

US EPA ARCHIVE DOCUMENT

Data Validation Sheet

Formulation: Technical -

52.0% Cuprous oxide, 9.9% tributyltin methacrylate (as polymer). The solvent used was dimethyl formamide (DMF) and 38.1% inerts.

Chemical Name: See above formulation. (Also known as Polyflo 2018).

Validator: Alvaro A. Yamhure

Date of Validation: 10/1/81

Test Type: 96-hour LC<sub>50</sub> for, fresh warmwater fish.

Test I.D.: Test conducted by EG & G Bionomics and presented to M & T Chemicals Inc. of N.J. Report # BW-81-7-946

Citation: Sousa, Joseph V. July, 1981. Acute toxicity of bioMet 304/CuO paint to Bluegill (Lepomis macrochirus).

Validation Category: Acceptable  
(Core under EEB's rating system).

Results:

<u>Time (hours)</u>	<u>Test Species</u>	<u>Test Results (ppm)</u>	<u>95% Confidence Limits (ppm)</u>
48	Bluegill sunfish	0.13	0.12 - 0.15
.72	"	0.12	0.11 - 0.14
96	"	0.11	0.10 - 0.13

96-hour non-discernible effects level = 0.036 ppm

Note: See attached copy of EPA's computer data validation sheet. EPA's results are similar to those of the applicant.

Acute Toxicity of M & T Chemicals Inc. Poly 2018  
to the Bluegill sunfish (Report No. BW-81-7-946)

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CONC.	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB. (PERCENT)
0.15	10	10	100	0.09765625
0.11	10	3	30	17.1875
0.084	10	1	10	1.074219
0.064	10	2	20	5.46875
0.048	10	1	10	1.074219
0.036	10	0	0	0.09765625

THE BINOMIAL TEST SHOWS THAT 0.048 AND 0.15 CAN BE USED AS STATISTICALLY SOUND CONSERVATIVE 95 PERCENT CONFIDENCE LIMITS, BECAUSE THE ACTUAL CONFIDENCE LEVEL ASSOCIATED WITH THESE LIMITS IS GREATER THAN 95 PERCENT.

AN APPROXIMATE LC50 FOR THIS SET OF DATA IS 0.1180704

RESULTS CALCULATED USING THE MOVING AVERAGE METHOD

SPAN	G	LC50	95 PERCENT CONFIDENCE LIMITS	
2	0.167754	0.1135168	0.1018035	0.1276718

RESULTS CALCULATED USING THE PROBIT METHOD

ITERATIONS	G	H	GOODNESS OF FIT PROBABILITY
6	0.2327877	1	0.06609394

SLOPE = 5.352804  
95 PERCENT CONFIDENCE LIMITS = 2.770179 AND 7.93543

LC50 = 0.1068754  
95 PERCENT CONFIDENCE LIMITS = 0.08953926 AND 0.1388483

LC10 = 0.06188976  
95 PERCENT CONFIDENCE LIMITS = 0.0395146 AND 0.07573571

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