beverages	3
2. Data quality for lifetime excess cancer risk estimates	3

1. Data for lifetime excess cancer risk estimates

Overview

The summary data used to calculate lifetime excess cancer risk and the results for dichloroacetic acid are provided in the tables below. For more detailed information on supporting data and sources, see below for each exposure pathway.

i. Environmental Concentrations

Exposure pathway	Units	Average	Maximum	Notes
Drinking water	µg/L	13.1	72.7	
Foods and beverages		Insufficient data		

ii. Calculated Lifetime Daily Intake

Exposure pathway	Average intake (mg/kg bodyweight per day)	Maximum intake (mg/kg bodyweight per day)
Drinking water	0.00034	0.0019
Foods and beverages	Insufficient data	

iii. Cancer Potency Factors

Exposure route	Health Canada	US EPA	CA OEHA
Ingestion	--	0.05	--

Sources for cancer potency factors:

- Health Canada, 2010. Federal Contaminated Site Risk Assessment in Canada, Part I: Guidance on Human Health Preliminary Quantitative Risk Assessment. Version 2.0.
- Health Canada, 2010. Federal Contaminated Site Risk Assessment in Canada, Part II: Health Canada Toxicological Reference Values (TRVs) and Chemical-Specific Factors. Version 2.0.
- United States Environmental Protection Agency Integrated Risk Information System
- California Office of Environmental Health Hazard Assessment, 2009. Air Toxics Hot Spots Risk Assessment Guidelines Part II: Technical Support Document for Cancer Potency Factors, Appendix A. (Updated 2011)

iv. Lifetime Excess Cancer Risk (per million people)

Exposure pathway	Average ¹			Maximum ²
	Health Canada	US EPA	CA OEHA ³	
Drinking water	--	17.01	--	94.39
Foods and beverages	Insufficient data			

¹Lifetime excess cancer risk based on average intake x cancer potency factor from each agency

²Lifetime excess cancer risk based on maximum intake x highest cancer potency factor

³California Office of Environmental Health Hazard Assessment

Supporting data by exposure pathway

i. Outdoor air

Dichloroacetic acid is not expected to be present in outdoor air in significant amounts.

ii. Indoor air

Dichloroacetic acid is not expected to be present in indoor air in significant amounts.

iii. Dust

Dichloroacetic acid is not expected to be present in dust in significant amounts.

iv. Drinking water

Drinking water data are from the Ontario Drinking Water Surveillance Program (DWSP) for 2010. A review of published reports was also conducted in order to compare how well the Ontario data represented other regions in Canada.

Source	Units	DL							
Ontario DWSP 2010	(µg/L)	0.3							
Sample Type	Parameter	Mean	SD	Min	25 th	50 th	75 th	Max	N
Distribution		13.1	13.4	0.46	3.53	8.82	18.7	72.7	201

DL = Detection limit
 SD = Standard Deviation

v. Food and Beverages

No recent data or studies were identified.

2. Data quality for lifetime excess cancer risk estimates

Only publicly available data were used to calculate these indicators. Data that are not publicly available may produce different results.

No systematic method for measuring data quality was possible, so we provide the following assessments of how well the data used may represent the actual Canadian average levels. Quality is rated higher when there are data from a number of Canadian monitors, or from Canadian studies that show results similar to other comparable studies. Quality is rated lower when data from few monitors or studies were available, and lowest when estimates are based on non-Canadian data. Others may rate data quality differently.

Exposure Pathway	Data Quality	Notes
Drinking water	Moderate	<ul style="list-style-type: none"> Dichloroacetic acid was detected in 95 percent of samples (n=211) of water in the distribution system, based on data from the Ontario Drinking Water Surveillance Program in 2010.
Foods and beverages	Gap	<ul style="list-style-type: none"> No recent data or studies on concentrations of dichloroacetic acid in foods and beverages were identified.