

OHIO EPA AQUATIC LIFE WATER QUALITY SCREENING VALUE FACT SHEET

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Chemical Name: Chrysene Developed by: Chris J. SkalskiCAS # 218-01-9 Data Retrieval Date: 4-24-01Internal Code # 42 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>	1,023	QSAR	48			1
Bluegill <i>Lepomis macrochirus</i>	1,340	QSAR	96			1
Fathead Minnow <i>Pimephales promelas</i>	1,559	QSAR	96			1
Channel Catfish <i>Ictalurus punctatus</i>	692	QSAR	96			1
Rainbow Trout <i>Oncorhynchus mykiss</i>	592	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>SMCV^a</u> <u>METHOD^a</u>	<u>GMCV^a</u> <u>(µg/l)</u>	<u>REFERENCE</u> <u>(µg/l)</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

Data Requirement OAC 3745-1-36(A)(1)	SPECIES	GMAV (µg/l)
(a)	Rainbow Trout	592
(b)	Channel Catfish	692
(c)	Bluegill	1,340
(d)	<i>Daphnia magna</i>	1,023

Secondary Acute Factor (SAF) = 7.0

Secondary Acute Value (SAV) = Lowest GMAV ÷ SAF
 = 592 ÷ 7.0
 = 85 µg/l

Tier II Acute Aquatic Value (AAV) = SAV ÷ 2
 = 85 ÷ 2
 = 42 µg/l

CALCULATION OF CHRONIC SCREENING AQUATIC VALUE (CAV)^a

Experimentally determined Acute-Chronic Ratios (ACRs):

SPECIES	ACUTE VALUE (µg/l)	CHRONIC VALUE (µg/l)	ACUTE-CHRONIC RATIO	SPECIES MEAN ACR
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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
 = 85 ÷ 18
 = 4.7 µg/l

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