

US EPA ARCHIVE DOCUMENT

2-28-91

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

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OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: EPA Reg. No./File Symbol 3125-319
Bayleton Technical

FROM: Lucy D. Markarian by 11/14/90 E 2/28/91
Precautionary Review Section
Registration Support Branch
Registration Division (P75-05C)

TO: Susan Lewis / Jones Stone (PM 21)
Fungicide - Herbicide
Registration Division (P75-05C)

APPLICANT: Mobay Corporation
P.O. Box 4913
Hawthorn Road
Kansas City, MO 64120-0013

FORMULATION FROM LABEL:

Active Ingredient(s):		% by wt.
<u>Triadimenol: 1-(4-Chlorophenyl)-3,3 dimethyl-1-</u>		<u>90%</u>
<u>(1H-1,2,4-Triazol-1-yl)-2-butanone</u>		
Inert Ingredient(s):		
.....		<u>10%</u>
Total		100.0%

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1: F20

BACKGROUND: Mobay Corporation has submitted Three new studies under EPA Symbol 3125-319 (acute inhalation, primary eye + primary dermal) to complete requirements for registration and labeling. Their product Bayleton Technical. Additionally a series of old tests run at Bayer AG in Germany in 1974 are submitted for review under accession number 240149902 That include oral studies in five species, Acute Dermal study in rats, Acute Inhalation studies in four species and eye and dermal irritation test.

Bayleton was tested for oral toxicity under Accession number 48623 (category II) for Dermal Toxicity under 60233 (category III) and for sensitization under MRID 415540-01 (Sensitizer)

RECOMMENDATION:

The Three studies performed at the Toxicology Department of The Mobay Company are acceptable support for the product.

The inhalation study is qualitative data in toxicity category III

The acute Eye irritation is considered a minimum minimum data because

1. Penlight is not adequate light source for the observation of ocular lesions

2. Fluorescein dye was not used to confirm the observed irritation.

3. 18 week old animals - that stating that weights may have been too heavy and consequently too high to be used in the test.

4. The results were not observed at 48 hrs.

The Dermal irritation Test is considered a minimum minimum data because 19 week old animals may have been too

RECOMMENDATION: -----

heavy to be used for test of. Providing weight information would have eliminated any doubts.

All the studies under Accession number 2401499-02 are considered supplementary data for the following reasons:

1. Emulsifier and solvents were not well defined.

The test material was emulsified in 1:10 mixture of acetone + oil of unspecified identity. It is not stated why acetone was necessary for emulsification as it adds a variable to the test system. This mixture was used in oral, dermal, and intraperitoneal studies as well as dermal irritation. The Inhalation study was conducted by dissolving the test material in a 1:1 mixture of Ethanol + butanol with no indication of the strength of either component.

2. There were no vehicle controls. This was necessary since the emulsifying agents (acetone + oil) or solvents (ethanol + butanol) can have toxic effects of their own. Control groups are needed.

3. The weight of the animals was either not mentioned or was not specific or at times as in the case of oral, dermal and inhalation rabbits, the animals were overweight. The weight changes during the test are not recorded. Possible weight loss as a toxic symptom is not addressed.

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RECOMMENDATION:

4. Symptoms of toxicity are not addressed specifically. "General health impairment" is used as description of toxicity which does not clarify the mode of manifestation. Necropsy information is missing in the majority of cases which if present would have clarified toxicity to some extent. The exception to this was the oral toxicity study in rats.

5. a) The inhalation study did not present any particle size or size distribution.

b) The chamber atmosphere conditions were indicated according to Eben: Test material was absorbed from the atmosphere in cotton wool, then eluted in benzene and analyzed by gas chromatography. It is unclear for how long the cotton wool was exposed or how often this was done.

c) It is not specified if all the species were exposed at the same time. The exposure of all species at the same time is not acceptable.

d) The chamber concentrations in general were low. It is not stated if these concentrations were the highest concentrations or other concentrations were not tried.

There were no vehicle controls. Ethanol and butanol have toxicity of their own which was not addressed.

5. There were no quality assurance statements, because the studies were performed in 1974.

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RECOMMENDATION: -----

The Mobay corporation says that the eye irritation study is in Toxicity Category III. There is no indication that it is. The guidelines find grade I irritation in the conjunctiva unremarkable. Therefore it is ~~rather~~ practically not irritating and placed in Toxicity category IV.

Label

The Signal word is "Warning" as correctly stated in the proposed label.

In the precautionary statement - Cause eye irritation may be deleted.

In the statement of practical treatment

If in eyes - flush with plenty of water should suffice. The remainder of the label is acceptable as it stands.

008569

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

Product Manager: (21) Reviewer: L. Markarian
 MPID No.: 416160-02 Report Date: 11/14/90
 Testing Laboratory: Cum. Tor. Dept. Mobay Corporation Report No. 90-042-CL
 Author(s): D. L. Warren
 Species: Rat, Sprague Dawley (Sas:CD(SD)Be 7-9 weeks old
 Sex: 13 ♂ + 12 ♀ Weight: ♂ 223-297, ♀ 193-238
 Source: Sasco, Inc. Houston Texas
 Test Material: Bayleton Technical batch 9-00-6001 (Trade name for)
 Quality Assurance (40 CFR §160.12): included

Summary:

1. LC₅₀ (mg/kg): Males = _____; Females = _____; Combined = _____
2. The estimated LC₅₀ is Greater Than 3.270 mg/L
3. Mean Concentration: 1.750 + 3.270 mg/L
4. Tox. Category: III. Classification: Core Guideline

Procedure (Deviations From §81-2): Nose only exposure was in a 27L cylindrical dynamic flow chamber with two levels of six ports. Airflow was monitored with a rotameter and recorded every 1/2 hr. Temperature & humidity were monitored through silicon probes with transmitters & recorded on a computer (C.I.M. PAC software). The aerosol was generated by micronizing the test material in a micro mill and sifting the fine particles through a 60 mesh stainless steel sieve and finally packing it into a dust separator at 397 PSI. The output of the dust feed generator was mixed with dry filtered air at 18 LPM. The total flow through the chamber was approximately 23 LPM. Chamber concentrations were determined
 Results:

Exposure Concentration (mg/L)	Reported Mortality (NUMBER KILLED/NUMBER TESTED)		
	Males	Females	Combined
0	0/6	0/6	0/12
1.750 (1750 mg/M ³)	0/6	0/6	0/12
3.270 (3270 mg/M ³)	0/6	0/6	0/12

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gravimetrically from the breathing zone using millipore membrane filters at the sampling rate of 2.0 LPM at 0.5, 1.0, 1.5, 2.5 & 3.4 hours into the exposure. Particle size distribution was determined with a TSI aerodynamic particle sizer (Model 3310) and diluter (Model 3302) interfaced to an IBM PS/2-50, using samples from the breathing zone two or three times during each exposure. The mass median aerodynamic diameter and the geometric standard deviation were calculated from the values of cumulative percent mass.

Three groups of animals were used in groups of 12. One group was used as a control. One group was exposed to 1750 mg/M³ and the third group was exposed to 3270 mg/M³. The concentration ranges were 1600-2270 & 2920-3820 mg/M³, respectively.

009569

Gravimetric Concentration mg/m ³	Sampling Time (hours exposure)	MMAO (um)	Geometric standard deviation
1750	0.8	3.0	1.7
	2.7	2.6	1.7
	mean	2.9	1.7
3270	0.8	2.9	1.7
	2.7	2.6	1.7
	3.8	2.9	1.7
	mean	2.8	1.7

A number of preliminary chamber calibration atmospheres were generated before the test, generating the atmosphere as it would be generated for the test and particle size information was gathered. These results the MMAO ranged from 3.01 to 1.72 and 3.37 - 1.74 um. Estimates were made using formula (included) to extrapolate values and it was concluded that for both atmospheres 5% were less than 1 um and 24 + 13% respectively were in 2 um range. These represented the best efforts.

Observations were before + after the exposure and twice daily on work days once daily on week ends. Body weights were recorded at initiation and on days 3, 7 + 14. Necropsy was performed on all animals.

Results

There were no deaths. Clinical signs included hypocoactivity, lacrimation, nasal discharge, anorexia appearance, urine stains, and diarrhea. At 3270 mg/M³ level significant restriction in the rate of weight gain was observed in the males. All other animals gained weight satisfactorily.

At necropsy no gross pathology was observed in any of the animals.

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

11-14-90

Product Manager: (21)

MRID No.: 416160-03

Testing Laboratory: Corp. Tox. Dept. McKay Corp

Author(s): L.P. Sheets

Species: Rabb. F. New Zealand White

Sex: 3 ♂ & 3 ♀ (13 weeks old) Weight: unspecial

Source: Small Stock Industries, Pen Ridge Arkansas

Dosage: 0.1 ml (66 mg)

Test Material: Bayleton Technical, batch 9-00-6001 (Triadine fm)

Quality Assurance (40 CFR §160.12): included

Reviewer: Lucy D. Markanan

Report Date: 11/14/90

Report No. 29-33-FI

Summary:

Tox. Category: IV Classification: core minimum

Procedure (Deviation From §81-4): 0.1 ml of granulated material was instilled in the conjunctival sacs of left eyes. Evaluations were at 1, 2, 4, 7 & 12 hrs and on day 7 according to Draize using penlight.

Results:

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

Comments: Penlight is not adequate to observe lesions in the eye especially when the absence or the presence of opacity is not confirmed by fluorescein dye. 18 week animal is usually too large and too old to be used for any testing in the acute field.

Providing the weight of these animals would have eliminated any doubt about the proper utilization of the animals.

8

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DATA REVIEW FOR SKIN IRRITATION TESTING (581-5)

Product Manager: (21)
 MRID No.: 416160-04
 Testing Laboratory: Comp. Test. Dept. Mobay Corp.
 Author(s): L. P. Sheets
 Species: Rabbit, New Zealand white (Small stock Industries, Pen Ridge, Arkansas)
 Age: 19 weeks old
 Sex: 3♂ + 3♀
 Weight: not specified
 Dosage: 0.5g
 Test Material: Bayleton, Technical, batch 9-00-0001 (Triad, Inc. for)
 Quality Assurance (40 CFR §160.12): included

Summary:

The Primary Irritation Index = 0.29
 Toxicity Category: IV
 Classification: One minimum

Procedure (Deviations From 581-5): The test material was moistened with Topwater and applied to the shaved skin of rabbits. Then it was covered with gauze patches secured with tape. The patches were covered with a piece of plastic and secured with adhesive bandage. At 4 hrs the patches were removed & sites wiped with moist paper towels. Evaluation was at 1, 2, 4, 8 & 72 hours after removal of the patches according to Draize.

Results:

Barely perceptible erythema was observed in 3/6 rabbits.
 all erythema subsided by 72 hrs.

Special Comments:

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19 week old rabbit is too old to serve as a test model. Providing weights would have assured the correct usage of these animals. Weight is indicative of age.

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

008569

Product Manager: (J1) Reviewer: L. Markarian
 MPID No.: 2401499-02 Report Date: 11/14/90
 Testing Facility: Institut für Toxikologie, Bayer AG Report No. 4416
 Author(s): Dr. J. Thyssen + Dr. G. Kimmiche
 Species: Rat, wistar albino
 Age: not specified Observation Days (Post
 Weight: 160 - 180g Exposure): (14); other ()
 Source: W. Kellmann (Kirchbellen)
 Test Material: MEB 6447 (Formaldehyde solution, Bayer AG (Trendelenburg))
 Quality Assurance (40 CFP §160.12): none

Conclusion:

1. LD₅₀ (mg/kg): Males = 568 (507-668) mg/kg; Females = 363 (322-404) mg/kg; Combined = estimated 465.5
2. The estimated LD₅₀ is
3. Tox. Category: ~~II~~. Classification: Supplementary

Procedure (Deviations From §81-1): Test material emulsified in 1:10 mixture of acetone and oil (unpublished). Rats intubated at an unspecified concentration at 30 animals per level (150 + 150) Observed for 14 days. No specific information about body weights. Necropsy was performed at death and at termination. Method of confidence limit calculations not specified.

Results:

Reported Mortality

DOSAGE (mg /kg)	(NUMBER KILLED/NUMBER TESTED)		
	Males	Females	Combined
10		0/15	0/15
25	0/15	0/15	0/30
50	0/15	0/15	0/30
100	0/15	0/15	0/30
250	0/15	1/15	1/30
350	0/15	0/15	0/30
400	2/15	—	2/15
500	6/15	14/15	20/30
750	12/15	15/15	27/30
1000	11/15	13/15	24/30
2500	9/15	14/15	23/30

Symptomology & Gross Necropsy Findings:

Males at 25mg/kg + Females at 10mg/kg remained asymptomatic. At the higher levels observations included "severe impairment of general health" initial mild to severe excitation and ensuing drowsiness, labored respiration and diarrhea. Necropsy of the animals that died abnormalities of the liver (as pallor, friability and faint lobular pattern) ulcer like foci on the glandular mucosae of the stomachs, redness of intestinal mucosae and bloody mucoid matter in the intestines, was observed. The necropsy of the survivors also revealed abnormalities of the liver (edema, lobular pattern at levels 500mg/kg + above and occasional ulcer like foci on the glandular mucosae of the stomachs

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

Product Manager: (21) Reviewer: L. Markarian
 MPID No.: 2401499-02 Report Date: 11/14/90
 Testing Facility: Institut für Toxikologie, Bayer AG Report No. 4416
 Author(s): Dr. J. Thyssen + Dr. G. Kimmeler
 Species: Mice NMRI
 Age: unspecified Observation Days (Post
 Weight: 18-22g Exposure): (14); other ()
 Source: Winkelmann, Kirchbessen
 Test Material: MEB 6447 (Formula shown same as Bayleton (Fenadimfen))
 Quality Assurance (40 CFP §160.12): none

Conclusion:

1. LD₅₀ (mg/kg): Males = 439 (317-1198) mg/kg; Females = 1071 (947-1233) mg/kg; Combined =
2. The estimated LD₅₀ is
3. Tox. Category: 2. Classification: supplementary

Procedure (Deviations From §81-1): Test material emulsified in 1:10 mixture of acetone and oil (unspecified). Mice intubated at an unspecified concentration at 30 animals per level (15♂/15♀) and observed for 14 days. No information about body weight. Necropsy not reported.

Results:

Reported Mortality

DOSAGE (mg /kg)	(NUMBER KILLED/NUMBER TESTED)		
	Males	Females	Combined
25	0/15	0/15	0/30
50	0/15	0/15	0/30
100	0/15	0/15	0/30
250	0/15	0/15	0/30
500	2/15	0/15	2/30
750	5/15	1/15	6/30
1000	7/15	7/15	14/30
1500	11/15	13/15	24/30
2000	14/15	—	14/15
2500	15/15	15/15	30/30

Symptomology & Gross Necropsy Findings:

Mice initially showed excitation followed by drowsiness and labored respiration and "general impairment of health"
The animals at 25 mg/kg level showed no signs of toxicity

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

Product Manager: (21) Reviewer: L. Markarian
 "PID No.": 2401449-02 Report Date: 11/14/90
 Testing Facility: Institut für Toxikologie, Bayreuth Report No. 4416
 Author(s): Dr. J. Thyssen & Dr. G. Kimmich
 Species: Rabbit New Zealand White Female
 Age: unspecified Observation Days (Post
 Weight: 3-4 kg Exposure): (14); other ()
 Source: Winkelmann Kirchbienen
 Test Material: MEB 5447 (Formulation: 100 mg/ml in 1 ml water)
 Quality Assurance (40 CFR §160.12): none

Conclusion:

1. LD₅₀ (mg/kg): Males = _____; Females = _____
approximately 500 mg/kg; Combined = _____
2. The estimated LD₅₀ is _____
3. Tox. Category: ____ Classification: Supplementary

Procedure (Deviations From §81-1): Test material emulsified in 10 ml water
in acetone: oil (unspecified) Rabbits intubated at an unspecified concentration
with 3 female rabbits per level No weight or Necropsy information
available

Results:

DOSAGE (mg /kg)	Reported Mortality		
	(NUMBER KILLED/NUMBER TESTED)		
	Males	Females	Combined
100	—	0/3	
250	—	0/3	
500	—	2/3	
750	—	3/3	

Symptomology & Gross Necropsy Findings:

Deaths occurred between days 1 & 3. Reported signs of
Toxicity included "General health impairment", excitation and
respiratory distress.

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

Product Manager: (21) Reviewer: L. Markarian
 MPID No.: 2401499-02 Report Date: 11/14/90
 Testing Facility: Institut für Toxikologie, Bayer AG Report No. 4416
 Author(s): Dr. Thyssen & Dr. G. Kimmale
 Species: Dog, Beagle
 Age: not specified Observation Days (Post
 Weight: 10-15 kg Exposure): (14) other ()
 Source: Velaz, Prague
 Test Material: MFB 6447 (Formulation shown as Bayer's Bayleton (Triadimenon))
 Quality Assurance (40 CFP \$160.12): none

Conclusion:

1. ID₅₀ (mg/kg): Males = _____; Females = _____; Combined = _____
2. The estimated ID₅₀ is not possible with levels used
3. Tox. Category: ____ Classification: Supplementary

Procedure (Deviations From §81-1): Two dogs per dose level were
intubated with an emulsion of the test material in a 1:10 mixture of
acetone to oil (unperfected) and observed for 14 days. No necropsy or
necropsy information provided.

Results:

DOSAGE (mg /kg)	Penorted Mortality		
	(NUMBER KILLED/NUMBER TESTED)		
	Males	Females	Combined
100		0/2	
250		0/2	
500		0/2	

Symptomology & Gross Necropsy Findings:

No adverse reactions were observed

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

Product Manager: (21) Reviewer: L. Markarian
 MPID No.: 2401499-02 Report Date: 4/14/60
 Testing Facility: Institut für Toxikologie, Bayer AG Report No. 4416
 Author(s): Dr. J. Thyssen + Dr. G. Kimmert
 Species: white leghorn hens, & female quails
 Age: Hens 12-14 months, Quail unspecified Observation Days (Post
 Weight: not specified Exposure): (14); other ()
 Source: hens - Gierlich, Paderborn, Quails - Graf von Degenfeld - Schomburg, Speyer, Baden
 Test Material: MEB 6447 (Formula shown Same as Bayleth (Triadimefn)
 Quality Assurance (40 CFR §160.12): none

Conclusion:

- LD₅₀ (mg/kg): Hens = Estimated 5000 mg/kg; Quails = Estimated 1750-2500 mg/kg; Combined =
- The estimated LD₅₀ is
- Tox. Category: . Classification: Supplementary

Procedure (Deviations From §81-1): white leghorn hens & female Quail
 were intubated with an emulsion of the test material in 1:10 mixture of
 acetone & oil (unspecified) and observed for 14 days. No weight or
 necropsy information provided

Results:

Reported Mortality

DOSAGE (mg /kg)	(NUMBER KILLED/NUMBER TESTED)		
	Hens	Quails	
750	—	0/5	
1000	0/6	1/5	
1750	—	1/5	
2500	0/6	4/5	
3750	0/2		
5000	2/5		

Symptomology & Gross Necropsy Findings:

Only report of Toxic manifestation is "general
 impairment of health for both species."

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

Product Manager: (21) Reviewer: L. Markarian
 MPID No.: 2401499-02 Report Date: 11/14/60
 Testing Laboratory: Institut für Toxikologie & Pharmazie Report No. 4416
 Author(s): Dr. T. Thyssen & Dr. G. Kimmig
 Species: Rat Wistar II albino (Winkelmann, Kirchhoff, Cohn)
 Sex: Male Wt.: 160 - 180 g
 Test Material: MEB 6447 (Formula shown same as Daylen (Triadmetr))
 Quality Assurance (40 CFR §160.12): none

Summary:

- LD₅₀ (mg/kg): Males = _____; Females = _____; Combined = _____;
- The estimated LD₅₀ is _____
- Tox. Category: _____. Classification: Supplementary

Procedure (Deviations From §81-2): Test material was applied to the shaved backs of unspecified number of rats as an emulsion in 1:10 mixture of acetone and oil (unspecified). Collars were put around the necks of the rats & test material was left on the skin for 7 days. Then the skin was washed with soap & water and the animals were checked for 7 more days. No information about weights or necropsy given

Results:

Reported Mortality

DOSAGE (mg/kg)	(NUMBER KILLED/NUMBER TESTED)		
	Males	Females	Combined
1000	unspecified number 0/?		

Symptomology & Gross Necropsy Findings:

All animals survived. It is reported that the "general health condition of the animals was mildly effected by the treatment for up to 4 days.

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

Product Manager: (21) Reviewer: L. Markarian
 MPID No.: 2401494-00 Report Date: 11/14/90
 Testing Facility: Institut für Toxikologie, Bayer AG Report No. 4416
 Author(s): Dr. J. Thyssen & Dr. G. Kimmade
 Species: Rat, wistar II albino
 Age: not specified Observation Days (Post Exposure): (14); Other (7 days)
 Weight: 160 - 180g
 Source: Winkelmann, Kirchbuchen
 Test Material: MEB 6447 (Formula shown same as Bayleton (Tricladinone))
 Quality Assurance (40 CFR §160.12): none

Conclusion:

1. LD₅₀ (mg/kg): Males = 321 (223 - 370) mg/kg; Females = 293 (271 - 311) mg/kg; Combined =
2. The estimated LD₅₀ is
3. Tox. Category: . Classification: Supplementary

Procedure (Deviations From §81-1): Test material was injected intraperitoneally as an emulsion in 1:10 mixture of acetone and oil (unperfumed) at a constant volume of 1ml 100g of body weight. No body weight on Necropsy information given

Results:

Reported Mortality

DOSAGE (mg/kg)	(NUMBER KILLED/NUMBER TESTED)		
	Males	Females	Combined
10	0/15	0/15	0/30
25	0/15	0/15	0/30
50	0/15	0/15	0/30
100	0/15	0/15	0/30
175	0/15	—	0/15
200	2/15	—	2/15
250	4/15	2/15	6/30
300	—	9/15	9/15
350	9/15	13/15	22/15
500	13/15	15/15	28/15
750	15/15	—	15/15

Symptomology & Gross Necropsy Findings:

Symptoms of Toxicity were initial excitation followed by drowsiness and "general ill health", cramps and blood in saliva.

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

Product Manager: (21)

Reviewer: L. Markarian

NPID No.: 2401499-02

Report Date: 11/14/90

Testing Laboratory: Institut für Toxikologie, Bayer AG Report No. 4416

Author(s): Dr. J. Thyssen + Dr. G. Kimmerte

Species: Rat winter II albino 160-180g (Winkelmann, Kirchbach) 5♂ 5♀

Mice NMRI, 12-22 g

Golden Hamsters 70-100g ♂

Rabbits, New Zealand White 3-4 kg

Test Material: MEB 6447 (Formula shown same as Bayleth (Triadimenol))

Quality Assurance Name

Classification: Supplementary

Static Spray				Dynamic Spray			
Species	mg/L	Dead M	Dead F	Species	mg/L	Dead M	Dead F
Rat	0.174	0	0	Rat	0.439	0/20	
Mouse	(4 hr)	0	0		(1 hr)		
Hamster		0	0		0.480		9/20
Rabbit		0	0		(1 hr)		
Rat	0.391	0	0		0.472	0/20	
Mouse	(4 hr)	11/20			(4 hr)		
Hamster		sex not specified			0.555		6/20
Rabbit		0	0		(4 hr)		
		0	0	Mice	0.516	0	
				groups of 10	4 hr	unspecified	
						unk & sex	
				Hamsters	0.516	0	
				groups of 10	4 hr	numbers & sex	
						not specified	

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Two types of acute Inhalation Tests were performed. The results are summarized in the chart

Static Spray Inhalation: Test material was dissolved in 1:1 mixture of Ethanol & Lutrol (concentration not specified). This was sprayed into a 3 M³ chamber with a paint gun (Type Walther P.101 "F") fitted with a 5mm nozzle eight times during a 4 hr exposure at two levels. It is not clear if all the animals were exposed at the same time.

Each spray was of 30 second duration. 120 L of air was extracted from the chamber over a period of 1 hr using a gas meter for analytic determination of the chamber concentration. During each spray the concentration of the test material was higher than between sprays. A fan was used to disperse the test material evenly. It is not reported when the fan was or what type. There was impaction analysis Inhalation Chamber. Atmospheric analysis was conducted according to Eben. The test material was absorbed from the atmosphere in cotton wool then eluted with benzene and concentration determined by gas chromatography. The same method for determination of chamber concentration was used in Dynamic Spray test.

All animals were exposed for 4 hrs and observed for 14 days.

No deleterious effects were observed at 0.172 mg/L level.

At the 0.291 mg/L level the reported observation is "General health of all animals was affected. Mice were worse off than the other species. 11/20 died between 4 hrs + 10 days (sex not specified). They also showed eye & nasal mucosal irritation. This was not observed in the other species."

Dynamic Spray Inhalation

Test material was dissolved in 1:1 mixture of ethanol & water and aerosolized into a dynamic flow chamber (no details given). Aerosol was mixed with air. Rats, mice & hamsters showed no signs of toxicity - Particle analysis was not made. Chamber concentrations were determined as described for Static Spray inhalation.

It is concluded that static spray caused more damage than dynamic spray.

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

Product Manager: (21)
 MRID No.: 2401499-02
 Testing Laboratory: Institute for Toxicology, Bayer AG
 Author(s): Dr. J. Thunemann & Dr. G. Kimmig
 Species: Rabbit, New Zealand White
 Age: not specified
 Sex: not specified
 Weight: 3-4 kg
 Dosage: not specified
 Test Material: MEB 6447 (Formulation shown same as Bayleten (Triad-metn))
 Quality Assurance (40 CFR §160.12): none

Reviewer: Lucy D. Markanan
 Report Date: 11/14/90
 Report No.: 4416

Summary:

The Primary Irritation Index = 1.3

Toxicity Category: _____

Classification: Supplementary

Procedure (Deviations From §81-5): 6 rabbits treated - according to
USDA (1969) standards. Application method not specified. At 72
hrs all showed erythema, but no edema. It is reported that
there was 'superficial corrosion'. It is not known if the
lesions were reversible. No further readings were made.

Additionally human skin tests were conducted
50 mg of test material was applied to the forearms of
3 volunteers covered with cotton wool + adhesive plaster.
At 24 hrs 5/8 showed slight erythema for "a brief time"
At 48 hrs all sites were normal

Special Comments:

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208569

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

Product Manager: (21)
 MRID No.: 2401499-02
 Testing Laboratory: Institut für Toxikologie, Bayer AG
 Author(s): Dr. J. Thyssen & Dr. G. Kimmstedt
 Species: Rabbit, New Zealand white
 Sex: not specified
 Source: Winkelmann, Kirsch, Neeschen
 Dosage: not specified
 Test Material: MEB 6947 (Formulation same as Bayleten (Treadline Co))
 Quality Assurance (40 CFR §160.12): none
 Reviewer: Lucy D. Markarian
 Report Date: 11/14/90
 Report No. 4416

Summary:

Tox. Category: _____ Classification: Supplementary

Procedure (Deviation From §81-4): Two types of tests performed
One with 1 hr exposure, and another with 24 hr exposure. It
is only stated that the test was conducted as USHEW 1972
guidelines dictate. No other details given

Results:

		Observations (number "positive"/number tested)							
		Hour	Days						
		1	1	2	3	4	7	14	21
1 hr exposure	Cornea Opacity	0/6	0/6	0/6					
	Iris	0/6	0/6	0/6					
	Conjunctivae Redness	0/6	1/6	0/6					
	Chemosis	3/6	0/6	0/6					
	Ulceration	0/6	0/6	0/6					
24 hr exposure	Cornea Opacity	0/3	0/3						
	Iris	0/3	0/3						
	Conjunctivae Redness	1/3	0/3						
	Chemosis	0/3	0/3						
	Ulceration	0/3	0/3						

Discharge was not evaluated. It is not clear what is
meant by 1 hr & 24 hr exposure

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