



ImDerma
LABORATORIES

BioScience Integrated Platform

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



Imdermalab[®] TrioWhite

INCI: Tranexamic Acid, Niacinamide, Phalaenopsis Sogo Yukidian Flower Extract

China INCI: Tranexamic Acid, Niacinamide, 蝴蝶兰 (PHALAENOPSIS AMABILIS) 提取物

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



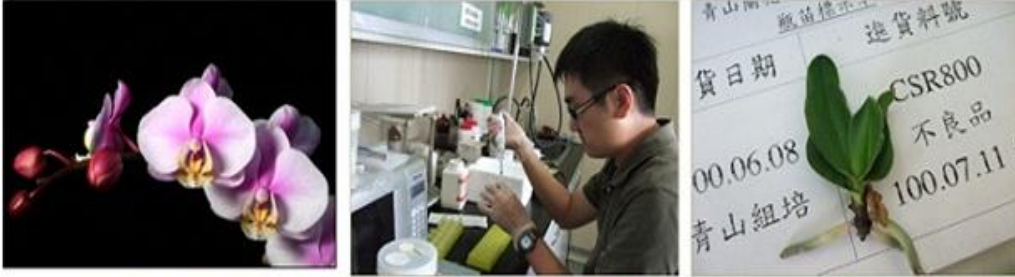
Fresh Extract from Bloom

1 g of freeze-dried = more than **200,000** 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

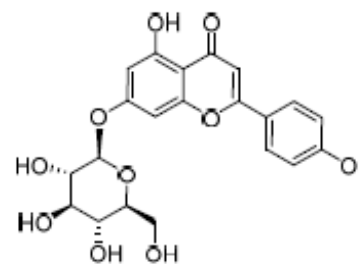
Contracted and fair trade with Award-Winning Orchid small-scale farmer

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

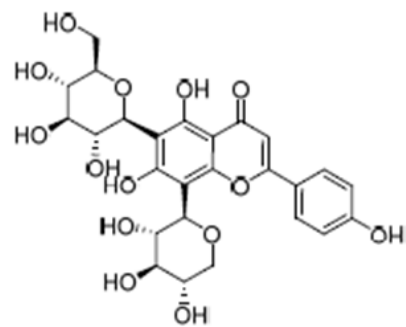
Key Compounds Identified in ImDermalab Crystorchid

By NMR and LC-MS

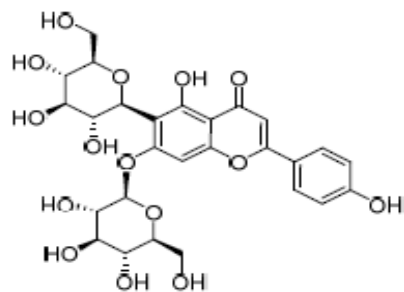
Apigenin-7-glucoside , $C_{21}H_{20}O_{10}$: MW:432, CAS:578-74-5



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



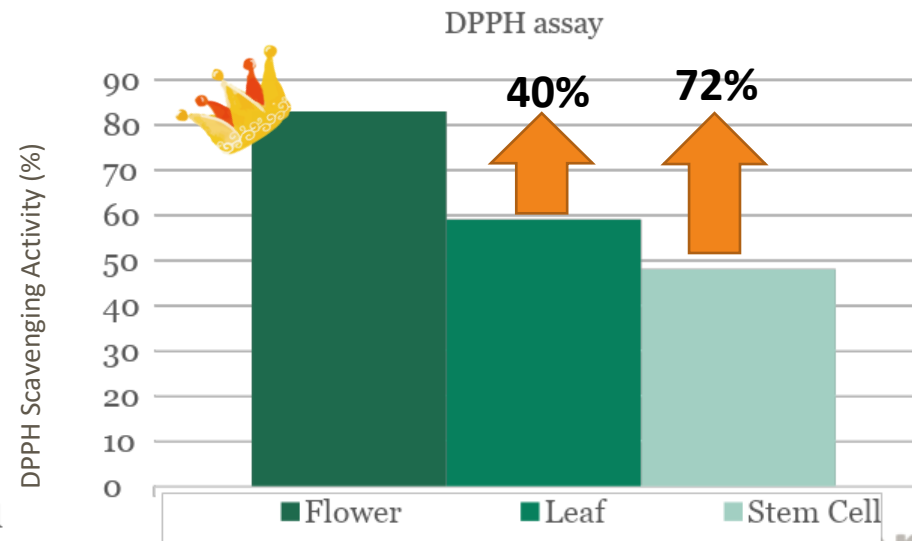
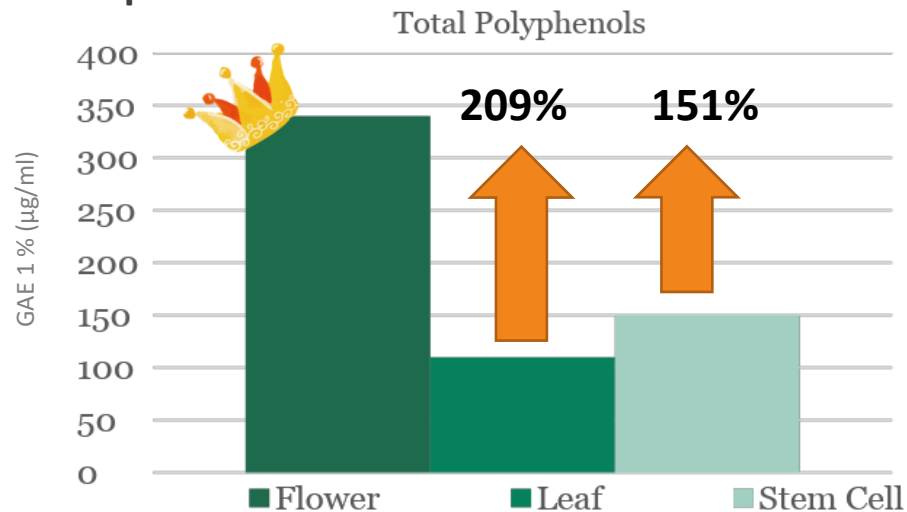
Saponarin, $C_{27}H_{30}O_{15}$: MW:594, CAS: 20310-89-8



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.

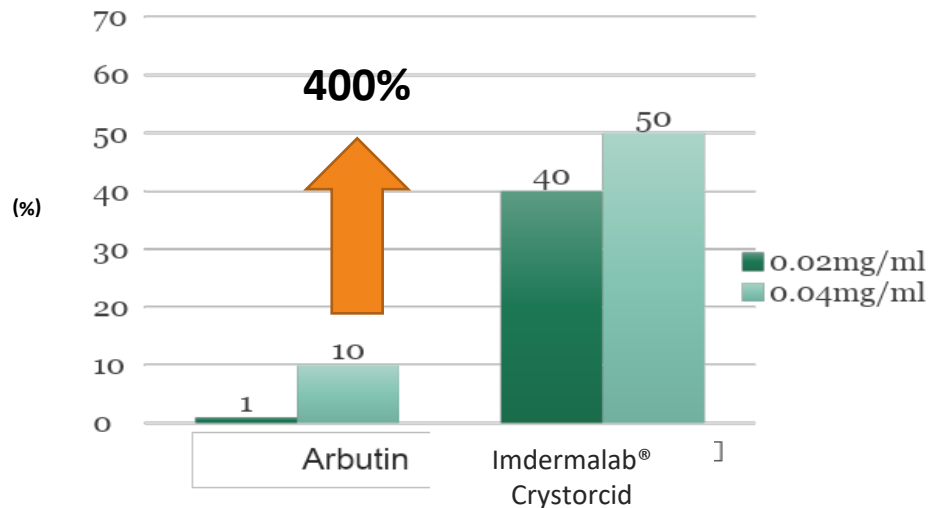


Imdermalab[®] Crystorchid

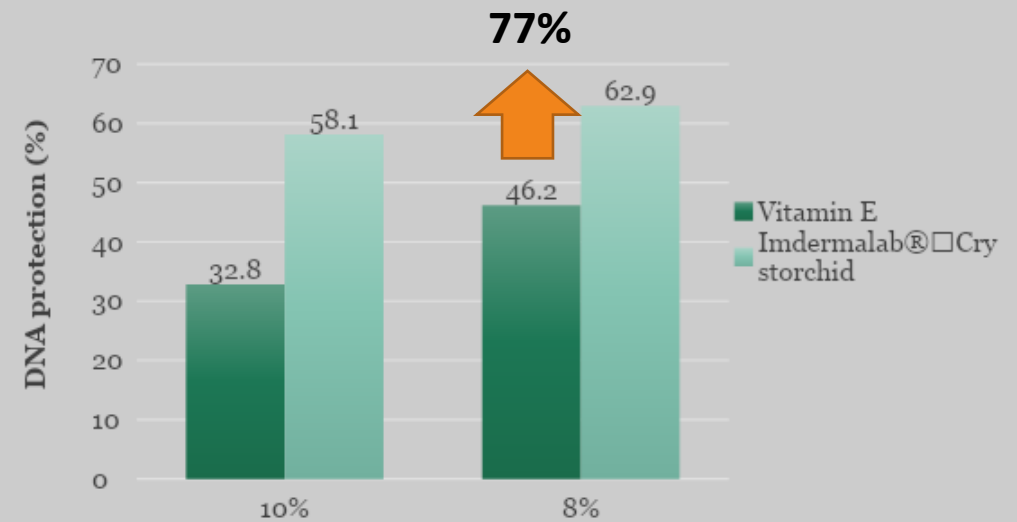
In-Vitro

- 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



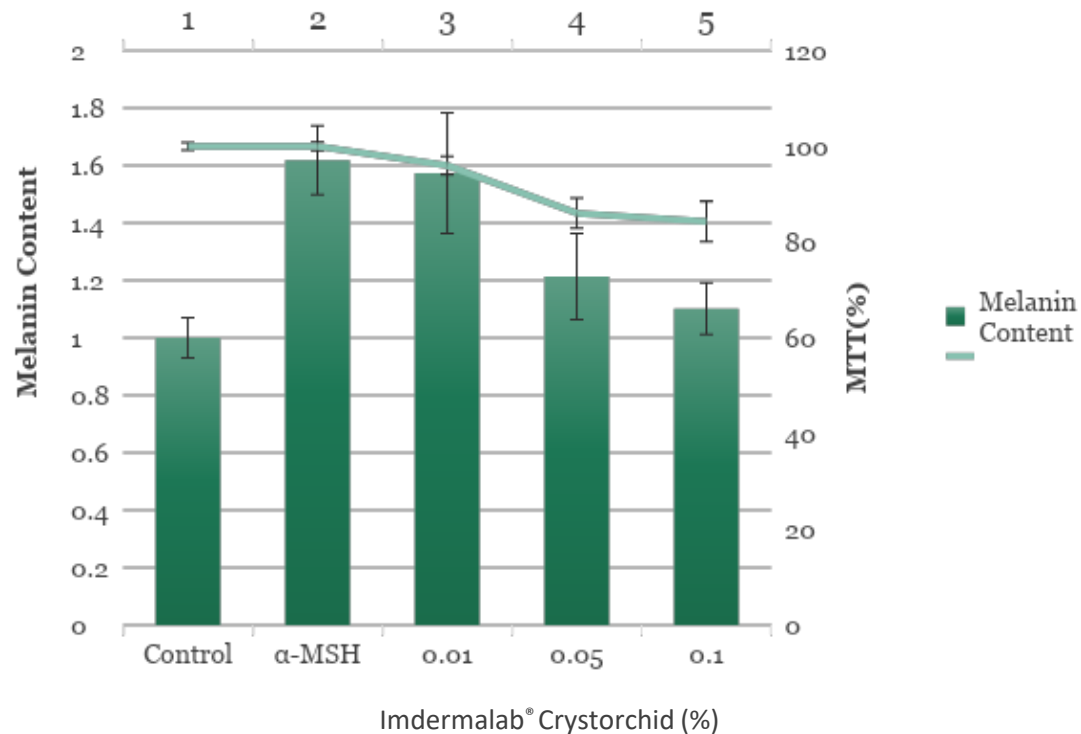
DNA Protection Assay



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® TrioWhite

In-Vitro

Multi-Target Whitening Mechanism

Stratum Corneum

Granular Layer

Spiny Layer

Basal Layer

Niacinamide:

Block melanin pathway.

Inhibit melanin transport to epidermis

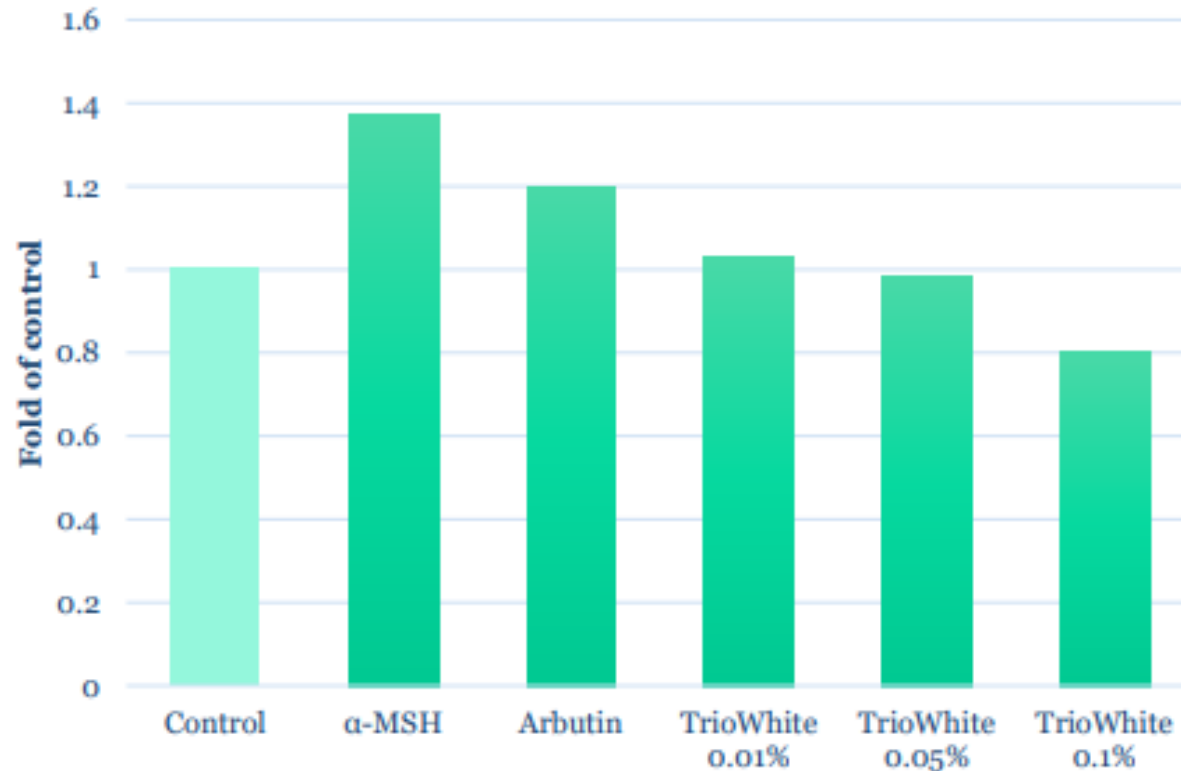
Crystorchid & Tranexamic Acid

Inhibit the activity of tyrosinase.

Inhibition of α -MSH Induced Melanin Assay

Great Inhibitory Effects on Melanin Production

As shown in Fig., Indermalab® TrioWhite with **0.01%** significantly inhibited melanin production induced by α -MSH and increase the effect by dosage.

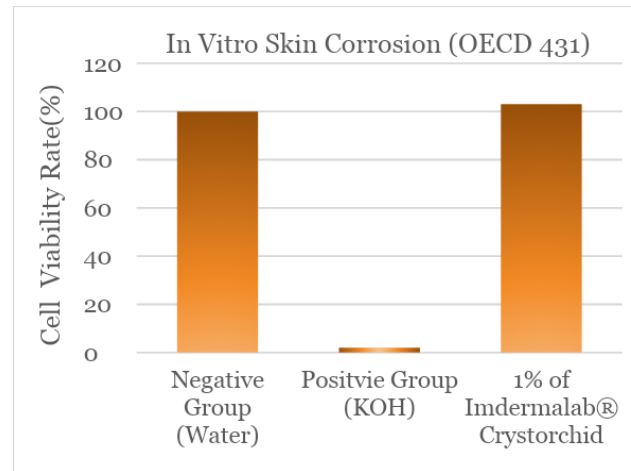
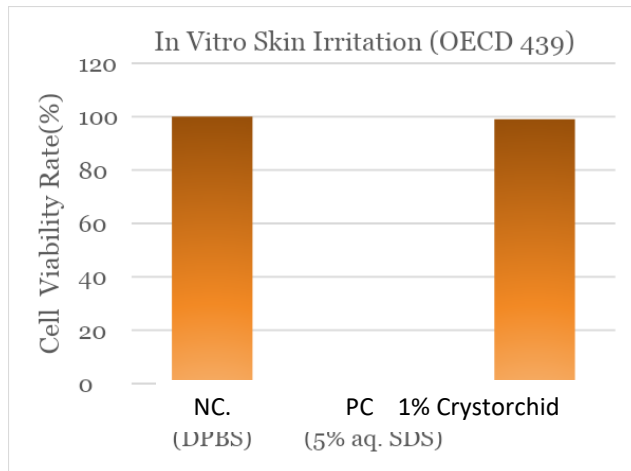


Imdermalab[®] TrioWhite

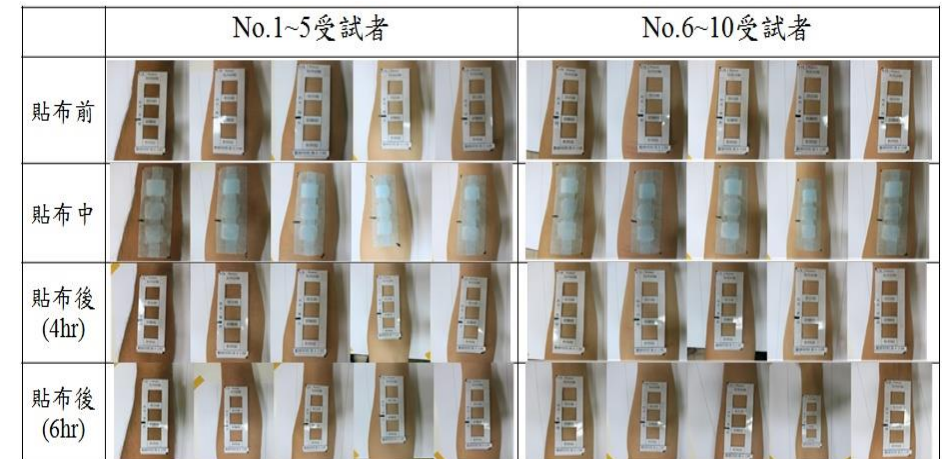
Safety test

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
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