

TSCA HEALTH & SAFETY STUDY COVER SHEET

TSCA CBI STATUS: NONE

8EHQ-0102-15048

RECEIVED
OPT 10/10

2002 JAN 10 AM 11:23

1.0 SUBMISSION TYPE

8(d) **XX 8(e)** FYI 4 OTHER: Specify _____
XX- Initial Submission - Follow-up Submission Final Report Submission
 Previous EPA Submission Number or Title if update or follow-up: _____

Docket Number, if any: #

continuation sheet attached

2.1 SUMMARY/ABSTRACT ATTACHED

(may be required for 8(e); optional for §4, 8(d) & FYI)

X- YES NO

2.2 SUBMITTER TRACKING

NUMBER OR INTERNAL ID

7106 4575 1292 0337 7951

2.3 FOR EPA USE ONLY

3.0 CHEMICAL/TEST SUBSTANCE IDENTITY

Reported Chemical Name (specify nomenclature if other than CAS name):

CAS# 64265-57-2 1-Aziridinepropanoic acid, 2-methyl-, 2-ethyl-2-((3-(2-methyl-1-aziridinyl)-1-oxopropoxy)methyl)-1,3-propanediyl ester

Purity ___%

X- Single Ingredient

Commercial/Tech Grade

Mixture

Trade Name: XAMA-220

Common Name:

CAS Number

NAME

% WEIGHT

Other chemical(s) present in tested mixture

continuation sheet attached

4.0 REPORT/STUDY TITLE

A Primary Eye Irritation Study in Rabbits, Study # 3319.6



8EHQ-02-15048

continuation sheet attached

5.1 STUDY/TSCATS INDEXING TERMS

[CHECK ONE]

HEALTH EFFECTS (HE): X ENVIRONMENTAL EFFECTS (EE): ENVIRONMENTAL FATE (EF):

5.2 STUDY/TSCATS INDEXING TERMS (see instructions for 4 digit codes)

STUDY SUBJECT ROUTE OF EXPOSURE (HE only): VEHICLE OF EXPOSURE (HE only):
 TYPE: EIRR ORGANISM (HE, EE only) RABB EXPOSURE (HE only):
 Other: Other: Other: Other:

6.0 REPORT/STUDY INFORMATION Study is GLP

Laboratory Bayer Toxicology Report/Study Date: 10/31/01

Source of Data/Study Sponsor (if different than submitter) Number of pages -

continuation sheet attached

7.0 SUBMITTER INFORMATION

Janet M. Mostowy, Ph.D.
 VP, Product Safety & Regulatory Affairs
 Bayer Corporation - 100 Bayer Road, Pittsburgh, PA. 15205

Phone: 412-777-3490

Technical Contact: SAME AS ABOVE Phone: ()

continuation sheet attached

8.0 ADDITIONAL/OPTIONAL STUDY COMMENTS

This compound is a commercial product. Information will be made known to appropriate personnel and sources.

continuation sheet attached

Submitter Signature: Janet M. Mostowy

Date: 11/02/01

Page 1 of 2



88020000034

MR 54106

RECEIVED
OPT 10/10

2002 JAN 28 11:23

9.0 CONTINUATION SHEET

Submitter Tracking Number/Internal ID

7106 4575 1292 0337 7951

01-2-28

Continuation of 2.1

As this study indicates that IONAC XAMA[®] 220 causes extremely severe eye irritation, the results are being reported.

Summary

The potential irritant and/or corrosive effects of IONAC XAMA[®] 220 were evaluated on the eyes of New Zealand White rabbits. Each of nine rabbits received a 0.1 ml dose of the test article in the conjunctival sac of the right eye. The eyes of three rabbits were rinsed with sterile water approximately 30 seconds following dosing (rinsed group). The remaining animals were not rinsed (no rinse group). The contralateral eye of each animal remained untreated and served as a control. Test and control eyes were-examined for signs of irritation for up to 21 days following dosing.

No Rinse Group: Exposure to the test article produced corneal opacity in 6/6 test eyes during the study (grade 4 in five animals and grade 3 in one animal). Due to the severity of the swelling observed, the onset of the opacity could not be definitely determined. An opacity severity and/or area score could not be obtained for many time points. Iritis was also noted in 6/6 test eyes (grade 1 for five animals and grade 2 for one animal, when scoring was possible). Again, due to the severity of the swelling, an iritis score could not be obtained for many time points. Conjunctivitis (redness, swelling and discharge) was noted in 6/6 test eyes at the one hour scoring interval, which persisted in all test eyes through study day 7 (grades ranged from 1- 4 for all animals). The corneal opacities and iritis also persisted through study day 7. In addition, on study day 7, injuries were noted in two of the test eyes that were deemed permanent in nature (adherence of the nictitating membrane to the cornea and an opaque area in the anterior chamber). Due to the permanent injuries, it was decided that additional scoring intervals were unnecessary. Additional ocular findings included corneal edema in 1/6 test eyes; neovascularization in 2/6 test eyes; corneal bulging and sloughing of the corneal epithelium in 3/6 test eyes; apparent blanching of the upper and lower lids in 4/6 test eyes; and apparent blanching of the nictitating membrane in 6/6 test eyes.

Rinsed Group: Exposure to the test article produced corneal opacity in 3/3 test eyes by the 48-hour scoring interval (grade 4 in all animals). Due to the severity of the swelling observed, the onset of the opacity could not be definitely determined. An opacity severity and/or area score could not be obtained for many time points. The corneal opacities persisted in 3/3 test eyes through study termination. Iritis was also noted in 3/3 test eyes during the study (grade 1 in 2 animals and grade 2 in one animal). Due to the severity of the swelling, an iritis score could not be obtained for many time points. The iritis resolved in 1/3 test eyes by day 21, but persisted in the remaining two animals through study termination. Conjunctivitis (redness, swelling and discharge) was noted in 3/3 test eyes at the one hour scoring interval, which persisted in all test eyes through study day 21 (grades ranged from 1- 4 for two animals and 2 - 4 for one animal). Permanent injury was considered to have occurred in 1/3 test eyes (opaque area in the anterior chamber). Additional ocular findings included apparent conjunctival tissue adhered to the eye, corneal edema in 1/3 test eyes; sloughing of the corneal epithelium in 2/3 test eyes; and bulging of the nictitating membrane, neovascularization, apparent blanching of the nictating membrane, and corneal bulging in 3/3 test eyes.

Based on the no rinse and rinsed groups, IONAC XAMA[®] 220 is considered to be an extremely severe eye irritant. While irrigation of the test eyes after dosing did not appear to lessen the overall severity of the response, it did seem to extend the time until permanent injury was observed.