

CIBA-GEIGY

Chemicals Division

CIBA-GEIGY Corporation
P. O. Box 18300
Greensboro, North Carolina 27419-8300
Telephone 919 632 6000

~~Contains NO CBI~~

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SEP 19 PM 1:20

88920010377
BEHQ-92-12139

September 4, 1992

Document Processing Center (TS-790)
Office of Toxic Substances
Environmental Protection Agency
401 M. Street, SW
Washington, DC 20460

Attention: Section 8(e) Coordinator (CAP Agreement)

RE: 8E CAP - 0024

Dear Section 8(e) Coordinator:

Enclosed are the original and two copies of a study CIBA-GEIGY Corporation is submitting pursuant to the TSCA Section 8(e) Compliance Audit Program and CAP Agreement number 8E CAP-0024. We are submitting the following information, as required by the CAP Agreement:

Company Name: CIBA-GEIGY Corporation
444 Saw Mill River Road
Ardsley, New York 10502-2699

Attention: Mr. Anthony Di Battista
Manager, Regulatory Affairs & Toxic Substances
Compliance
Telephone (914) 479-2776

Tested Chemical: 1-Propanaminium, 2-hydroxy-N,N,N-trimethyl-,
3-({.gamma.-.omega.-perfluoro-C6-20-alkyl}thio) derivs.,
chlorides'

also identified as: #c-430-42; Lodyne S-106

CAS No.: 70983-60-7

Report Title: Primary Eye Irritation/Corrosion in Rabbits
(Laboratory Project ID MB 89-9497 D, dated 10/04/89)

Summary:

The test material (0.1 mL) was instilled into the conjunctival sac in each of six New Zealand Albino rabbits. Ocular responses were recorded at 1 hour post dose and on days 1, 2, 3, 7, 14, and 21 and scored according to the method of Draize, et al. One

3/10/95 mm
Chemicals Division

2

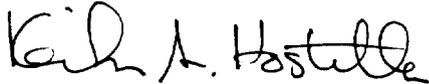
animal was sacrificed on day 7 due to the severity of the ocular reactions. Corneal opacity, noted in 5/6 eyes, persisted to day 21 in 4/5 eyes. Iritis, noted in 6/6 eyes, cleared by day 21 in surviving animals. Systemic signs of diarrhea, few feces, yellow nasal discharge, lethargy, and rales were noted during the observation period. These findings of severe eye irritation and/or corrosion, along with the potential for human exposure, meet the criteria for reporting under TSCA section 8(e).

Category: Unit II.B.2.b

Prior Reporting: Not Applicable

Please call the undersigned at telephone number (919) 632-7237 if you have any questions about this submittal.

Very Truly Yours,



Keith A. Hostetler, Ph.D., DABT
Manager, Hazard Assessment
Chemicals Division

Enclosures

2 copies of this letter
3 copies of the study

cc: A. Di Battista

I.D. #

18321

MB RESEARCH LABORATORIES, INC.

VOLUME 3

STUDY TITLE

#C-430-42, Tox #89-003

PRIMARY EYE IRRITATION/CORROSION IN RABBITS

AUTHOR

Daniel R. Cerven, M.S., Study Director

STUDY COMPLETED ON

10/04/89

PERFORMING LABORATORY

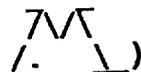
MB Research Laboratories, Inc.
P.O. Box 178
Steinsburg and Wentz Roads
Spinnerstown, PA 18968

LABORATORY PROJECT ID

MB 89-9497 D

CITATION

Cerven, D.R. (1989). #C-430-42, Tox #89-003. Primary Eye Irritation/Corrosion in Rabbits. Unpublished Report by MB Research Laboratories, Inc. (MB 89-9497 D). 10 pp.



MB RESEARCH LABORATORIES, INC.

GOOD LABORATORY PRACTICE STATEMENT

This study meets the requirements for 40 CFR Part 792.

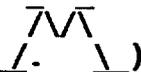
SUBMITTER : CIBA-GEIGY CORPORATION

J. Wright 10/10/89
Signature Date

SPONSOR : CIBA-GEIGY CORPORATION

STUDY DIRECTOR : *Daniel R. Cerven*
Daniel R. Cerven, M.S.

MB Research Laboratories, Inc.



MB RESEARCH LABORATORIES, INC.

PROJECT NUMBER: MB 89-9497 D
TEST ARTICLE : #C-430-42, Tox #89-003
SPONSOR : CIBA-GEIGY CORPORATION
TITLE : PRIMARY EYE IRRITATION/CORROSION IN RABBITS
PROTOCOL # : 264-01

A B S T R A C T

Method Synopsis - Six healthy New Zealand Albino rabbits (5 males-1 female), free from evidence of ocular irritation and corneal abnormalities, were dosed with #C-430-42, Tox #89-003. 0.1 ml of the test article was placed into the conjunctival sac of one eye of each rabbit. Ocular responses were recorded at 1 hour post dose and on days 1, 2, 3, 7, 14 and 21. Sodium fluorescein was used to determine corneal effects after the 24 hour reading. The primary eye irritation score for each rabbit, each day, was calculated. Pretest body weights were recorded.

Summary - One animal was sacrificed on day 7 due to the severity of the ocular reactions. Corneal opacity, noted in 5/6 eyes, persisted to day 21 in 4/5 eyes. Iritis, noted in 6/6 eyes, cleared by day 21 in the surviving animals. Conjunctival irritation, noted in 6/6 eyes, persisted to day 21 in 3/5 eyes. Systemic signs of diarrhea, few feces, yellow nasal discharge, lethargy and rales were noted during the observation period.

Conclusion - Under the conditions of this study, the test article is corrosive.

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PROJECT : MB 89-9497 D
PROT/PAGE: 264-01/ 4 of 10

QUALITY ASSURANCE EVALUATION

The Quality Assurance Unit inspected the study, audited the raw data, reviewed the final report and reported the results to Management and the Study Director on the following dates:

June 5, 1989
July 7, 1989
October 3, 1989

Respectfully submitted:

Oscar M. Moreno 10/13/89
Oscar M. Moreno, Ph.D.

Daniel R. Cerven 4 Oct 89
Daniel R. Cerven, M.S., Study Director

Bonnie W. Cerven 10/3/89
Bonnie W. Cerven, Quality Assurance

Elizabeth J. Altenbach 10/3/89
Elizabeth J. Altenbach, Archivist

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PROJECT : MB 89-9497 D
PROT/PAGE: 264-01/5 of 10

T I T L E O F R E P O R T

PRIMARY EYE IRRITATION/CORROSION IN RABBITS

P R O T O C O L N U M B E R

264-01

O B J E C T I V E

To determine the irritation potential and/or corrosive effects of a test article when instilled into the rabbit eye. This study was designed to comply with the EPA Health Effects Guidelines published by the Office of Toxic Substances.

T E S T A R T I C L E

Source and : CIBA-GEIGY CORPORATION
Date Received: 5/24/89

Label : #C-430-42, Tox #89-003

Storage : The test article was stored at ambient room temperature & humidity.

Test Article
Description : Clear Liquid

Sample
Preparation : Used as received

T E S T A N I M A L S

Six healthy New Zealand Albino rabbits (5 males-1 female), free from evidence of ocular irritation, were selected for this test from a larger group which had been quarantined at least one week. The animals were received from Ace Animals on 4/25 and 5/02/89.

The pretest body weight range was 2.3 - 2.5 kg. The animals were identified by cage notation and a uniquely numbered metal eartag. The animals were housed 1/cage in suspended wire mesh cages. Bedding, placed beneath the cages, was changed twice/week. Fresh Purina Rabbit Chow (Diet #5321) and water were available.

The animal room, reserved exclusively for rabbits on acute tests, was temperature controlled and kept clean and vermin free.

T E S T D A T E S

Study Initiation	(Date Protocol Signed)	:	5/25/89
Experimental Start	(1st Exposure to Test Substance)	:	6/05/89
Experimental Term	(Last date data collected)	:	6/26/89
Draft Report Submitted	(if applicable)	:	9/29/89
Study Completion	(Submission of Final Report)	:	10/4/89

EXPERIMENTAL DESIGN

A dose of 0.1 ml was placed by syringe into the conjunctival sac after gently pulling the lower eyelid away from the eye. After instillation, the lids were held together for approximately 1 second to insure adequate distribution of the test article. One eye of each rabbit was dosed. The contralateral eye served as a control.

TYPE AND FREQUENCY OF OBSERVATIONS

The treated eye of each rabbit was examined for irritation of the cornea, iris and conjunctiva at 1 hour post dose and on days 1, 2, 3, 7, 14 and 21. Ocular reactions were graded according to the numerical Draize technique. The eyes of all rabbits were examined with sodium fluorescein after the 24 hour reading. Additional signs were described.

Body weights were recorded pretest.

The general health of the animals was monitored at each observation time.

ANALYSIS OF DATA

The primary eye irritation score for each rabbit was calculated from the weighted Draize scale. The method of calculation is indicated on the attached scale.

Eye Irritation is the production of reversible changes in the eye following application of the test article to the anterior surface of the eye.

Eye Corrosion is the production of irreversible tissue damage to the eye following application of the test article to the anterior surface of the eye.

RETENTION OF DATA

The raw data is filed at MB Research by MB project number. The final report is filed at MB Research by sponsor name and MB project number.

The test article will be returned to the sponsor upon submission of the final report.

GOOD LABORATORY PRACTICES

This study was conducted in accordance with the Good Laboratory Practices Regulations of the EPA - 40 CFR Part 792.

REVISION OF THE PROTOCOL

There were no revisions to the protocol.

An.#/Sex:	ITEM TISSUE	READING	HOUR D A Y S						
			1	1	2	3	7	14	21
C6631-F	A Cornea	Opacity	0h	0h	0h	0	0	0	0
	B	Area	0	0	0	0	0	0	0
		1. Total=(AxB)x5	0	0	0	0	0	0	0
	C Iris		0	1	1	0	0	0	0
		2. Total = Cx5	0	5	5	0	0	0	0
	D Conjunctiva	Redness	3	3	3	2	1	0	0
	E	Chemosis	3	2	2	2	1	0	0
	F	Discharge	3a	3	1	0	0	0	0
		3. Total=(D+E+F)x2	18	16	12	8	4	0	0
		Totals = 1+2+3	18	21	17	8	4	0	0
	SODIUM FLUORESCEIN		2						
	PRETEST BODY WEIGHT:	2.4 kg							
<hr/>									
C6685-M	A Cornea	Opacity	0h	2	4	3	3p	3p	2pe
	B	Area	0	2	1	2	1	1	1
		1. Total=(AxB)x5	0	20	20	30	15	15	10
	C Iris		0	1	1	1	1	0	0
		2. Total = Cx5	0	5	5	5	5	0	0
	D Conjunctiva	Redness	2	3	3	3	2	0	0
	E	Chemosis	4	4	3	3	3	2	0
	F	Discharge	3a	2a	2a	2a	1	2	0
		3. Total=(D+E+F)x2	18	18	16	16	12	8	0
		Totals = 1+2+3	18	43	41	51	32	23	10
	SODIUM FLUORESCEIN		3						
	PRETEST BODY WEIGHT:	2.3 kg							
<hr/>									
C6697-M	A Cornea	Opacity	0h	0h	2	2	4	SACRIFICED	
	B	Area	0	0	1	1	3	DAY 7*	
		1. Total=(AxB)x5	0	0	10	10	60		
	C Iris		0	1	1	1	?		
		2. Total = Cx5	0	5	5	5			
	D Conjunctiva	Redness	3	3	3	3	3		
	E	Chemosis	3	3	3	3	3		
	F	Discharge	3a	2ab	2a	2a	3ac		
		3. Total=(D+E+F)x2	18	16	16	16	18		
		Totals = 1+2+3	18	21	31	31	78+		
	SODIUM FLUORESCEIN		3						
	PRETEST BODY WEIGHT:	2.3 kg							

An.#/Sex:	ITEM TISSUE	READING	HOUR D A Y S							
			1	1	2	3	7	14	21	
C6699-M	A	Cornea	Opacity	0h	2	3	3	3p	3p	3pe
	B		Area	0	2	1	1	3	2	1
		1. Total=(AxB)x5		0	20	15	15	45	30	15
	C	Iris		1	1	1	1	1	0	0
		2. Total = Cx5		5	5	5	5	5	0	0
	D	Conjunctiva	Redness	3	3	3	3	3	1	1
	E		Chemosis	3	4	4	3	3	2	2
	F		Discharge	3a	2a	2a	2a	2a	2a	1
		3. Total=(D+E+F)x2		18	18	18	16	16	10	8
		Totals = 1+2+3		23	43	38	36	66	40	23
	SODIUM FLUORESCEIN								2	
	PRETEST BODY WEIGHT:	2.4 kg								

C6700-M	A	Cornea	Opacity	0h	2	4	3	4	4pd	4pd
	B		Area	0	2	1	1	2	2	1
		1. Total=(AxB)x5		0	20	20	15	40	40	20
	C	Iris		1	1	1	1	1	1	0
		2. Total = Cx5		5	5	5	5	5	5	0
	D	Conjunctiva	Redness	3	3	3	3	3	1	0
	E		Chemosis	3	4	3	3	3	3	2
	F		Discharge	3a	2a	2a	2ab	2a	2a	0
		3. Total=(D+E+F)x2		18	18	16	16	16	12	4
		Totals = 1+2+3		23	43	41	36	61	57	24
	SODIUM FLUORESCEIN								3	
	PRETEST BODY WEIGHT:	2.5 kg								

C6701-M	A	Cornea	Opacity	0h	0h	0h	2	4p	4pd	3pe
	B		Area	0	0	0	1	2	2	1
		1. Total=(AxB)x5		0	0	0	10	40	40	15
	C	Iris		1	1	1	1	1	?	0
		2. Total = Cx5		5	5	5	5	5		0
	D	Conjunctiva	Redness	3	3	3	3	3	0	0
	E		Chemosis	4	4	3	3	3	3	2
	F		Discharge	3a	2a	2a	2a	2a	1	1
		3. Total=(D+E+F)x2		20	18	16	16	16	8	6
		Totals = 1+2+3		25	23	21	31	61	48	21
	SODIUM FLUORESCEIN								3	
	PRETEST BODY WEIGHT:	2.5 kg								

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PROJECT : MB 89-9497 D
PROT/PAGE: 264-01/ 9 of 10

F O O T N O T E S

a = white discharge

b = red discharge

c = eye irrigated with saline due to extreme white
mucoid discharge blocking access to eye

d = appeared to be a blister on cornea

e = cornea appeared irregular in shape

h = lack of normal luster

p = panus

? = unable to determine due to the extent of opacity

+ = actual total may be higher if all scores were readable

* = animal sacrificed on day 7 due to severity of
reactions

SCALE FOR SCORING OCULAR LESIONS**

(1) CORNEA	
(A) OPACITY--DEGREE OF DENSITY (AREA MOST DENSE TAKEN FOR READING)	
NO OPACITY	0
SCATTERED OR DIFFUSE AREA, DETAILS OF IRIS CLEARLY VISIBLE	1*
EASILY DISCERNIBLE TRANSLUCENT AREAS, DETAILS OF IRIS SLIGHTLY OBSCURED	2*
OPALESCENT AREAS, NO DETAILS OF IRIS VISIBLE, SIZE OF PUPIL BARELY DISCERNIBLE	3*
OPAQUE, IRIS INVISIBLE	4*
(B) AREA OF CORNEA INVOLVED	
ONE QUARTER (OR LESS) BUT NOT ZERO	1
GREATER THAN ONE QUARTER, BUT LESS THAN HALF	2
GREATER THAN HALF, BUT LESS THAN THREE QUARTERS	3
GREATER THAN THREE QUARTERS, UP TO WHOLE AREA	4
SCORE EQUALS A x B x 5	TOTAL MAXIMUM = 80
(2) IRIS	
(A) VALUES	
NORMAL	0
FOLDS ABOVE NORMAL, CONGESTION, SWELLING, CIRCUMCORNEAL INJECTION (ANY OR ALL OF THESE OR COMBINATION OF ANY THEREOF) IRIS STILL REACTING TO LIGHT (SLUGGISH REACTION IS POSITIVE)	1*
NO REACTION TO LIGHT, HEMORRHAGE, GROSS DESTRUCTION(ANY OR ALL OF THESE)	2*
SCORE EQUALS A x 5	TOTAL MAXIMUM = 10
(3) CONJUNCTIVAE	
(A) REDNESS(REFERS TO PALPEBRAL AND BULBAR CONJUNCTIVAE EXCLUDING CORNEA AND IRIS)	
VESSELS NORMAL	0
VESSELS DEFINITELY INJECTED ABOVE NORMAL	1
MORE DIFFUSE, DEEPER CRIMSON RED, INDIVIDUAL VESSELS NOT EASILY DISCERNIBLE	2*
DIFFUSE BEEFY RED	3*
(B) CHEMOSIS	
NO SWELLING	0
ANY SWELLING ABOVE NORMAL(INCLUDES NICTITATING MEMBRANE)	1
OBVIOUS SWELLING WITH PARTIAL EVERSION OF LIDS	2*
SWELLING WITH LIDS ABOUT HALF CLOSED	3*
SWELLING WITH LIDS ABOUT HALF CLOSED TO COMPLETELY CLOSED	4*
(C) DISCHARGE	
NO DISCHARGE	0
ANY AMOUNT DIFFERENT FROM NORMAL(DOES NOT INCLUDE SMALL AMOUNTS OBSERVED IN INNER CANTHUS OF NORMAL ANIMALS)	1
DISCHARGE WITH MOISTENING OF THE LIDS AND HAIRS JUST ADJACENT TO LIDS	2
DISCHARGE WITH MOISTENING OF THE LIDS AND HAIRS, AND CONSIDERABLE AREA AROUND THE EYE	3
SCORE EQUALS (A + B + C) x 2	TOTAL MAXIMUM = 20

THE MAXIMUM TOTAL SCORE IS THE SUM OF ALL SCORES OBTAINED FOR THE CORNEA, IRIS, AND CONJUNCTIVAE. TOTAL MAXIMUM SCORE POSSIBLE = 110

*AN ANIMAL SHALL BE CONSIDERED AS EXHIBITING A POSITIVE REACTION
 **DRAIZE, J.H. ET AL. J. PHARM. EXP. THER. 82:377-390,1944

CONCLUSIONS

NON-IRRITANT	0 OR 1 RABBIT(S) WITH POSITIVE SCORES
INDETERMINATE	2 OR 3 RABBITS WITH POSITIVE SCORES
IRRITANT	4 TO 6 RABBITS WITH POSITIVE SCORES

ULTRAVIOLET FLUORESCENCE SCAN SCORING CODE

- 0 = NEGATIVE
- 1 = POSITIVE WITH AN AREA 1/4 OR LESS
- 2 = POSITIVE WITH AN AREA GREATER THAN 1/4, BUT LESS THAN 1/2
- 3 = POSITIVE WITH AN AREA GREATER THAN 1/2, BUT LESS THAN 3/4
- 4 = POSITIVE WITH AN AREA GREATER THAN 3/4, UP TO WHOLE AREA

Triage of 8(e) Submissions

Date sent to triage: MAY 03 1995

NON-CAP

CAP

Submission number: 12139A

TSCA Inventory:

Y

N

D

Study type (circle appropriate):

Group 1 - Dick Clements (1 copy total)

ECO AQUATO

Group 2 - Linnie Falke (1 copy total)

ATOX SBTOX SEN w/NEUR

Group 3 - Elizabeth Margosches (1 copy each)

STOX CTOX EPI RTOX GTOX
STOX/ONCO CTOX/ONCO IMMUNO CYTO NEUR

Other (FATE, EXPO, MET. etc.): _____

Notes:

THIS IS THE ORIGINAL 8(e) SUBMISSION; PLEASE REFILE AFTER TRIAGE DATABASE ENTRY

For Contractor Use Only	
entire document <u>0</u> 1 2 pages <u>1,2</u>	pages <u>1,2, 17A, B</u>
Notes:	
Contractor reviewer: <u>PAC</u>	Date: <u>4/25/95</u>

CECATS/TRIAGE TRACKING DBASE ENTRY FORM

CECATS DATA: Submission # 8EHQ-0992-12139 SEQ. A

TYPE: INT. SUPP FLWP

SUBMITTER NAME: Ciba-Geigy Corporation

SUB. DATE: 09/04/92 OTS DATE: 09/10/92 CSRAD DATE: 03/10/95

CHEMICAL NAME: Lodyne S-106 CAS# 70983-60-7

- VOLUNTARY ACTIONS:
 0401 NO ACTION REPORTED
 0402 STUDIES PLANNED/IN PROGRESS
 0403 NOTIFICATION OF WORKING METHODS
 0404 LABEL/MSDS CHANGES
 0405 PROCESS/HANDLING CHANGES
 0406 APP. USE DISCONTINUED
 0407 PRODUCTION DISCONTINUED
 0408 CONFIDENTIAL

- INFORMATION REQUESTED: FLWP DATE
 0501 NO INFO REQUESTED
 0502 INFO REQUESTED (TECH)
 0503 INFO REQUESTED (VOL. ACTIONS)
 0504 INFO REQUESTED (REPORTING RATIONALE/F)

DISPOSITION:
0503 REFER TO CHEMICAL SCREENING
0504 CAP NOTICE

INFORMATION TYPE:	P F C	INFORMATION TYPE:	P F C	INFORMATION TYPE:	P F C
0201 ONCO (HUMAN)	01 02 04	0216 EPICLIN	01 02 04	0241 IMMUNO (ANIMAL)	01 02 04
0202 ONCO (ANIMAL)	01 02 04	0217 HUMAN EXPOS (PROD CONTAM)	01 02 04	0242 IMMUNO (HUMAN)	01 02 04
0203 CELL TRANS (IN VITRO)	01 02 04	0218 HUMAN EXPOS (ACCIDENTAL)	01 02 04	0243 CHEM/PHYS PROP	01 02 04
0204 MUTA (IN VITRO)	01 02 04	0219 HUMAN EXPOS (MONITORING)	01 02 04	0244 CLASTO (IN VITRO)	01 02 04
0205 MUTA (IN VIVO)	01 02 04	0220 ECO/AQUA TOX	01 02 04	0245 CLASTO (ANIMAL)	01 02 04
0206 REPRO/TERATO (HUMAN)	01 02 04	0221 ENV. OCCUR/REL/FATE	01 02 04	0246 CLASTO (HUMAN)	01 02 04
0207 REPRO/TERATO (ANIMAL)	01 02 04	0222 EMER INCI OF ENV CONTAM	01 02 04	0247 DNA DAM/REPAIR	01 02 04
0208 NEURO (HUMAN)	01 02 04	0223 RESPONSE REQUEST DELAY	01 02 04	0248 PROD/USE/PROC	01 02 04
0209 NEURO (ANIMAL)	01 02 04	0224 PROD/COMP/CHEM ID	01 02 04	0251 MSDS	01 02 04
0210 ACUTE TOX. (HUMAN)	01 02 04	0225 REPORTING RATIONALE	01 02 04	0259 OTHER	01 02 04
0211 CHR. TOX. (HUMAN)	01 02 04	0226 CONFIDENTIAL	01 02 04		
0212 ACUTE TOX. (ANIMAL)	01 02 04	0227 ALLERG (HUMAN)	01 02 04		
0213 SUB ACUTE TOX (ANIMAL)	01 02 04	0228 ALLERG (ANIMAL)	01 02 04		
0214 SUB CHRONIC TOX (ANIMAL)	01 02 04	0229 METAB/PHARMACO (ANIMAL)	01 02 04		
0215 CHRONIC TOX (ANIMAL)	01 02 04	0240 METAB/PHARMACO (HUMAN)	01 02 04		

USE: PRODUCTION:

TOXICOLOGICAL CONCERN:

SPECIES PET

LOW
MED
HIGH

ONGOING REVIEW

YES (DROP/PREFER)
NO (CONTINUE)
REFR

NON-CBI INVENTORY

YES
NO
HUMAN

CAS SR

-CPSS- 0927952113

0 0 0 0 0 0 0 0 0 0 0

> <ID NUMBER>

8(E)-12139A

> <TOX CONCERN>

H

> <COMMENT>

EYE IRRITATION IN RABBITS IS HIGH CONCERN. 1 FEMALE AND 5 MALE RABBITS WERE ADMINISTERED 0.1 ML OF TEST MATERIAL. DUE TO THE SEVERITY OF THE OCULAR REACTION 1 MALE WAS SACRIFICED ON DAY 7. THE TEST MATERIAL CAUSED CORNEAL OPACITY (5/6), IRITIS (6/6), AND CONJUNCTIVAL REACTION CONSISTING OF REDNESS (6/6), CHEMOSIS (6/6), AND DISCHARGE (6/6). CLINICAL SIGNS INCLUDED DIARRHEA, FEW FECES, YELLOW NASAL DISCHARGE, LETHARGY, AND RALES.

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