

OHIO EPA AQUATIC LIFE WATER QUALITY CRITERION FACT SHEET

Page 1 of 2

Chemical Name: Tetrahydrofuran Developed by: Chris J. SkalskiCAS # 109-99-9 Data Retrieval Date: 11-01-04Internal Code # Fact Sheet Preparation Date: 3-01-06ACUTE 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>
Fathead Minnow	2,160,000	F,M	96	1,930,000	1,930,000	1
<i>Pimephales promelas</i>	1,930,000	F,M	96			2
Cladoceran	3,110,000	S,U	48	3,110,000	3,110,000	3
<i>Daphnia magna</i>						

^a F = flow-through; S = static; U = unmeasured; M = measured.^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>
Fathead Minnow	282,000	Early Life Stage	282,000	282,000	4
<i>Pimephales promelas</i>					

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

1. Veith et al. 1983. Can. J. Fish. Aq. Sci. 40(6):743-748.
2. Brooke, L.T., D.J. Call, D.L. Geiger and C.E. Northcott. 1984. Acute Toxicities of Organic Chemicals to Fathead Minnows (*Pimephales promelas*). Volume 1. Center for Lake Superior Environmental Studies, Univ. of Wisconsin-Superior, Superior, WI: 414 p.
3. Meier, P.G. 1991. Acute Toxicity of Tetrahydrofuran (THF) and Isopropyl alcohol (IPA) to *Daphnia magna*. Ph.D Dissertation, University of Michigan.
4. Call et. al. 1985. Environ. Toxicol. Chem. 4:335-341.

OHIO EPA AQUATIC LIFE WATER QUALITY CRITERION FACT SHEET

Page 2 of 2

Chemical Name: Tetrahydrofuran Developed by: Chris J. SkalskiCAS # 109-99-9 Data Retrieval Date: 11-01-04Internal Code # Fact Sheet Preparation Date: 3-01-06CALCULATION OF ACUTE AQUATIC VALUE (AAV)^a

<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	1,930,000
(d)	Cladoceran	3,110,000

Secondary Acute Factor (SAF) = 13.0

Secondary Acute Value (SAV) = Lowest GMAV ÷ SAF
= 1,930,000 ÷ 13.0
= 148,462 = 150,000 µg/l

Tier II Acute Aquatic Value (AAV) = SAV ÷ 2
= 148,462 ÷ 2
= 74,231 = 74,000 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>
Fathead Minnow	1,930,000	282,000	6.84	6.84
<i>Pimephales promelas</i>				

Secondary Acute-Chronic Ratio (SACR) = $\sqrt[3]{(6.84)(18)(18)} = 13$

Chronic Aquatic Value (CAV) = SAV ÷ SACR
= 148,462 ÷ 13
= 11,385 = 11,000 µg/l

OHIO EPA AQUATIC LIFE WATER QUALITY CRITERION FACT SHEET

Page 3 of 2

Chemical Name: Tetrahydrofuran Developed by: Chris J. Skalski

CAS # 109-99-9 Data Retrieval Date: 11-01-04

Internal Code # Fact Sheet Preparation Date: 3-01-06

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