OHIO EPA SURFACE WATER QUALITY CRITERION FACT SHEET

Chemical Name: Bromoform Developed by: Chris J. Skalski
CAS # 75-25-2 Data Retrieval Date: 10-29-97
Internal Code # 26 Fact Sheet Preparation Date: 3-01-06

ACUTE DATA

SPECIES	EC_{50}/LC_{50} (µg/l)	TEST TYPE[a]	DURATION (HOURS)	SMAV[b] (µg/l)	GMAV[b] (µg/l)	REFERENCE NUMBER
Cladoceran *Daphnia magna*	46,000	S,U	48	46,000	46,000	1
Bluegill *Lepomis macrochirus*	29,000	S,U	96	29,000	29,000	2
Sheepshead Minnow *Cyprinodon variegatus*	17,900[c]	S,U	96			3

[a] S = static; U = unmeasured.
[b] SMAV = Species Mean Acute Value; GMAV = Genus Mean Acute Value.
[c] Data for this saltwater species is used in the determination of the secondary acute-chronic ratio but not in the determination of the secondary acute value or the acute aquatic value.

CHRONIC DATA

SPECIES	CHRONIC VALUE (µg/l)	METHOD	SMCV[a] (µg/l)	GMCV[a] (µg/l)	REFERENCE NUMBER
Sheepshead Minnow *Cyprinodon variegatus*	4,800 - 8,500 6,387	Embryo-Larval	6,387	6,387	4

[a] SMCV = Species Mean Chronic Value; GMCV = Genus Mean Chronic Value.

REFERENCES

1. LeBlanc, G.A. 1980. Acute Toxicity of Priority Pollutants to Water Flea (*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 Bluegill (*Lepomis macrochirus*). Bull. Environ. Contam. Toxicol. 26(4):446-452.

3. Heitmuller, P.T., T.A. Hollister and P.R. Parrish. 1981. Acute Toxicity of 54 Industrial Chemicals to Sheepshead Minnows (*Cyprinodon variegatus*). Bull. Environ. Contam. Toxicol. 27(5):596-604.

4. Ward, G.S., P.R. Parrish and R.A. Rigby. 1981. Early Life Stage Toxicity Tests with a Saltwater Fish: Effects of Eight Chemicals on Survival, Growth, and Development of Sheepshead Minnows (*Cyprinodon variegatus*). J. Toxicol. Environ. Health 8(1-2):225-240.

Chemical Name: Bromoform Developed by: Chris J. Skalski
CAS # 75-25-2 Data Retrieval Date: 10-29-97
Internal Code # 26 Fact Sheet Preparation Date: 3-01-06

CALCULATION OF ACUTE AQUATIC VALUE (AAV)[a]

Data Requirement OAC 3745-1-36(A)(1)	SPECIES	GMAV (μg/l)
(b)	Bluegill	29,000
(d)	*Daphnia magna*	46,000

Secondary Acute Factor (SAF) = 13.0

Secondary Acute Value (SAV) = Lowest GMAV ÷ SAF
= 29,000 ÷ 13.0
= 2,231 = 2,200 μg/l

Tier II Acute Aquatic Value (AAV) = SAV ÷ 2
= 2,231 ÷ 2
= 1,115 = 1,100 μg/l

CALCULATION OF CHRONIC AQUATIC VALUE (CAV)[a]

Experimentally determined Acute-Chronic Ratios (ACRs):

SPECIES	ACUTE VALUE (μg/l)	CHRONIC VALUE (μg/l)	ACUTE-CHRONIC RATIO	SPECIES MEAN ACR
Sheepshead Minnow *Cyprinodon variegatus*	17,900	6,387	2.8	2.8

Secondary Acute-Chronic Ratio (SACR) = $\sqrt[3]{(2.8)(18)(18)} = 9.68$

Chronic Aquatic Value (CAV) = SAV ÷ SACR
= 2,231 ÷ 9.68
= 230 μg/l

[a]See Ohio Administrative Code 3745-1-36 effective February 22, 2002.