

Rule 57 Aquatic Values Data Sheet

Chemical or product name: Bromomethane  
 C.A.S #: 74-83-9

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FAV: 75 ug/l (Tier II)  
 AMV: 38 ug/l (Tier II)  
 FCV: 4.2 ug/l (Tier II)

ACUTE DATA

Species	Test type (EC or LC50)	Duration (hours)	Test		Chemical	LC50/EC50 ug/L	SMAV ug/L	GMAV ug/L	Rank	Reference
			conditions (FT,M, etc.)	Hardness mg/L						
Guppy ( <i>Poecilia reticulata</i> )	EC50	96	SR,M	----	----	600 <sup>1</sup>	600	600	1	1
	LC50	96	SR,M	----	----	800				1
Water Flea ( <i>Daphnia magna</i> )	EC50	48	S,M	140-186		2,600	2,280	2,280	2	3
	LC50	48	S,M	----	----	2,000	2,000			1
	LC50	48	S,U	164	----	12,700 <sup>2</sup>				2
Rainbow trout ( <i>Onchorynchus mykiss</i> )	LC50	96	S,M	136		3,900	3,900	3,900	3	4
Fathead Minnow ( <i>Pimephales promelas</i> )	LC50	96	S,U	69	----	5100 <sup>3</sup>	5,100	5,100		2

<sup>1</sup>EC50 preferred over LC50 from same test.

<sup>2</sup>Unmeasured test results not used because measured results for the same species suggest loss of chemical during unmeasured test.

<sup>3</sup>Value not used because daphnid test conducted by same researcher suggests loss of chemical from test containers during test.

## CHRONIC DATA

Species	Test type (ELS, etc.)	Duration (days)	Study Conditions (FT,M etc.)	Hardness mg/L	Chemical	MATC ug/L	SMCV ug/L	GMCV ug/L	Rank	Reference
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No suitable data were found.

### References Used

1. 019194: Canton, J.H., Wegman, R.C.C., and Mathijssen, E.A.M. 1980. Hydrobiological toxicological research with methylbromide (Hydrobiologisch-toxicologisch onderzoek met methylbromide). Report No. 105/80 CBS VI/RA. Rijks Instituut Voor de Volksgezondheid Bilthoven, Bilthoven, Netherlands.
2. Dow Chemical. 1989. Methyl bromide: Evaluation of the toxicity to representative freshwater organisms. Study ID ES-DR-0000-6019-2. R&D Report, Health and Environmental Sciences, The Dow Chemical Company, Midland, Michigan.
3. Drottar, K.R. and J.P. Swigert. 1993. Methyl bromide: A 48-hour static acute toxicity test with the cladoceran (*Daphnia magna*). Report, Wildlife International Ltd., Easton, MD. Obtained from USEPA, 2002. Methyl Bromide CAS No: 73-83-9. SIDS initial assessment profile. UNEP Publications, Geneva, Switzerland. 219 pp.
4. Drottar, K.R. and J.P. Swigert. 1993. Methyl bromide; A 96-hour static acute toxicity test with the rainbow trout (*Onchorynchus mykiss*). Report, Wildlife International Ltd., Easton, MD. Obtained from USEPA, 2002. Methyl Bromide CAS No: 73-83-9. SIDS initial assessment profile. UNEP Publications, Geneva, Switzerland. 219 pp.

### Notes:

1. This review rejects the data of Dawson, et al. 1977 (#4544) used in the previous review. The Dawson paper was found to be unacceptable for criteria development after the previous review had been completed.

Min. data req. met	Acute Factor
2	13
3	8
4	7
5	6.1
6	5.2
7	4.3

## Rule 57 Aquatic Values Work Sheet

Chemical Name: Bromomethane

C.A.S. #: 74-83-9

### AQUATIC MAXIMUM VALUE CALCULATIONS

A. Minimum 8 species requirement is **not** met. Minimum requirements met = 3

Minimum requirements missing for Tier I =

Acute factor = 8

1. Toxicity **is not** dependent on a water characteristic

a. FAV calculation  $FAV=600/8=75$  ug/l

Round to two significant digits: 75 ug/l

2. Toxicity **is** dependent on a water characteristic

a. Slope = (Table \_\_\_)

b. FAV equation:

3. Go to C.

B. Minimum 8 species requirement **is** met (Tier I)

1. Toxicity **is not** dependent on a water characteristic

a. FAV calculation: Att. \_\_\_

2. Toxicity **is** dependent on a water characteristic

a. Slope = (Table \_\_\_)

b. Ranked genus mean acute intercepts: Table

c. Final acute intercept = (Att. \_\_\_)

ln of final acute intercept =

d. FAV equation =

C. Aquatic Maximum Value (AMV) calculation:  $AMV = 75/2$   
 $= 37.5 \text{ ug/l}$

Round to two significant digits:  $AMV = 38 \text{ ug/l}$

### FINAL CHRONIC VALUE CALCULATIONS

A. Minimum 8 species requirement is **not** met (Tier II). Minimum requirements met = \_\_\_\_  
Minimum requirements missing for Tier I = \_\_\_\_

1. Acute to chronic ratio

a. Number ACRs meeting minimum data requirements =   0   (Table \_\_\_\_)

b. Acute to chronic ratio = 18

2. Toxicity **is not** dependent on a water characteristic

$FCV = 75/18 = 4.166666666666667$   
round to 2 sig. dig. =  $4.2 \text{ ug/l}$

3. Toxicity **is** dependent on a water characteristic

a. Slope = (Table \_\_)

b. Aquatic chronic intercept = (Table \_\_)

ln of aquatic chronic intercept =

c. FCV equation =

B. Minimum 8 species requirement **is** met (Tier I)

1. Toxicity **is not** dependent on a water characteristic

a.  $FCV =$  \_\_\_\_ (Att. \_\_\_\_)

2. Toxicity **is** dependent on a water characteristic

a. Slope = (Table \_\_)

b. Ranked genus mean chronic intercepts: Table \_\_\_\_

c. Final chronic intercept = \_\_\_\_ (Att. \_\_\_\_); ln of final chronic intercept =

d. FCV equation =