

## OHIO EPA SURFACE WATER QUALITY CRITERION FACT SHEET

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Chemical Name: 2-Nitrotoluene      Developed by: Chris J. SkalskiCAS # 88-72-2 Data Retrieval Date: 10-11-01Internal Code # ---      Fact Sheet Preparation Date: 3-01-06ACUTE DATA

<u>SPECIES</u>	<u>EC<sub>50</sub>/LC<sub>50</sub></u> <u>(µg/l)</u>	<u>TEST TYPE<sup>a</sup></u>	<u>DURATION</u> <u>(HOURS)</u>	<u>SMAV<sup>b</sup></u> <u>(µg/l)</u>	<u>GMAV<sup>b</sup></u> <u>(µg/l)</u>	<u>REFERENCE</u> <u>NUMBER</u>
Cladoceran	5,400	S,U	48	8,955	8,955	1
<i>Daphnia magna</i>	12,300	S,U	48			2
	11,000	S,U	48			3
	8,800	S,U	48			1
Snail	42,100	R,M	96	42,100	42,100	2
<i>Lymnaea stagnalis</i>						
Fathead Minnow	38,000	S,U	96	37,497	37,497	4
<i>Pimephales promelas</i>	37,000	S,U	96			5
Guppy	30,100	R,M	96	30,100	30,100	2
<i>Poecilia reticulata</i>						

<sup>a</sup> S = static; U = unmeasured; M = measured; R = renewal.<sup>b</sup> 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<sup>a</sup></u> <u>(µg/l)</u>	<u>GMCV<sup>a</sup></u> <u>(µg/l)</u>	<u>REFERENCE</u> <u>NUMBER</u>
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None Available

<sup>a</sup> SMCV = Species Mean Chronic Value; GMCV = Genus Mean Chronic Value.

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## REFERENCES

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## CALCULATION OF ACUTE AQUATIC VALUE (AAV)<sup>a</sup>

<u>Data Requirement</u> OAC 3745-1-36(A)(1)	<u>SPECIES</u>	<u>GMAV</u> ( $\mu\text{g/l}$ )
(b)	Guppy	30,100
(c)	Fathead Minnow	37,497
(d)	<i>Daphnia magna</i>	8,955
(g)	Snail	42,100

Secondary Acute Factor (SAF) = 7.0

Secondary Acute Value (SAV) = Lowest GMAV  $\div$  SAF  
 = 8,955  $\div$  7.0  
 = 1,279 = 1,300  $\mu\text{g/l}$

Tier II Acute Aquatic Value (AAV) = SAV  $\div$  2  
 = 1,279  $\div$  2  
 = 640  $\mu\text{g/l}$

## CALCULATION OF CHRONIC AQUATIC VALUE (CAV)<sup>a</sup>

Experimentally determined Acute-Chronic Ratios (ACRs):

<u>SPECIES</u>	<u>ACUTE VALUE</u> ( $\mu\text{g/l}$ )	<u>CHRONIC VALUE</u> ( $\mu\text{g/l}$ )	<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  $\div$  SACR  
 = 1,279  $\div$  18

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= 71 µg/l

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<sup>a</sup>See Ohio Administrative Code 3745-1-36 effective February 22, 2002.