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

EPA United States Environmental Protection Agency **Office of Pesticide Programs**

MEMORANDUM

11/30/2017

SUBJECT: Revised Acute Toxicity Review for *Project Flash Spray*, EPA Reg. No.: **9480-RU** to Update Data Review for the Dermal Irritation Study, DP 440586

FROM: Boris S. Yurchak, Chemist
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THRU: Jenny Tao, Team Leader (Acute Toxicology)
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TO: Zeno Bain / Terria Northern
Regulatory Management Branch I
Antimicrobials Division (7510P)

Registrant: Professional Disposables International, Inc			
Action Code A540	Decision No.: 529432	Submission No.: 1003580	E-Sub No.: n/a
MRID No(s).: 50282507, 50282507_revised			

Formulation from label			
PC code(s)	CAS #(s)	Active Ingredient(s)	% weight
000595	7722-84-1	Hydrogen Peroxide	4.04
		Other Ingredients	95.96
		Total	100.00

I. BACKGROUND

The Registrant, Professional Disposables International, Inc, has submitted six acute toxicity studies to support the application for pesticide registration of their product: *Project Flash Spray*, EPA Reg. No. 9480-RU. The proposed product is a disinfectant spray for hard non-porous non-food contact surfaces.

In the Agency's previous acute toxicity review (D440586, 10/10/2017), the Toxicity Category for skin irritation could not be determined due to major derivations from the Guideline in the original skin irritation study, MRID 50282507. The registrant submitted additional information from the laboratory (email dated Friday, October 20, 2017 1:45 PM), stating that the timing to take the dermal irritation scores in the original skin irritation study was "from the actual application of the test article". According to the laboratory's email, "All observation times in the table [in the original study report] are indicative from the time the test article is initially applied to the skin", i.e., the 4-hour exposure period was included in all the observation times when the dermal irritation scores were taken, while the Guideline requires that dermal irritation scores are taken ***after*** the removal of the test substance. Then shortly after speaking to the Agency to explain how the dermal irritation study was conducted, the registrant revised the original study report (amended and re-issued report date 10/30/2017) as well as the test protocol, according to the Guideline requirement, i.e., revising all observation times to indicate that dermal irritation scores were taken after the removal of test article. However, the revised study report was written based on the same set of data that were used to generate the original study report! The registrant, along with the laboratory, indicated that they incorrectly wrote the original study report.

II. FINDINGS/RECOMMENDATIONS

2.1. The Agency cannot accept the revised skin irritation study report based on the fact that (1) same set of data were used for both the original and the revised study reports; (2) no new study and/or data were generated to correctly follow the Guideline requirements; and (3) the scientific integrity could have potentially been damaged.

2.2. The original Primary Skin Irritation study (MRID 50282507) is deemed to be unacceptable because the test protocol was not composed according to OCSPP 870.2500. Therefore, this major deviation from the Agency's test guideline affects how to interpret the test result. Detailed comments are provided in the Data Evaluation Record (DER) for this endpoint. A Toxicity Category III is assigned for regulatory purpose only.

2.3. The acute toxicity profile of *Project Flash Spray*, EPA Reg. No. 9480-RU, is currently:

GRN	Study	MRID	Toxicity Category	Status
870.1100	Acute Oral Toxicity	50282503	IV	Acceptable
870.1200	Acute Dermal Toxicity	50282504	IV	Acceptable
870.1300	Acute Inhalation Toxicity	50282505	IV	Acceptable
870.2400	Primary Eye Irritation	50282506	III	Acceptable
870.2500	Primary Skin Irritation	50282507	III*	Unacceptable
870.2600	Dermal Sensitization	50282508	Not a sensitizer	Acceptable

* Assigned for regulatory purpose only.

CONCLUSION:

The primary skin irritation study/data provided for the proposed product EPA Reg. No. 9480-RU does not satisfy the data requirements to support its registration. A Toxicity Category III is assigned for skin irritation endpoint for regulatory purpose only.

IV. PRODUCT LABELING

1. SIGNAL WORD: **CAUTION**

2. The statement, "**Keep Out of Reach of Children (KOROC)**", is required. It should appear immediately below the front-panel signal word "CAUTION".

3. The Agency's *Label Review Manual* (https://www.epa.gov/pesticide-registration/label-review-manual) indicates the following human-hazard precautionary statements:

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

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

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 eye. Call a poison control center or doctor for treatment advice

IF ON SKIN OR CLOTHING: 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.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. For general information on product use, etc., call the National Pesticides Information Center at 1-800-858-7378. You may also contact 1-800-222-1222, the poison control center, for emergency medical treatment information.

DATA REVIEW FOR ACUTE DERMAL IRRITATION TESTING (OCSPP 870.2500)

Product Manager: Zeno Bain /33
MRID No.: 50282507

Reviewer: B. Yurchak
Study Completion Date: 3/4/2016
Project No.: 16-012-2

Testing Laboratory: Tox Monitor Laboratories, Inc
Author: Michael Kukulinski, B.S., L.A.T.G.

Quality Assurance (40 CFR §160): Included

Test Material: *Project Flash*, Clear liquid

Dosage: 0.5 mL

Animals: Rabbit, New Zealand albino
- **Sex:** 3 Females
- **Age:** Young adult, 10-12 weeks old
- **Weight:** 2.82-3.39 kg
- **Source:** Kuiper Rabbitry, Gary, Indiana

Summary:

1. **Toxicity Category:** III (assigned)
2. **Classification:** Unacceptable

PII: cannot be determined

Deviations from Guideline 870.2500 and/or other comments:

1. The time for grading the dermal reaction was conducted following the application of the test substance patch. Therefore, additional 4 hours were included for all Observation Time except for the first 30 minutes. This major deviation from the test guideline altered the test result.
2. After 4 hours of exposure to the test substance, the <u>excess</u> material was removed from the site. As per the recommendation, <u>residual</u> test substance should be generally removed.

Results:

Five-tenths of a milliliter of the test substance was applied to one 6-cm^2 intact dose site on each animal. The test substance was then covered with a 2.5 cm^2 – 2 layer gauze patch held in place with non-irritating Kendal Curity Standard Porous Tape and the patch was then covered with a semi-occlusive plastic overwrap secured in place with Kendal Curity Standard Porous Tape for the duration of the exposure period.

At the end of the 4-hour contact period excess material was removed from the site; and 30 minutes after removal, the site was observed and scored.

Within 24 hours of patch removal, one treated site exhibited well-defined erythema and all three sites exhibited slight edema. The overall incidence and severity of irritation decreased gradually with time. All animals were free of erythema and edema by 72 hours. The Primary Irritation Index (PDII) was found to be 1.08 by the study laboratory based on erythema and edema.

Individual Dermal Irritation Scores following the four-hour exposure

ERYTHEMA/EDEMA

Animal No.	Sex	Observation Time				
		4.5 hrs	24 hrs	48 hrs	72 hrs	Day7
25	F	1/2	0/0	0/0	0/0	0/0
26	F	2/2	1/0	1/0	0/0	0/0
27	F	1/2	1/0	0/0	0/0	0/0
Avg		1.33/2.0	0.67/0	0.33/0	0/0	0/0
Total		3.33	0.67	0.33	0/0	0/0

Reviewer's Comments:

1. The reviewer disagrees with the test result and the conclusion. The Observation Time in the table above was a time "after initiation of treatment", as stated in the test protocol, i.e., it included the 4-hour exposure time of the test substance patch except for the first 30 minutes (it was recorded as 4.5 hrs in the table above). The Observation Time for grading the dermal reaction should be the time **after** removal of the patch, according to the test guideline.
2. Only data related to 4.5 hours of the observation time is acceptable, i.e., the first 0.5 hour after patch removal, which was in compliance with the requirements of the guideline OPPTS 870.2500.
3. Based on the data at 4.5-hour Observation Time and the clinical observation at the test site in the submitted acute dermal toxicity study (MRID 50282504), a Toxicity Category III can be assigned to the Skin Irritation endpoint for regulatory purpose only.
4. Although the data seemed to imply a Toxicity Category IV, a Toxicity Category III, instead, is assigned to the Skin Irritation endpoint for regulatory purpose only, due to (1) major deviation from the Guideline requirement, (2) uncertainties in interpreting the test result, and (3) the clinical observation at the test site in the submitted acute dermal toxicity study (MRID 50282504).