3M General Offices

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MR 280349

3M

October 26, 2004

8EHQ-1004-15861

COMPANY SANITIZED

By Hand Delivery
Document Processing Center (7407)
Office of Pollution, Prevention and Toxics
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N. W.
Washington, DC 20460
Attention: Section 8(e) Coordinator

Re: **TSCA Section 8(e) Submissions**

Dear Sir/Madam:

3M Company ("3M") requests that EPA place the attached studies in the TSCA Section 8(e) docket. We have included a master index for these studies identifying the study title, test substance and CAS number. A Confidential Business Information (CBI) version of this index and the studies also is being submitted today pursuant to EPA procedures. 3M has not provided CBI substantiation with this submission, but would be willing to do so at the Agency's request.

3M has concluded that data in these studies may not be, strictly speaking, "corroborative" of previously reported or published information as defined in EPA's reporting guidance or otherwise potentially may warrant 8(e) submission based on EPA's reporting guidance.

3M appreciates EPA's attention to this matter. Please contact the undersigned if you have any questions or require further information regarding this submission.

8EHQ-04-15861

Very truly yours,

Katherine E. Reed

Dr. Katherine E. Reed, Ph.D
Staff Vice President
Environmental Technology and Safety Services
(651) 778-4331
kereed@mmm.com

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Master Index to Studies Submitted Under TSCA 8(e) by 3M Company on October 26, 2004
(Confidential Business Information Redacted)

Title	Substance Information	CAS Information
Aquatic Toxicity Data Sheet: 48hr *Daphnia Magna*	1,4-dioxane; heptadecafluoro-1-octanesulfonic acid; linear n-ethyl perfluorooctanesulfonamide; n-ethylperfluorooctanesulfonamidoethyl alcohol; poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-; poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(nonafluorobutyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-; poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-; poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(tridecafluorohexyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-; poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(undecafluoropentyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-; polyethylene glycol; water	1,4-dioxane (123-91-1); heptadecafluoro-1-octanesulfonic acid (1763-23-1); linear n-ethyl perfluorooctanesulfonamide (4151-50-2); n-ethylperfluorooctanesulfonamidoethyl alcohol (1691-99-2); poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl]-.omega.-hydroxy- (29117-08-6); poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(nonafluorobutyl)sulfonyl]amino]ethyl]-.omega.-hydroxy- (68298-79-3); poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl]-.omega.-hydroxy- (68298-81-7); poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(tridecafluorohexyl)sulfonyl]amino]ethyl]-.omega.-hydroxy- (56372-23-7); poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(undecafluoropentyl)sulfonyl]amino]ethyl]-.omega.-hydroxy- (68298-80-6); polyethylene glycol (25322-68-3); water (7732-18-5)
Multigeneration Daphnid Life Cycle Test	1,4-dioxane; heptadecafluoro-1-octanesulfonic acid; linear n-ethyl perfluorooctanesulfonamide; n-ethylperfluorooctanesulfonamidoethyl alcohol; poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-; poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(nonafluorobutyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-; poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-; poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(tridecafluorohexyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-; poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(undecafluoropentyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-; polyethylene glycol; water	1,4-dioxane (123-91-1); heptadecafluoro-1-octanesulfonic acid (1763-23-1); linear n-ethyl perfluorooctanesulfonamide (4151-50-2); n-ethylperfluorooctanesulfonamidoethyl alcohol (1691-99-2); poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl]-.omega.-hydroxy- (29117-08-6); poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(nonafluorobutyl)sulfonyl]amino]ethyl]-.omega.-hydroxy- (68298-79-3); poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl]-.omega.-hydroxy- (68298-81-7); poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(tridecafluorohexyl)sulfonyl]amino]ethyl]-.omega.-hydroxy- (56372-23-7); poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(undecafluoropentyl)sulfonyl]amino]ethyl]-.omega.-hydroxy- (68298-80-6); polyethylene glycol (25322-68-3); water (7732-18-5)
* Aquatic Invertebrate Testing - Alkyltins LR 8024-1	Alkyltins: dibutyltin laurate and dibutyltin-di(2 ethylhexoate)	Dibutyltin laurate (CAS 77-58-7); Dibutyltin-di(2 ethylhexoate) (CAS 2781-10-4)
Aquatic Invertebrate Testing - Decosheen Material (LR-8052)	Decosheen Ribbon Materials and pigments: Decosheen Blue in Green Ceres Blue ZV; Decosheen Gold Paste Pigment; Decosheen Royal Blue, Solvent Blue	Decosheen Blue in Green [illegible] Blue ZV (CAS 61814-09-3); Decosheen Royal Blue, Solvent Blue [illegible] 6); Decosheen Gold Paste Pigment (CAS Number [illegible]
R Scratch Remover (Fathead Minnow)	55-65% Water; 20-30% Stoddard Solvent; 1-5% Sodium Silicate; 1-5% Potassium Hydroxide; 0.1-3% Nonylphenoxypoly(oxyethylene)ethanol	Water (CAS 7732-18-5); [illegible] Solvent (CAS 8052-41-3); Sodium Silicate (CAS 1344-09-8); Potassium Hydroxide (CAS 1310-58-3); Nonylphenoxypoly(oxyethylene)ethanol (CAS 9016-45-9)
S Scratch Remover (Fathead Minnow)	60-70% Water; 20-30% Stoddard Solvent; 1-5% Sodium Silicate; 0.1-3% Turgitol NP-33	Water (CAS 7732-18-5); Stoddard Solvent (CAS 8052-41-3); Sodium Silicate (CAS 1344-09-8); Turgitol NP-33 (CAS 9016-45-9)
Octanol Water Partition Coefficient	N-methylperfluorooctane sulfonamidoethanol	CAS 24448-09-7

COMPANY SANITIZED

Master Index to Studies Submitted Under TSCA 8(e) by 3M Company on October 26, 2004
(Confidential Business Information Redacted)

Title	Substance Information	CAS Information
CoCl2.6H2O as Co2+ Toxicity to Microtox Reagent	Cobalt (as Co2+ ion) (CoCl2.6H2O)	CAS 7791-13-1
Activated Sludge Respiration Inhibition Test on CoCl2.6H2O as Co ion	Cobalt (as Co2+ ion) (CoCl2.6H2O)	CAS 7791-13-1
Acute Toxicity of CoCl2.6H20 as Co ion to Daphnia magna under Static Exposure Conditions	Cobalt (as Co2+ ion) (CoCl2.6H2O)	CAS 7791-13-1
Acute Toxicity of CoCl2.6H20 as Co ion to Fathead Minnow under Static Exposure Conditions	Cobalt (as Co2+ ion) (CoCl2.6H2O)	CAS 7791-13-1
Freshwater Algae Growth Inhibition Test	Cobalt (as Co2+ ion) (CoCl2.6H2O)	CAS 7791-13-1
Daphnia magna 21-Day Chronic Reproouction Study	N-ethylperfluorooctane sulfonamidoethanol	CAS 1691-99-2
Plant Growth Effects of [ ]	[ ]	[ ]
Final Report (*Daphnia* and Microtox)	Monomethyl ether of hydroquinone	CAS 150-76-5
Microtox Test Results	2 Ethylhexyl Acrylate; Isooctyl Acrylate Monomer; 2-Methylbutyl acrylate; Methyl isoamyl acrylate; Isooctyl Acrylate	2 Ethylhexyl Acrylate (CAS 103-11-7); Isooctyl Acrylate Monomer (CAS 29590-42-9) 2-Methylbutyl acrylate (CAS 44914-03-6); Methyl isoamyl acrylate (CAS 18993-92-1); Isooctyl Acrylate (CAS 29590-42-9)
Phytotoxicity Test Results	[ ]	[ ]

Master Index to Studies Submitted Under TSCA 8(e) by 3M Company on October 26, 2004
(Confidential Business Information Redacted)

Title	Substance Information	CAS Information
Plant Toxicity Comparison, Young Seedling Growth	[ ]	[ ]
Ceriodaphnia dubia Survival and Reproduction exposed to Opequon Creek Water Spiked with BETZ 1110 Polymer (November 4, 1987 sample) for seven days under static renewal conditions	BETZ 1110: Non-3M Product - Chemical composition not provided to 3M by manufacturer	MSDS provided by manufacturer states product is "not hazardous" and not "considered to be a carcinogen"
Ceriodaphnia dubia Survival and Reproduction exposed to Opequon Creek Water Spiked with Betz 1138 Polymer (November 4, 1987 sample) for seven days under static renewal conditions	BETZ 1138: Non-3M Product - Chemical composition not provided to 3M by manufacturer	MSDS provided by manufacturer states product is "not hazardous" and not "considered to be a carcinogen"
Toxicity of 1,6 - Hexanediol Diacrylate to *Daphnia magna*	1,6 Hexanediol diacrylate	CAS 13048-33-4
Daphnia magna Chronic Bioassay Under Static Renewal Conditions	Methyl isoamyl acrylate	CAS 18993-92-1
Estimating the Chronic Toxicity of Nalclear 7177 to *Ceriodaphnia* Survival and Reproduction Using Short-Term Tests	Nalclear 7177 wastewater treatment acrylamide/acrylate polymer - Chemical composition not provided to 3M by manufacturer	CAS Information not provided to 3M by manufacturer
Acute Toxicity of Isooctyl Acrylate to *Daphnia magna*	Isooctyl Acrylate Monomer	CAS 29590-42-9
Static Acute Toxicity of [ ] to the Daphnid, *Daphnia magna*	Tolyltriazole	CAS 29385-43-1
Static Acute Toxicity of [ ] to the Alga, *Selenastrum capricornutum*	Tolyltriazole	CAS 29385-43-1
Static Acute Toxicity of [ ] to the Daphnid, *Daphnia magna*	[ ]	[ ]
Static Acute Toxicity of [ ] to the Fathead Minnow, *Pimephales promelas*	[ ]	[ ]
Static Acute Toxicity of [ ] to the Daphnid, *Daphnia magna*	water; propylene-tetrafluoroethylene polymer; tert-butyl alcohol	water (7732-18-5); propylene-tetrafluoroethylene polymer (27029-05-6); tert-butyl alcohol (75-65-0)

CONFIDENTIAL BUSINESS INFORMATION
SUBJECT TO PROTECTION UNDER THE
TOXIC SUBSTANCES CONTROL ACT
AND OTHER LAWS HAS BEEN
REDACTED FROM THIS DOCUMENT

LR 8024

TECHNICAL REPORT SUMMARY

TO: TECHNICAL COMMUNICATIONS CENTER — 201-20-12

Data Recording Products

Environmental Risk Assessment

Aquatic Invertebrate Testing: Alkyltins LR 8024-1

R. E. Purdy

A. N. Welter

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7/13/82

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SECURITY ▶ ☐ Open Report & Summary ☒ Open Report, Open Summary, Company Confidential ☐ Open Report, Open Summary, Special Reproduction

3M CHEMICAL REGISTRY ▶ ☐ Given box if new chemicals are reported. List chemical in order. Form C-0107 to report on new chemicals.

KEYWORDS

CURRENT OBJECTIVE

To determine the acute aquatic toxicity of dibutyltin materials to Daphnia magna (waterfleas) and Pimephales promelas (Fathead minnows).

REPORT ABSTRACT

The 48-hr IC_{50} values following the acute exposure of Daphnia magna to the laurate and ethylhexoate salts of dibutyltin were 0.17 and 6.8 mg/l, respectively.

Fathead minnows (Pimephales promelas) when exposed to a single dose of the laurate salt, at its solubility limit were not significantly affected by this exposure. The ethylhexoate salt at this dose level did cause surfacing behavior in 50% of the organisms exposed to the chemical.

3M CONFIDENTIAL

Conclusion

In these replicated acute aquatic tests the 48-hr IC_{50} values for Daphnia magna were: 0.17 (0.14-0.2) mg/l, dibutyltin laurate and 6.8 (1.76-7) mg/l, dibutyltin di-2-ethylhexoate. In these replicated 96-hr acute toxicity fish screening tests, exposure of these dibutyltin salts at their solubility limits caused one compound induced lethal effect for each of these salts. No visible behavioral changes were noted during exposure to the laurate salt, while 50% of those exposed to the ethylhexoate salt demonstrated noticeable behavioral effects.

Introduction

The test substances used in these studies included dibutyltin-di(2-ethylhexoate) a white crystalline material and dibutyltin laurate, a clear, yellow liquid. Tests performed on these materials evaluated their potential aquatic toxicity and the data generated form the basis of this report.

Acclimation and Experimental Design

The test protocol utlized for this study was modeled after that described by ASTM-E729-80. (1)

The fathead minnows (Pimephales promelas) were obtained from a private hatchery (a). Stock fish were held in a flow through system fiberglass holding tank filled with carbon-filtered well-water at 14-16 degrees C. A daily photoperiod of 16 hours light and 8 hours dark, with a 30-minute transition period was maintained throughout the acclimation and testing period. The fish were fed Tetra-Min (b) daily, food being withheld 48 hours prior to and throughout the test period. Fish were acclimated to the test temperature for 2 days prior to use in assays.

Five (5) fathead minnows, uniform in size, were exposed to a single concentration, 1 mg/l in duplicate of each of the test chemicals. Three liter all-glass jars comprised a study chamber. Test fish were randomly allocated to each test chamber within 30 minutes following toxicant addition. Mortality, temperature, dissolved oxygen level, and pH of the test solution were measured at 24-hour intervals. General observations were recorded relative to swimming pattern and behavioral changes induced by exposure to the test chemicals.

The Daphnia magna instars used in these tests were derived from adult daphnids which were received from the Duluth ERL at this laboratory on 12/14/81.

a) Dale Fattig Fish Farm, Brady, Nebraska.

The 48-hr IC_{50} values for Daphnia magna were calculated based on exposure concentrations of 0.063, 0.125, 0.25, 0.50, and 1.0 mg/l based on volume/volume dilutions.

Monitoring equipment used included ASTM thermometers, Orion temperature-compensating pH meter, and a Yellow Springs dissolved oxygen meter.

Results

The fathead minnows (Pimephales promelas) used in these studies had an average weight of 0.25 grams and a length of 3.1 cm. The loading factor was 0.41 g/l; the maximum recommended loading factor is 0.8 g/l (1). Temperature, pH, and dissolved oxygen values and ranges obtained during this study were: 21± 1°C, 7.9-8.3 pH units, and 96-hour dissolved oxygen values ranged from 5.5-6.3 mg/l. These latter values calculated out to a minimal oxygen saturation of 64-73%.

In these replicated studies, the fish LC_{50} values were demonstrated to exceed the solubility limits of each of the test materials.

Furthermore, in these replicated acute aquatic tests the 48-hr IC_{50} values for Daphnia magna were: 0.17 (0.14-0.2) mg/l, dibutyltin laurate and 6.8 (1.76-?) mg/l dibutyltin di-2-ethylhexoate. The data reported herein are based on studies performed by A. N. Welter and R. R. Robideau. Accompanying data sheets comprise original data. A copy of this report is filed in the Environmental Laboratory Arche System, Building 2-3E.

Reference

(1) ASTM-Standard Practice E729-80. Standard Practice for Conducting Acute Toxicity Tests with Fishes, Macroinvertebrates, and Amphibians. American Society for Testing and Materials, Philadelphia, PA 1980.

TABLE 1

WELL WATER QUALITY

SAMPLE DATE: 5/25/82
SAMPLE TAKEN: 3M Bldg. 2-3E St. Paul

SAMPLE DATE 5/25/82 (TAKEN FROM ROOM 5)

PARAMETER	CONCENTRATION	ENV. LAB WATER QUALITY BOOK REF.
pH	7.8	8
Residual Chlorine	<0.02 mg/l	9
Ammonia Nitrogen	<0.1 mg/l as N	8
Conductivity	340 umhos/cm at 25°C	9
M-Alkalinity	224 mg/l as $CaCO_3$	8
Total Solids	275 mg/l	8
Total Hardness	254 mg/l as $CaCO_3$	8
Total Fluoride	<0.02 mg/l	9
Dilute CO_2	<0.4 mg/l	9
Total Coliform	Negative	10
Standard Plate Count	70 per ml	10
Aluminum as Al*	0.012 mg/l	16
Arsenic as As*	<0.005 mg/l	16
Boron as B*	<0.2 mg/l	16
Cobalt as Co*	<0.001 mg/l	16
Copper as Cu*	0.021 mg/l	16
Chromium as Cr*	<0.001 mg/l	16
Cadmium as Cd*	<0.001 mg/l	16
Iron as Fe*	0.02 mg/l	15
Nickel as Ni*	<0.001 mg/l	16
Lead as Pb*	<0.001 mg/l	16
Silver as Ag*	<0.0002 mg/l	15
Zinc as Zn*	0.09 mg/l	15
Mercury as Hg*	<0.4 ug/l	16
PCB's*	<0.06 ug/l	17
Total Organochlorine* Pesticides	<0.01 mg/l	17
Total Organophosphorus* Pesticides	<1 mg/l	17

* Sample Date 1/31/82

TABLE I

WELL WATER QUALITY

SAMPLE DATE: 6/28/82
SAMPLE TAKEN: 3M Bldg. 2-5E, St. Paul

SAMPLE DATE 6/28/82 (TAKEN FROM ROOM 5)

PARAMETER	CONCENTRATION	ENV. LAB WATER QUALITY BOOK REF.
pH	7.8	8
Residual Chlorine	<0.02 mg/l	9
Ammonia Nitrogen	<0.1 mg/l as N	8
Conductivity	330 umhos/cm at 25°C	9
M-Alkalinity	225 mg/l as $CaCO_3$	8
Total Solids	284 mg/l	8
Total Hardness	252 mg/l as $CaCO_3$	8
Total Fluoride	<0.02 mg/l	9
Dilute COD	<0.4 mg/l	9
Total Coliform	Negative	10
Standard Plate Count	38 per ml	10
Aluminum as Al*	0.012 mg/l	16
Arsenic as As*	<0.005 mg/l	16
Boron as B*	<0.2 mg/l	16
Cobalt as Co*	<0.001 mg/l	16
Copper as Cu*	0.021 mg/l	16
Chromium as Cr*	<0.001 mg/l	16
Cadmium as Cd*	<0.001 mg/l	16
Iron as Fe*	0.02 mg/l	15
Nickel as Ni*	<0.001 mg/l	16
Lead as Pb*	<0.001 mg/l	16
Silver as Ag*	<0.0002 mg/l	16
Zinc as Zn*	1.09 mg/l	15
Mercury as Hg*	<0.4 ug/l	16
PCB's*	<0.06 ug/l	17
Total Organochlorine* Pesticides	<0.01 ug/l	17
Total Organophosphorus* Pesticides	<1 ug/l	17

* Sample Date 1/30/82

TABLE 2

ENVIRONMENTAL LABORATORY
BLDG. 2-3E
ST. PAUL, MINNESOTA

SECOND QUARTERLY REPORT, 1982
WELL WATER SUPPLY FOR AQUATIC TOXICITY TESTING

PARAMETER	APR 27	MAY 25	JUNE 28	AVERAGE (± SD)
TOTAL HARDNESS* as mg/l $CaCO_3$	252	253	252	253 ± 1
TOTAL "M" ALKALINITY* as mg/l $CaCO_3$	223	224	225	224 ± 1
ELECTRICAL SPECIFIC CONDUCTANCE* as umhos per cm^2 at 25°C	330	340	330	33[illegible] ± 6
TOTAL SOLIDS* as mg/l	264	275	284	274 ± 10
pH**	7.7	7.8	7.8	7.8 ± 0.1
STANDARD PLATE COUNT*** per 1.0 ml	66	70	38	58 ± 17

CRITERIA OF CONSTANT QUALITY

* Monthly ranges should be less than 10% of their respective averages. (ASTM Standard E729-1980.)

** Monthly range of pH should be less than 0.4 unit. (ASTM Standard E729-1980.)

*** Total bacterial densities should not be greater than 500 organisms per ml. (USEPA-600/8-78-017, p. 101.)

ENVIRONMENTAL LABORATORY
AQUATIC TOXICITY DATA SHEET
EXPLORATORY (RANGE-FINDING TEST)

LF 8024-1

Type Test 96HR. ACUTE STATIC Material Tested DIBUTYLTIN DI(2-ETHYLHEXANATE) [CODE 11-0003-8145-1]

Test Organism FATHEAD MINNOWS Source BRADY, NEB Date Rec'd. 3/22/82 Batch No. 3-82

Avg. Wt. 0.25 grams Avg. Size 3.1 CM No. Organisms per dose 5

Test Solution Volume 3 Liters/All-Glass Tank Tank Dimensions: WIDE-MOUTH 1 GALLON GLASS JAR

Time Started 4:30 PM Date Started 5/10/82 Date Completed 5/14/82

Dilution Water Carbon-filtered well water (Temp. 21 °C., D.O. 8.6 ppm, pH 8.3)

Investigator [signature] LC_{50} (95% Confidence Limits) n=2
(Full Signature)

Tank No.	Init. Conc. mg/l	Total Amount Added	24 Hours Total No. Dead	24 Hours pH	24 Hours D.O. ppm	48 Hours Total No. Dead	48 Hours pH	48 Hours D.O. ppm	72 Hours Total No. Dead	72 Hours pH	72 Hours D.O. ppm	96 Hours Total No. Dead	96 Hours pH	96 Hours D.O. ppm
CI	Control	— ml	0	8.3	6.6	0	8.3	6.2	0	8.3	6.2	0	8.3	6.2
CII	Control	—	0	8.3	6.6	0	8.3	6.3	0	8.3	6.2	0	8.3	6.1
1	1mg	1000*	0	8.3	6.8	0	8.3	6.4	0	8.2	6.3	0	8.2	6.3
1A	1mg	1000	0	8.3	6.9	1	8.3	6.4	1	8.2	6.2	1	8.2	6.2
Test Temp. °C.			22°C			22°C			22°C			22°C		
Initials & Date			[initials] 5/11/82			[initials] 5/12/82			[initials] 5/13/82			[initials] 5/14/82		

Comments: * COMMON STOCK SOLUTION 6mg/2l. EACH 1l = 3mg.
MATERIAL - CRYSTALLINE WHITE PIECES.

Effects other than Mortality EC_{50}

Tank No.	Symptoms or Reactions	Total No. Affected 24-Hr.	48 Hr.	72-Hr.	96-Hr.
Control	I	NONE	NONE	NONE	NONE
Control	II	NONE	NONE	NONE	NONE
1	SURFACING	NONE	NONE	NONE	3
1A	SURFACING	NONE	NONE	NONE	2

Comments:

ENVIRONMENTAL LABORATORY
AQUATIC TOXICITY DATA SHEET
EXPLORATORY (RANGE-FINDING TEST)

LR 8024-2

Type Test 96 HR. Acute Static Material Tested DIBUTYTIN DILAURATE Lot [CODE 11-0000-9548-6]

Test Organism FATHEAD MINNOW Source BRADY, NEB Date Rec'd. 5/10/82 Batch No 4-82

Avg. Wt. 0.321 grams Avg. Size 3.4 CM No. Organisms per dose 5

Test Solution Volume 3 Liters/All-Glass Tank Tank Dimensions: WIDE-MOUTH 1 GALLON GLASS JAR

Time Started 10:30 AM Date Started 6/18/82 Date Completed 6/22/82

Dilution Water Carbon-filtered well water (Temp. 19 °C., D.O. 8.6 ppm, pH 8.2)

Investigator ANW, RJ (Full Signature) LC_{50} (95% Confidence Limits) n=2

Tank No.	Init. Conc. mg/l	Total Amount Added	24 Hours Total No. Dead	24 Hours pH	24 Hours D.O. ppm	48 Hours Total No. Dead	48 Hours pH	48 Hours D.O. ppm	72 Hours Total No. Dead	72 Hours pH	72 Hours D.O. ppm	96 Hours Total No. Dead	96 Hours pH	96 Hours D.O. ppm
CI	Control	—	0	8.2	6.8	0	8.2	6.5	0	8.2	6.4	0	8.2	6.5
CII	Control	—	0	8.2	6.7	0	8.2	6.2	0	8.2	6.2	0	8.2	6.2
1	1.0	1000*	0	8.0	5.5	1	7.9	5.4	1	7.9	5.9	1	7.9	6.1
1A	1.0	1000	0	8.0	5.3	0	7.9	5.0	0	7.9	5.2	0	7.9	5.5
	Test Temp. °C.		20°C			21°C			21°C			21°C		
	Initials & Date		RJ 6/19/82			RJ 6/20/82			RJ 6/21/82			RJ 6/22/82		

Comments: *COMMON STOCK SOLUTION. 6 mg/2 L. EACH 1 L = 3 mg. MATERIAL IS A CLEAR, YELLOW LIQUID.

Effects other than Mortality EC_{50}

Tank No.	Symptoms or Reactions	Total No. Affected 24-Hr.	48 Hr.	72-Hr.	96-Hr.
Control	I	None	None	None	None
Control	II	None	None	None	None
1		None	None	None	None
1A		None	None	None	None

Comments:

ENVIRONMENTAL LABORATORY

SOLUBILITY INFORMATION FOR AQUATIC EFFECTS TESTING(1)

MATERIAL TESTED DIBUTYLTIN DILAURATE [ ]

SOLUBILITY IN WATER PARTIAL

SOLVENT	SOLUBILITY(2) IN 100% SOLVENT	SOLUBILITY STATUS IN SOLVENT & WATER(3)			
		COMPLETE	PARTIAL	NIL	COMMENTS
ACETONE			X		
DIMETHYL FORMAMIDE (DMFA)			X		
ETHANOL			X		
METHANOL			X		
TRIETHYLENEGLYCOL			X		
DIMETHYL SULFOXIDE (DMSO) (4)				X	

(1) At ambient room temperature 21 ± 2°C (70 ± 3°F).

(2) Material dissolved in 100% solvent.

(3) Material dissolved in a mixture of water plus solvent. Maximum solvent concentration is 0.5 ml per liter.

(4) In algal assays only.

USED:

100 mg + 1 ml SOLVENT + 999 ml D.I WATER.

5/20/82

CONFIDENTIAL BUSINESS INFORMATION SUBJECT TO PROTECTION UNDER THE TOXIC SUBSTANCES CONTROL ACT AND OTHER LAWS HAS BEEN REDACTED FROM THIS PAGE

ENVIRONMENTAL LABORATORY

SOLUBILITY INFORMATION FOR AQUATIC EFFECTS TESTING (1)

MATERIAL TESTED DIBUTYLTIN DILAURATE [ ]

SOLUBILITY IN WATER NIL

SOLVENT	SOLUBILITY (2) IN 100% SOLVENT	SOLUBILITY STATUS IN SOLVENT & WATER (3)			
		COMPLETE	PARTIAL	NIL	COMMENTS
ACETONE	YES			X	
DIMETHYL FORMAMIDE (DMFA)	PARTIAL			X	
ETHANOL	NO			X	
METHANOL	NO			X	
TRIETHYLENEGLYCOL	YES			X	
DIMETHYL SULFOXIDE (DMSO) (4)	YES			X	

(1) At ambient room temperature 21 ± 2°C (70 ± 3°F).

(2) Material dissolved in 100% solvent.

(3) Material dissolved in a mixture of water plus solvent. Maximum solvent concentration is 0.5 ml per liter.

(4) In algal assays only.

USED

100 mg / 1 ml SOLVENT

100 mg / 1 ml + 200 ml D.I. WATER

5/2/82

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ENVIRONMENTAL LABORATORY
AQUATIC TOXICITY DATA SHEET

LR 8024-1

T-8

Type Test LC_{50} Material Tested D.butyltin D.(ethylhexanate) Lot [ ]

Test Organism D. magna Source Duluth ERL Date Rec'd 12/14/82 Batch No. ____

Age: First-instar young (0.5-1.5mm) No. Organisms per treatment 20

Test Chamber 250ml glass beaker Test Solution Vol.: 200ml Test Solution Depth: 6cm

Time Started 3:15 P Date Started 5/4/82 Date Completed ____

Dilution Water Carbon-filtered well water (Temp. ____ °C, D.O. ____ ppm, pH ____)

Investigator A.N.Welter LC_{50} (95% Confidence Limits) ____

(Full Signature)

Tank No.	Init. Conc. mg/l	Total Amount Added	24 Hours Total No. Dead	24 Hours pH	24 Hours D.O. ppm	48 Hours Total No. Dead	48 Hours pH	48 Hours D.O. ppm	72 Hours Total No. Dead	72 Hours pH	72 Hours D.O. ppm	96 Hours Total No. Dead	96 Hours pH	96 Hours D.O. ppm
	Control	-												
	C II	-												
	1A 100mg/l	20mg	20/20											
	1B 100mg/l	20mg	20/20											
	Test Temp. °C.													
	Initials & Date													

Comments: ____

Effects other than Mortality EC_{50} ____

Tank No.	Symptoms or Reactions	Total No. Affected 24-Hr.	48 Hr.	72-Hr.	96-Hr.
Control					

Comments: ____

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AQUATIC TOXICITY DATA SHEET

Type Test 48h TSCA Material Tested Dibutyltin dacetate (in water)

Test Organism U. Magna Source Pulitk EPI Date Rec'd 12/14/81 Batch No. -

Age: First Instar, Young (<24 hrs.) No. Organisms per treatment 20

Test Chamber: 250ml glass beaker Test Solution Vol.: 200ml Test Solution Depth: 6cm

Time Started 11:30 A Date Started 6/10/82 Date Completed 6/12/82

Dilution Water Carbon-filtered well water (Temp. 22 °C, D.O. 8.4 ppm, pH 8.5)

Investigator Alphonse H. Walter (Full Signature) LC_{50} (95% Confidence Limits) Combined 6.8 (1.26 - ?) mg/l

Tank No.	Init. Conc. mg/l	Total Amount Added	24 Hours Total No. Dead	pH	D.O. ppm	48 Hours Total No. Dead	pH	D.O. ppm	72 Hours Total No. Dead	pH	D.O. ppm	96 Hours Total No. Dead	pH	D.O. ppm
13	Control		0	8.7	7.9	0/20			0			3/20	8.7	7.8
14	.063		0	8.7	8.1	1/19			0			4/23	8.7	7.7
15	.125		0	8.7	8.0	0/20			0			1/18	8.8	7.6
16	.25		0	8.6	7.9	2/20			0			3/21	8.7	7.9
17	.5		0	8.6	7.8	3/20			1			3/20	8.6	7.8
18	1		2	8.3	7.8	7/20			1			6/20	8.4	7.9
				48h ANW										
Test Temp. °C.			23.5°C			23.5°C			23.5°C			23.5°C		
Initials & Date			ANW 6/11/82			6/12/82 ANW			ANW 6/11/82			ANW 6/12/82		

Comments: Stock solution 1 ppm. Made appropriate dilutions. Material (V/N) amorphous white crystals. (1 mg/l) Expt. in Growth Chamber. Control light, humidity & Temp.

Effects other than Mortality EC_{50}

Tank No.	Symptoms or Reactions	Total No. Affected 24 Hr.	48 Hr.	72-Hr.	96-Hr.
Control					

Comments:

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ENVIRONMENTAL LABORATORY
AQUATIC TOXICITY DATA SHEET

Type Test 48h IC, a Material Tested Dibutyltin Laurate di Lot LR-8024-1

Test Organism D. magna Source Duluth ERL Date Rec'd 12/14/81 Batch No. -

Age: First-Instar young (0.5-1.5mm) No. Organisms per Treatment 20

Test Chamber: 250ml glass beaker Test Solution Vol.: 200ml Test Solution Depth: 6cm

Time Started 3:15P Date Started 6/10/81 Date Completed 6/12/82

Dilution Water Carbon-filtered well water (Temp. 22 °C, D.O. 8.4 ppm, pH 8.5)

Investigator Stephen F. Welter

(Full Signature)

EC_{50} (95% Confidence Limits) (0.17 [0.14-0.20]) mg/l

Tank No.	Init. Conc. mg/l	Total Amount Added	24 Hours Total No. Dead	pH	D.O. ppm	48 Hours Total No. Dead	pH	D.O. ppm	24-72 Hours Total No. Dead	pH	D.O. ppm	48-96 Hours Total No. Dead	pH	D.O. ppm
25	Control		0			1/20	8.7	7.9	31 0			1/20	8.7	7.9
26	.063		0			2/20	8.7	7.7	32 0			1/19	8.7	8.1
27	.125		0			11/20	8.7	7.7	33 1			6/21	8.7	8.2
28	.25		8			17/23	8.7	8.0	34 9			13/20	8.7	8.0
29	.50		16			20/20	8.6	7.9	35 10			17/20	8.5	8.5
30	1.0		19			19/20	8.3	7.8	36 19			20/20	8.6	8.1
Test Temp. °C.			23.5°C			23.5°C			23.5°C			23.5°C		
Initials & Date			ANW 6/11/82			ANW 6/12/82			ANW 6/11/82			6/12/81 ANW		

Comments: Stock solution 1ppm (1mg/l) Expl. in Growth Chamber, controlled light, Temperature & humidity conditions. Dilutions on V/V basis

Effects other than Mortality

EC_{50}

Tank No.	Symptoms or Reactions	Total No. Affected 24-Hr.	48 Hr.	72-Hr.	96-Hr.
Control					

Comments:

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