



ImDerma
LABORATORIES

BioScience Integrated Platform

We offer one-stop solution from
customized ingredient development to industry
application.



Imdermalab[®] Crystorchid

INCI: Phalaenopsis Sogo Yukidian Flower Extract

- **Functions: Antioxidant, Skin Brightening, Spot lighting and Anti-photoaging**
- **Passed heavy metal, microbiological test; pesticide free!**
- **Patent : Taiwan 、 Japan 、 China**



**COSMOS
APPROVED**



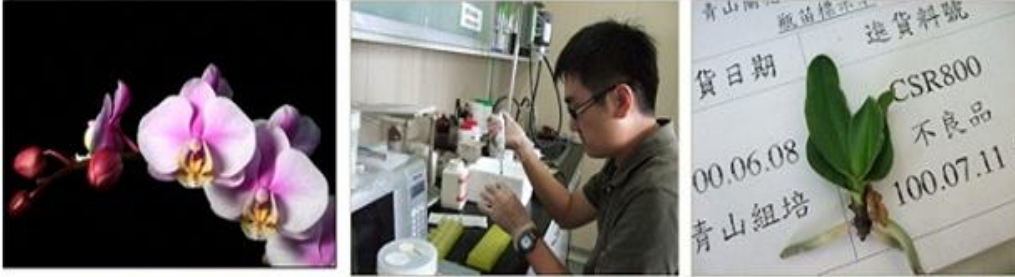
Fresh Extract from Bloom

1 kg of extract = more than **10,000** of Phalaenopsis blooming flowers

- Hand plucked blooming flower part and completed extraction process within 2 weeks to obtain high concentration of active components.
- Fresh flowers are not easy to store and transport, generally the brand manufacturers prefer to extract whole dry orchids or rhizomes.



選種及育種過程



48 months/1460 days – 12-stage process



1460 days Well-Cultivated

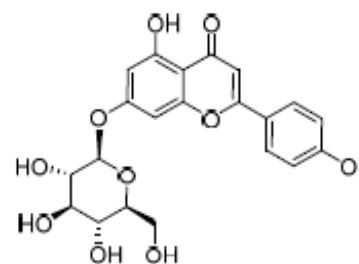
Contracted and fair trade with Award-Winning Orchid small-scale farmer

- Strain screening>Virus-free screening>Healthy roots screening · selected from 300 species of orchids.
- 12 stages growth process 、 4 years cultivation period
- Toxic-free Agriculture Management – pesticide free

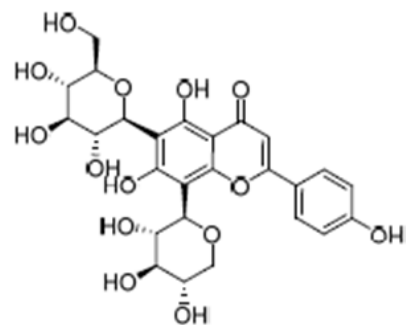
Key Compounds Identified in ImDermalab Crystorchid

By NMR and LC-MS

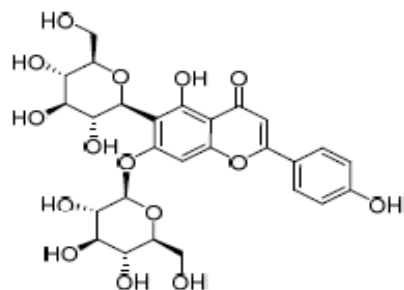
Apigenin-7-glucoside , $C_{21}H_{20}O_{10}$: MW:432, CAS:578-74-5



Apigenin-6-ribosido-7-glucoside, $C_{26}H_{28}O_{14}$: MW:564, CAS:51938-32-0



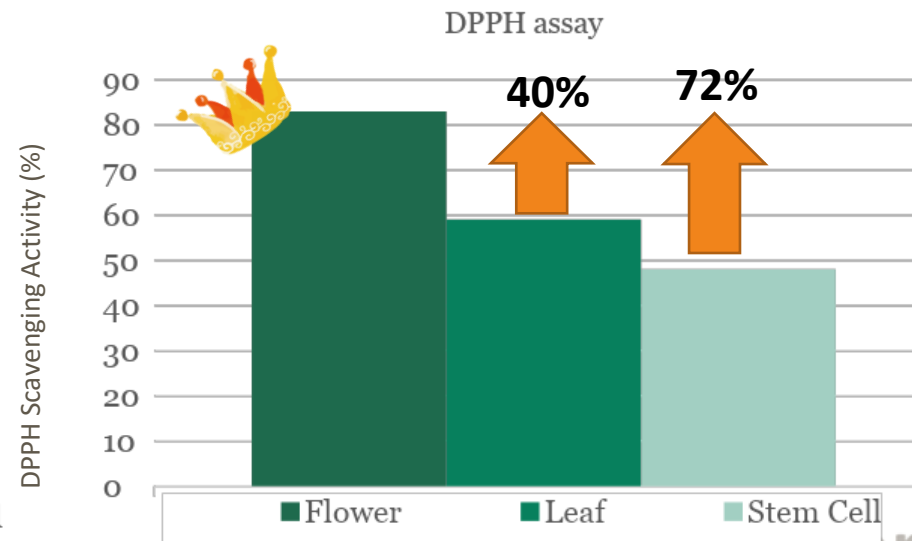
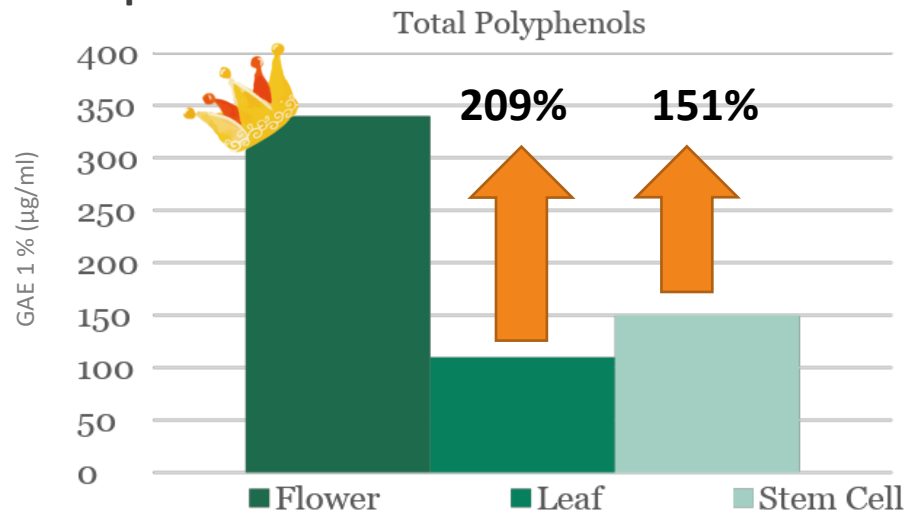
Saponarin, $C_{27}H_{30}O_{15}$: MW:594, CAS: 20310-89-8



Total Polyphenols & Free Radicals Scavenging ability

Antioxidant activity of bloom part

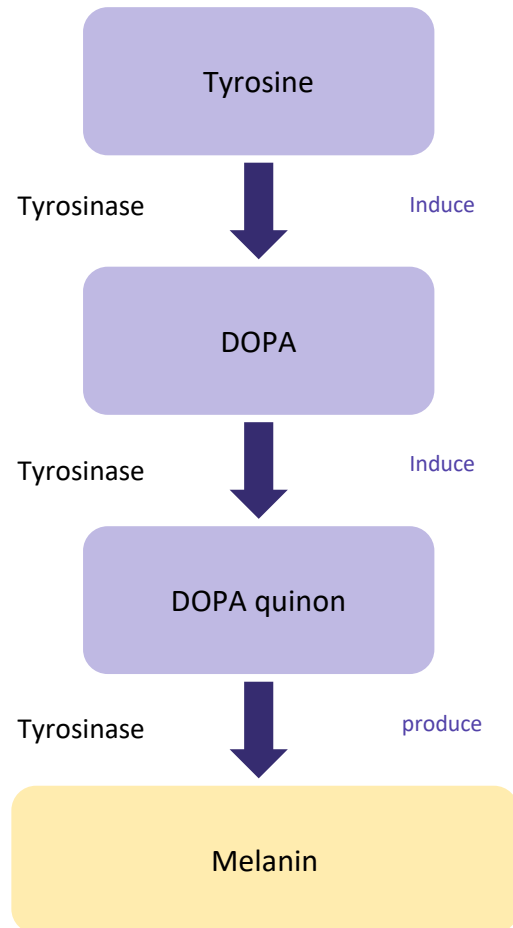
- Indermalab[®] Crystorchid extracted from fresh blooming flower of Phalaenopsis Sogo Yukidian and completed extraction process within 14 days after harvest.
- The experiment results shown, fresh flower part has richer content of total polyphenols 3 times more than leaf part ; the ability of free radicals scavenging is about 40% more higher than the leaf and the stem cell part.



Imdermalab[®] Crystorchid

In-Vitro

Whitening Mechanism



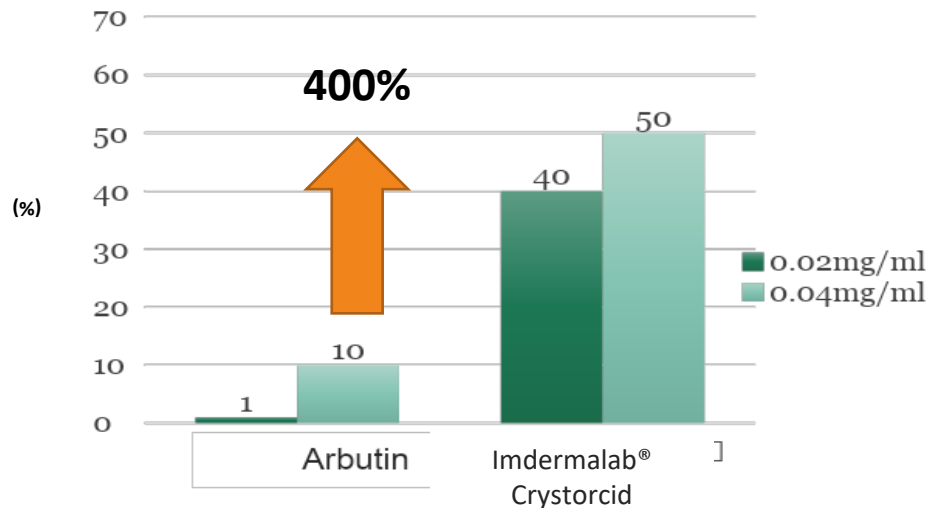
- Reduce oxidized melanin pigments
- Inhibit the activity of tyrosinase
- Inhibit melanin production induced by α -MSH

Imdermalab[®] Crystorchid

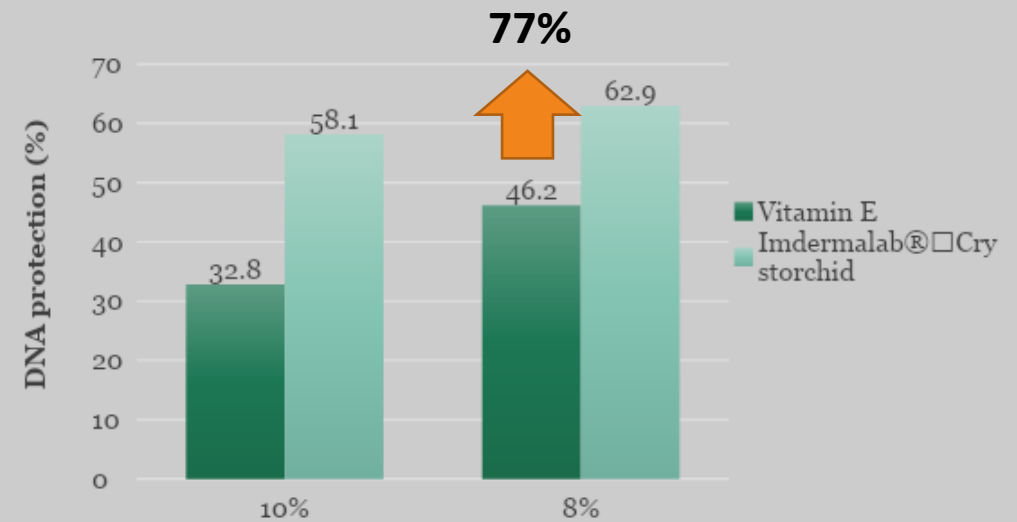
In-Vitro

- As the result of Tyrosinase Inhibition Test with IC₅₀ shown, The inhibitory effect of Imdermalab[®] Crystorchid on tyrosinase activity is **4 times** higher than that of arbutin.
- Ultraviolet (UV) radiation can induce the production of hydrogen peroxide (H₂O₂). The combination of UV and H₂O₂ will produce hydroxyl radical (OH⁻) and cause DNA damage or breakage. It was confirmed that Imdermalab[®] Crystorchid has DNA protection effect, which is **77%** better than Vitamin E.

Tyrosinase Inhibition Assay



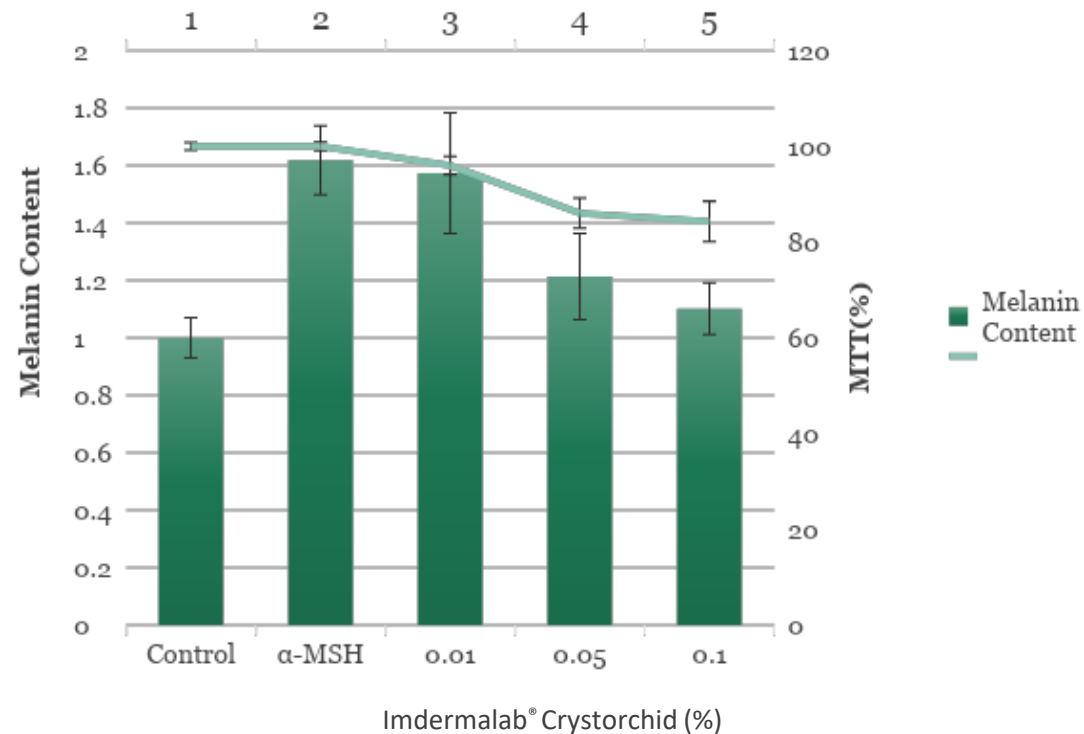
DNA Protection Assay



Inhibition of α -MSH Induced Melanin Assay

Great Inhibitory Effects on Melanin Production

As shown in Fig., Indermalab[®] Crystorchid at concentrations with 0.01% , 0.05% and 0.1% significantly inhibited melanin production induced by α -MSH and there is a dose-dependent relationship. **With 0.1% of Indermalab[®] Crystorchid, the melanin production inhibition rate can reach to 84% effectively.** It is also proved that the Indermalab[®] Crystorchid can efficiently inhibit developing of **Melanin in Melanocyte** (picture on right below) by our test.



Imdermalab[®] Crystorchid

In-Vivo

by Medical Aesthetic Center of National Taiwan University Hospital

Purpose:

To evaluate the spot lightening effect of toner with 1% Imdermalab[®] Crystorchid

Study Condition:

Test Material: Toner (Water , 1% content of Imdermalab[®] Crystorchid)

Sex: Male or female

Subject: with 31 Asian race of age 30-60 years old

Usage: twice daily application on whole face for 2 weeks

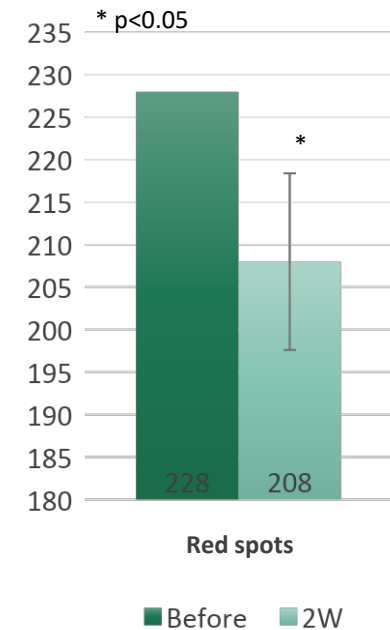
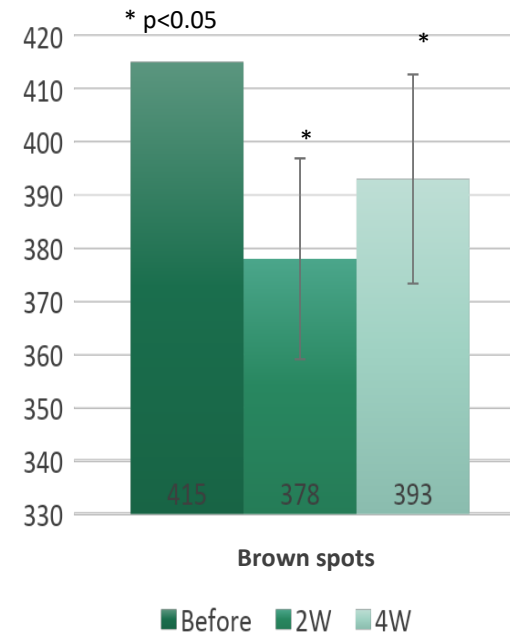
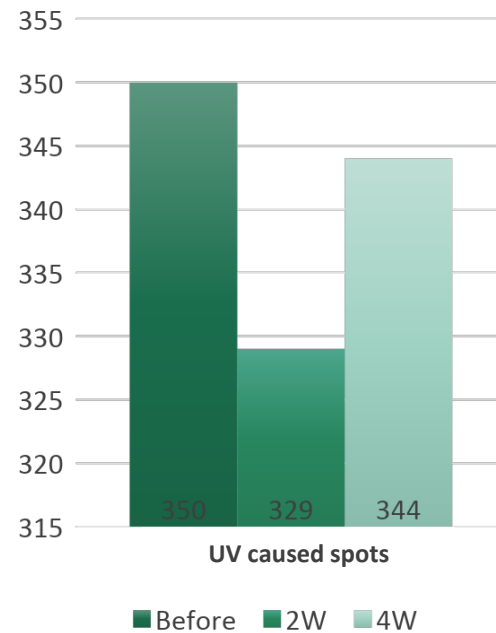
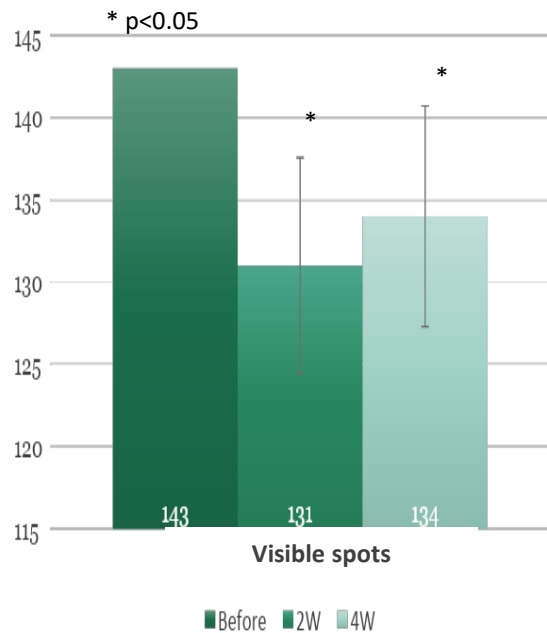
Method: Visia skin analysis (Canfield)

Test Time: D0, D14 and D28.

Imdermalab[®] Crystorchid

In-Vivo

**Dermatologist Evaluate:
After two weeks, all subjects without adverse effect.**



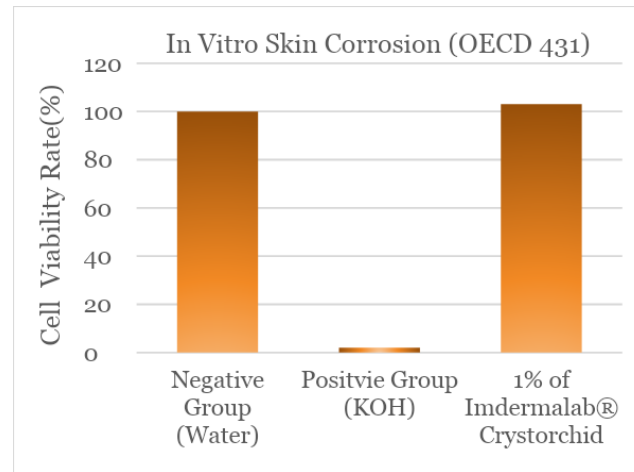
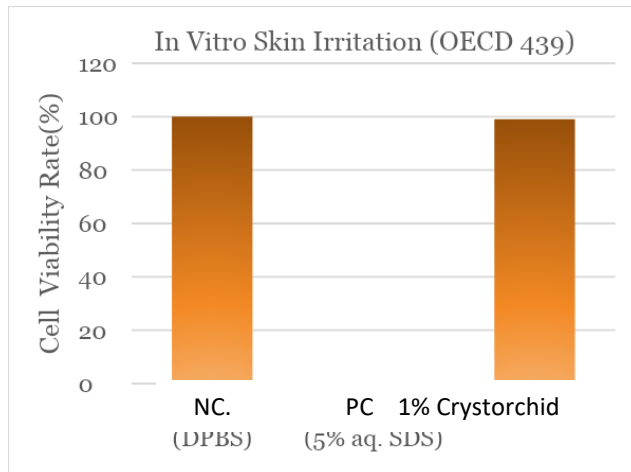
** Test performed by NTUH and ITRI (Taiwan)**

Imdermalab[®] Crystorchid

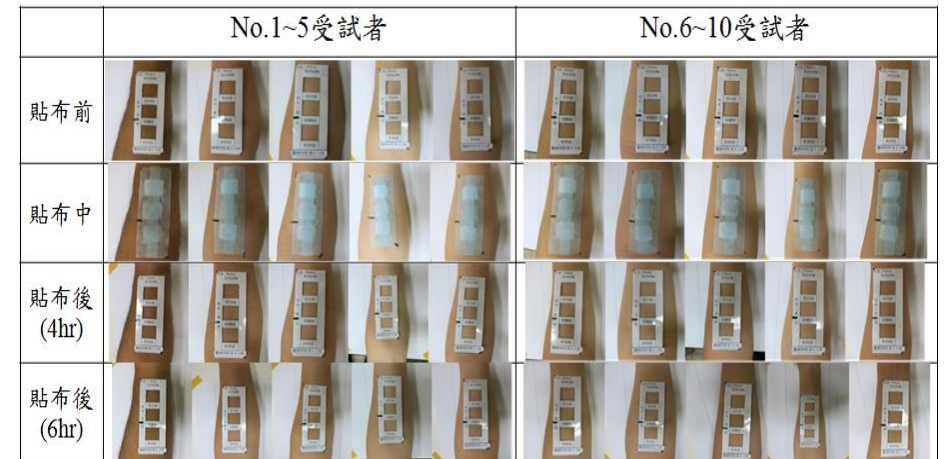
Safety test

1% of Imdermalab[®] Crystorchid had no skin corrosivity and skin irritation through the Human Patch Test and 3D skin test by Industrial Technology Research Institute (ITRI).

In Vitro Skin Irritation Test / In Vitro Skin Corrosion Test



Human Patch Test





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We offer one-stop solution from
customized ingredient development to industry
application.

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