ACUTE ORAL TOXICITY STUDY OF IN ALBINO RATS	File No.: 4187-4
	Reference No.:
	Series No.: I-0005-1326
	Authors:
Reference No.: E-6463-43	
GLP/QAU:	Submitted By:
Reported By:	
Checked By:	Date: April 16, 1985

This summary of data and conclusions is based upon the sample received. Additional studies may be required as specific uses and formulations are developed or if process changes occur.

ABSTRACT

An acute oral toxicity study was designed to determine the LD_{50} of in the Sprague Dawley rat. The procedure followed was in accordance with the "O.E.C.D. Short-Term and Long-Term Toxicology Groups Final Report", adopted in May, 1981. Five dose levels (80, 158, 200, 317, 400 mg/kg) of were administered to male and female rats by oral gavage. The oral LD_{50} of in the rat was 196 (146-257) mg/kg body weight. Signs of toxicity exhibited by rats include cyanosis, ataxia, prostration, glossy-eyed appearance, and lethargy. The toxic effects of indicate that the central nervous system is most likely the target organ. Autopsy of animals that died during the study revealed severe inflammation of the gastrointestinal tract. No gross pathological alterations in the organs or tissues were noted in any of the surviving animals at terminal necropsy. Under the conditions of this study, is moderately toxic when ingested on an acute basis by laboratory rats. It is likely that amounts which may be swallowed incidental to industrial handling and use may cause injury.

ORIGINAL REPORT
Do not remove from file.

*Amine siloxane hydrolyzate

Distribution

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TEST MATERIAL

An clear, colorless liquid identified as was submitted to the Toxicology Department for the determination of acute oral toxicity. The procedure for testing this material was based on methods recommended in the "O.E.C.D. Short-Term and Long-Term Toxicology Groups Final Report", adopted in May, 1981.

METHOD

Fifty (25 male, 25 female) Sprague-Dawley young albino rats (Charles River Breeding Laboratories, Portage, Michigan) weighing approximately 235 ± 60 grams were employed in this study. Animals were maintained under controlled laboratory conditions for seven days prior to study initiation and only healthy animals were used for the study. All rats were housed individually in conventional design stainless steel, wire mesh bottom cages. The animals were maintained on a diet of PURINA® Rodent Chow and fresh water ad libitum. Each rat was individually identified by permanent ear tag.

The animals were fasted for about 18 hours prior to administration of the compound and were weighed just prior to dosing. The test material was administered as received.

Based on an oral rangefinding screen test, five logarithmically spaced dose levels (80, 158, 200, 317, 400 mg/kg) of material were administered orally by a hypodermic syringe fitted with a 16 gauge, snub-tipped dosing needle. The animals were then allowed food and water ad libitum. All animals were weighed 24 hours, 7 and 14 days following test article administration. The animals were observed frequently on the first day of dosing and twice daily thereafter on weekdays. Individual observations for mortality and changes in behavior or other reactions were made for each animal. A necropsy and complete gross pathologic examination was performed on all rats at the termination of the study.

The oral median lethal dose, 95% confidence interval, and approximate slope of the dose response curve were calculated by a computerized version of Finney's (1972) Probit Method.

RESULTS

The results of the acute oral toxicity study conducted on are presented in Table I. The pharmacotoxic signs were seen within 30 minutes following compound administration. Death generally occurred within two hours after dosing. No instances of delayed mortality were observed. Surviving animals were observed to be normal 24 hours following exposure. Signs of toxicity exhibited by the rats include cyanosis, ataxia, prostration, glassy-eyed appearance, and lethargy. There was no observable depression in food

consumption or body weight gain in the surviving animals. Autopsy of the rats that died during the study showed severe inflammation of the gastrointestinal tract. Terminal sacrifice of surviving animals did not reveal any significant gross pathological alterations in the organs, or tissues that were examined. The dose response curves for male, female and both combined are shown in Figures 1-3. An apparent difference in the slope of the dose-response curve can be seen for female rats. The LD_{50} values for males and females were 200 and 191 mg/kg, respectively. When considering the male and female mortality together, the oral LD_{50} of in the rat was 196 (146-257) mg/kg of body weight.

CONCLUSIONS

On the basis of this test, is moderately toxic when ingested on an acute basis by laboratory rats. It is likely that amounts which may be swallowed incidental to industrial handling and use may cause injury. Therefore, care must be taken in the handling of this material.

REFERENCES

1) "O.E.C.D. Short-Term and Long-Term Toxicology Groups Final Report", published in December, 1979, and adopted in May, 1981.

2) Finney, D. J. (1972). Statistical Methods in Biological Assay. Second Edition, Griffin Press, London.

This Report constituted of pages 1-6, and Table I, and Figures 1-3, signed this 8th day of April, 1985.

Authors:

Approved By:

Toxicology Department

Typed By:

QUALITY ASSURANCE STATEMENT

This report represents data generated by the Toxicology Department, This study was conducted according to the EPA Toxic Substances Control; Good Laboratory Practices Regulations; 4-CFR, Part 797, Vol. 48, No. 230 The results of the report accurately reflect the data generated. All raw data is located at

Study Started:	February 6, 1985
Study Completed:	February 22, 1985
Date Audited:	February 6, 1985 and February 22, 1985
Report Issued:	April 16, 1985

April 8, 1985
Date:

TABLE I

Acute Oral Toxicity of in Albino Rats

Mortality Data

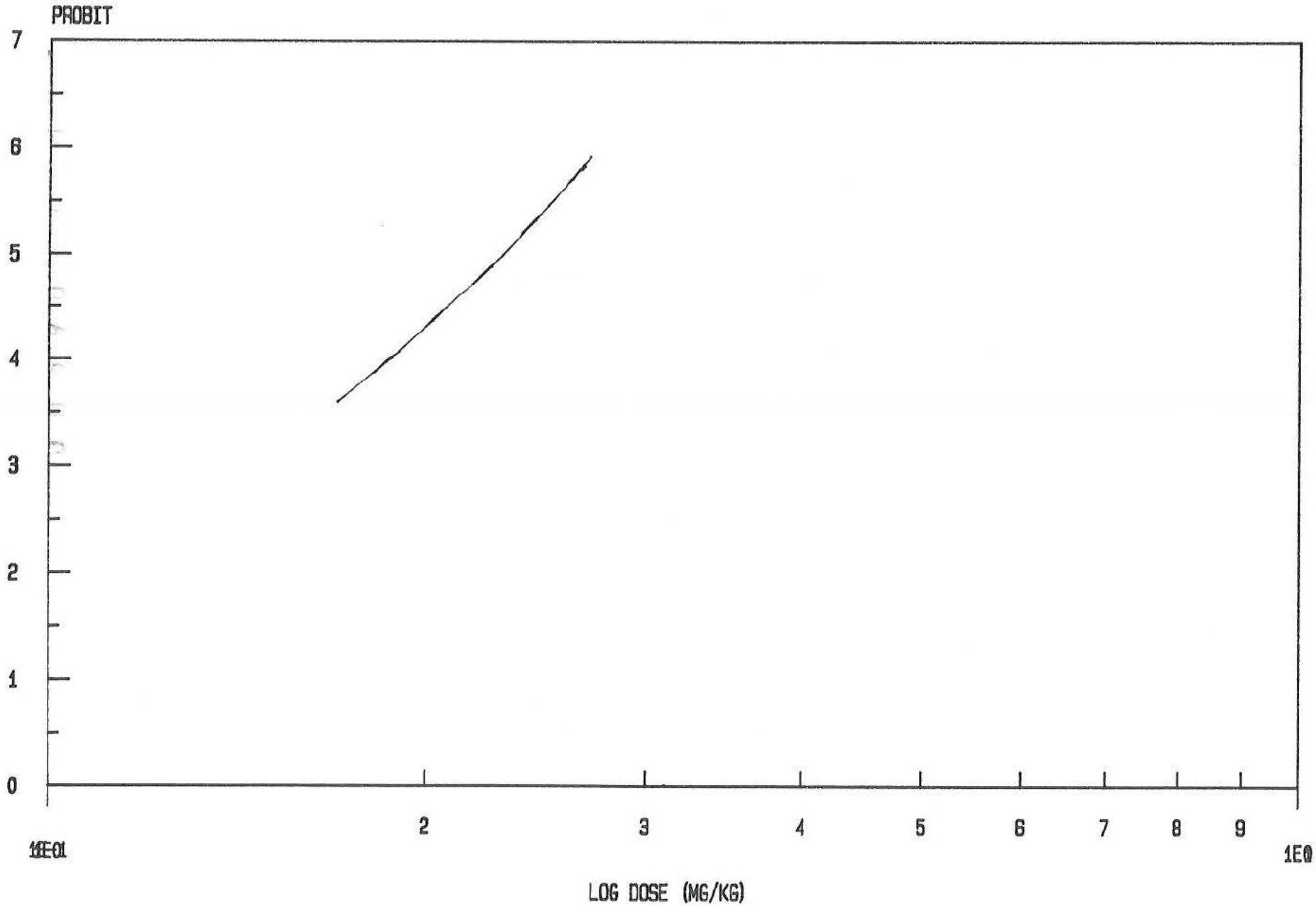
Dose (mg/kg)	Number Dead/Number Treated		
	Male	Female	Males & Females Combined
80	2/5	0/5	2/10
158	-	1/5	1/5
200	2/5	4/5	6/10
317	2/5	4/5	6/10
400	4/5	-	4/5
500	2/2	-	2/2

Acute Oral LD_{50} Data

Sex	LD_{50} (mg/kg)	95% Confidence Intervals (mg/kg)	Slope
Males	200	(96 - 372)	2.31
Females	191	(124 - 269)	5.90
Males & Females Combined	196	(146 - 257)	3.14

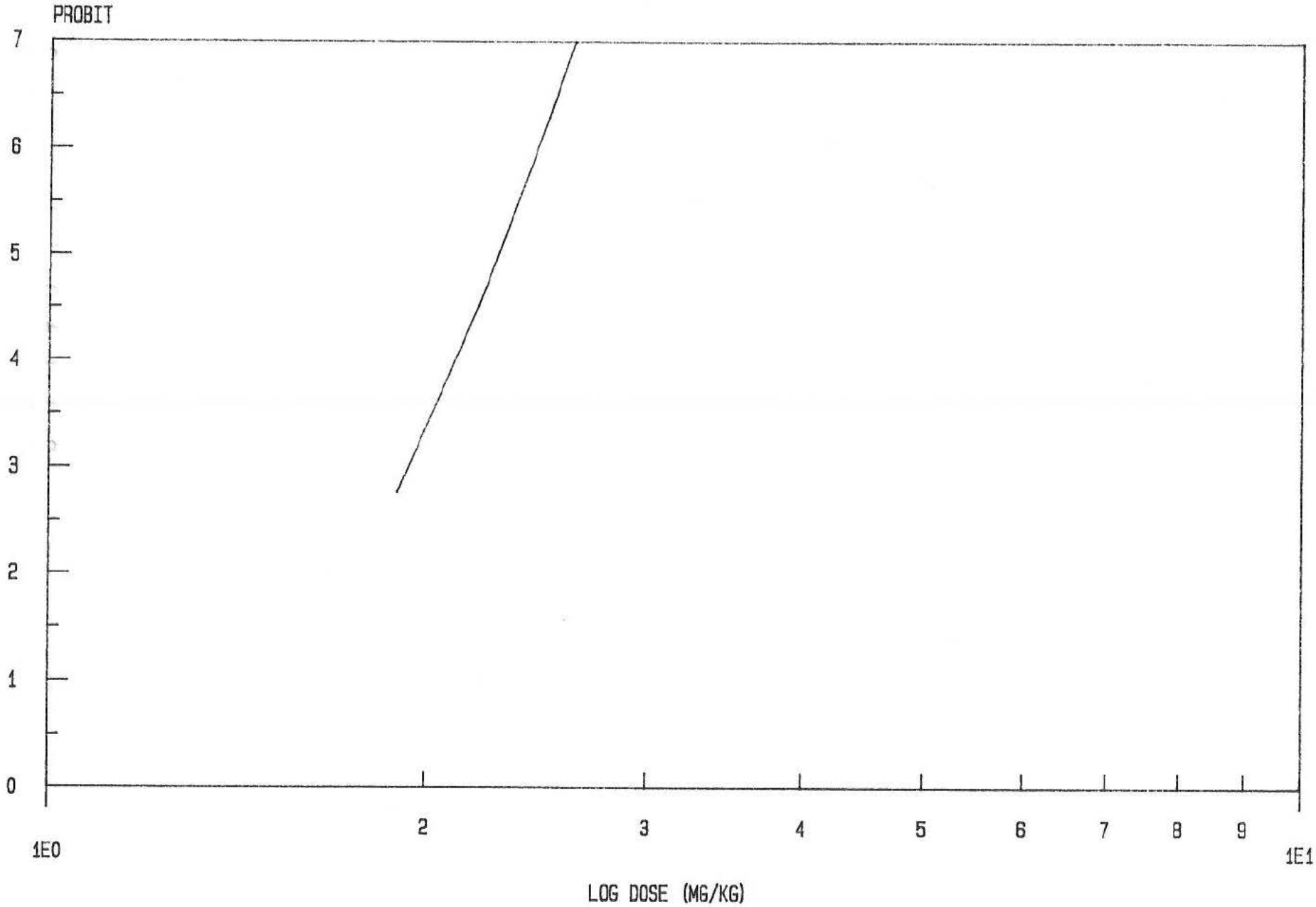
DOSE MORTALITY CURVE

MALES/



DOSE MORTALITY CURVE

FEMALES



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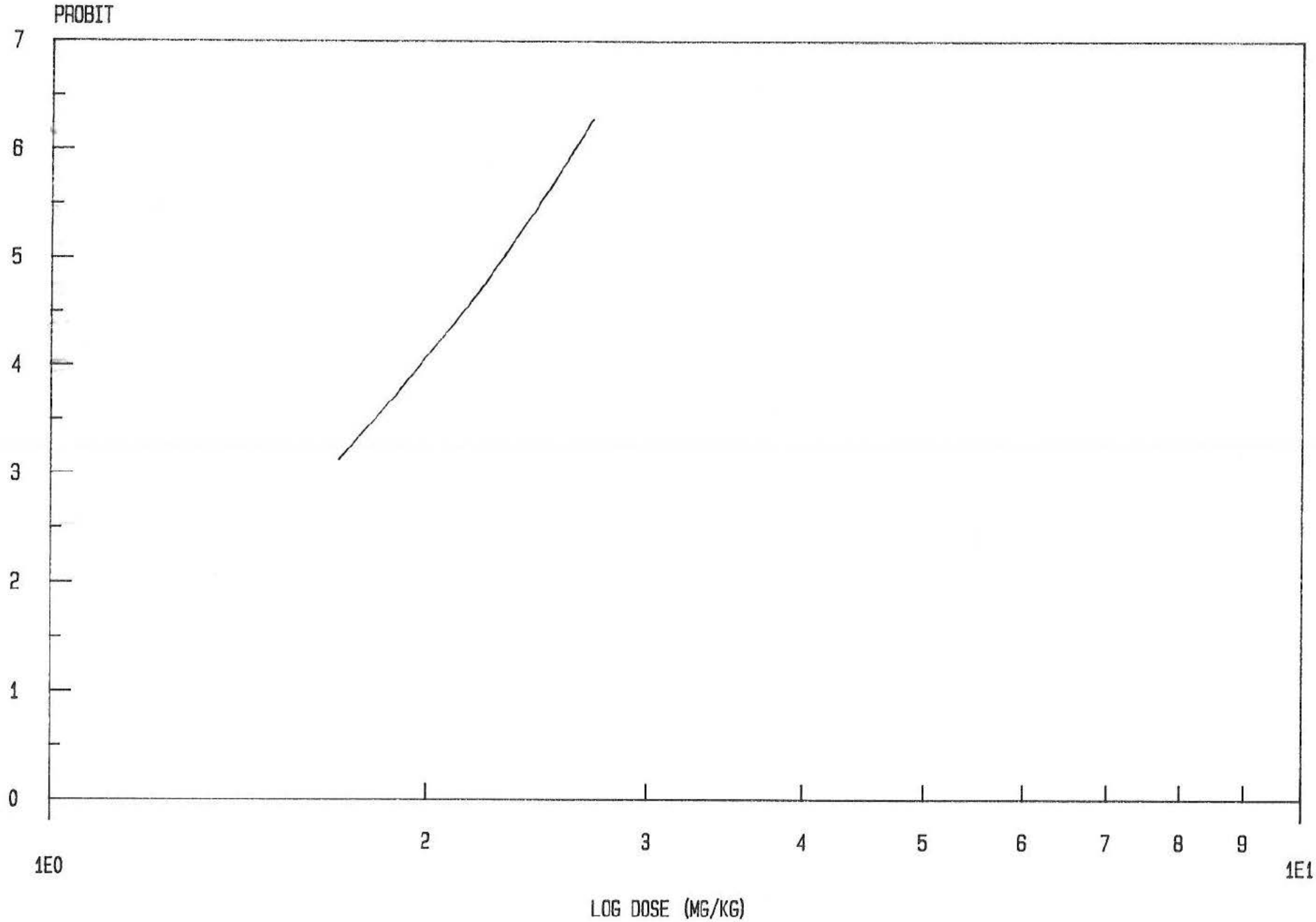
MALES-FEMALES