

OHIO EPA SURFACE WATER QUALITY CRITERION FACT SHEET

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Chemical Name: Anthracene Developed by: Chris J. SkalskiCAS # 120-11-7 Data Retrieval Date: 4-17-01Internal Code # 6 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	3,030 ^c	S,U	48	49.7	49.7	1
<i>Daphnia magna</i>	36	S,U	48			2
	36	S,U	48			2
	95	S,U	48			3
Cladoceran	754	S,U	48	754 ^d		4
<i>Daphnia pulex</i>						
Bluegill	2.78	F,M	96	4.61	4.61	5
<i>Lepomis macrochirus</i>	4.5	F,U	96			6
	46	F,U	96			6
	7.47	F,M	96			7
	1.27	F,M	96			7
	7.97	F,M	96			7
	6.78	F,M	96			7
	3.74	F,M	96			7
	8.27	F,M	96			7
	26.47	F,M	96			5
	18.23	F,M	96			5
	11.92	F,M	96			5

^a S = static; F = flow through; U = unmeasured; M = measured.^b SMAV = Species Mean Acute Value; GMAV = Genus Mean Acute Value.^c Data not used to calculate the SMAV because it varies by over a factor of 10 from the other data for this species.^d Data not used to calculate the GMAV because it varies by over a factor of ten from the other data for this genus.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 Data Available

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

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CALCULATION 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>
(b)	Bluegill	4.61
(d)	<i>Daphnia</i>	49.7

Secondary Acute Factor (SAF) = 13.0

Secondary Acute Value (SAV) = Lowest GMAV ÷ SAF
 = 4.61 ÷ 13.0
 = 0.3546 = 0.35 µg/l

Tier II Acute Aquatic Value (AAV) = SAV ÷ 2
 = 0.3546 ÷ 2
 = 0.18 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>
None Available				

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

Chronic Aquatic Value (CAV) = SAV ÷ SACR
 = 0.3546 ÷ 18
 = 0.020 µg/l

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