

OHIO EPA SURFACE WATER QUALITY CRITERION FACT SHEET

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Chemical Name: 4-Isopropyltoluene Developed by: Chris J. Skalski

CAS # 99-87-6 Data Retrieval Date: 2-4-04

Internal Code # --- Fact Sheet Preparation Date: 2-9-04

Reviewed by: Bob Heitzman

### ACUTE DATA

<u>SPECIES</u>	<u>EC<sub>50</sub>/LC<sub>50</sub></u> <u>(<math>\mu</math>g/l)</u>	<u>TEST TYPE<sup>a</sup></u>	<u>DURATION</u> <u>(HOURS)</u>	<u>SMAV<sup>b</sup></u> <u>(<math>\mu</math>g/l)</u>	<u>GMAV<sup>b</sup></u> <u>(<math>\mu</math>g/l)</u>	<u>REFERENCE</u> <u>NUMBER</u>
Cladoceran <i>Daphnia magna</i>	6,500	S,U	48	6,500	6,500	1

<sup>a</sup> S = static; F= flow through; U = unmeasured; M = measured.

<sup>b</sup> SMAV = Species Mean Acute Value; GMAV = Genus Mean Acute Value.

### CHRONIC DATA

<u>SPECIES</u>	<u>CHRONIC VALUE</u> <u>(<math>\mu</math>g/l)</u>	<u>METHOD</u>	<u>SMCV<sup>a</sup></u> <u>(<math>\mu</math>g/l)</u>	<u>GMCV<sup>a</sup></u> <u>(<math>\mu</math>g/l)</u>	<u>REFERENCE</u> <u>NUMBER</u>
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No Chronic Data Available

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

### REFERENCES

1. LeBlanc, G.A. 1980. Acute Toxicity of Priority Pollutants to Water Flea (*Daphnia magna*). Bull. Environ. Contam. Toxicol. 24(5):684-691.

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

Data Requirement <u>OAC 3745-1-36(A)(1)</u>	<u>SPECIES</u>	GMAV <u>(µg/l)</u>
(d)	<i>Daphnia magna</i>	6,500

Secondary Acute Factor (SAF) = 21.9

Secondary Acute Value (SAV) = Lowest GMAV ÷ SAF  
 = 6,500 ÷ 21.9  
 = 297 = 300 µg/l

Tier II Acute Aquatic Value (AAV) = SAV ÷ 2  
 = 297 ÷ 2  
 = 148 = 150 µg/l

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

Experimentally determined Acute-Chronic Ratios (ACRs):

<u>SPECIES</u>	ACUTE VALUE <u>(µg/l)</u>	CHRONIC VALUE <u>(µg/l)</u>	ACUTE-CHRONIC <u>RATIO</u>	SPECIES MEAN <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  
 = 297 ÷ 18  
 = 16.48 = 16 µg/l

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