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

OFFICE OF PREVENTION, PESTICIDES
AND TOXIC
SUBSTANCES

12/MAY/2003

MEMORANDUM

Subject: Tolerance Petition ID#: 1E06257
DP Barcode: D296257
Decision No.:304364
PC Code: 900435 Octanamide, N,N-dimethyl-
800435 Decanamide, N,N-dimethyl-

From: James O. Parker, Environmental Scientist
Minor Use Inerts and Emergency Response Branch
Registration Division (7505C)

To: Kathryn Boyle
Minor Use Inerts and Emergency Response Branch
Registration Division (7505C)

Applicant: The C.P. Hall Company
311 South Wacker Drive
Chicago, Illinois 60606

FORMULATION FROM LABEL: N/A

ACTION REQUESTED: The Inerts Team request a review of an acute six pack (900435 Octanamide, N,N-dimethyl-, and 800435 Decanamide, N,N-dimethyl-).

RECOMMENDATION:

The six studies have been reviewed and are classified as acceptable.

The acute toxicity profile for Halcomid M-8-10 (PC Code: 900435 Octanamide, N,N-dimethyl- and 800435 Decanamide, N,N-dimethyl-) is as follows:

acute oral toxicity	III	Acceptable	MRID 45369714
acute dermal toxicity	II	Acceptable	MRID 45369716
acute inhalation toxicity	IV	Acceptable	MRID 45369717
primary eye irritation	I	Acceptable	MRID 45369721
primary skin irritation	II	Unacceptable[1]	MRID 45369723
dermal sensitization	No	Acceptable	MRID 45369724

[1] However, the study is acceptable for regulatory purposes.

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.

PC CODE: 900435 Octanamide, N,N-dimethyl- and 800435 Decanamide, N,N-dimethyl**-**

PRODUCT NAME: N/A

PRECAUTIONARY STATEMENTS

SIGNAL WORD: DANGER

SPANISH SIGNAL WORD: PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand the label, find someone to explain it to you in detail.)

Hazards to Humans and Domestic Animals:

Restricted Use Pesticide due to toxicity categories. For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification. Child Resistant Packaging Required.

Corrosive. Causes irreversible eye damage. May be fatal if absorbed through skin. Causes skin irritation. Harmful if swallowed. Do not get in eyes, on skin or on clothing. Wear protective eyewear (goggles, face shield, or safety glasses). Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse. Wear long-sleeved

shirt and long pants, socks, chemical-

resistant footwear, and chemical-resistant gloves (such as Natural Rubber, Selection Category A).
When mixing and loading wear a chemical resistant apron.

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.

If on skin: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

If swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor. Do not give anything to an unconscious person.

NOTE TO PHYSICIAN: Note to PM/CRM/Registrant: The proposed label should contain a Note to Physician which addresses the category I Primary Eye Irritant toxicity. The following statements are suggested types of information that may be included, if applicable:
- technical information on symptomatology;
- use of supportive treatments to maintain life functions;
- medicine that will counteract the specific physiological effects of the pesticide;
- company telephone number to specific medical personnel who can provide specialized medical advice. NOTE TO PHYSICIAN: Note to PM/CRM/Registrant: The proposed label should contain a "Note to Physician". The following statements are suggested types of information that may be included, if applicable: - technical information on symptomatology; - use of supportive treatments to maintain life functions; - medicine that will counteract the specific physiological effects of the pesticide; - company telephone number to specific medical personnel who can provide specialized medical 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: James Parker **Date:** Feb 20, 2004
Product Manager (EPA): Kathryn Boyle, Inerts Team

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

TEST MATERIAL: Halcomid M-8-10

SYNONYMS: 900435 Octanamide, N,N-dimethyl-, and 800435 Decanamide, N,N-dimethyl-

CITATION: James J. Kreuzmann, .(1998) Acute Oral Toxicity in Rats- Median Lethal Dosage Determination. Hill Top Research, Inc. (formerly Hill Top Biolabs, Inc.), Main and Mill Streets, Miamiville, OH 45147. Laboratory Report number 90-4047-21 (A). February 11,1998. MRID No. 45369714.

SPONSOR: C.P. Hall, 7300 South Central Avenue, Chicago, IL 60638

EXECUTIVE SUMMARY: In an acute oral toxicity study (MRID # 453697-14), groups (five male and five female) of Sprague-Dawley, rats (Source: Harlan Sprague-Dawley, Inc), (Age: young adult, Weight: 215-225 g females and 249-281g males) were given a single oral dose of (Hallcomid M-8-10) in (a undiluted test article) at doses of 0.625, 1.25, 2.5 and 5.0 g/kg bw. Animals were then observed for (14) days.

Oral LD_{50} Males = 1770 mg/kg bw
Oral LD_{50} Females = 1770 mg/kg bw
Oral LD_{50} Combined = 1770 mg/kg bw

EPA Toxicity Category III (Toxicity based on the LD_{50})

At the dose of 5.0 g/kg bw, ten deaths occurred between days 0 and 1 of the observation period. At a dose of 2.5 g/kg bw three deaths occurred in four treated animals between days 0 and 1 of the observation period. At a dose of 1.25 g/kg bw zero deaths occurred in four treated animals during the observation period. At the dose of .625 g/kg bw no deaths occurred during the observation period.

At 0.625 g/kg bw Hallcomid M-8-10, clinical observations included depression, rapid breathing, cool body and shallow breathing. No signs of gross pathology were observed.

At 1.25 g/kg bw Hallcomid M-8-10, clinical observations included rapid breathing, gasping, cold body, shallow respiration, red stain around nostrils, fecal stains, slightly depressed, salvia stains, reddish brown discharge from genitals and clear greezy fluid around anal area. One of two animals displayed clinical signs of discolored internal organs (such as reddish-orange intestines), thickened stomach walls, and green fecal material (in addition to other unreadable necropsy

observations).

At 2.5 g/kg bw Hallcomid M-8-10, clinical observations included moderately-severely depressed, brownish yellow urine stains, dried red material around nostrils, rapid respiration, salivation, cold body and gasping. One of two animals displayed pale lungs, whitened pancreas (congested into a solid mass), slightly viscous (greenish-brown) viscous liquid and slightly yellow fluid with white tissue like material in stomach and darkened-atrophied intestines.

At 5.0 g/kg bw Hallcomid M-8-10, clinical observations included reddish brown stain around one eye and salvia stains around mouth. All animals administered 5.0 g/kg b.w. Hallcomid M-8-10 displayed necropsy findings. These necropsy observations included: pale intestines, yellow stomach with yellowish liquid and white mucous inside.

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:

Dose (mg/kg bw)	Mortality/Number Tested		
	Males	Females	Combined
5	5/5	5/5	10/10
2.5	1/2	2/2	3/4
1.25	0/2	0/2	0/4
0.625	0/2	0/2	0/4

Statistics - The oral LD_{50} was calculated to be 1.77g/kg using the Gar and Weil (with 95% confidence with limits of 1.02 g/kg to 3.08 g/kg.

A. Mortality - At the dose of 5.0 g/kg bw ten deaths occurred between days 0 and 1 of the observation period. At a dose of 2.5 g/kg bw three deaths occurred in four treated animals between days 0 and 1 of the observation period. At a dose of 1.25 g/kg bw zero deaths occurred in four treated animals during the observation period. At the dose of .625 g/kg bw no deaths occurred during the observation period.

B. Clinical observations - When administered .625 g/kg bw Hallcomid M-8-10, clinical observations included: depression, rapid breathing, cool body, shallow breathing.

When administered 1.25 g/kg bw Hallcomid M-8-10, clinical observations included: rapid breathing, gasping, cold body, shallow respiration, red stain around nostrils, fecal stains, slightly depressed, salvia stains, reddish brown discharge from genitals and clear greezy fluid around anal area.

When administered 2.5 g/kg bw Hallcomid M-8-10, clinical observations included: moderately-severely depressed, brownish yellow urine stains, dried red material around nostrils, rapid respiration, salivation, cold body and gasping.

When administered 5.0 g/kg bw Hallcomid M-8-10, clinical observations included: reddish brown stain around one eye and salvia stains around mouth.

C. Gross Necropsy - All animals administered 0.625 g/kg b.w. Hallcomid M-8-10, showed no signs of a gross pathology.

When administered 1.25 g/kg b.w. Hallcomid M-8-10, one of two animals displayed clinical signs of discolored internal organs (such as reddish-orange intestines), thickened stomach walls, and green fecal material (in addition to other unreadable necropsy observations).

One of two animals administered 2.5 g/kg b.w. Hallcomid M-8-10 displayed pale lungs, whitened pancreas (congested into a solid mass), slightly viscous (greenish-brown) viscous liquid and slightly yellow fluid with white tissue like material in stomach and darkened-atrophied intestines.

All animals administered 5.0 g/kg b.w. Hallcomid M-8-10 displayed necropsy findings. These necropsy observations included: pale intestines, yellow stomach with yellowish liquid and white mucous inside.

D. Reviewer's Conclusions: The acute LD50 value for Hallcomid M-8-10 was estimated to be 1770 mg/kg which places Hallcomid M-8-10 into toxicity category III.

E. Deficiencies -none

Reviewer: James Parker **Date:** March 4, 2004
Product Manager (EPA): Kathryn Boyle, Inerts Team

STUDY TYPE: Acute Dermal Toxicity - S-D Rrat; OPPTS 870.1200; OECD 402

TEST MATERIAL: Hallcomid M-8-10 Batch No. 002949

SYNONYMS: 900435 Octanamide, N,N-dimethyl-, and 800435 Decanamide, N,N-dimethyl-

CITATION: Dr. W. Bomann (1995) Hallcomid M-8-10 (CN.: Hallcomid (mixture of amides) study for acute dermal toxicity in rats. Institute of Toxicological Agro-chemicals, Fachbereich Toxicology, BAYER AG, Fried-rich-Ebert-Str. 217-333 42096, Wuppertal. Laboratory Report number 23785 (Study number T 1055380). February 22, 1995. MRID No. 45369716.

SPONSOR: C.P. Hall, 7300 South Central Avenue, Chicago, IL 60638

EXECUTIVE SUMMARY: In an acute dermal toxicity study (MRID # 45369716, groups (5 male and 5 female) of SPF-bred Winstar Hsd Win:Hu rats (Source: Harlan Winkelmann GmbH, Borchen, District of Paderborn), (age of males:10-11 weeks, age of females: >/= 16 weeks and weight of male: 242-286 grams, weight of females: 228-260 grams) were dermally exposed to 0.6 mg/cm² (50mg/kg b.w.) and 41.6-45.1 mg/cm² (5000 mg/kg b.w). in males and 0.6 mg/cm² (50mg/kg b.w) and 16.3-16.1 mg/cm² (2000mg/kg b.w.) mg/cm² in females of the sum of N,N-Dimethyl hexane, octane, decane and dodecane acid amides: 98.33% in cellulose to 4 X 5 cm (50mg/kg b.w.) and 5.5 X 5.5 (5000 mg/kg b.w in males and 2000 mg/kg b.w in females) of skin surface. Test sites were covered with a(n) occlusive dressing for (24) hours. Animals were then observed for (14) days.

Dermal LD_{50} Males = 2000 mg/kg bw
Dermal LD_{50} Females => 400 - < 2000 mg/kg bw

EPA LD_{50} Toxicity Category II (Toxicity based on LD_{50} of females animals).

When rats were treated with Halcomid at 50, 200 and 400 mg/kg b.w., no deaths occurred. However, two out of five males treated with 2000 mg/kg b.w. died and five of five females died. Only the males were treated with 5000 mg/kg b.w. in which case five of five animals died.

Treated animals experienced the following effects 30 minutes after administration of Hallcomid M-8-10: piloerection, heavy breathing, decreased motility, decreased reactivity, poor response (no reflexes), spastic gait, temporary tremor, abdominal position, hypothermia, increased salivation, increased lacrimation, pallor, cyanosis, chromodacryorrhea (red tears), red incrusted margin of eye, palpebral fissure (eyelid separation) and red urine . All signs were reversible within the post-treatment observation period.

Some of the localized effects included the following:: Reddening, dark color, scarring, squamation (scaly), partly hardening of the skin and formation of scab. The skins effects lasted from day 2 to the end of the study.

Animals which died during the observation period displayed the following changes: brownish-red urinary bladder with fluid contents and moderate discoloration of the liver. Sacrificed animals displayed no changes at the end of the post-treatment observation period.

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
50 mg/kg b.w.	0/5	0/5	0/10
200 mg/kg b.w.	0/5	0/5	0/10
400 mg/kg b.w.	No Data	0/5	0/5
2000 mg/kg b.w.	2/5	5/5	7/10
5000 mg/kg b.w.	5/5	No Data	5/5

Statistics - The oral LD_{50} was based on the fact that there was no recorded deaths in the animals at 400 mg/kg b.w. and the fact that all females died at 2000 mg/kg b.w.

A. Mortality - When administered treated with Halcomid at 50, 200 and 400 mg/kg b.w., no deaths occurred. However, two out of five males treated with 2000 mg/kg b.w. died and five of five females died. Only the males were treated with 5000 mg/kg b.w. inwhich case five of five animals died.

B. Clinical observations - Treated animals experienced the following effects 30 minutes after administration of Hallcomid M-8-10: piloerection, heavy breathing, decreased motility, decreased reactivity, poor response (no reflexes), spastic gait, temporary tremor, abdominal position, hypothermia, increased salivation, increased lacrimation, pallor, cyanosis, chromodacryorrhea (red tears), red incrusted margin of eye, palpebral fissure (eyelid separation)

and red urine . All signs were reversible within the post-treatment observation period.

Some of the localized effects included the following:: Reddening, dark color, scarring, squamation (scaly), partly hardening of the skin and formation of scab. The skins effects lasted from day 2 to the end of the study.

C. Gross Necropsy - Animals which died during the observation period displayed the following changes: brownish-red urinary bladder with fluid contents and moderate discoloration of the liver. Sacrificed animals displayed no changes at the end of the post-treatment observation period.

D. Reviewer's Conclusions: Due to the LD_{50} in female SPF-bred Winstar Hsd Win:Hu rats of greater >400 and <2000 mg/kg bw which places Hallcomid M-8-10 in toxicity category II.

E. Deficiencies - None

Reviewer: James Parker **Date:** March 4, 2004
Product Manager (EPA): Kathryn Boyle, Inerts Team

STUDY TYPE: Acute Inhalation Toxicity -S-D rat; OPPTS 870.1300; OECD 403

TEST MATERIAL: Hallcomid M-8-10

SYNONYMS: 900435 Octanamide, N,N-dimethyl-, and 800435 Decanamide, N,N-dimethyl-

CITATION: Dr. J. Pauluhn (1991) Hallcomid M-8-10 acute inhalation toxicity study in rat. Institute of Toxicological Agro-chemicals, Fachbereich Toxicology, BAYER AG, Friedrich-Ebert-Str. 217-333 42096, Wuppertal. Laboratory Report number 20386 (Study number T9039809). January 1, 1991. MRID No. 45369717.

SPONSOR: C.P. Hall, 7300 South Central Avenue, Chicago, IL 60638

EXECUTIVE SUMMARY: In an acute inhalation toxicity study (MRID 45369717), groups (five male and five female) of SPF-bred Winstar, rats strain: Bor: WISW (SPF-Cpb) (Source: Winklelmann, Borchen, District of Paderborn), (Age:2-3 mouths, Weight: 170-210 grams) were exposed (nose only) via the inhalation route to Hallcomid M-8-10 in either undiluted form (generation of high concentrations) or as a mixture with polyethylene glycol 400 and ethanol (generation of low concentrations) for 4 hours at concentrations of 0.69 mg/L air. Animals were then observed for 14 days.

LC_{50} Males = 3.5 mg/L
LC_{50} Females = 3.5 mg/L
LC_{50} Combined LC_{50} = 3.5 mg/L

EPA Toxicity Category IV based on LC_{50} in males.

On high-dose male rat died. Clinical observations included reddened nose, reduced motility, piloerection (in group 3 treated with 586.4 Hallcomid M-8-10); blood encrusted and swollen rhinarium, serious nasal discharge, heavy decreased respiration, piloerection and ungroomed fur (in group 4 treated with 2007.6 Hallcomid M-8-10); and stridor (weezing), serious nasal discharge, sniffing noises, steppage (walking problems), prostration (lying on abdomen), atony, cyanosis and piloerection.

Animals which died during testing displayed the following conditions during pathological examination: lung distended, liver-like and edematous; hydrothorax, nose and rhinarium reddened and swollen; pale spleen; marbled kidneys; and content of duodenum slimy-yellow. Animals sacrificed at the end of the post-treatment observation period displayed no evidence of internal changes during pathological examination.

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)	Actual Conc. (Gravimetric/ Analytical) (mg/L)	MMAD µm	GSD µm	Mortality/Number Tested		
				Males	Females	Combined
1000	118.5 mg/m³ ≈0.1185 mg/L	1.37	1.42	0/5	0/5	0/10
5000	586.4 mg/m³≈0.5864 mg/L	1.23	1.37	0/5	0/5	0/10
20000	2007.6 mg/m³≈2.01 mg/L	1.14	1.46	0/5	0/5	0/10
50000	3550.7 mg/m³≈3.56 mg/L	1.27	1.49	1/5	0/5	1/10

Note: Particle size was determined using an aerodynamic particle sizer with laser velocimeter (TSI-APS 3300).

Test Atmosphere / Chamber Description:

Chamber Volume:	**20 L**
Airflow:	**83 ml/sec LPM**
Temperature:	**22 °C**
Relative Humidity:	**30 %**
Time to Equilibrium:	**6 min.**

Test atmosphere concentration: Sampling took place at the start of the study (after reaching steady state concentration), at mid-point and towards the end of the study. The total air volume per analysis was 10 1 air/minute.

Statistics - The LC_{50} was basically a limit test. The laboratory uses a procedure based on the C.I. Bliss Maximum Likelihood Method (1938).

A. Mortality - as noted in table.

B. Clinical observations - Clinical observations included reddened nose, reduced motility, piloerection (in group 3 treated with 586.4 Hallcomid M-8-10); blood encrusted and swollen rhinarium, serious nasal discharge, heavy decreased respiration, piloerection and ungroomed fur (in group 4 treated with 2007.6 Hallcomid M-8-10); and stridor (weezing), serious nasal discharge, sniffing noises, steppage (walking problems), prostration (lying on abdomen), atony, cyanosis and piloerection.

C. Gross Necropsy - Animals which died during testing displayed the following conditions during pathological examination: lung distended, liver-like and edematous; hydrothorax, nose and rhinarium reddened and swollen; pale spleen; marbled kidneys; and content of duodenum slimy-yellow. Animals sacrificed at the end of the post-treatment observation period displayed no evidence of internal changes during pathological examination.

D. Reviewer's Conclusions: Due to the LC_{50} in male SPF-bred Winstar, rats (strain: Bor:WISW (SPF-Cpb)) of 3.557 mg/L, Hallcomid M-8-10 is considered toxicity category IV.

E. Deficiencies - none

Reviewer: James Parker **Date: March 5, 2004**
Product Manager (EPA): Kathryn Boyle, Inerts Team

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

TEST MATERIAL: Hallcomid M-8-10

SYNONYMS: 900435 Octanamide, N,N-dimethyl-, and 800435 Decanamide, N,N-dimethyl-

CITATION: James J. Kreuzmann, (2001) Primary Eye Irritation Study in Rabbits Without Rinsing. Hill Top Research, Inc. (formerly Hill Top Biolabs, Inc.), Main and Mill Streets, Miamiville, OH 45147. Laboratory Report number 90-4047-21 (D). May 8 1990. MRID No. 45369721

SPONSOR: The C.P. Hall Company, 7300 South Central Avenue Chicago, IL 60638

EXECUTIVE SUMMARY: In a primary eye irritation study [MRID 45369721], (0.1 ml) of Hallcomid in a undiluted test material was instilled into the conjunctival sac of the left eye of one male New Zealand White rabbit (Source:USDA approved supplier) for 24 hours._Animals were then observed for 4 days. Irritation was scored by the Draize Method.

In this study, formulation is extremely irritating to the eye based on MAS of 24, 48 and 72 hours and MIS of 24 hours, EPA Toxicity Category I.

Clinical observations included corneal strain in right eye, blistered appearance, opacity, extreme swelling, white mucous like substance in bottom lid of the eye, bleached appearance to the nictitating membrane, thickened appearance to conjunctiva and vascularization.

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:

Observations	Irritation Scores for Animal # 1-560-R				
	Hours				Day
	1	24	48	72	4
Corneal Opacity	1	1	2	2	3
Iritis	1	1	1	1	1
Conjunctivae:					
Redness	1	2	3	3	3
Chemosis	4	4	4	4	4
Discharge	3	3	1	0	1

A. Observations - Clinical observations included corneal strain in right eye, blistered appearance, opacity, extreme swelling, white mucous like substance in bottom lid of the eye, bleached appearance to the nictitating membrane, thickened appearance to conjunctiva and vascularization.

B. Reviewer's Conclusions: Due to the corrosive nature of Hallcomid M-8-10 to the eye, Hallcomid M-8-10 is placed in toxicity category I.

C. Deficiencies - The researcher only tested one animal.

Reviewer: James Parker **Date:** March 5, 2004
Product Manager (EPA): Kathryn Boyle, Inerts Team

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

TEST MATERIAL: Hallcomid M-8-10 (purity and Lot No. not reported)

SYNONYMS: 900435 Octanamide, N,N-dimethyl-, and 800435 Decanamide, N,N-dimethyl-

CITATION: Teresa D. Morris (1990) Corrosivity Study in Rabbits.Hill Top Research, Inc. (formerly Hill Top Biolabs, Inc.), Main and Mill Streets, Miamiville, OH 45147. Laboratory Report number 90-4206-21(A). September 28 1990. MRID No. 45369723

SPONSOR: C.P. Hall, 7300 South Central Avenue Chicago, IL 60638

EXECUTIVE SUMMARY: In a primary dermal irritation study (MRID 45369723), three male and three female New Zealand White rabbits (Source: Myrtles's Rabbitry), were dermally exposed to 0.5 ml of Hallcomid M-8-10 in undiluted test material to a 1 inch X 1 inch test site on the left side of the rabbit. Test sites were covered with a(n) semi-occlusive dressing for 4 hours. Animals were then observed for 2 days. Irritation was scored by the Draize Method.

Based on the moderate to severe erythema and severe edema observed at 48 hours, Hallcomid M-8-10 is classified as EPA Toxicity Category II.

Clinical observations included spreading of erythema beyond treated site, light brown discoloration on site, blanched appearance to site, erythema at parameter, dark brown discoloration, and coriaceousness on site.

This study is classified as Unacceptable due to the fact (no 1 or 72 hour observation) that the first dermal observation was not conducted until 4 hours and a 72-hour observation was not completed. It does not satisfy the guideline requirement for a primary dermal irritation study (OPPTS 870.2500; OECD 404) in the rabbit.

However, the Agency will accept this study for regulatory purposes based upon the severe irritation noted at 48 hours. The Agency does not believe that a new study will provide additional information.

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

RESULTS and DISCUSSION:

A. Observations - Clinical observations included spreading of erythema beyond treated site, light brown discoloration on site, blanched appearance to site, erythema at parameter, dark brown discoloration, and coriaceousness on site.

B. Results - Due the absence of extreme irritation in the single animal. The study was completed by adding five additional animals.

C. Reviewer's Conclusions - Due to the extreme irritation of Hallcomid, Toxicity category II was established for this study

D. Deficiencies - This study is classified as Unacceptable due to the fact (no 1 or 72 hour observation) that the first dermal observation was not conducted until 4 hours and a 72-hour observation was not completed.

Reviewer: James Parker **Date:** March 5, 2004
Product Manager (EPA): Kathryn Boyle, Inerts Team

STUDY TYPE: Dermal Sensitization - Guinea Pig; OPPTS 870.2600; OECD 406

TEST MATERIAL: Hallcomid M-8-10

SYNONYMS: 900435 Octanamide, N,N-dimethyl-, and 800435 Decanamide, N,N-dimethyl-

CITATION: James J. Kreuzmann,(2001) Dermal Sensitization in Guinea Pigs. Hill Top Research, Inc. (formerly Hill Top Biolabs, Inc.), Main and Mill Streets, Miamiville, OH 45147. Laboratory Report number 90-4047-21 (E). May 8 1990. MRID No. 45369724

SPONSOR: C.P. Hall, 7300 South Central Avenue Chicago, IL 60638

EXECUTIVE SUMMARY: In a dermal sensitization study (MRID 45369724) with 2.5% Hallcomid M-8-10 in acetone, Hartley albino guinea pigs from U.S.D.A. approved supplier (weight: 418-559 grams in females and 458-623 in males) were tested using the method of Ritz and Buehler. Identify positive control material. List clinical signs (systemic and local for LLNA) and mortality.

In this study, Hallcomid M-8-10 is not a dermal sensitizer.

Following primary challenge, there were no grades of 1 produced in the test or control animals. The incidence of grade +/- in the test group (14-20) was compared to that of the naive control group (7-10). The incidence and severity of these responses in the test group were essentially comparable to those produced by the naive control group indicating that sensitization had not been induced.

This study is classified as Acceptable. It does satisfy the guideline requirement for a 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 - Clip the left shoulder of each animal with a small animal clipper the day before exposure. Expose the clipped areas and restrain the animals. Repeat the procedure at the same site once a week for the next two weeks for a total of three approximate six-hour exposures (the interval between induction exposures may vary from five to nice days). Should excessive irritation, as defined by the study director, appear at the induction sites during the induction phase, chambers may still be placed within the same left shoulder area, taking care to avoid this irritation. After the last induction exposure , leave the animals untreated for approximately two weeks (12-16 days) before primary challenge.

B. Challenge -The test animals, which have had three previous exposures to the test material at appropriate intervals, are again exposed in the challenge phase approximately two weeks after the last induction exposure.

C. Naive Controls - In addition, ten naive animals, which have never been exposed to the test material, are concurrently treated with the same test material concentration.

II. RESULTS and DISCUSSION:

A. Reactions and duration -The potential of Hallcomid M-8-1 as a 5% w/v formulation in 80% ethanol/ 20% distilled water, to produce delayed contact hypersensitivity in guinea pigs was evaluated using an adaptation of the method of Ritz and Buehler.

Following primary challenge, there were no grades of 1 produced in the test or control animals. The incidence of grade +/- in the test group (14-20) was compared to that of the naive control group (7-10). The incidence and severity of these responses in the test group were essentially comparable to those produced by the naive control group indicating that sensitization had not been induced

B. Positive control -1-Chloro-2,4-Dinitrobenzene (DNCB)

C. Reviewer's Conclusions: Agree with the study author.

D. Deficiencies - None

ACUTE TOX ONE-LINERS

1. **DP BARCODE:** D297637
2. **PC CODE:** 900435, 800435
3. **CURRENT DATE:** 04/15/2004
4. **TEST MATERIAL:** Hallcomid M-8-10

Study/Species/Lab Study # /Date	MRID	Results	Tox. Cat.	Core Grade
Acute oral toxicity / rat Hill Top Research 90-4047-21 (A) / 02-11-98	45369714	LD_{50} = 1770 mg/kg (males and females)	III	A
Acute dermal toxicity / rat Institute of Toxicological Agro-chemicals 23785; T 1055380 / 02/22/95	45369716	LD_{50} =>400 - <2000 mg/kg (males and females)	II	A
Acute inhalation toxicity / rat Institute of Toxicological Agro-chemicals 20386; T9039809 / 01-01-91	45369717	LC_{50} = 3.5 mg/L (males and females)	IV	A
Primary eye irritation / rabbit Hill Top Research 90-4047-21 (D) / 05-08-90	45369721	Test had to be halted after testing one rabbit due to the corrive effects.	I	A
Primary dermal irritation / rabbit Hill Top Research 90-4206-21(A) / 09-28-90	45369723	Based on the moderate to severe erythema and severe edema observed at 48 hours, Hallcomid M-8-10 is classified as EPA Toxicity Category II..	II	U
Dermal sensitization / guinea pig Hill Top Research 90-4047-21 (E) / 05-08-90	45369724	The incidence and severity of these responses in the test group were essentially comparable to those produced by the naive control group indicating that sensitization had not been induced.	---	A

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