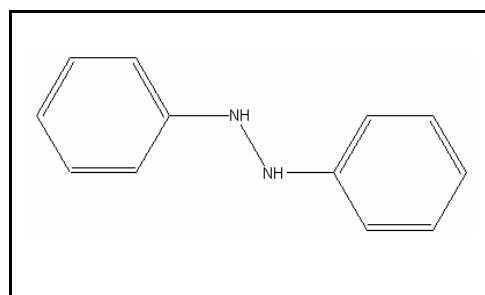




TIER II ACUTE AND CHRONIC AQUATIC LIFE VALUES

1,2-DIPHENYLHYDRAZINE

CAS RN: 122-66-7
Water Solubility: 68 mg/L
Log K_{ow}: 2.97^P



Standard

The procedures described in the Tier II methodology indicate that, except possibly where a locally important species is very sensitive, aquatic organisms should not be affected unacceptably if the four (4) day average concentration of 1,2-diphenylhydrazine does not exceed 1.1 µg/L more than once every three (3) years on the average and if the one (1) hour average concentration does not exceed 9.6 µg/L more than once every three (3) years on the average.

Calculations

Acute Aquatic Life:

$$\text{SAV} = \text{lowest GMAV/SAF}$$

$$\begin{aligned}\text{Lowest GMAV} &= 250 \text{ } \mu\text{g/L} \\ \text{SAF} &= 13.0\end{aligned}$$

$$\text{SAV} = 250/13.0 = 19.23 \text{ } \mu\text{g/L}$$

$$\text{SMC} = \text{SAV}/2 = 19.23/2 = \mathbf{9.6 \text{ } \mu\text{g/L}}$$

Chronic Aquatic Life:

$$SCV = SAV/SACR$$

$$SACR = 18$$

$$SCV = 19.23/18 = \mathbf{1.1 \mu g/L}$$

Data

Table 1. GMAVs and SMAVs for 1,2-diphenylhydrazene

<u>Genus Mean Acute Value ($\mu\text{g/L}$)</u>	<u>Species</u>	<u>Species Mean Acute Value ($\mu\text{g/L}$)</u>	<u>Acute- Chronic Ratio</u>	<u>Reference Number</u>
250	Bluegill <u>Lepomis macrochirus</u>	250		1
4,100	Cladoceran <u>Daphnia magna</u>	4,100		2

References

1. Buccafusco, R.J., S.J. Ells, and G.A. LeBlanc 1981. Acute toxicity of priority pollutants to bluegill (*Lepomis macrochirus*). Bull. Environ. Contam. Toxicol. 24(5): 446-452.
2. LeBlanc, G.A. 1980. Acute toxicity of priority pollutants to Daphnia magna. Bull. Environ. Contam. Toxicol. 24(5): 684-691.

Acronyms/Abbreviations

CAS RN	Chemical Abstract Service Registry Number
K _{ow}	Octanol-Water Partition Coefficient
P (superscript)	Predicted value
SAV	Secondary Acute Value
GMAV	Genus Mean Acute Value
SAF	Secondary Acute Factor
SMC	Secondary Maximum Concentration
SCC	Secondary Continuous Concentration
SACR	Secondary Acute-Chronic Ratio
FT	Flow-through
S	Static
U	Unmeasured
M	Measured
EVISTRA	Evaluation and Interpretation of Suitable Test Results in AQUIRE (EPA quality checking method/database)

Revision History

June 22, 1999	Values first developed
April 25, 2001	New search for data. No new studies added.

Contact Information

David B. Kallander
Water Quality Standards Section
Indiana Department of Environmental Management
100 North Senate Ave., P.O. Box 6015
Indianapolis, IN 46206-6015
(317) 233-2472
Email: dkalland@dem.state.in.us