



SUPER LABORATORY
www.superlab.com.tw

中華民國實驗室認證體系
行政院環保署環境檢驗認證



Animal Skin Hypersensitivity Test Using BIO-ALPOSOL

Client	GreenTech Biotechnology Environmental Co., LTD	Report No.	SL92E9019-epi 2/2m
Client Address	3F, No.97, Jingye 1 st . Road, Taipei, Taiwan, ROC		
Specimen I.D.	BIO-ALPOSOL, 10ppm	Date Received	June 3, 2003
Specimen I.D.	9019E01	Date Issued	July 7, 2003
Specimen description	Fluid	Specimen collector:	<input checked="" type="checkbox"/> contract research
Remarks : 1. This report includes: 5 pages totally. It will be in vain if separated and/or partially copied. 2. The results in this report are valid only to the specimen sent by client. 3. All report content is used as references, not for advertising, sales promotion and notarial purpose.			



Client : GreenTech Biotechnology Environmental Co., LTD

Preliminary Report Final Report

Report No. : SL92E9019-epi2/2m

Page 1, 5 pages totally

台美檢驗科技有限公司

地址：248 台北縣五股工業區五權六路15號6樓
電話：(02) 2298-1887 · 2298-1932
傳真：(02) 2290-2510



SUPER LABORATORY
www.superlab.com.tw

中華民國實驗室認證體系
行政院環保署環境檢驗認證

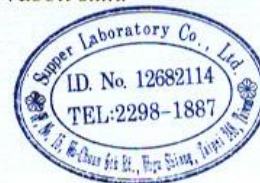
SL
D. No
L:22
行

Animal Skin Hypersensitivity Test Using BIO-ALPOSOL

Abstract

Rabbit's skin hypersensitivity test was conducted with 3 of 2 kg-weight rabbits by using BIO-ALPOSOL chemical (provided by GreenTech Biotechnology Co., Ltd.). One day before the experiment, the hair of the dorsal part of rabbit was removed by electrical razor, and marked crossly with sterile needle. In this experiment, 1 mL of BIO-ALPOSOL solution was dropped onto the gauze by a sterile plastic dropper, then the gauze was put on the lower part of naked dorsal skin in three home-bred rabbits (about 2kg in weight), and the upper part of naked dorsal skin was acted as blank control group. Any local response on the lower part of back skin in the home-bred rabbit was observed after 1, 24, 48 and 72 hours. Results indicate that hypersensitive response was observed neither on the lower nor upper part of dorsal skin. According to evaluated grade of skin hypersensitivity, the grades for both the tested and the control group are zero. Therefore, we concluded that BIO-ALPOSOL solution had not possessed any adverse hypersensitivity to the home-bred rabbit skin.

Research Content



1. Objective:

The test will evaluate whether there is any hypersensitivity exerted by BIO-ALPOSOL on the rabbit' skin

2. Specimen:

BIO-ALPOSOL chemical (in liquid form) is provided by GreenTech Biotechnology Environmental Co., Ltd. Original concentration of BIO-ALPOSOL solution is used for this test..

Client : GreenTech Biotechnology Environmental Co., LTD

Preliminary Report Final Report

Report No. : SL92E9019-epi2/2m

Page 2, 5 pages totally

台美檢驗科技有限公司

地址：248 台北縣五股工業區五權六路15號6樓
電話：(02) 2298-1887 · 2298-1932
傳真：(02) 2290-2510



SUPER LABORATORY
www.superlab.com.tw

中華民國實驗室認證體系
行政院環保署環境檢驗認證

orato
1268
98-18
Shing, 18

3. Materials and Methods:

(1) Animal :

Select 3 home-bred rabbits, about 2kg in weight. Before experiment, there should be have no edema or erythema on each rabbit.

(2) Tested dose:

BIO-ALPOSOL solution in original concentration was used as tested agent. One day before the experiment, the hair of the dorsal part of rabbit was removed by electrical razor, and marked crossly with sterile needle. After that, about 1mL of BIO-ALPOSOL solution was added to a piece of gauze (about 2cm×3cm in size), this gauze consists of four layers. Naked skin on the lower dorsal part of rabbit are covered firstly with the gauze, and then tighten the gauze well. Finally, the gauze was removed after 24 hours closed contact, Any response on the local skin of home-bred rabbit was examined and observed after 1, 24, 48 and 72 hours.

(3) Results and Interpretation:

The tested results were recorded for each home-bred rabbit according to the evaluation grade showed on Table 1. The average for the sum of erythema and edema are determined, if the grade is smaller than 0.5, then indicate there is no hypersensitivity. If the grade is smaller than 2, indicate slightly hypersensitivity. If the grade smaller than 6, indicate moderate hypersensitivity. And, if grade is more than 6, then indicate heavy hypersensitivity.

$$\text{Stimuli partial value} = \frac{\text{Total sum of erythema and edema reaction}}{\text{Total number of animal}}$$



Client : GreenTech Biotechnology Environmental Co., LTD
Report No. : SL92E9019-epi2/2m

Preliminary Report Final Report
Page 3, 5 pages totally

台美檢驗科技有限公司
地址：248 台北縣五股工業區五權六路15號6樓
電話：(02) 2298-1887 · 2298-1932
傳真：(02) 2290-2510



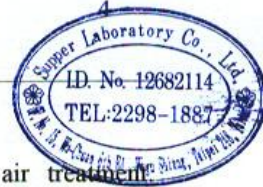
SUPER LABORATORY
www.superlab.com.tw

中華民國實驗室認證體系
行政院環保署環境檢驗認證

Super Laboratory Co., Ltd.
2114
387

Table 1. Grading for the Degree of Skin Hypersensitivity

Erythema formation		Edema formation	
Reactive rate	Partial value	Reactive level	Partial value
No erythema	0	No edema	0
Slightly visible erythema	1	Slightly visible edema	1
Significant erythema	2	Visible skin bulgy	2
Severe erythema	3	Skin bulgy about 1 mm size	
Turn purple-red & scar formation	4	Edema area > bandage-wide	



4. Results and Discussion:

BIO-ALPOSOL solution is used as detergent for air treatment. Therefore, it should be proved that it has no any stimulating or hypersensitive effect on animal. If there is any adverse response on the animal skin, it should not be used for environmental treatment. Three of the home-bred rabbit were selected for this experiment, hairs of dorsal part of rabbits were removed by electrical razor one day before the experiment. The tested animal should have no any skin damage or injury. On the experiment, the naked dorsal part of rabbit was marked “井” with a sterile needle. After that, about 1mL of BIO-ALPOSOL agent (original concentration) was added to the gauze (about 2cm×3cm in size), Naked skin of the lower dorsal part was covered firstly with the gauze, followed by tightening the gauze. Finally, the gauze was removed after 24 hours closely contact. The upper part of dorsal skin will be used for blank control. The local condition of the dorsal part skin was then observed after 1, 24, 48 and 72 hours. The immediate and delayed response of skin by BIO-ALPOSOL were observed. Response include erythema and edema formation listed on the Table 1, the stimulate partial value can then be evaluated and calculated,

Client : GreenTech Biotechnology Environmental Co., LTD
Report No. : SL92E9019-epi2/2m

Preliminary Report Final Report
Page 4, 5 pages totally

台美檢驗科技有限公司

地址：248 台北縣五股工業區五權六路15號6樓
電話：(02) 2298-1887 · 2298-1932
傳真：(02) 2290-2510

