PC Code: 044312
EPA File Symbol:

2596-RLL

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

OFFICE OF P

AND TOXIC SUBSTANCES
July 18, 2005

MEMORANDUM

Subject:	Name of Pesticide Product:	Hartz® Reference 123	
	EPA File Symbol:	2596-RLL	
	DP Barcode:	D318725	
	Decision No.:	358347	
	PC Code:	044312	Dinotefuran

From: Breann Hanson, Biologist
Technical Review Branch
Registration Division (7505C)

To: Rita Kumar, RM Team 01
Insecticide-Rodenticide Branch
Registration Division (7505C)

Applicant: The Hartz Mountain Corporation
400 Plaza Drive
Secaucus, New Jersey 07094-3688

FORMULATION FROM LABEL:

Active Ingredient:			% by wt.
044312	Dinotefuran	CAS No. 165252-70-0	14.85%
Inert Ingredients:			85.15%

(1)

Total: 100.00%

ACTION REQUESTED: The Product Manager requests:

> "Please review acute toxicity data for this new cat spot-on product. This is a new use for dinotefuran. MRID #s: 465816-02 to -06. The review needs to be expedited, as asked by Lois Rossi"

BACKGROUND: The Hartz Mountain Corporation has submitted five acute toxicity studies in support of registration for Hartz® Reference 123, EPA File Symbol: 2596-RLL. This is the first product for cat/kitten use with the A.I dinotefuran. The submission included a CSF, label and a letter from the company. The acute oral, acute dermal, acute eye irritation, acute dermal irritation and dermal sensitization studies (MRIDs 465816-02 through -06) were performed at Product Safety Laboratories, Dayton, New Jersey. No acute inhalation toxicity study was submitted. The product is a flea treatment for cats/kittens.

RECOMMENDATIONS: The 5 acute toxicity studies have been reviewed and are classified as acceptable. The acute toxicity profile for Hartz® Reference 123, EPA File Symbol: 2596-RLL, is:

Acute oral toxicity	IV	Acceptable	MRID 46581602
Acute dermal toxicity	IV	Acceptable	MRID 46581603
Acute inhalation toxicity	WAIVED		
Primary eye irritation	III	Acceptable	MRID 46581604
Primary skin irritation	IV	Acceptable	MRID 46581605
Dermal sensitization	Negative	Acceptable	MRID 46581606

The requirement for an acute inhalation toxicity study has been waived. In the past, products of this nature have requested such waivers and they have generally been granted. Spot on flea products are applied in small doses and applied directly to the skin of the animals, thus eliminating most of the exposure to the substance via the inhalation route. On this basis, the waiver is granted.

The registrant is in the process of sending in a formal waiver request, which was not included in the original data package. Upon discussion with TRB employees, it has been decided to grant the waiver without the formal request in hand, though a formal request is being submitted to include in the jacket.

LABELING: Based on the toxicity profile above, the following are the precautionary and first aid statements for this product as obtained from the Label Review System:

PRODUCT ID #: **002596-00155**

PRODUCT NAME:

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals:

SIGNAL WORD: **CAUTION**

Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco.

First Aid:

If in eyes:
-Hold eye open and rinse slowly and gently with water for 15-20 minutes.
-Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.
-Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-xxx-xxxx for emergency medical treatment information.

Reviewer: Breann Hanson **Date:** July 18, 2005
Risk Manager (EPA): Rita Kumar, RM 01

2596-RLL

STUDY TYPE: Acute Oral Toxicity - SD Rat; OPPTS 870.1100; OECD 425

TEST MATERIAL: STE (Dinotefuran: 15.13%, Test Sample # 12563; clear liquid)

CITATION: Durando, J. (2005) Acute Oral Toxicity (Up and Down Procedure) of Hartz STE (Sample 12563). PSL Study ID Number: 16894. Unpublished study prepared by Product Safety Laboratories. May 25, 2005. MRID 46581602.

SPONSOR: The Hartz Mountain Corporation, 400 Plaza Drive, Secaucus, New Jersey 07094-3688

EXECUTIVE SUMMARY: In an acute oral toxicity study (MRID 46581602), 3 female Sprague Dawley rats (Age: 10 weeks; Weight: 205-210 g; Source: Ace animals, Inc., Boyertown, PA) were given a single oral dose of STE (Dinotefuran: 15.13%, Test Sample # 12563; clear liquid) by oral gavage at a limit dose 5,000 mg/kg. The test substance was administered as received. Initially one female was dosed at a limit dose concentration of 5,000 mg/kg and due to the survival in this animal an additional two females were dosed. Individual animal body weights were recorded prior to test substance administration and again on days 7 and 14. The animals were observed for clinical signs of toxicity, behavioural changes and mortality during the first several hours post-dosing and at least once daily thereafter for 14 days. All animals were necropsied on study day 14.

All three animals survived and gained weight throughout the study period. Apart from one test animal exhibiting piloerection and a reduced fecal volume on the initial study day, there were no other signs of toxicity. No gross internal findings were observed at necropsy.

Oral LD_{50} Females => 5,000 mg/kg

Based on the LD_{50}, STE is classified as EPA Toxicity Category IV.

This acute oral study is classified as acceptable. It does satisfy the guideline requirement for an acute oral study (OPPTS 870.1100; OECD 425) in the rat.

COMPLIANCE: Signed and dated GLP, Quality Assurance, and Data Confidentiality statements were provided.

RESULTS and DISCUSSION:

Animals were dosed as follows:

Dosing Sequence	Animal No.	Dose Level mg/kg	Short-Term Outcome	Long-Term Outcome

1	661	5,000	S	S
2	728		S	S
3	729		S	S

S - Survival

AOT425statpgm (Version: 1.0) Test Results and Recommendations
Acute Oral Toxicity (OECD Test Guideline 425) Statistical Program

Date/Time: Wednesday, July 13, 2005, 2:35:43 PM
Data file name: work.dat
Last modified: 7/13/2005 2:35:42 PM

Test/Substance: Hartz
Test type: Limit Test
Limit dose (mg/kg): 5000
Assumed LD50 (mg/kg): Default
Assumed sigma (mg/kg): 0.5

DATA:

Test Seq.	Animal ID	Dose (mg/kg)	Short-term Result	Long-term Result
1	661	5000	O	O
2	728	5000	O	O
3	729	5000	O	O

(X = Died, O = Survived)

Dose Recommendation: The limit test is complete.

SUMMARY OF LONG-TERM RESULTS:

Dose	O	X	Total
5000	3	0	3
All Doses	3	0	3

Statistical Estimates:
The LD50 is greater than 5000 mg/kg.

A. **Mortality** - None, as noted in table.

B. **Clinical observations** - All three animals survived and gained weight throughout the study period. Apart from one test animal exhibiting piloerection and a reduced fecal volume on the initial study day, there were no other signs of toxicity.

C. **Gross Necropsy** - No gross internal findings were observed at necropsy.

D. **Reviewer's Conclusions:** Agree with study author that the LD_{50} => 5,000 mg/kg.

Reviewer: Breann Hanson **Date:** July 18, 2005
Risk Manager (EPA): Rita Kumar, RM 01

STUDY TYPE: Acute Dermal Toxicity - SD Rat; OPPTS 870.1200; OECD 402

TEST MATERIAL: STE (Dinotefuran: 15.13%, Test Sample # 12563; clear liquid)

CITATION: Durando, J. (2005) Acute Dermal Toxicity of Hartz STE (Sample 12563). PSL Study ID Number: 16895. Unpublished study prepared by Product Safety Laboratories. May 25, 2005. MRID 46581603.

SPONSOR: The Hartz Mountain Corporation, 400 Plaza Drive, Secaucus, New Jersey 07094-3688

EXECUTIVE SUMMARY: In an acute dermal toxicity study (MRID 46581603), 5/sex of Sprague Dawley rats (Age: 8-9 weeks; Weight: 264-279 g males, 190-215 g females; Source: Ace Animals, Inc., Boyertown, PA) were dermally exposed to a single application of STE (Dinotefuran: 15.13%, Test Sample # 12563; clear liquid) at a limit dose of 5,000 mg/kg. The test substance was applied evenly over a dose area, covering an area approximately 10% of the total body surface area, covered with a gauze pad and wrapped with tape 24 hours. Individual body weights were recorded prior to dosing then on days 7 and 14. The animals were observed for clinical signs of toxicity, behavioural changes and mortality during the first several hours post- dosing and at least once daily thereafter for 14 days. All animals were necropsied on study day 14.

All animals survived, gained weight and appeared healthy throughout the study period. No gross internal findings were observed at necropsy.

Dermal LD_{50} Males => 5,000 mg/kg
Females => 5,000 mg/kg
Combined => 5,000 mg/kg

Based on the LD_{50} in rats, STE is classified as EPA Toxicity Category IV.

This acute dermal study is classified acceptable. It does satisfy the guideline requirement for an acute dermal study (OPPTS 870.1200; OECD 402) in the rat.

COMPLIANCE: Signed and dated GLP, Quality Assurance, and Data Confidentiality statements were provided.

RESULTS and DISCUSSION:

Dose (mg/kg bw)	Mortality/Number Tested		
	Males	Females	Combined
5000	0/5	0/5	0/10

A. Mortality - None, as noted in table.

B. Clinical observations - All animals survived, gained weight and appeared healthy throughout the study period.

C. Gross Necropsy - No gross internal findings were observed at necropsy.

D. Reviewer's Conclusions: Agree with study author that the combined LD_{50} => 5,000 mg/kg.

Reviewer: Breann Hanson
Risk Manager (EPA): Akiva Abramovitch, RM 07

Date: July 18, 2005

STUDY TYPE: Acute Inhalation Toxicity - SD Rat; OPPTS 870.1300; OECD 403

TEST MATERIAL: STE (Dinotefuran: 15.13%, Test Sample # 12563; clear liquid)

CITATION: Durando, J. (2005) Acute Inhalation Toxicity Study in Rats - Limit Test. Laboratory Study Number: 17166. Unpublished study prepared by Product Safety Laboratories. May 27, 2005. MRID 46564506.

SPONSOR: The Hartz Mountain Corporation, 400 Plaza Drive, Secaucus, New Jersey 07094-3688

EXECUTIVE SUMMARY: In an acute inhalation toxicity study (MRID 46564506), 5/sex Sprague Dawley rats (Age: 9-10 weeks; Weight: 305-370 g males; 195-231 g females; Source: Ace Animals, Inc., Boyertown, PA) were exposed whole body via the inhalation route to Chlorpyrifos G-Pro 2.32% Granules (Chlorpyrifos: 2.30%, Batch # 5026001; tan granules) for 4 hours at a gravimetrically determined concentration of 2.07 mg/L. Prior to exposure the test substance was ground in a mill until able to be sieved through a 3/8" sieve and then aerosolized using a modified Wright Dust Generator. Individual body weights were recorded prior to exposure and again on days 7 and 14. The animals were observed for clinical signs of toxicity,

behavioural changes and mortality prior to exposure and twice during the first 30 minutes of exposure, upon removal from the exposure chamber and at least once daily thereafter. Additional in-chamber observations were limited due to accumulation of the test substance on the wall of the exposure chamber. All animals were necropsied on study day 14.

All animals survived and gained weight throughout the study period. During the first 30 minutes of exposure all animals exhibited hunched posture and decreased activity levels. Upon removal from the exposure chamber most rats exhibited ocular or nasal discharge. Affected animals recovered by day 1 and all animals appeared healthy for the remainder of the study period. No gross internal findings were observed at necropsy.

LC_{50} Combined = > 2.07 mg/L
Males = > 2.07 mg/L
Females = > 2.07 mg/L

Based on the combined LC_{50} of 2.07 mg/L, Chlorpyrifos G-Pro 2.32% Granules is classified as EPA Toxicity Category IV.

This acute inhalation study is classified as acceptable. It does satisfy the guideline requirement for an acute inhalation study (OPPTS 870.1300; OECD 403) in the rat.

COMPLIANCE: Signed and dated GLP, Quality Assurance, and Data Confidentiality statements were provided.

RESULTS and DISCUSSION:

Nominal Conc. (mg/L)	Gravimetric Conc. (mg/L)	MMAD ·m	GSD ·m	Mortality/Number Tested		
				Males	Females	Combined
15.75	2.07	3.4	2.09	0/5	0/5	0/10

Test Atmosphere / Chamber Description:

Gravimetric Conc:	**2.07 mg/L**
Chamber Volume:	**100 L**
Total Airflow:	**50.3-50.7 LPM**
Temperature:	**20-22 °C**
Relative Humidity:	**40-52%**
Time to Equilibrium:	**9 min.**

Test atmosphere concentration -

Gravimetric: Samples were collected at 6 intervals during the exposure from the breathing zones of the animals onto filters. Each filter was weighed before and after sampling. Mass collected was divided by the total volume of air sampled. Collections were carried our for 2 minutes at

airflows of 4 LPM. Sample airflows were measured using a Mass Flowmeter.

Particle size determination - Particle size was determined by sampling the breathing zone of the test animals twice during exposure using a eight-stage anderson cascade impactor. Samples were drawn through the impactor and separated according to their aerodynamic size. The weight deposited on each stage of the impactor was determined and the MMAD and GSD calculated using graphically using two-cycle log-probit axes.

A. **Mortality** - None as noted in table.

B. **Clinical observations** - All animals survived and gained weight throughout the study period. During the first 30 minutes of exposure all animals exhibited hunched posture and decreased activity levels. Upon removal from the exposure chamber most rats exhibited ocular or nasal discharge. Affected animals recovered by day 1 and all animals appeared healthy for the remainder of the study period.

C. **Gross Necropsy** - No gross internal findings were observed at necropsy.

D. **Reviewer's Conclusions:** Agree with study author that the combined LC_{50} =. 2.07 mg/L.

Reviewer: Breann Hanson
Risk Manager (EPA): Rita Kumar, RM 01

Date: July 18, 2005

STUDY TYPE: Primary Eye Irritation - NZW Rabbit, OPPTS 870.2400; OECD 405

TEST MATERIAL: STE (Dinotefuran: 15.13%, Test Sample # 12563; clear liquid)

CITATION: Durando, J. (2005) Primary Eye Irritation of Hartz STE (Sample 12563). PSL Study ID Number: 16896. Unpublished study prepared by Product Safety Laboratories. May 25, 2005. MRID 46581604.

SPONSOR: The Hartz Mountain Corporation, 400 Plaza Drive, Secaucus, New Jersey 07094-3688

EXECUTIVE SUMMARY: In a primary eye irritation study (MRID 46581604), 0.1 mL of STE (Dinotefuran: 15.13%, Test Sample # 12563; clear liquid) was instilled into the conjunctival sac of the right eye of 3 male young adult New Zealand white rabbits (Source: Robinson Services, Inc., Clemmons, NC). The untreated left eye served as a control. Animals were then scored for irritation at 1, 24, 48, 72 hours and on study days 4 and 7. Animals were observed for clinical signs of toxicity and behavioural changes at least daily throughout the study period. Irritation was scored according to Draize.

Apart from the eye irritation noted there were no other signs of toxicity and all animals appeared healthy. 1-hour post instillation all three treated eyes exhibited corneal opacity (score 1), iritis (score 1) and conjunctival redness (score 2-3), chemosis (score 2) and discharge (score 3). Irritation gradually decreased thereafter. No positive irritation was noted on study day 4. All treated eyes recovered completely by day 7.

In this study, the formulation is moderately irritating to the eye. STE is classified as EPA Toxicity Category III.

This study is classified as acceptable. It does satisfy the guideline requirement for a primary eye irritation study (OPPTS 870.2400; OECD 405) in the rabbit.

COMPLIANCE: Signed and dated GLP, Quality Assurance, and Data Confidentiality statements were provided.

RESULTS AND DISCUSSION:

	Number "positive"/number treated					
	Hours				Days	
Observations	1	24	48	72	4	7
Corneal Opacity	3/3	3/3	3/3	2/3	0/3	0/3
Iritis	3/3	3/3	3/3	1/3	0/3	0/3
Conjunctivae:						
Redness*	3/3	3/3	3/3	3/3	0/3	0/3
Chemosis*	3/3	3/3	1/3	0/3	0/3	0/3
Discharge*	3/3	3/3	3/3	0/3	0/3	0/3

* Score of 2 or more required to be considered "positive"

A. Observations - Apart from the eye irritation noted there were no other signs of toxicity and all animals appeared healthy. 1-hour post instillation all three treated eyes exhibited corneal opacity (score 1), iritis (score 1) and conjunctival redness (score 2-3), chemosis (score 2) and discharge (score 3). Irritation gradually decreased thereafter. No positive irritation was noted on study day 4. All treated eyes recovered completely by day 7.

B. Reviewer's Conclusions: Agree with the study author that the test substance is moderately irritating to the eye.

PC Code: 044312
EPA File Symbol:

2596-RLL

Reviewer: Breann Hanson
Risk Manager (EPA): Rita Kumar, RM 01

Date: July 18, 2005

STUDY TYPE: Primary Dermal Irritation - NZW Rabbit; OPPTS 870.2500; OECD 404

TEST MATERIAL: STE (Dinotefuran: 15.13%, Test Sample # 12563; clear liquid)

CITATION: Durando, J. (2005) Primary Skin Irritation of Hartz STE (Sample 12563). PSL Study ID Number: 16897. Unpublished study prepared by Product Safety Laboratories. May 25, 2005. MRID 46581605.

SPONSOR: The Hartz Mountain Corporation, 400 Plaza Drive, Secaucus, New Jersey 07094-3688

EXECUTIVE SUMMARY: In a primary dermal irritation study (MRID 46581605), 3 male, young adult New Zealand white rabbits (Source: Robinson Services, Inc., Clemmons, NC) were dermally exposed to 0.5 mL of STE (Dinotefuran: 15.13%, Test Sample # 12563; clear liquid). The test substance was applied to an intact dose site on each animal, covered with a gauze pad and then wrapped with semi-occlusive tape for 4 hours. Animals were observed for clinical signs of toxicity and behavioural changes at least daily throughout the study period. Dermal irritation was scored according to the Draize system at 1, 24, 48 and 72 hours post-patch removal.

From 1 to 24 hours post-patch removal all three treated sites exhibited very slight erythema (score 1) and edema (score 1). Irritation gradually decreased thereafter. Animals were free from dermal irritation at 72 hours.

In this study, the formulation is slightly irritating to the skin. STE is classified as EPA Toxicity Category IV.

This study is classified as acceptable. It does satisfy the guideline requirement for a primary dermal irritation study (OPPTS 870.2500; OECD 404) in the rabbit.

COMPLIANCE: Signed and dated GLP, Quality Assurance, and Data Confidentiality statements were provided.

RESULTS and DISCUSSION:

2596-RLL

INDIVIDUAL SKIN IRRITATION SCORES
ERYTHEMA/EDEMA

Animal Number	Sex	Hours			
		1	24	48	72
13732	M	1/1	1/1	1/0	0/0
13733		1/1	1/1	1/0	0/0
13734		1/1	1/1	0/0	0/0
Severity of Irritation - Mean Score		1/1	1/1	0.66/0	0/0

A. Observations - From 1 to 24 hours post-patch removal all three treated sites exhibited very slight erythema (score 1) and edema (score 1). Irritation gradually decreased thereafter. Animals were free from dermal irritation at 72 hours.

B. Results - Test substance is slightly irritating. PDI = 1.2.

C. Reviewer's Conclusions - Agree with study author that the test substance is slightly irritating to the skin.

Reviewer: Breann Hanson **Date:** July 18, 2005
Risk Manager (EPA): Rita Kumar, RM 01

STUDY TYPE: Dermal Sensitization - Hartley guinea pigs; OPPTS 870.2600; OECD 406

2596-RU

TEST MATERIAL: STE (Dinotefuran: 15.13%, Test Sample # 12563; clear liquid)

CITATION: Durando, J. (2005) Dermal Sensitization (Buehler Method) of Hartz STE (Sample 12563). PSL Study ID Number: 16898. Unpublished study prepared by Product Safety Laboratories. May 25, 2005. MRID 46581606.

SPONSOR: The Hartz Mountain Corporation, 400 Plaza Drive, Secaucus, New Jersey 07094-3688

EXECUTIVE SUMMARY: In a dermal sensitization study (MRID 46581606) with STE (Dinotefuran: 15.13%, Test Sample # 12563; clear liquid), 30 female, young adult Hartley albino guinea pigs (Weight: 318-370 g; Source: Elm Hill Breeding Labs, Chelmsford, MA) were tested using the Buehler method. Once a week for 3 weeks, 0.4 mL of undiluted test substance was applied to the left side of 20 test animals, secured and wrapped with tape to secure the patch into place. After 6 hours of exposure, the chambers were removed and the test sites cleaned of residual test material. Approximately 24 and 48 hours after each induction the animals were observed for dermal irritation and graded. Twenty-seven days after the first induction dose, a challenge dose of 0.4 mL of a 75% w/w mixture of test substance in distilled water was applied to a naive site on the right side of each test animal, as well as to a group of 10 naive control guinea pigs. The controls were maintained under identical environmental conditions during the induction phase for the test animals. The 75% w/w mixture was established in a preliminary irritation test as the highest non-irritating concentration to be used for challenge. Approximately 24 and 48 hours after the challenge dose, all animals were observed for dermal irritation and graded.

The procedures were validated using alpha-Hexylcinnamaldehyde (HCA) as the positive control substance.

During the induction phase very faint erythema (score 0.5) was noted at most test sites.

At challenge, very faint erythema (score 0.5) was noted at 7/20 test sites at the 24 hour reading. Irritation persisted at 2/20 sites through 48 hours. Very faint erythema was noted at 3/10 naive control sites at the 24 hour reading with irritation persisting at 1/10 sites through 48 hours.

Based on this study, STE **is not a dermal sensitizer**.

This study is classified as acceptable. It does satisfy the guideline requirement for a primary dermal sensitization study (OPPTS 870.2600; OECD 406) in the Guinea pig. .

COMPLIANCE: Signed and dated GLP, Quality Assurance, and Data Confidentiality statements were provided.

I. PROCEDURE

A. Induction - Once a week for 3 weeks, 0.4 mL of undiluted test substance was applied to the left side of 20 test animals, secured and wrapped with tape to secure the patch into place. After 6 hours of exposure, the chambers were removed and the test sites cleaned of residual test material.

Approximately 24 and 48 hours after each induction the animals were observed for dermal irritation and graded.

C. Challenge - Twenty-seven days after the first induction dose, a challenge dose of 0.4 mL of a 75% w/w mixture of test substance in distilled water was applied to a naive site on the right side of each test animal. The 75% w/w mixture was established in a preliminary irritation test as the highest non-irritating concentration to be used for challenge. Approximately 24 and 48 hours after the challenge dose, all animals were observed for dermal irritation and graded.

D. Naive Controls - A naive group of 10 test animals were treated with the test substance at challenge only. These controls were maintained under identical environmental conditions during the induction phase for the test animals. Approximately 24 and 48 hours after the challenge dose, all animals were observed for dermal irritation and graded.

II. RESULTS and DISCUSSION:

A. Reactions and duration - During the induction phase very faint erythema (score 0.5) was noted at most test sites.

At challenge, very faint erythema (score 0.5) was noted at 7/20 test sites at the 24 hour reading. Irritation persisted at 2/20 sites through 48 hours. Very faint erythema was noted at 3/10 naive control sites at the 24 hour reading with irritation persisting at 1/10 sites through 48 hours.

B. Positive control - The procedures were validated using alpha-Hexylcinnamaldehyde (HCA) as the positive control substance. The testing for the positive control study was completed August 12, 2004. This study was performed from January-March 3, 2005.

C. Reviewer's Conclusions: Agree with study author that the test substance is not a dermal sensitizer.

1. **DP BARCODE:** D318725
2. **PC CODE:** 044312
3. **CURRENT DATE:** 18/JULY/2005
4. **TEST MATERIAL:** STE (Dinotefuran: 15.13%, Test Sample # 12563; clear liquid)

Study/Species/Lab Study # /Date	MRID	Results	Tox. Cat.	Core Grade

2596-RLL

Acute oral toxicity/rat Product Safety Laboratories 16894/05-25-2005	46581602	LD_{50} => 5,000 mg/kg (females)	IV	A
Acute dermal toxicity/rat Product Safety Laboratories 16895/05-25-2005	46581603	LD_{50} => 5,000 mg/kg (males, females combined)	IV	A
Primary eye irritation/rabbit Product Safety Laboratories 16896/05-25-2005	46581604	positive corneal opacity, iritis, conjunctivae for all treated eyes through 48 hrs. No positive irritation on study day 4.	III	A
Primary dermal irritation/rabbit Product Safety Laboratories 16897/05-25-2005	46581605	slight irritant. No irritation at 72 hours	IV	
Dermal sensitization/guinea pig Product Safety Laboratories 16898/05-25-2005	46581606	is not a sensitizer	–	A

Core Grade Key: **A =Acceptable, S = Supplementary, U = Unacceptable, W = Waived**