

OHIO EPA AQUATIC LIFE WATER QUALITY SCREENING VALUE FACT SHEET

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Chemical Name: Acenaphthylene Developed by: Chris SkalskiCAS # 208-96-8 Data Retrieval Date: 3-19-03Internal Code # 2 Fact Sheet Preparation Date: 3-01-06Reviewed 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>
Cladoceran <i>Daphnia magna</i>	2,567	QSAR	48			1
Bluegill <i>Lepomis macrochirus</i>	3,511	QSAR	96			1
Fathead Minnow <i>Pimephales promelas</i>	4,309	QSAR	96			1
Channel Catfish <i>Ictalurus punctatus</i>	1,862	QSAR	96			1
Rainbow Trout <i>Oncorhynchus</i>	1,688	QSAR	96			1

^a QSAR = Quantitative Structure Activity Relationship.^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^a</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

- USEPA ASTER database, March 24, 2001.

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CALCULATION OF ACUTE SCREENING 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>
(a)	Rainbow Trout	1,688
(b)	Channel Catfish	1,862
(c)	Bluegill	3,511
(d)	<i>Daphnia magna</i>	2,567

Secondary Acute Factor (SAF) = 7.0

Secondary Acute Value (SAV) = Lowest GMAV ÷ SAF
 = 1,688 ÷ 7.0
 = 241 = 240 µg/l

Tier II Acute Aquatic Value (AAV) = SAV ÷ 2
 = 241 ÷ 2
 = 121 = 120 µg/l

CALCULATION OF CHRONIC SCREENING 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 Chronic Data Available

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

Chronic Aquatic Value (CAV) = SAV ÷ SACR
 = 241 ÷ 18
 = 13 µg/l

^aSee Ohio Administrative Code 3745-2-04(C) effective October 31, 1997 and 3745-1-36 effective February 22, 2002.

Screening SAV	240 µg/l
Screening AAV	120 µg/l

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Screening CAV	13 µg/l
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