Chemical & Biological Investigations Branch, TSD
Bldg. 402, AEC-East, Beltsville, Md. 20705

Biological Laboratories Report

From Region _____ Date July 31, 1975

SAMPLE IDENT

Sample # MB 388 Code(s) EPA Reg # Establishment #
Product Name: Tech. Mocap Ethoprop
Manufacturer & Address
Physical Form [X] Conc. [ ] W.P. [ ] P.S. [ ] Aero. [ ] Dust [ ] Granular [ ] Bait _____ [ ] Other _____
Ingredients: Tech. Mocap 92%

TEST

Laboratory: Animal Biology
Type Test: Static jar
Test Organism(s): Rainbow trout (S. gairdneri)
Source: Wytheville National Fish Hatchery
Average Length: 40.1 mm Average Weight: .5 gm
Fish/Jar: 10 Fish/Conc: 10 Conc. Tested: 12 Water Volume: 15 l
Water Temperature: 12 °C Dissolved O_2: >6 ppm Calcium Hardness: 17.1 ppm
pH: 7 Dissolved CO_2: <10 ppm Total Hardness: 51.3 ppm
Alkalinity: 41.04 ppm
Test number: 859

Method: TSD 1.206
Duration: 96 hour
Diluent: Acetone

SUMMARY

Tech. Mocap can be expected to kill rainbow trout at a concentration of 5.4 ppm within 24 hours of exposure. The 24-hour values are based on test ran 6/17-21/75. The 48 & 96 hour values are based on a test ran 6/24-28/75.

The 24-hour LC 50 is 12.8 ppm for this test.

RESULTS

LC values, in ppm, obtained from data collected during this test, based on total formulation.

	LC 10	LC 50	LC 90
24 hr.	5.4	12.8	25
48 hr.	1.75	3.9	8.7
96 hr.	0.425	1.15	3:0

Laboratory Supervisor: _____ Tested by: Fredrick J. Putcha

Chemical & Biological Investigations Branch, TSD
Bldg. 402, ARC-East, Beltsville, MD. 20705

Biological Laboratories Report

From Region ——— METHOPREP Date ~~July 31,~~ 1975

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Manufacturer & Address
Physical Form [X] Conc. [ ] W.P. [ ] P.S. [ ] Aero. [ ] Dust [ ] Granular [ ] Bait ____ [ ] Other ____
Ingredients: Tech. Mocap 92%

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Laboratory Supervisor: John A McLam Tested by: Fredrick S. Petchel

24h - 6/17-21/75
48h - 6/24-28/75
96h - 6/24-28/75

TECHNICAL SERVICES DIVISION
Animal Biology Section (Fish)
Probit Analysis Worksheet

Test Species RT
Source Coyleville NFH
Exp Period 24h
Chemical MB 388 ↑
Date tested See Above
LC 10 5.4 LC 50 12.8 LC 90 25

Concentration PPM	No dead/ No. tested	Observed % Mortality	Expected % Mortality	O-E	Contributions to Chi(nomo #1)
42	10/10	100 (99.62)	98.8	.82	.0057
28	8/10	80	93	13	.2600
18	9/10	90	74	16	.1300
12	3/10	30	45	15	.0900
7.5	3/10	30	15	15	.1750
4.9	1/10	10	3.3	6.7	.1400
3.2	0	0 (.12)	.4	.28	.0021
2.1	0	0			

Total Fish Tested 70
Number of Doses (K) 7
Degrees of freedom (K-2) = 5
Total .8028
Chi^2 = Total cont. X Total fish / K = 8.028
Chi^2 to Chi (p=.05) for 5 deg of freedom = 11.1

Exp. Period 48 LC 10 1.75 LC 50 3.9 LC 90 8.7

Concentration	No dead/ No. tested	Observed % Mortality	Expected % Mortality	O-E	Contributions to Chi(nomo #1)
4.9	7/10	70	65	5	.0110
3.2	3/10	30	38	8	.0270
2.1	2/10	20	16.5	3.5	.0090
1.4	1/10	10	5	5	.0530
.87	0	0 (.255)	.85	.595	0
.56	0	0 (.03)	.1	.07	0

Total Fish Tested = 60
Number of Doses (K) = 6
K-2=4
Total .1000
Chi^2 = Total Cont. X Total fish / K = 1.0
Chi^2 (p=.05) for 4 deg of freedom = 9.49

Exp Period 96h LC 10 0.425 LC 50 1.15 LC 90 3.0

Concentration	No dead/ No. tested	Observed % Mortality	Expected % Mortality	O-E	Contributions to Chi(nomo #1)
4.9	9/10	90	97	7	.1700
3.2	9/10	90	91	1	.0012
2.1	10/10	100 (93.8)	79	148	.1400
1.4	7/10	70	61	9	.0330
.87	4/10	40	36	4	.0068
.56	0	0 (5.5)	18	12.5	.1050
.37	0	0 (2.3)	7	4.7	.0340

Total Fish Tested 70
Number of Doses (K) = 7
Degrees of freedon (K-2) = 5
Total .4900
Chi^2 = Total Cont X Total fish / K = 4.9
Chi^2 (p=.05) for 5 deg of freedom = 11.1

CHEMICAL & BIOLOGICAL INVESTIGATIONS BRANCH
Animal Biology Laboratory - Aquatic Section
Worksheet

Test Number _____ Date Tested 2:45 pm 7/1/75

Sample Number MB 388 Solvent Used Acetone

Trade Name Mocap (Tech)

Stock Solutions I .75 into 49.25 III _____

II _____

Test Species RT

Condition _____ Length (mm) 40.1 Weight (gm) .5

Vessel No.	1	2	3	4	5	6	7	8	9	10					Remarks
Concl (ppm)	12	7.5	4.9	3.2	2.1	1.4	.87	.56	.37	0					
Aliquot	12	7.5	4.9	3.2	2.1	1.4	.87	.56	.37	0					
0.75 hrs															
1.5 hrs.															
3.0 hrs															
6.0 hrs.															
12 hrs															
24 hrs	3/10	3/10	3/10	0	—	—	—	—	—	0					
48 hrs	1/10	8/10	6/10	0/10	1/10	0	—	—	—	0					
72 hrs	9/10	9/10	8/10	3/10	3/10	0	—	—	—	0					
96 hrs	9/10	9/10	X	7/10	7/10	1/10	0	—	—	0					

Data fraction = total number dead/number tested per vessel

CHEMICAL & BIOLOGICAL INVESTIGATIONS BRANCH
Animal Biology Laboratory - Aquatic Section
Worksheet

11.00

Test Number _____ Date Tested 6-24-75

Sample Number MB 388 Solvent Used Acetone

Trade Name Mocap (Tech)

Stock Solutions I .75 into 49.25 III _____

II _____

Test Species RT

Condition Excellent To Length (mm) 36.5 Weight (gm) .4
Good

Vessel No.	1	2	3	4	5	6	7	8	9	10	11				Remarks
Concl (ppm)	4.9	3.2	2.1	1.4	.87	.56	.37	.24	.16	.1	0				
Aliquot	4.9	3.2	2.1	1.4	.87	.56	.37	.24	.16	.1	0				
0.75 hrs	I									I					
1.5 hrs.															
3.0 hrs															
6.0 hrs.															
12 hrs															
24 hrs	0	1/10	0								0				
48 hrs	7/10	3/10	2/10	1/10											
72 hrs	9/10	8/10	5/10	3/10	0						0				
96 hrs	9/10	9/10	X	7/10	4/10	0					0				

Data fraction = total number dead/number tested per vessel

CHEMICAL & BIOLOGICAL INVESTIGATIONS BRANCH
Animal Biology Laboratory - Aquatic Section
Worksheet

4:05 pm

Test Number ____________ Date Tested 6-17-75

Sample Number MB 388 Solvent Used Acetone

Trade Name Tech. Mocap

Stock Solutions I 1.5 ml in 98.5 ml III ____________

II ____________

Test Species RT

Condition Fair To Good Length (mm) 34.6 Weight (gm) 0.30

Vessel No.	1	2	3	4	5	6	7	8	9						Remarks
Concl (ppm)	42	28	18	12	7.5	4.9	3.2	2.1	0						
Aliquot	.53	.42	.27	.18	7.5	4.9	3.2	2.1	0						13°C
0.75 hrs	D 9	(10)	(8)	4 D	4	0	0	9	0						(n) – no. of fish that are very still & black
1.5 hrs.	Plus 10 ml														
3.0 hrs	10 Acetone	(10)	(10)	(4) To	0	0	0	(8)	0						⊗ – crooked backs
6.0 hrs.	Each														
12 hrs															
24 hrs		8/10	9/10	3/10	3/10	1/10	0	0	0						
48 hrs		10/10	10/10	10/10	9/10	8/10	9/10	1/10	0						
72 hrs		X	X	X	9/10	X	X	5/10	0						
96 hrs		X	X	X		X	X	7/10	0						

Data fraction = total number dead/number tested per vessel

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MB 388
24h Results
48h Results
96h Results