

OHIO EPA SURFACE WATER QUALITY SCREENING VALUE FACT SHEET

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Chemical Name: 1,2-Dibromoethane (Ethylene dibromide:EDB) Developed by: Chris J. SkalskiCAS # 106-93-4 Data Retrieval Date: 6-20-01Internal Code # --- Fact Sheet Preparation Date: 5-16-06Reviewed by: Bob HeitzmanACUTE DATA

<u>SPECIES</u>	<u>EC₅₀/LC₅₀</u> <u>(μg/l)</u>	<u>TEST TYPE^a</u>	<u>DURATION</u> <u>(HOURS)</u>	<u>SMAV^b</u> <u>(μg/l)</u>	<u>GMAV^b</u> <u>(μg/l)</u>	<u>REFERENCE</u> <u>NUMBER</u>
Bluegill	18,000 ^d	S,U	48			1
<i>Lepomis macrochirus</i>	25,000 ^d	S,U	48			1
Largemouth Bass	15,000 ^d	S,U	48			1
<i>Micropterus salmoides</i>	25,000 ^d	S,U	48			1
Japanese Medaka ^c	32,100	F,M	96			2
<i>Oryzias latipes</i>						
Hydra	50,000 ^d	R,U	72			3
<i>Hydra oligactis</i>						

^a S = static; U = unmeasured; F = Flow-through; R = Renewal; M = Measured.^b SMAV = Species Mean Acute Value; GMAV = Genus Mean Acute Value.^c SMAV not calculated because this species is not resident to North America.^d Data not used to calculate a SMAV because the exposure duration was inadequate.CHRONIC DATA

<u>SPECIES</u>	<u>CHRONIC VALUE</u> <u>(μg/l)</u>	<u>METHOD</u>	<u>SMCV^a</u> <u>(μg/l)</u>	<u>GMCV^a</u> <u>(μg/l)</u>	<u>REFERENCE</u> <u>NUMBER</u>
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No Chronic Data Available

^a SMCV = Species Mean Chronic Value; GMCV = Genus Mean Chronic Value.REFERENCES

- Davis, J.T. and W.S. Hardcastle. 1959. Biological Assay of Herbicides for Fish Toxicity. *Weeds* 7:397-404.
- Holcombe, G.W., D.A. Benoit, D.E. Hammermeister, E.N. Leonard and R.D. Johnson. 1995. Acute and Long-Term Effects of Nine Chemicals on the Japanese Medaka (*Oryzias latipes*). *Arch. Environ. Contam. Toxicol.* 28(3):287-297.
- Herring, C.O., J.A. Adams, B.A. Wilson and S. Pollard, Jr. 1988. Dose-Response Studies Using

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Ethylene Dibromide (EDB) in *Hydra Oligactis*. Bull. Environ. Contam. Toxicol. 40(1):35-40.

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CALCULATION OF ACUTE AQUATIC VALUE (AAV)^a

Data Requirement <u>OAC 3745-1-36(A)(1)</u>	<u>SPECIES</u>	GMAV <u>(µg/l)</u>
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Secondary Acute Factor (SAF) =

Screening Secondary Acute Value (SAV) = Lowest GMAV ÷ SAF
 =
 = Insufficient data available

Screening Acute Aquatic Value (AAV) = SAV ÷ 2
 =
 = Insufficient data available

CALCULATION OF CHRONIC AQUATIC VALUE (CAV)^a

Experimentally determined Acute-Chronic Ratios (ACRs):

<u>SPECIES</u>	<u>ACUTE VALUE</u> <u>(µg/l)</u>	<u>CHRONIC VALUE</u> <u>(µg/l)</u>	<u>ACUTE-CHRONIC</u> <u>RATIO</u>	<u>SPECIES MEAN</u> <u>ACR</u>
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No Experimentally-Derived ACRs Available

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

Screening Chronic Aquatic Value (CAV) = SAV ÷ SACR
 =
 = Insufficient data

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^aSee Ohio Administrative Code 3745-1-36 effective February 22, 2002.