Abbreviated toxicity testing report of Organic Fresh®

Toxicology testing, also known as **safety assessment**, or **toxicity testing**, is the process of determining the degree to which a substance of interest negatively impacts the normal biological functions of an organism, given a certain exposure duration, route of exposure, and substance concentration.

The in vitro toxicology testing of Organic Fresh® was conducted by researchers who followed established toxicology test protocol for this specific substance, mode of exposure, exposure environment, duration of exposure, and for this particular organism of interest (as scientifically acceptable representative of the *in vivo* environment, and for a particular developmental stage of interest.

These toxicology tests were conducted as final stage of the development of Organic Fresh® since it is intended for human exposure as application in the human environment. These *in vivo* tests were conducted to determine safe exposure doses in model organisms as indication of its acceptability in the human environment.

The following tests were undertaken, and their results reflected below:

1. LD_{50} Acute Oral Toxicity Testing

The table below reflects the test results of the laboratory tests done for acute oral toxicity

Sex	Number of animals	Animal weight changes ($\bar{X}$ ±SD) (g)				Mortality	Rates of death
		0 days (start)	7 days	14 days	14 days weight gain		
Male	10	20.3±1.43	24.9±1.47	30.1± 1.48	9.8±0.45	0	0
Female	10	20.3±0.88	23.5±0.79	28.1± 0.75	7. 8 ± 0. 39	0	0

Neither abnormal clinical symptoms nor poisoning deaths occurred in all the experimental animals during the 14 days observation period. The body weights of animals did not significantly change during the study.

This indicates that the animals did not experience unnecessary stress as a result of the testing. In terms of the gross anatomy no remarkable pathological findings were made on any of the animals after the 14 days observation period. The LD 50 > 5021.1mg/kg.

Conclusion

The oral LD50 of the sample on the sample animals are higher than 5000mg/kg. This suggested "no actual toxic", according to the acute toxicity classification criterion.

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2. Repeated Skin Toxicity Testing

The purpose of this test was to assess the possibility of causing skin irritation when Organic Fresh® was applied repeatedly on the skin. The table inserted below reflect the scores of skin irritation measured for a variety of possible skin conditions following the repeated application of Organic Fresh® as per test protocols.

	Score of skin reactions					
Test schedule	Test sample			Control		
	Erythema	Oedema	Total	Erythema	Oedema	Total
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	0	0	0	0	0	0
5	0	0	0	0	0	0
6	0	0	0	0	0	0
7	0	0	0	0	0	0
8	0	0	0	0	0	0
9	0	0	0	0	0	0
10	0	0	0	0	0	0
11	0	0	0	0	0	0
12	0	0	0	0	0	0
13	0	0	0	0	0	0
14	0	0	0	0	0	0
The average score of skin irritation per animal after 14 days			0			0
The average score of skin irritation per animal per day			0			0

Conclusion

The test results clearly indicate that, in terms of the tested irritation response categories, the test sample is non-irritating to the skin. Where included in a wound healing gel, in vivo tests have further confirmed that Organic Fresh® also possesses inherent skin healing, scar reduction and skin smoothing properties.

3. Acute Eye Irritation Testing

The purpose of this test is to ascertain the degree of irritation that Organic Fresh® will directly cause when coming into contact with the eyes. The eyes were examined after I hour, 24 hours, 48 hours and 72 hours following the application of Organic Fresh® directly into the eyes of the sample animals. The following categories were tested, and the passing scores associated with each category are as follows:

Cornea < 1, Iris< 1, Conjunctivae< 2, Chemosis < 2.

The table below indicates the scores that were recorded following the tests:

Animal *no.*	Parts	Value of acute eve irritation								Mean score
		One hour		24 hours		48 hours		72 hours		
		Sample group	Control group	Sample group	Control group	Sample group	Control group	Sample group	Control group	
I	Cornea	0	0	0	0	0	0	0	0	0
	Iris	0	0	0	0	0	0	0	0	0
	Conjunctivae	0	0	0	0	0	0	0	0	0
	Chemosis	0	0	0	0	0	0	0	0	0
2	Cornea	0	0	0	0	0	0	0	0	0
	Iris	0	0	0	0	0	0	0	0	0
	Conjunctivae	I	0	0	0	0	0	0	0	0
	Chemosis	0	0	0	0	0	0	0	0	0
3	Cornea	0	0	0	0	0	0	0	0	0
	Iris	0	0	0	0	0	0	0	0	0
	Conjunctivae	0	0	0	0	0	0	0	0	0
	Chemosis	0	0	0	0	0	0	0	0	0

Conclusion

According to value observations irritation responses recorded for each of the categories, no acute eye irritation was observed or recorded. This is very clear indication that Organic Fresh® is non- irritating to the eye.

4. Acute Inhalation Toxicity Testing

The purpose of the inhalation toxicity testing was to ascertain whether any signs of toxicity or behavioural changes were observed in sample animals following continued exposure to Organic Fresh® inhalation at normal dilution quantities.

The table below reflects the values of the observations following the 14-day observation period.

Sex	Number of animals	Weight (X ±SD) (g)				Mortality	Rate of death
		0 day	7 days	14 days	14 days weight gain		
Male	10	19.1±1.17	23.7±1.20	28.3±1.51	9.2 ± 0.5 2	0	0
Female	10	20.1±1.35	23.7±1.44	27.1±1.54	7.0±0.59	0	0

Weight changes are measured as an indication of any inhalation stress experienced since changes in food intake will be the most important and reliable indicator of such stress levels.

Conclusion

The results clearly indicate that the animals experienced no inhalation stress during the observation period. All animals in fact gained weight, indication a totally stress-free experience.

Organic Fresh® has therefore passed all the necessary independent personal contact tests to support the statement that it is a safe and health friendly product with strong sanitation properties.

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