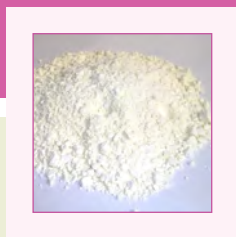


PteroWhite®



PteroWhite® - A natural skin lightening ingredient containing 90% pterostilbene from a purely natural source *Pterocarpus marsupium*.

With significant antioxidant and anti-inflammatory effects, PteroWhite® also shows marked anti aging effects. Its UV protection potential is comparable to that of Resveratrol.

PteroWhite® is an effective natural ingredient in cosmetic compositions that support skin texture, even skin tone, in sun care and after sun care formulations.

Applications

- Skin Lightening
- Anti-oxidant
- Anti-inflammatory
- UV Protection



In vitro studies:

Antioxidant Potential

Antioxidant strength of PteroWhite® was evaluated by DPPH radical scavenging test. Figure 1 depicts the comparative efficacy of PteroWhite®, Resveratrol and a commonly used skin lightening agent, Kojic acid, in quenching free radicals.

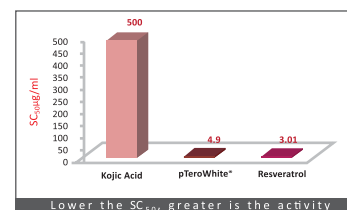


FIGURE 1: Antioxidant Activity - DPPH Inhibition

Skin Lightening Potential:

PteroWhite® perceptibly inhibits melanin formation. Figure 2 shows the comparative effects of Kojic acid, PteroWhite® and Resveratrol on melanogenesis in cell culture, and Figure 3 shows melanin formation in cells cultured with and without PteroWhite®.

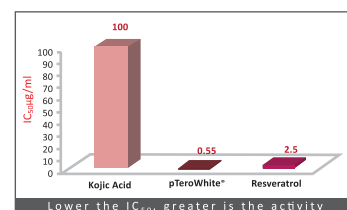


FIGURE 2: Comparative Melanin Inhibition

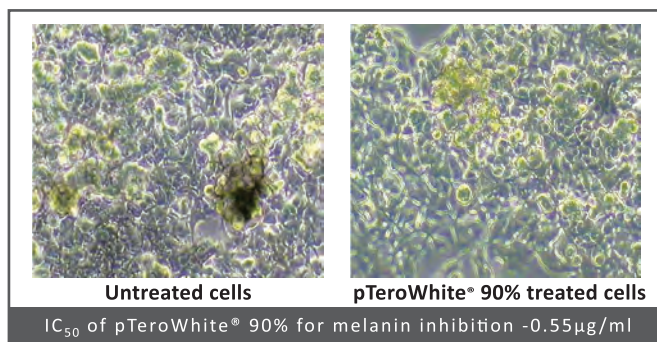


FIGURE 3: Melanogenesis Inhibition In Cell Culture

UV Protection

PteroWhite® shows protection against ultraviolet light.

Figure 4 shows the comparative efficacy of PteroWhite® and Resveratrol in protecting cells against the effects of ultraviolet radiation.

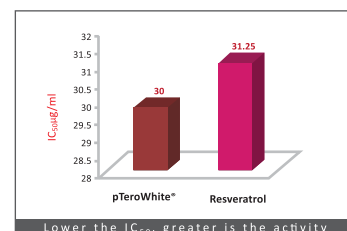


FIGURE 4: UV Protection

Technical Data

INCI Name	Pterocarpus Marsupium Bark Extract
Description	Off white Powder
Toxicity	Primary Skin Irritation: Non Irritant



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PteroWhite®

Formulation Guidelines:

- Use stainless steel (SS316) vessels for production. Avoid contact with iron or copper.
- Solublize PteroWhite® in the one of the recommended solvents before adding it to emulsion below 40°C.
- Nonionic and anionic emulsifiers are to be used.
- Maintain the pH of the formulation slightly acidic preferably between pH 5.0 - 6.5.
- PteroWhite® can be gelled using thickeners such as Carbomer, Acrylates copolymer, Lecithin.
- Opaque packaging is recommended for the finished product formulation.
- Protect the finished product from exposure to direct heat and light.
- PteroWhite® is suitable for use in creams and translucent to opaque gels/serums.
- PteroWhite® is not suitable for use in clear gels/serums/toners.
- Use Anti oxidants and Photostabilizers in the formulations.

Suggested use level:

- Skin lightening : 0.1 - 0.3 % w/w
- Anti-aging : 0.05 - 0.2 % w/w
- Sun care and After sun care : 0.2 - 0.3 % w/w
- Depigmentation : 0.1 - 0.2 % w/w

Solubility Data:

PteroWhite®	Soluble
Propylene Glycol	(1:10) at 40°C
Polysorbate 20	(1:20) at 40°C
Caprylic/Capric Triglyceride (CCTG)	(1:10) at 40°C

Other Actives:

- Artonox®
- Licorice extract 40% CA
- Oxyresvenox®
- Saberry®
- SabiWhite®



RELAX. IT'S NATURAL.

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