



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

MEMORANDUM:

Subject: EPA Reg. No./File Symbol: 45729-E

From: JoAnne Hayes, Biologist  
Precautionary Review Section  
Registration Support Branch  
Registration Division (7505W)

*J. Hayes*  
7/13/75

To: Richard Keigwin, PM 10  
Insecticide-Rodenticide Branch  
Registration Division (7505C)

Applicant: Safe and Sure Products Incorporated  
P.O. Box 5547  
Sarasota, FL 34277

FORMULATION FROM LABEL:

<u>Active Ingredient(s)::</u>	<u>% by wt.</u>
Docusate Sodium .....	12.0%
Hendecenoic Acid .....	2.0%
<u>Inert Ingredient(s):</u> .....	86.0%
Total: .....	100.0%

BACKGROUND: The registrant submitted acute oral toxicity, acute dermal toxicity, acute inhalation toxicity, primary eye irritation, primary dermal irritation, and dermal sensitization studies to support registration of the subject product. The MRID numbers for these studies are respectively: 436984-01, 418377-01, 430691-01, 436094-02, 436094-03, 4369-094-04.

RECOMMENDATIONS: The acute oral, dermal and inhalation toxicity studies, primary eye and dermal irritation studies and dermal sensitization study are classified as acceptable. The toxicity findings for these studies are outlined in the Table 1:

TABLE 1

Acute Oral . . . . .	IV
Acute Dermal . . . . .	III
Acute Inhalation . . . . .	III
Eye Irritation . . . . .	III
Dermal Irritation . . . . .	IV
Dermal Sensitization . . . . .	NEGATIVE

LABELING:

1. The signal word for the subject product is "CAUTION".
2. Revise the <sup>PRECAUTIONARY STATEMENTS</sup> Hazards to Humans statement to read:

*Harmful if absorbed through skin or inhaled. Causes eye irritation. Avoid contact with skin, eyes or clothing. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.*

3. Revise the <sup>of PRACTICAL TREATMENT</sup> Precautionary Statements to read:

*IF INHALED: Remove victim to fresh air if not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.*

*IF ON SKIN: Wash with plenty of soap and water. Get medical attention.*

*IF IN EYES: Flush eyes with plenty of water. Call a physician if irritation persists.*

# DATA REVIEW FOR ACUTE ORAL TOXICITY TESTING (§ 81-1)

Product Manager: R. Keigwin  
MRID No.: 436984-01

Reviewer: J. Hayes  
Report Date: Jan 31, 1989  
amended report: June 21, 1995  
Report No.: MB89-9354A

Author(s): Daniel R. Cerven  
Testing Laboratory: MB Research Laboratories, Inc., Spinnerstown, PA  
Test Material: De-Flea Concentrate  
Species: Wistar Rats

Age: not supplied  
Sex: male (5); female (5)  
Weight: m = 200 - 208g, f = 220 - 248g

Quality Assurance (40 CFR §160.12): yes  no  GLP: yes  no

## Conclusion:

1. LD <sub>50</sub>	(mg/kg)	95% Conf. Limits
Males =	—	—
Females =	—	—
Combined =	—	—

2. The estimated LD<sub>50</sub> is > 5.0 g/kg

3. Tox. Category: IV

Classification: Acceptable

Procedure (Deviations from §81-1): —

## Results:

Dosage	(Number Killed/Number Tested)		
	Males	Females	Combined
5.0 g/kg	0/5	0/5	0/10

## Symptoms & Gross Necropsy Findings:

Symptoms included diarrhea, chromodacryorrhea, ptosis, chromorhinorrhea, anogenital area soiling, anogenital area wetness, body area soiling, wetness or redness around the mouth or nose, yellow staining of anogenital area, rales. All animals were normal at necropsy.

DATA REVIEW FOR ACUTE DERMAL TOXICITY TESTING (§81-2)

Product Manager: R. Keigwin  
MRID No.: 418377-01  
436094-05

Reviewer: J. Hayes  
Report Date: 2/02/89  
amended report: June 21, 1995  
Report No.: MB 89-9354B

Author(s): Daniel R. Cerven  
Testing Laboratory: MB Research Laboratories, Inc., Spinnerstown, PA  
Test Material: De-Flea Concentrate  
Species: New Zealand White Rabbit

Age: not supplied  
Sex: male (5); female (5)  
Weight: male: 2.3 - 3.0kg, female: 2.2 - 2.7kg

Quality Assurance (40 CFR §160.12): yes  no  GLP: yes  no

Summary:

1. LD<sub>50</sub> (mg/kg) 95% Conf. Limits  
Males = \_\_\_\_\_  
Females = \_\_\_\_\_  
Combined = \_\_\_\_\_

2. The estimated LD<sub>50</sub> is > 2.0 g/kg

3. Tox. Category: III

Classification: Acceptable

Procedure (Deviation From §81-2): —

Results: Reported Mortality

DOSAGE	(NUMBER KILLED/NUMBER TESTED)		
	Males	Females	Combined
2000 mg/kg	0/5	1/5	1/10

Symptoms & Gross Necropsy Findings:

Symptoms were severe erythema, with moderate edema, flaking skin, moderate eschar, yellow nasal discharge, diarrhea, anogenital area soiling. Necropsy revealed white area in liver, distension of stomach with fluid, red or yellow intestinal areas, large uterus, large and red uterine horns.

**DATA REVIEW FOR ACUTE INHALATION TOXICITY TESTING (§81-3)**

**Product Manager:** R. Keigwin

**Reviewer:** J. Hayes

**MRID No.:** 436094-01

**Report Date:** 4/6/95

**Author(s):** Mark S. Holbert

**Report No.:** 1756-94

**Testing Laboratory:** Stillmeadow Inc., Sugar Land, TX

**Test Material:** De-Flea Concentrate

**Species:** Rat, HSD: Sprague-Dawley

**Age:** young adult

**Sex:** male/female

**Weight:** m = 185 - 231g, f = 203 - 248g

**Quality Assurance (40 CFR §160.12):** yes  no  **GLP:** yes  no

**Summary:**

- |                           |                |                         |
|---------------------------|----------------|-------------------------|
| <b>1. LD<sub>50</sub></b> | <b>(mg/kg)</b> | <b>95% Conf. Limits</b> |
| Males =                   | 0.990          | 0.899 - 1.09            |
| Females =                 | 1.39           | 0.912 - 2.13            |
| Combined =                | 1.16           | 0.472 - 2.83            |
- 2. The estimated LC<sub>50</sub> is** —
- 3. Mean Concentration:** 0.776, 1.1, 1.36, 2.31
- 4. Tox. Category:** III **Classification:** Acceptable

**Procedure (Deviation From §81-3):** —

**Results:**

**Reported Mortality**

Exposure Concentration	(NUMBER KILLED/NUMBER TESTED)		
	Males	Females	Combined
0.776 mg/l MMAD 1.024 $\mu$ GSD 2.843 $\mu$	0/5	0/5	0/10
1.01 mg/l MMAD 1.394 $\mu$ , GSD 2.214 $\mu$	3/5	2/5	5/10
1.36 mg/l MMAD 1.348 $\mu$ , GSD 2.385 $\mu$	5/5	4/5	9/10
2.31 mg/l MMAD 1.470 $\mu$ , GSD 2.116 $\mu$	5/5	3/5	8/10

**Symptoms & Gross Necropsy Findings:** Clinical symptoms were activity decrease, ataxia, body tremors, corneal opacity, crusty nose, gasping, lacrimation, nasal discharge, piloerection, polyuria, ptosis, respiratory chirp, retardation of weight gain and salivation. Necropsy found discoloration of kidneys, liver and lungs; swollen lungs, and discolored contents and gas in small intestine.

**DATA REVIEW FOR ACUTE EYE IRRITATION TESTING (§81-4)**

**Product Manager:** R. Keigwin

**Reviewer:** J. Hayes

**MRID No.:** 436094-02

**Report Date:** 3/15/95

**Author(s):** Janice O. Kuhn

**Report No.:** 1757-94

**Testing Laboratory:** Stillmeadow Inc., Sugar Land, TX

**Test Material:** De-Flea Concentrate

**Species:** New Zealand White Rabbit

**Age:** young adult (3-6mo)

**Sex:** male/female

**Weight:** m = 2.525 - 2.875kg, f = 1.975 - 2.850kg

**Dosage:** 0.1ml of liquid

**Quality Assurance (40 CFR §160.12):** yes  no  **GLP:** yes  no

**Summary:**

1. **Toxicity Category:** III
2. **Classification:** Acceptable

**Procedure (Deviations From §81-4):** —

**Results:**

Observations	(number "positive"/ number tested)							
	Hour	Days						
	1	1	2	3	4	7	14	21
Cornea Opacity	0/6	6/6	5/6	4/6	4/6	0/6		
Fluorescein Staining	n/a	6/6	5/6	4/6	4/6	0/6		
Stippling	2/6	5/6	3/6	3/6	2/6	0/6		
Iris	0/6	0/6	0/6	0/6	0/6	0/6		
Conjunctivae								
Redness	6/6	6/6	5/6	4/6	3/6	0/6		
Chemosis	5/6	5/6	4/6	2/6	1/6	0/6		
Discharge	0/6	0/6	0/6	0/6	0/6	0/6		

**Comments:**

**DATA REVIEW FOR SKIN IRRITATION TESTING (§81-5)**

**Product Manager:** R. Keigwin

**Reviewer:** J. Hayes

**MRID No.:** 436094-03

**Report Date:** 3/17/95

**Author(s):** Janice O. Kuhn

**Report No.:** 1758-94

**Testing Laboratory:** Stillmeadow Inc., Sugar Land, TX

**Test Material:** De-Flea Concentrate

**Species:** New Zealand White Rabbit

**Age:** young adult

**Sex:** male/female

**Weight:** m = 2.350 - 2.575kg, f = 2.400 - 2.825kg

**Dosage:** 0.5ml liquid

**Quality Assurance (40 CFR §160.12):** yes  no  **GLP:** yes  no

**Summary:**

1. The Primary Irritation Index = 0.4
2. Toxicity Category: IV
3. Classification: Acceptable

**Procedure (Deviations From §81-5):**

**Results:**

Study Day	Erythema					Edema				
	0	1	2	3	4	0	1	2	3	4
1/2 hour	1/6	5/6				4/6	2/6			
24 hours	4/6	2/6				6/6				
48 hours	5/6	1/6								
72 hours	6/6									
7 days										
10 days										
14 days										

**Special Comments:**

**DATA REVIEW FOR SKIN SENSITIZATION TESTING (§81-6)**

**Product Manager:** R. Keigwin

**MRID No.:** 436094-04

**Author(s):** Janice O. Kuhn

**Testing Laboratory:** Stillmeadow Inc., Sugar Land, TX

**Test Material:** De-Flea Concentrate

**Species:** Guinea Pig - Hartley Albino

**Weight:** males = 327 - 373g, females = 307 - 364g

**Source:** SASCO, Inc., Madison, WI

**Positive Control Material:** DNCB

**Quality Assurance (40 CFR §160.12):** yes  no  **GLP:** yes  no

**Reviewer:** J. Hayes

**Report Date:** 3/29/95

**Report No.:** 1759-94

**Method:** Modified Buehler

**Summary:**

1. **This Product is not a dermal sensitizer.**
2. **Classification: Acceptable**

**Procedure (Deviation From §81-6):** —

**Results:**

Test material: applied at 100% for induction and challenge.

First induction of test animals showed no response at 24 hour observation.

Challenge of test animals showed no response at 24 hour observation.

Naive control animals showed no response at 24.

Positive Control:

Applied at 1.0% in 80% ethanol for induction.

Applied at 0.1% in acetone for challenge.

Naive control showed no response at 24 hour observation after challenge dose.

Test animals showed very faint erythema (4/10), faint erythema (1/10), moderate erythema (3/10), and strong erythema (2/10).



**ONELINER**

Tox Chem No.: 079027 File Last Updated:

Current Date: July 13, 1995

Study/Species/Lab/Study#/Date	Material	MRID No	Results	Tox Cat	Core Grade
Acute oral/Wistar rat/MB Reasearch Lab/MB89-9354A/ 1-31-89	see below	436984-01	no mortality	IV	Accept able
Acute <del>Inhalation</del> <sup>Dermal</sup> /NZW rabbit/ MB Reasearch Lab/MB 89-9354B/2-2-89	"	418377-01	1/5 ♀ deaths 0/5 ♂ deaths	III	Accept able
Acute Inhalation/SD rat/ Stillmeadow/ 1756-94/4-6-95	"	436094-01	Lowest LC50 = Males 0.990 mg/l	III	Accept able
Eye Irritation/NZW rabbit/Stillmeadow, Inc/1757-94/3-15-95	"	436094-02	corneal & conjunctival irritation thru day 4	III	Accept able
Dermal irritation/NZW rabbits/Stillmeadow/ 1758-94/ 3-17-95	"	436094-03	no irritation past 24 hrs	IV	Accept able
Dermal Sensitization/Hartley Guinea Pigs/Stillmeadow/ 1759-94/ 3-29-95	"	436094-04	no irritation at challenge	Neg	Accept able

**FORMULATION FROM LABEL:**

<u>Active Ingredient(s)::</u>	<u>% by wt.</u>
Docusate Sodium .....	12.0%
Hendecenoic Acid .....	2.0%
<u>Inert Ingredient(s):</u> .....	86.0%