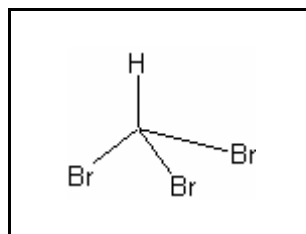




TIER II ACUTE AND CHRONIC AQUATIC LIFE VALUES

BROMOFORM

CAS RN: 75-25-2



Standard

The procedures described in the Tier II methodology indicate that, except possibly where a locally important species is very sensitive, aquatic organisms should not be affected unacceptably if the four (4) day average concentration of bromoform does not exceed 61 µg/L more than once every three (3) years on the average and if the one (1) hour average concentration does not exceed 1,100 µg/L more than once every three (3) years on the average.

Calculations

Acute Aquatic Life:

$$SAV = \text{lowest GMAV}/SAF$$

$$\text{Lowest GMAV} = 29,000 \text{ } \mu\text{g/L}$$

$$SAF = 13.0$$

$$SAV = 29,000/13.0 = 2,231 \text{ } \mu\text{g/L}$$

$$SMC = SAV/2 = 2,231/2 = 1,100 \text{ } \mu\text{g/L}$$

Chronic Aquatic Life:

$$SCC = SAV/SACR$$

$$SACR = 18$$

$$SCC = 1,100/18 = 61 \mu\text{g/L}$$

Data

Table 1. GMAVs and SMAVs for bromoform

<u>Genus Mean Acute Value ($\mu\text{g/L}$)</u>	<u>Species</u>	<u>Species Mean Acute Value ($\mu\text{g/L}$)</u>	<u>Acute- Chronic Ratio</u>	<u>Reference Number</u>
46,000	Cladoceran <u>Daphnia magna</u>	46,000		1
29,000	Bluegill <u>Lepomis macrochirus</u>	29,000		2

References

1. LeBlanc, G.A. 1980. Acute toxicity of priority pollutants to *Daphnia magna*. Bull. Environ. Contam. Toxicol. 24(5): 684-691.
2. Buccafusco, R.J., S.J. Ells, and G.A. LeBlanc 1981. Acute toxicity of priority pollutants to the bluegill (Lepomis macrochirus). Bull. Environ. Contam. Toxicol. 26(4): 446-452.

Acronyms/Abbreviations

CAS RN	Chemical Abstract Service Registry Number
K _{ow}	Octanol-Water Partition Coefficient
P (superscript)	Predicted value
SAV	Secondary Acute Value
GMAV	Genus Mean Acute Value
SAF	Secondary Acute Factor
SMC	Secondary Maximum Concentration
SCC	Secondary Continuous Concentration
SACR	Secondary Acute-Chronic Ratio
FT	Flow-through
S	Static
U	Unmeasured
M	Measured
EVISTRA	Evaluation and Interpretation of Suitable Test Results in AQUIRE (EPA quality checking method/database)

Revision History

October 19, 1998 Values first developed
August 23, 2000 New search for data. No new studies added.

Contact Information

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