

OHIO EPA SURFACE WATER QUALITY CRITERION FACT SHEET

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Chemical Name: Nitroglycerine Developed by: Chris J. SkalskiCAS # 55-63-0 Data Retrieval Date: 10-11-01Internal 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>
Cladoceran	46,000	S,U	48	38,367	38,367	1
<i>Daphnia magna</i>	32,000	F,U	48			1
Midge	55,000	S,U	48	33,166	33,166	1
<i>Chironomus tentans</i>	20,000	F,U	48			1
Channel Catfish	3,200	S,U	96	3,200	3,200	1
<i>Ictalurus punctatus</i>						
Bluegill	3,550	S,U	96	1,946	1,946	1
<i>Lepomis macrochirus</i>	2,100	S,U	96			1
	2,000	S,U	96			1
	1,700	S,U	96			1
	2,100	S,U	96			1
	2,000	S,U	96			1
	2,000	S,U	96			1
	1,670	F,U	96			1
	2,700	S,U	96			1
	1,760	S,U	96			1
	1,510	S,U	96			1
	1,650	S,U	96			1
	1,920	S,U	96			1
	1,990	S,U	96			1
	1,380	S,U	96			1
	1,910	S,U	96			1
Rainbow Trout	2,800	S,U	96	2,800	2,800	1
<i>Oncorhynchus mykiss</i>						
Fathead Minnow	3,400	S,U	96	2,919	2,919	1
<i>Pimephales promelas</i>	2,100	S,U	96			1
	5,500	S,U	96			1
	2,100	S,U	96			1
	2,500	S,U	96			1
	3,000	F,U	96			1

^a S = static; U = unmeasured; F = flow-through.^b SMAV = Species Mean Acute Value; GMAV = Genus Mean Acute Value.

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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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None Available

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

REFERENCES

1. Bentley, R.E., J.W. Dean, S.J. Ells, G.A. LeBlanc, S. Sauter, K.S. Buxton and B.H. Sleight III. 1978. Laboratory Evaluation of the Toxicity of Nitroglycerine to Aquatic Organisms. U.S. Army Medical Research Development Command, Washington, DC: 82 p.

CALCULATION OF ACUTE AQUATIC VALUE (AAV)^a

Data Requirement OAC 3745-1-36(A)(1)	SPECIES	GMAV ($\mu\text{g/l}$)
(a)	Rainbow Trout	2,800
(b)	Bluegill	1,946
(c)	Fathead Minnow	2,919
(d)	<i>Daphnia magna</i>	38,367
(f)	Midge	33,166

Secondary Acute Factor (SAF) = 6.1

Secondary Acute Value (SAV) = Lowest GMAV \div SAF
 $= 1,946 \div 6.1$
 $= 319 = 320 \mu\text{g/l}$

Tier II Acute Aquatic Value (AAV) = SAV \div 2
 $= 319 \div 2$
 $= 160 \mu\text{g/l}$

CALCULATION OF CHRONIC AQUATIC VALUE (CAV)^a

Experimentally determined Acute-Chronic Ratios (ACRs):

SPECIES	ACUTE VALUE ($\mu\text{g/l}$)	CHRONIC VALUE ($\mu\text{g/l}$)	ACUTE-CHRONIC RATIO	SPECIES MEAN ACR
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None Available

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

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$$\begin{aligned}\text{Chronic Aquatic Value (CAV)} &= \text{SAV} \div \text{SACR} \\ &= 319 \div 18 \\ &= 18 \mu\text{g/l}\end{aligned}$$

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