

DATA EVALUATION RECORD
AQUATIC INVERTEBRATE LIFE CYCLE TEST
GUIDELINE 72-4(B)

1. **CHEMICAL:** DDVP Technical PC Code No.: 084001
2. **TEST MATERIAL:** DDVP Technical Grade; Lot No. 402010; Purity: 98.0% and ¹⁴C-DDVP technical Grade; Lot No. 3048-221; Specific activity: 18.518 mCi/mmol.

3. **CITATION**

Authors: G.S. Ward and J.W. Davis
Title: DDVP Technical Grade: Chronic Toxicity to the Mysid (*Mysidopsis bahia*) Under Flow-Through Conditions.

Study Completion Date: August 5, 1996

Laboratory: Toxikon Environmental Sciences

Sponsor: AMVAC Chemical Corporation, Los Angeles, CA

Laboratory Report ID: J9407006a

MRID No.: 438543-01

DP Barcode: D222024

4. **REVIEWED BY:** Regina Hirsch, Wildlife Biologist, EEB, EFED

Signature: 

Date: 7/31/94

5. **APPROVED BY:** Les Touart, Head of Section (1), EEB, EFED

Signature: 

Date: 9/30/96

6. **STUDY PARAMETERS**

Age of Test Organism: < 24 hours old

Definitive Test Duration: 28 days

Study Method: Flow-through

Type of Concentrations: Mean measured

7. **CONCLUSIONS:**

Results Synopsis

NOEC: 1.48 µg ai/L LOEC: 3.25 µg ai/L MATC: 2.19 µg ai/L



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DP Barcode: D222024

MRID No.: 438543-01

LOEC's for specific effects

Young/Female/Repro. Day: 13.0 µg ai/L

Growth 1) length: Mean 3.25 µg ai/L

2) weight: Mean 3.25 µg ai/L

8. ADEQUACY OF THE STUDY

A. Classification: Core.

B. Rationale: N/A

C. Repairability: N/A

8. GUIDELINE DEVIATIONS:

1) Test had two brood stocks, the second brood stock was introduced on days 12 and 14 prior to test initiation.

10. MATERIALS AND METHODS:

A. Biological System:

Guideline Criteria	Reported Information
Species: An estuarine shrimp species, preferably <u>Americamysis bahia</u> .	Test species is <u>Americamysis bahia</u>
Duration 28 days/one generation	28 days
Source (or supplier)	Toxikon Environmental Sciences, Jupiter, Florida and Aquatic BioSystems, Inc., Fort Collins, Colorado

Guideline Criteria	Reported Information
<p>Parental Acclimation 1) Parental stock must be maintained separately from the brood culture in dilution water and under test conditions. 2) Mysids should be in good health.</p>	<p>The culture system was designed to collect post-larval mysids as soon as they were released from the female. However, 12 and 14 days prior to test initiation, the culture system was supplemented with parental mysids acquired from Aquatic BioSystems, Inc.</p> <p>No diseases observed, nor disease treatments were administered to either adult culture or post-larvae population of mysids.</p>
<p>Parental Acclimation Period At least 14 days</p>	<p>Not reported</p>
<p>Chamber Location: Treatments should be randomly assigned to test chamber locations.</p>	<p>Randomly assigned</p>
<p>Duration of the Test: A mysid test must not be terminated before 7 days past the median time of 1st brood release in the control treatment.</p>	<p>N/A</p>
<p>Brood Stock: Test started with mysids: 1) from only one brood stock or 2) from brood stock which has not obtain sexual maturity or had been maintained for > 14 days in a laboratory with same food, water, temperature, and salinity used in the test.</p>	<p>Test had two brood stocks, the second brood stock was introduced on days 12 and 14 of the prior to test initiation.</p>

Guideline Criteria	Reported Information
<p>Distribution: No. of mysids before pairing: Minimum of 15 mysids per compartment, 2 compartments per chamber, 2 chambers per concentration for a total of 60/level. No. of mysids after pairing: ≥ 20 randomly selected pairs/treatment (excess males should be held in separate compartment to replace paired males).</p>	<p>15 mysids per compartment, 2 compartments per chamber, 2 chambers per concentration for a total of 60/level.</p>
<p>Pairing: 1) Should be conducted when most of the mysids are sexually mature (usu. 10-14 days after test initiation). 2) Should be paired on the same day</p>	<p>Based on Toxikon's previous experience, it was believed that the extra handling of mysids and the arbitrary pairing of males and females yields lower and more variable young production and increases the potential for adult mortalities that are not associated with toxicity of the material being tested.</p>
<p>Feeding: 1) Mysids should be fed live brine shrimp nauplii at least once daily. 2) 150 live brine shrimp nauplii per mysid per day or 75 twice a day is recommended.</p>	<p>Fed concentrated live brine shrimp nauplii at least two times per day.</p>
<p>Counts: Live adult mysids should be counted 1) at initiation, 2) at pairing, 3) and daily after pairing. 4) Live young must be counted and removed daily. 5) Missing or impinged animals should be recorded.</p>	<p>Survival of mysids and number of offspring produces were monitored daily and any dead removed. Impinged animals were recorded.</p>

Guideline Criteria	Reported Information
<p>Controls: Survival in any control chamber (between pairing and test termination) must be less than 70%.</p>	<p>12% mortality in both the solvent control and dilution control.</p>
<p>Controls: Negative control and carrier control (when applicable) are required.</p>	<p>Negative and Solvent (DMF) Control groups were used.</p>

B. Physical System:

Guideline Criteria	Reported Information
<p>Test Water:</p> <ol style="list-style-type: none"> 1) May be natural (sterilized and filtered) or a commercial mixture; 2) During the test, difference between highest and lowest measured salinities must be less than 10 g/kg. Should be measured daily. 3) Salinity should be between 15 and 30 g/kg. 4) Measured pH should be between 7.6 and 8.2. Must not deviate by more than one unit for more than 48 hours. Should be measured at the beginning, end of test and weekly. 5) Water must be free of pollutants. 6) DO must be measured @ each conc. @ least once a wk. (see details in ASTM) 	<ol style="list-style-type: none"> 1) Dilution water was natural saltwater pumped from a saltwater well. The saltwater was vigorously aerated and then filtered, carbon-treated, and adjusted to a salinity of approximately 20 ‰ with carbon-treated, aerated freshwater. This dilution water was then re-aerated prior to use. 2-3) 19 to 21 ‰ salinity 4) pH range was 8.0 - 8.3, pH was measured on days 0, 7, 14, 21, and 28. 5) Water analysis was submitted and appeared to be clear of pollutants. 6) DO was measured in all chambers on days 0, 7, 14, 21, and 28. The range of DO was 4.4 - 6.7 mg/L

Guideline Criteria	Reported Information
<p>Test Temperature:</p> <ol style="list-style-type: none"> 1) Mean measured temperature for each chamber at test termination should be within 1°C of selected test temperature. 2) Each individual measured temperature must be within 3°C of the mean of the time-weighted averages. 3) For mysid shrimp, 27°C is recommended. 4) Whenever temp. is measured concurrently in more than one test chamber the highest & lowest temp. must not differ by more than 2°C. 	<p>The test temperature during the 32-day total exposure ranged from 25.7 to 28.7°C with a mean and standard deviation of 27.0 ± 0.7°C.</p>
<p>Photoperiod: Recommend 16L/8D.</p>	<p>16L/8D</p>
<p>Dosing Apparatus:</p> <ol style="list-style-type: none"> 1) Intermittent flow proportional diluters or continuous flow serial diluters should be used. 2) A minimum of 5 toxicant concentrations 3) with a dilution factor not greater than 0.5 and controls should be used. 	<ol style="list-style-type: none"> 1) Definitive exposure was conducted under flow-through conditions in a modified proportional vacuum-siphon diluter (Mount and Brungs 1967). 2) 0.81, 1.63, 3.25, 6.65, and 13.0 µg/L. 3) 50% dilution and equal solvent concentration in all test concentrations.
<p>Toxicant Mixing:</p> <ol style="list-style-type: none"> 1) Mixing chamber is recommended but not required; 2) Aeration should not be used for mixing; 3) It must be demonstrated that the test solution is completely mixed before intro. into the test system; 4) Flow splitting accuracy must be within 10%. 	<p>Not Reported.</p>

Guideline Criteria	Reported Information
<p>Test Vessels:</p> <p>1) Material: all glass, No. 316 stainless steel, or perflorocarbon plastic</p> <p>2) Size: 250 ml with 200 ml fill volume is preferred; 100 ml with 80 ml fill volume acceptable</p> <p>3) 90 or 140 mm inside dia. glass Petri dish bottoms with collars made of 200 - 250 um mesh screen.</p>	<p>Test chambers were 23.6 -L glass tanks equipped with automatic glass siphons. The 6-centimeter glass siphons were positioned to provide a maximum depth of 13 cm and volume of approximately 15.3 L.</p> <p>3) Retention chambers (150-mm diameter by 13-mm high glass petri dishes with 17-cm high collars of 355-μm mesh screen.</p>
<p>Covers</p> <p>1) Renewal: Test vessels should be covered with a glass plate.</p> <p>2) Flow-through: Openings in the test compartments should be covered with nylon mesh or stainless steel screen.</p>	<p>See above</p>
<p>Flow Rate:</p> <p>1) Flow rates should provide 5 to 10 volume additions per 24 hr.</p> <p>2) Flow rate must maintain DO at or above 60% of saturation and maintain the toxicant level.</p> <p>3) Meter systems calibrated before study and checked twice daily during test period 4) Renewal must not drop below 50% for more than 48 hours.</p>	<p>1) 6.1 vol. additions/ 24 hours</p> <p>2) DO range throughout the test was 4.4 - 6.7 mg/L.</p> <p>3) Function of diluter system checked daily.</p>
<p>Aeration:</p> <p>1) Dilution water should be aerated to insure DO concentration at or near 100% saturation.</p> <p>2) Test tanks may be aerated.</p>	<p>See above.</p>

Chemical System:

Guideline Criteria	Reported Information
<p>Concentrations:</p> <p>1) Minimum of 5 concentrations and a control, all replicated, plus solvent control if appropriate.</p> <p>2) Toxicant conc. must be measured in one tank at each toxicant level every week.</p> <p>3) One concentration must adversely affect a life stage and one concentration must not affect any life stage.</p> <p>4) The measured conc. of the test material of any treatment should be at least 50% of the time-weighted average measured conc. for > 10% of the duration of the test.</p> <p>5) The measured conc. for any treatment level should not be more than 30% higher than the time-weighted average measured conc. for more than 5% of the duration of the test.</p>	<p>1) Control, Solvent Control (DMF), 0.81, 1.63, 3.25, 6.5, 13.0 $\mu\text{g }^{14}\text{C}$-equivalents/L</p> <p>2) Water samples were collected from the controls and each DDVP Technical Grade replicate test chamber on test days 0, 7, 14, 21, and 28.</p> <p>4) Measured concentrations ranged from 84% (day 0) to 102% (mean) of the nominal concentrations.</p>
<p>Solvents:</p> <p>1) Should not exceed 0.1 ml/L in a flow-through system.</p> <p>2) Following solvents are acceptable: triethylene glycol, methanol, acetone, ethanol.</p>	<p>Triethylene glycol (TEG) solvent at 5.66 $\mu\text{l/L}$</p>

11. REPORTED RESULTS:

Guideline Criteria	Reported Information
Quality assurance and GLP compliance statements were included in the report?	Yes
1) At least 75% of the paired 1 st generation females in the control produced young or 2) the average number of young produced by the 1 st generation females in the control(s) was more than 3.	The number of young produced per female for the dilution water control lies between 22.1 and 24.0.
Data Endpoints must include: 1) Survival of first-generation mysids Female Male 2) Number of live young produced per female 3) Dry weight of each first-generation mysid alive at the end of the test Female Male 4) Length of each 1 st generation mysid alive at the end of the study Female Male 5) Incidence of pathological or histological effects; 6) Observations of other effects or clinical signs	Yes
Raw data included? (Y/N)	No

Effects Data:

Toxicant Conc. (µg/L) ¹		Mean # Young/fem. repro. day	Survival (28 days) No. dead (%)			Mean Total Length (mm)			Mean Dry weight (mg)		
Nom.	Meas.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> & <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> & <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> & <input type="checkbox"/>
Ctrl		1.35			7 (23)	6.56	6.57	6.56	0.81	1.04	0.91
Sol		1.94			7 (23)	6.50	6.69	6.61	0.77	1.07	0.94
0.81	0.746	2.08			5 (17)	6.39 ²	6.57	6.48 ²	0.70	1.00	0.85
1.63	1.48	2.30			7 (23)	6.38	6.61	6.52	0.70	1.06	0.91
3.25	3.25	1.76			13 (43)	6.05 ²	6.33 ²	6.19 ²	0.56 ²	0.87 ²	0.71 ²
6.50	6.63	1.46			16 (53) ²	6.02 ²	6.17 ²	6.10 ²	0.70 ²	0.60 ²	0.64 ²
13.0	13.0	0.20 ²			25 (83) ²	5.65 ²	5.91 ²	5.83 ²	0.47 ²	0.45 ²	0.46 ²

¹ Measured concentration of DDVP

² Significantly less than pooled controls ($\alpha = 0.05$)

Statistical Results:

Most sensitive endpoint: mean weight and length

Endpoint	Method	NOEC	LOEC
Survival	Fischer's exact test	3.25	6.63
Reproduction	ANOVA & Dunnett's multiple comparison	6.63	13.0
Weight	ANOVA & Dunnett's multiple comparison	1.48	3.25
Length	ANOVA & Dunnett's multiple comparison	1.48	3.25

The extrapolated MATC based upon growth, as overall mean length and dry weight,

was $>1.48 < 3.25 \mu\text{g/L}$ with an extrapolated geometric mean of $2.19 \mu\text{g/L}$.

12. Reviewer's Statistical Results:

Most sensitive endpoint: Mean length and weight

Endpoint	Method	NOEC	LOEC
Survival	Fischer Exact Test	3.25	6.63
Reproduction	ANOVA	6.63	13.0
Weight	ANOVA	1.48	3.25
Length	ANOVA	1.48	3.25

NUMBER OF OFFSPRING PER FEMALE REPRODUCTIVE DAY

File: C:\ACTIONS\DDVP\MYSID1

Transform: NO TRANSFORM

ANOVA TABLE

SOURCE	DF	SS	MS	F
Between	5	11.058	2.212	10.147
Within (Error)	22	4.787	0.218	
Total	27	15.845		

Critical F value = 2.66 (0.05,5,22)

Since F > Critical F REJECT Ho:All groups equal

NUMBER OF OFFSPRING PER FEMALE REPRODUCTIVE DAY

File: C:\ACTIONS\DDVP\MYSID1

Transform: NO TRANSFORM

BONFERRONI T-TEST

TABLE 1 OF 2

Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	MEAN CALCULATED IN ORIGINAL UNITS	T STAT	SIG
1	GRPS 1&2 POOLED	1.650	1.650		
2	0.746	2.105	2.105	-1.591	
3	1.48	2.323	2.323	-2.352	
4	3.25	1.745	1.745	-0.332	
5	6.63	1.508	1.508	0.498	
6	13.0	0.203	0.203	5.063	*

Bonferroni T table value = 2.51 (1 Tailed Value, P=0.05, df=22,5)

NUMBER OF OFFSPRING PER FEMALE REPRODUCTIVE DAY

File: C:\ACTIONS\DDVP\MYSID1

Transform: NO TRANSFORM

BONFERRONI T-TEST

TABLE 2 OF 2

Ho:Control<Treatment

GROUP	IDENTIFICATION	NUM OF REPS	Minimum Sig Diff (IN ORIG. UNITS)	% of CONTROL	DIFFERENCE FROM CONTROL
1	GRPS 1&2 POOLED	8			
2	0.746	4	0.717	43.5	-0.455
3	1.48	4	0.717	43.5	-0.673
4	3.25	4	0.717	43.5	-0.095
5	6.63	4	0.717	43.5	0.142
6	13.0	4	0.717	43.5	1.448

NUMBER OF OFFSPRING PER FEMALE REPRODUCTIVE DAY

File: C:\ACTIONS\DDVP\MYSID1

Transform: NO TRANSFORM

ANOVA TABLE

SOURCE	DF	SS	MS	F
Between	5	11.058	2.212	10.147
Within (Error)	22	4.787	0.218	
Total	27	15.845		

Critical F value = 2.66 (0.05,5,22)
 Since F > Critical F REJECT Ho:All groups equal

NUMBER OF OFFSPRING PER FEMALE REPRODUCTIVE DAY
 File: C:\ACTIONS\DDVP\MYSID1 Transform: NO TRANSFORM

TUKEY method of multiple comparisons

GROUP	IDENTIFICATION	TRANSFORMED MEAN	ORIGINAL MEAN	GROUP					
				0	0	0	0	0	0
				6	5	1	4	2	3
6		13.0	0.203	0.203	\				
5		6.63	1.508	1.508	*	\			
1	GRPS 1&2 POOLED	1.650	1.650	1.650	*	.	\		
4		3.25	1.745	1.745	*	.	.	\	
2		0.746	2.105	2.105	*	.	.	.	\
3		1.48	2.323	2.323	*

* = significant difference (p=0.05) . = no significant difference
 Tukey value (6,22) = 4.45 s = 0.218

MEAN TOTAL LENGTH

File: C:\ACTIONS\DDVMYSID2

Transform: NO TRANSFORM

t-test of Solvent and Blank Controls

Ho:GRP1 MEAN = GRP2 MEAN

GRP1 (SOLVENT CRTL) MEAN	=	6.6125	CALCULATED t VALUE	=	0.3061
GRP2 (BLANK CRTL) MEAN	=	6.5800	DEGREES OF FREEDOM	=	6
DIFFERENCE IN MEANS	=	0.0325			

TABLE t VALUE (0.05 (2), 6) = 2.447 NO significant difference at alpha=0.05

TABLE t VALUE (0.01 (2), 6) = 3.707 NO significant difference at alpha=0.01

MEAN TOTAL LENGTH

File: C:\ACTIONS\DDVMYSID2

Transform: NO TRANSFORM

ANOVA TABLE

SOURCE	DF	SS	MS	F
Between	5	2.113	0.423	22.263
Within (Error)	22	0.421	0.019	
Total	27	2.534		

Critical F value = 2.66 (0.05,5,22)

Since F > Critical F REJECT Ho:All groups equal

MEAN TOTAL LENGTH

File: C:\ACTIONS\DDVMYSID2

Transform: NO TRANSFORM

BONFERRONI T-TEST

TABLE 1 OF 2

Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	MEAN CALCULATED IN ORIGINAL UNITS	T STAT	SIG
1	GRPS 1&2 POOLED	6.596	6.596		
2	0.746	6.482	6.482	1.348	
3	1.48	6.510	6.510	1.022	
4	3.25	6.193	6.193	4.783	*
5	6.63	6.103	6.103	5.849	*
6	13.0	5.820	5.820	9.196	*

Bonferroni T table value = 2.51 (1 Tailed Value, P=0.05, df=22,5)

MEAN TOTAL LENGTH

File: C:\ACTIONS\DDVMYSID2

Transform: NO TRANSFORM

BONFERRONI T-TEST

TABLE 2 OF 2

Ho:Control<Treatment

GROUP	IDENTIFICATION	NUM OF REPS	Minimum Sig. Diff (IN ORIG. UNITS)	% of CONTROL	DIFFERENCE FROM CONTROL
1	GRPS 1&2 POOLED	8			
2	0.746	4	0.212	3.2	0.114
3	1.48	4	0.212	3.2	0.086
4	3.25	4	0.212	3.2	0.404
5	6.63	4	0.212	3.2	0.494
6	13.0	4	0.212	3.2	0.776

MEAN TOTAL LENGTH

File: C:\ACTIONS\DDVMYSID2

Transform: NO TRANSFORM

ANOVA TABLE

SOURCE	DF	SS	MS	F
Between	5	2.113	0.423	22.263
Within (Error)	22	0.421	0.019	
Total	27	2.534		

Critical F value = 2.66 (0.05,5,22)
 Since F > Critical F REJECT Ho:All groups equal

MEAN TOTAL LENGTH

File: C:\ACTIONS\DDVMYSID2

Transform: NO TRANSFORM

TUKEY method of multiple comparisons

GROUP	IDENTIFICATION	TRANSFORMED MEAN	ORIGINAL MEAN	GROUP						
				6	5	4	2	3	1	
6	13.0	5.820	5.820	\						
5	6.63	6.103	6.103	.	\					
4	3.25	6.193	6.193	*	.	\				
2	0.746	6.482	6.482	*	*	.	\			
3	1.48	6.510	6.510	*	*	*	.	\		
1	GRPS 1&2 POOLED	6.596	6.596	*	*	*	.	.	\	

* = significant difference (p=0.05)

. = no significant difference

Tukey value (6,22) = 4.45

s = 0.019

MEAN GROWTH OF MYSIDS

File: C:\ACTIONS\DDVP\MYSID3

Transform: NO TRANSFORM

t-test of Solvent and Blank Controls

Ho:GRP1 MEAN = GRP2 MEAN

GRP1 (SOLVENT CTRL) MEAN	=	0.9500	CALCULATED t VALUE	=	0.6085
GRP2 (BLANK CTRL) MEAN	=	0.9150	DEGREES OF FREEDOM	=	6
DIFFERENCE IN MEANS	=	0.0350			

TABLE t VALUE (0.05 (2), 6)	=	2.447	NO significant difference at alpha=0.05
TABLE t VALUE (0.01 (2), 6)	=	3.707	NO significant difference at alpha=0.01

MEAN GROWTH OF MYSIDS

File: C:\ACTIONS\DDVP\MYSID3

Transform: NO TRANSFORM

ANOVA TABLE

SOURCE	DF	SS	MS	F
Between	5	0.807	0.161	10.733
Within (Error)	22	0.321	0.015	
Total	27	1.128		

Critical F value = 2.66 (0.05,5,22)

Since F > Critical F REJECT Ho:All groups equal

MEAN GROWTH OF MYSIDS

File: C:\ACTIONS\DDVP\MYSID3

Transform: NO TRANSFORM

BONFERRONI T-TEST

TABLE 1 OF 2

Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	MEAN CALCULATED IN ORIGINAL UNITS	T STAT	SIG
1	GRPS 1&2 POOLED	0.932	0.932		
2	0.746	0.850	0.850	1.100	
3	1.48	0.910	0.910	0.300	
4	3.25	0.720	0.720	2.833	*
5	6.63	0.635	0.635	3.967	*
6	13.0	0.450	0.450	6.433	*

Bonferroni T table value = 2.51 (1 Tailed Value, P=0.05, df=22,5)

MEAN GROWTH OF MYSIDS

File: C:\ACTIONS\DDVP\MYSID3

Transform: NO TRANSFORM

BONFERRONI T-TEST

TABLE 2 OF 2

Ho:Control<Treatment

GROUP	IDENTIFICATION	NUM OF REPS	Minimum Sig Diff (IN ORIG. UNITS)	% of CONTROL	DIFFERENCE FROM CONTROL
1	GRPS 1&2 POOLED	8			
2	0.746	4	0.188	20.2	0.082
3	1.48	4	0.188	20.2	0.023
4	3.25	4	0.188	20.2	0.212
5	6.63	4	0.188	20.2	0.297
6	13.0	4	0.188	20.2	0.483

MEAN GROWTH OF MYSIDS

File: C:\ACTIONS\DDVP\MYSID3

Transform: NO TRANSFORM

ANOVA TABLE

SOURCE	DF	SS	MS	F
Between	5	0.807	0.161	10.733
Within (Error)	22	0.321	0.015	
Total	27	1.128		

Critical F value = 2.66 (0.05,5,22)
 Since F > Critical F REJECT Ho:All groups equal

MEAN GROWTH OF MYSIDS

File: C:\ACTIONS\DDVP\MYSID3

Transform: NO TRANSFORM

TUKEY method of multiple comparisons

GROUP	IDENTIFICATION	TRANSFORMED MEAN	ORIGINAL MEAN	GROUP					
				0	0	0	0	0	0
				6	5	4	2	3	1
6	13.0	0.450	0.450	\					
5	6.63	0.635	0.635	.	\				
4	3.25	0.720	0.720	.	.	\			
2	0.746	0.850	0.850	*	.	.	\		
3	1.48	0.910	0.910	*	*	.	.	\	
1	GRPS 1&2 POOLED	0.932	0.932	*	*	.	.	.	\

* = significant difference (p=0.05)
 Tukey value (6,22) = 4.45

. = no significant difference
 s = 0.015

DP BARCODE: D222024

REREG CASE # 0310

CASE: 819293
SUBMISSION: S498872

DATA PACKAGE RECORD
BEAN SHEET

DATE: 01/19/96
Page 1 of 1

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: REREGISTRATION ACTION: 606 GENERIC DATA
CHEMICALS: 084001 Dichlorvos

100.00 %

ID#: 084001

COMPANY:

PRODUCT MANAGER: 61 RICHARD DUMAS 703-308-8015 ROOM: CS1 1H3
PM TEAM REVIEWER: DENNIS UTTERBACK 703-308-8026 ROOM: CS1 2K5
RECEIVED DATE: 11/22/95 DUE OUT DATE: 12/22/95

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 222024 EXPEDITE: N DATE SENT: 01/19/96 DATE RET.: / /

CHEMICAL: 084001 Dichlorvos

DP TYPE: 001 Submission Related Data Package

CSF: N LABEL: N

ASSIGNED TO	DATE IN	DATE OUT	ADMIN DUE DATE: 02/18/96
DIV : EFED	1/13/96	/ /	NEGOT DATE: / /
BRAN: EEB	1/13/96	/ /	PROJ DATE: / /
SECT: IO	/ /	/ /	
REVR :	/ /	/ /	
CONTR:	/ /	/ /	

* * * DATA REVIEW INSTRUCTIONS * * *

Please review mrid 438543-01 72-4(b) life cycle invertebrates

* * * DATA PACKAGE EVALUATION * * *

No evaluation is written for this data package

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL
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DP Barcode : D222024
 PC Code No : 084001
 EEB Out : / /

To: Richard Dumas
 Product Manager 61
 Special Review and Reregistration Division (7508W)

From: Anthony F. Maciorowski, Chief
 Ecological Effects Branch/EFED (7507C)

Attached, please find the EEB review of...

Reg./File # : 0310
 Chemical Name : Dichlorvos
 Type Product : insecticide
 Product Name :
 Company Name :
 Purpose : Review mysid life cycle study.

Action Code: 606
 Reviewer: Regina Hirsch

Date Due: 2/18/96

EEB Guideline/MRID Summary Table: The review in this package contains an evaluation of the following:

GDLN NO	MRID NO	CAT	GDLN NO	MRID NO	CAT	GDLN NO	MRID NO	CAT
71-1 (A)			72-2 (A)			72-7 (A)		
71-1 (B)			72-2 (B)			72-7 (B)		
71-2 (A)			72-3 (A)			122-1 (A)		
71-2 (B)			72-3 (B)			122-1 (B)		
71-3			72-3 (C)			122-2		
71-4 (A)			72-3 (D)			123-1 (A)		
71-4 (B)			72-3 (E)			123-1 (B)		
71-5 (A)			72-3 (F)			123-2		
71-5 (B)			72-4 (A)			124-1		
72-1 (A)			72-4 (B)	43854) .01	C	124-2		
72-1 (B)			72-5			141-1		
72-1 (C)			72-6			141-2		
72-1 (D)						141-5		

Y=Acceptable (Study satisfied Guideline)/Concur

P=Partial (Study partially fulfilled Guideline but additional information is needed)

S=Supplemental (Study provided useful information but Guideline was not satisfied)

N=Unacceptable (Study was rejected)/Nonconcur