

## OHIO EPA SURFACE WATER QUALITY CRITERION FACT SHEET

Page 1 of 2

Chemical Name: Carbon Disulfide      Developed by: Chris J. SkalskiCAS # 75-15-0 Data Retrieval Date: 5-07-01Internal Code # ---      Fact Sheet Preparation Date: 3-01-06Reviewed by: Bob HeitzmanACUTE 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>	2,100	R,U	48	2,100	2,100	1
Guppy <i>Poecilia reticulata</i>	4,000	R,U	96	4,000	4,000	1
Mosquitofish <i>Gambusia affinis</i>	135,000	S,U	96	135,000	135,000	2

<sup>a</sup> S = static; R = renewal; U = unmeasured.<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>SMCV<sup>a</sup></u> <u>METHOD</u>	<u>GMCV<sup>a</sup></u> <u>(<math>\mu</math>g/l)</u>	<u>REFERENCE</u> <u>(<math>\mu</math>g/l)</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. Van Leeuwen, C.J., J.L. Maas-Diepeveen, G. Niebeek, W.H.A. Vergouw, P.S. Griffioen and M.W. Luijken. 1985. Aquatic Toxicological Aspects of Dithiocarbamates and Related Compounds. I. Short-Term Toxicity Tests. *Aquat. Toxicol.* 7(3):145-164.
2. Wallen, I.E., W.C. Greer and R. Lasater. 1957. Toxicity to *Gambusia affinis* of Certain Pure Substances in Turbid Waters. *Sewage Ind. Wastes* 29(6):695-711.

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Page 2 of 2

Chemical Name: Carbon Disulfide      Developed by: Chris J. SkalskiCAS # 75-15-0 Data Retrieval Date: 5-07-01Internal Code # ---      Fact Sheet Preparation Date: 3-01-06Reviewed by: Bob HeitzmanCALCULATION OF ACUTE AQUATIC VALUE (AAV)<sup>a</sup>

<u>Data Requirement</u> <u>OAC 3745-1-36(A)(1)</u>	<u>SPECIES</u>	<u>GMAV</u> <u>(µg/l)</u>
(b)	Guppy	4,000
(c)	Mosquitofish	150,000
(d)	<i>Daphnia magna</i>	2,100

Secondary Acute Factor (SAF) = 8.0

Secondary Acute Value (SAV) = Lowest GMAV ÷ SAF  
 = 2,100 ÷ 8.0  
 = 262.5 = 260 µg/l

Tier II Acute Aquatic Value (AAV) = SAV ÷ 2  
 = 262.5 ÷ 2  
 = 131.25 = 130 µg/l

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

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>
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None Available

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

Chronic Aquatic Value (CAV) = SAV ÷ SACR  
 = 262.5 ÷ 18

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Page 3 of 2

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= 14.58 = 15 µg/l

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