

OHIO EPA SURFACE WATER QUALITY CRITERION FACT SHEET

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Chemical Name: Dibenzofuran Developed by: Chris J. SkalskiCAS # 132-64-9 Data Retrieval Date: 4-15-02Internal Code # --- Fact Sheet Preparation Date: 4-16-02ACUTE 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>
Cladoceran <i>Daphnia magna</i>	1,700	S,U	48	1,700	1,700	1
Fathead Minnow <i>Pimephales promelas</i>	980	F,M	96	929	929	2
	780	F,M	96			2
	1,050	F,M	96			3
	3,620	S,U	96			3
	1,140	S,M	96			3

^a F = Flow through; S = static; M = Measured; U = Unmeasured.^b SMAV = Species Mean Acute Value; GMAV = Genus Mean Acute Value.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.

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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. Geiger, D.L., D.J. Call and L.T. Brooke. 1988. Acute Toxicities of Organic Chemicals to Fathead Minnows (*Pimephales promelas*), Vol. 4. Center for Lake Superior Environmental Studies, University of Wisconsin, Superior, WI: 355 p.
3. Brooke, L.T. 1991. Results of Freshwater Exposures with the Chemicals Atrazine, Biphenyl, Butachlor, Carbaryl, Dibenzofuran, 3,3-Dichlorobenzidine, Dichlorvos..... Center for Lake Superior Environmental Studies, University of Wisconsin, Superior, WI: 110 p.

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<u>Data Requirement</u> <u>OAC 3745-1-36(A)(1)</u>	<u>SPECIES</u>	<u>GMAV</u> <u>(µg/l)</u>
(c)	Fathead Minnow	929
(d)	<i>Daphnia magna</i>	1,700

Secondary Acute Factor (SAF) = 13.0

Secondary Acute Value (SAV) = Lowest GMAV ÷ SAF
 = 929 ÷ 13.0
 = 71.46 = 71 µg/l

Tier II Acute Aquatic Value (AAV) = SAV ÷ 2
 = 71.46 ÷ 2
 = 35.73 = 36 µg/l

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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None Available

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

Chronic Aquatic Value (CAV) = SAV ÷ SACR
 = 71.46 ÷ 18
 = 4.0 µg/l

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

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SAV	71 µg/l
AAV	36 µg/l
CAV	4.0 µg/l