

# TEST REPORT

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**Receipt No.:** 981111-101000-001

**Testing Event:** Assessment of Skin Primary and Cumulative Test

**Testing Type:** Entrusted by client

**Name of Sample:** *Rhodobacter sphaeroide*-produced lycopene-like

**Sampling Method:** Sampling from client

**Client:** Asia-Pacific Biotech Developing, Inc.

**Date of Sampling:** (Y)2009 (M) 10 (D) 6

**Date of Testing:** (Y)2009 (M) 10 (D) 17 ~ (Y)2009 (M) 11 (D) 20

**Date of Issue:** (Y)2009 (M) 11 (D) 23

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### Assessment of Skin Primary and Cumulative Test

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- Assessment of skin primary and cumulative irritation testing in hamster with *Rhodobacter sphaeroide*-produced lycopene-like by using path test, results displayed almost no irritative effect in hamster with 20  $\mu$ M lycopene-like. The animals skin of treatment with Tetrahydrofuran (THF; vehicle control) group were showed erythema and eschar, but no edema (medium irritation) at 48 and 72 hours during path testing. It revealed that treatment with THF caused irritative injury on animals' skin. By contrast, administration of 20  $\mu$ M lycopene-like in THF was no significant aggravation in situation of skin medium irritation in hamsters. Hence, Treatment with 20  $\mu$ M lycopene-like is supposed to have no irritation influence on skin in animals.
- In formula application testing, assessment of skin primary and cumulative irritation testing in hamster by giving gel with or without 2% lycopene-like once each 24 hours, results showed no skin irritative influence after continuous administration of gel with 2% lycopene-like 30 days later. It seems to suggest that treatment with 2% lycopene-like has no skin irritative influence in animals.

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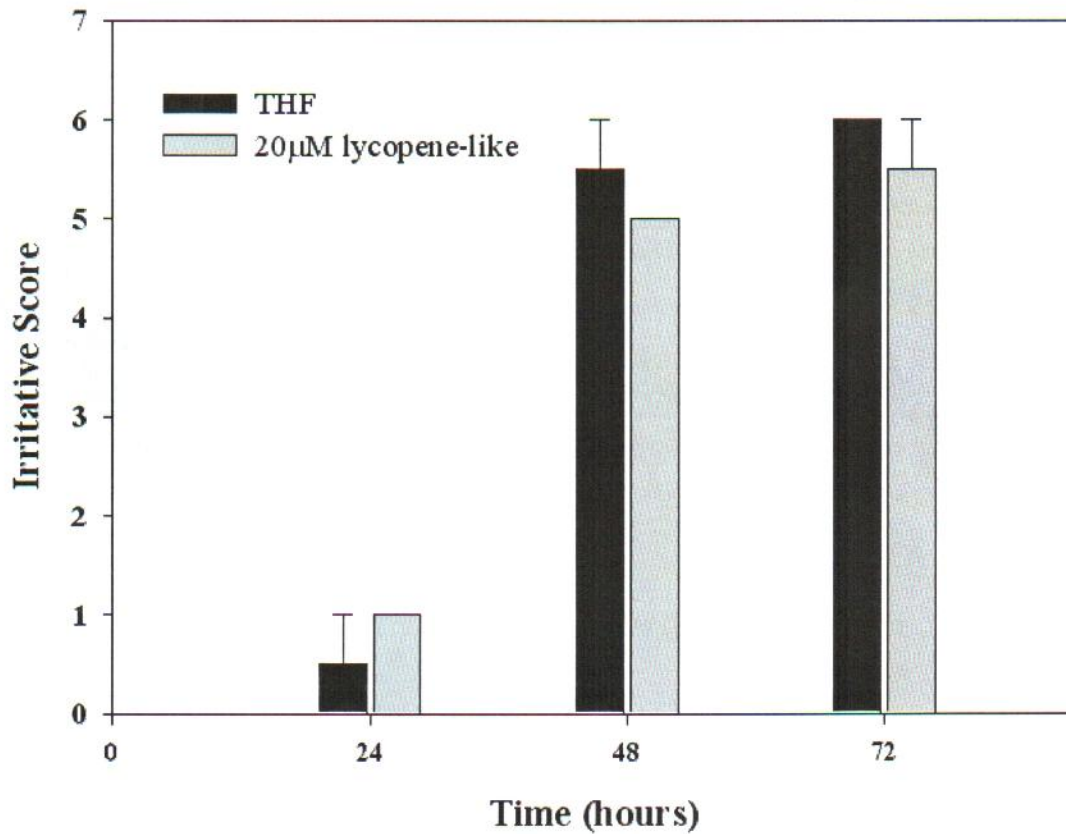


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## Results of Testing

Figure 1. Irritative score of skin cumulative irritation during 24, 48 and 72 hours in hamster with treatment of THF or lycopene-like



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### Results of Testing

Table 1. Assessment of skin cumulative irritation after 3 days or 30 days with different treatments in hamster

| Treatments                                    | Mean±SD   | Degree of irritation |
|---|-----------|----------------------|
| Saline (3 days testing)                       | 0.00±0.00 | no irritation        |
| Tetrahydrofuran (THF) (3 days testing)        | 4.00±0.47 | medium irritation    |
| 20 µM lycopene-like in THF ((3 days testing)  | 3.83±0.24 | medium irritation    |
| Gel without lycopene-like (30 days testing)   | 0.00±0.00 | no irritation        |
| Gel with 0.2% lycopene-like (30 days testing) | 0.00±0.00 | no irritation        |

#### Gel formula (each 100g)

| Ingredients                 | (W/W)%                      |
|-----------------------------|-----------------------------|
| A Carbopo1940               | 0.5 g                       |
| Glycerin                    | 2                           |
| Purified water to 100       |                             |
| B Fragrance (lycopene-like) |                             |
| Tween 20                    | Depends (Fragrance times 5) |
| C Neutralizing Agents (TEA) | Depends                     |

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### Explanation of Testing

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1. This test report shall not be allowed to alter, increase, diminish or delete.
2. Results of this test report only relate to the items tested.
3. This test report shall not be allowed to advertise or publish in any commercial purpose without agreement.
4. This test report shall not be allowed to copy wholly or partly without agreement.
5. Lab. of the testing place:  
Lab. of Integumentary Physiology & Biochemistry, Q808 in laboratory building Q,  
Chia-Nan University of Pharmacy & Science  
60, Erh-Jen RD., Sec.1, Jen-Te, Tainan, Taiwan

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