

ORIGINAL

Hoechst Celanese

Department of
Environmental, Health &
Safety Affairs (DEHSA)



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September 7, 1995
RAJ-103-95

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401 M Street, S.W.
Washington, DC 20460

8EMG-0995-13514

Contains No CBI

Dear Sir or Madam:

In accordance with the reporting requirements of TSCA Section 8(e), Hoechst Celanese Corporation hereby submits the results of an acute toxicity screen with mysid shrimp for 1-(4-isobutylphenyl)ethanol (CAS no. 40150-92-3).

The 96 hour LC₅₀ was found to be between 0.3 and 3.0 mg/l; the NOEC was found to be 0.3 mg/ml. A summary report is enclosed.

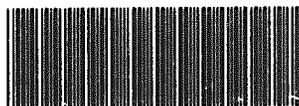
This substance is manufactured as a site-limited intermediate.

This submission contains no confidential business information.

If any further information is required, do not hesitate to contact Dr. Richard A. Jourdenais, Corporate Manager, Product Stewardship at 908-231-3746.

Sincerely,

Susan Engelman
Vice President, Environmental, Health &
Safety Affairs



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*RW
9/7/95*

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Enclosure

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Interoffice Memo

Hoechst Celanese

Date: 17 May, 1992

To: A. Savage

From: Elmer Rauckman

Dept/Location: ATG/CCTC

Dept/Location: Corporate Toxicology

Subject: Toxicity Study Final Report

Study Material: 1-(4-Isobutylphenyl)ethanol (IBPE)
Study Number: Toxikon J9111004e
HCC Number: C-1653
Study Type: Acute Toxicity Screen with Mysid Shrimp

Results:

The test substance, dissolved in DMF, was diluted to 1000 ml (natural sea water diluted to 15 ppt salt) in 2000 ml glass crystallizing dishes to 5 nominal concentrations of test substance as shown in the table below. Test material concentration was not measured. Ten mysid shrimp (*Mysidopsis bahia*) were exposed for a period of 96 hours under static conditions. Mysids were observed at 24, 48, 72 and 96 hours after initiation for signs of toxic effects and mortality. Results for mortality are given in the table; these are for the second of two studies. In the first study, conducted with concentration from 10 to 100 mg/l, all mysids died. Lethargy was the only other sign of toxicity reported, 2/10 mysids in the 0.3 mg/l group were reported as lethargic at 24 hours but not at subsequent observations. Lethargy was observed in all surviving mysids in the 3 and 10 mg/l groups except at the 96 hour observation.

Nominal concentration (mg/l)	Percent Mysids Dead				Other Adverse Effects
	24 hr	48 hr	72 hr	96 hr	
0	0	0	0	0	none
Solvent	0	0	0	0	none
0.3	0	0	0	0	Y
3.0	50	90	90	90	Y
10	70	100	100	100	Y
30	100	100	100	100	-
60	100	100	100	100	-

Conclusion:

C-1653 [1-(4-Isobutylphenyl)ethanol (IBPE)] was found to have an LC₅₀ (96 hr.) between 0.3 and 3.0 mg/l and the NOEC is considered to be 0.3 mg/ml for mysid shrimp under these conditions.



Elmer J. Rauckman, Ph.D., DABT
 Manager, Toxicology

Attachment

cc: without X

M. Clark (CCTC)
 C. Cole (Bishop)
 S. Dalton (CCTC)
 V. Gliebe (Short Hills)✓
 G. Loewengart (DEHSA)
 H. Morgan (Boots)✓
 G. Mott (CCTC)

K. Roberts (CCTC)
 A. Solefer (DEHSA)
 P. Thomas (Bishop)
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FILE ⇨ CASNO 40150-92-3

Hoechst 

95 SEP 22 1992

SUMMARY REPORT

**1-(4-Isobutylphenyl) Ethanol (IBPE): Acute Toxicity
To The Mysid, Mysidopsis bahia,
Under Static Conditions (Screening Test)**

(C1653; CAS #40150-92-3)

Two 96-hour static toxicity tests were conducted at Toxikon Environmental Sciences, Jupiter, Florida, on IBPE with mysids, Mysidopsis bahia, from March 2 to 6, and March 31 to April 4, 1992. The first test was conducted at 10, 25, 50 and 100 mg/L. After 96 hours of exposure to IBPE, mortality of mysids was 100% at all test concentrations. Mortality was 0% in the control and solvent control. Based on the results of this test, a second test was conducted at nominal IBPE concentrations of 0.3, 3, 10, 30 and 60 mg/L.

The test substance, IBPE (lot number SN-9823), was a clear liquid which was soluble in dimethylformamide (DMF). The primary test stock solution (600 g/L) was prepared by diluting 6.0064 g of neat test material to 10 mL with DMF. Serial dilutions were made from this primary stock to provide secondary stock solutions of 300, 100, 30 and 3 g/L. Test solutions were prepared in 1-L volumes of dilution water by adding 0.1 mL of the 600, 300, 100, 30 and 3 g/L stocks for the 60, 30, 10, 3 and 0.3 mg/L test solutions, respectively. Mysids used in the test were neonates (<24 hours old) obtained from an in-house culture. The dilution water was natural saltwater which was adjusted to a salinity of 15 ppt and vigorously aerated prior to use.

The test was conducted in 2000-mL glass crystallizing dishes containing 1000 mL of dilution water. The dishes were positioned under fluorescent lighting on a 16-hour light and 8-hour dark photoperiod. Following addition of the test substance to the test dishes, mysids were added by twos until a total of 10 mysids per dish was attained. A dilution water control, a solvent control (100 μ l DMF/L) and five test concentrations of IBPE (0.3, 3, 10, 30 and 60 mg/L) were tested.

After 96 hours of exposure, mortality of mysids ranged from zero percent at 0.3 mg/L to 100 percent at test concentrations \geq 10 mg/L; mortality was zero percent in both controls (see table). The LC_{50} value appears to lie between 0.3 and 3.0 mg/L. The no-observed-effect concentration (NOEC) was 0.3 mg/L, based on the absence of mortality and significant sublethal effects at this test concentration. Initial dissolved oxygen concentrations in the controls and all test solutions were 7.0 to 7.2 mg/L (85 to 87 percent of saturation) and remained \geq 4.5 mg/L (\geq 55 percent of saturation) for the duration of the test. Initially, the pH was 8.2 in the controls and all test solutions. The pH remained at 8.0 to 8.2 in all controls and test solutions for the remainder of the test. Test temperature was maintained at 23.0 to 24.3°C.

Mortality of Mysids, Mysidopsis bahia, Exposed To IBPE For
96 Hours Under Static Test Conditions

Nominal Concentration (mg/L)	Cumulative Mortality (percent)			
	24 H	48 H	72 H	96 H
Control	0	0	0	0
Solvent Control	0	0	0	0
0.3	0 ^a	0	0	0
3	50 ^b	90 ^d	90 ^d	90
10	70 ^c	100	100	100
30	100	100	100	100
60	100	100	100	100

- ^a Two mysids were lethargic.
^b Five mysids were lethargic.
^c Three mysids were lethargic.
^d One mysid was lethargic.

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