



SabiWhite® is a color-free natural extract derived from turmeric roots with proven luminosity boosting and skin tone lightening effects. A potent inhibitor of melanogenesis, its activity was found to be several fold greater than Kojic acid, Glabridin and other natural extracts. SabiWhite® also provides antioxidant protection benefiting skin tone, texture and integrity.

## In vitro studies:

### Antioxidant Potential

Product	ORAC value (μmol trolox equivalents/g)
SabiWhite®	10,786
Kojic acid	0
Vitamin C	3,400
Arbutin	0

The ORAC (Oxygen Radical Absorbance Capacity) value of SabiWhite® is significantly better compared to other well known Skin lightening actives with regard to DPPH scavenging activity.

Antioxidants	IC <sub>50</sub> (microgram/ml)*
SabiWhite®	2.01
Curcuminoids	4.60
Curcumin	5.30
Vitamin E	11.60

\*Lower the IC<sub>50</sub>, better is the Antioxidant Activity  
Ref: 7th ASCS conference, Bangkok, Thailand 2005

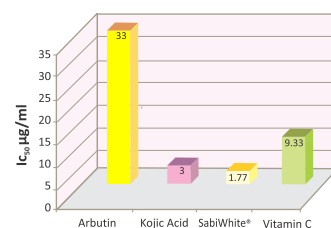
SabiWhite® as Antioxidant is found to have DPPH (1,1 Diphenyl - 2-Picrylhydrazyl Radical) scavenging activity which is 5.8 times better than Vitamin E.

### Skin Lightening Potential:

Skin lightening effect cannot be brought about by one single mechanism. It can occur effectively only by a synchronized combination of various biological mechanisms in skin cells.

SabiWhite® inhibits tyrosinase enzyme better than other well known Skin lightening actives.

SabiWhite® also showed significant Melanin inhibition potential (IC<sub>50</sub> - 3 μg/ml)



Anti-tyrosinase Activity (Enzyme Based Assay)

## Clinical Trial

In a clinical trial on 50 subjects in Philippines, the depigmenting effect of 0.25% SabiWhite® and 4% Hydroquinone were comparable throughout the 4 week trial.

No adverse reactions were noted from 0.25% SabiWhite® while mild to moderate adverse reaction were found with application of 4% Hydroquinone .

0.25% SabiWhite® was concluded to be a safe and effective alternative to 4% hydroquinone as a de-pigmenting agent.

## Technical Data

INCI Name	Tetrahydrodiferuloylmethane
Description	Off white to creamy white powder
Toxicity	Acute Dermal Toxicity LD <sub>50</sub> : > 2000mg/kg body weight Primary skin irritation: No Irritation. Dermal irritation: Non irritant. Ocular irritation Test: Minimal irritant
Regulatory Status	REACH Pre-registration No.05-2114128422-60-0000
Patents (THC CG)	US6,653,327; EP1171144; EP1328263; AU2006235807; NZ514884

## Applications

- Anti-oxidant
- Protection against UVB
- Skin Lightening
- Anti-aging



TETRAHYDROCUCUMIN 95%

Clinically Validated

Inhibits Tyrosinase

Skin Lightening

Color Free

# SabiWhite®

## Formulation Guidelines:

- Use stainless steel (SS316) vessels for production. Avoid contact with iron or copper.
- Solublize SabiWhite® 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.
- SabiWhite® can be gelled using thickeners such as Carbomer, Acrylates copolymer, Lecithin.
- Opaque packaging is recommended for the finished formulation.
- Protect the finished product from exposure to direct heat and light.
- SabiWhite® is suitable for use in creams and translucent to opaque gels / serums.
- SabiWhite® is not suitable for use in clear gels / serums / toners.
- Use Anti oxidants and Photostabilizers in the formulations.

## Suggested use level:

- Skin lightening and Skin brightening : 0.1 - 0.3 % w/w
- Antiaging : 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
- De-stress (protection from free radical damage) : 0.1 - 0.2 % w/w

## Solubility Data:

SabiWhite®	Soluble
Propylene Glycol	(1:8) at 40°C
Polysorbate 20	(1:4) at 40°C
Caprylic/Capric Triglyceride (CCTG)	(1:15) at 40°C

## Other Actives:

- Artonox®
- Licorice extract 40% CA
- OxyResvenox®
- PteroWhite®
- Saberry®
- Tetrahydrocucuminoids CG

**SABINSA**

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*Innovating Natural Actives for Your Brands®*