

Care  
Creations™

# Dermawhite™ WF

The power of nature to illuminate your skin

by Beauty Creations

another Care Creations product group Inspired by Life

 **BASF**

We create chemistry

# DERMAWHITE™ WF

## The power of nature to illuminate your skin

**A healthy glow: all over the world, a radiant complexion is associated with beauty. In populations with darker skin pigmentation, this can mean that fairer complexions are considered more attractive. BASF Beauty Creations has drawn inspiration from this trend and developed an active ingredient that helps women achieve the brightness they want while maintaining healthy skin functions. Based on extracts of white blossoms, Dermawhite™ WF noticeably brightens the complexion yet fully respects the skin's natural characteristics and health.**

Across Asia, Africa and Latin America, women are seeking to brighten their skin. No wonder, with glamorous celebrities like movie stars and fashion models from India, China and Brazil setting the trend toward fairer complexions. Accordingly, the market for low-priced "miracle" creams is booming in many regions, with questionable consequences for the women using them.

Even the World Health Organization (WHO) has sounded the alarm: face creams containing hydroquinone, large quantities of mercury and other toxic chemicals pose a considerable risk. Despite the potential long-term consequences for both skin and general health, consumers cannot be expected to boycott these products unless a safer alternative is available.

The experts at BASF Beauty Creations set out to fulfill this demand and create the best of both worlds: a safe and healthy ingredient that effectively brightens the complexion. The result is Dermawhite™ WF, an active based on a combination of extracts from Papaya, Guava and Saxifrage Blossoms, three perennial white flowers that bloom with striking radiance. In-vitro tests showed that this complex inhibits the synthesis of melanin by 90%.

Effective, skin-friendly and priced to be competitive in emerging economies, Dermawhite™ WF has properties that make it an ideal active for brightening and radiance-enhancing creams or lotions for the face and body as well as for after-sun treatments. Take advantage of its qualities in developing your innovative skincare products – and profit from some of the world's fastest-growing markets.

WE'RE INSPIRED BY LIFE –  
WHAT'S IN IT FOR YOU?

WE TRANSLATE INNERMOST WISHES  
INTO PRODUCTS THAT PEOPLE LOVE ■ ■ ■

HOW?

SUCCESSFUL BRANDS

OUTPERFORMING PRODUCTS

SCIENCE EXCELLENCE  
MEETS  
MARKET EMPATHY

## Dermawhite™ WF, a powerful complex to inhibit the melanogenesis.

Papaya, Guava and Saxifrage, three plants with immaculate white flowers that blossom each season with the same radiance, have inspired researchers at BASF Beauty Care Solutions. The purity of these three plant extracts, recognized by Traditional Chinese Medicine (TCM) and likely to have synergistic whitening action, have been used to create Dermawhite™ WF.

This complex inhibits the synthesis of melanin by 90%\*, delivering a skin brightening action that is three times higher than that of kojic acid, a commonly used and well-known active ingredient on the topical skin brightening market. Dermawhite™ WF thereby helps reduce skin pigmentation in darker phototypes, offering rapid effectiveness that has been proven after 2 weeks of product use.

### Cosmetic applications

- Brightening skincare for face and body
- Radiance-boosting skincare
- After-sun care

### Cosmetic properties

A powerful inhibitor of melanin synthesis, proven both *in vitro* and *in vivo*.

\* *in vitro* results in the scientific brochure

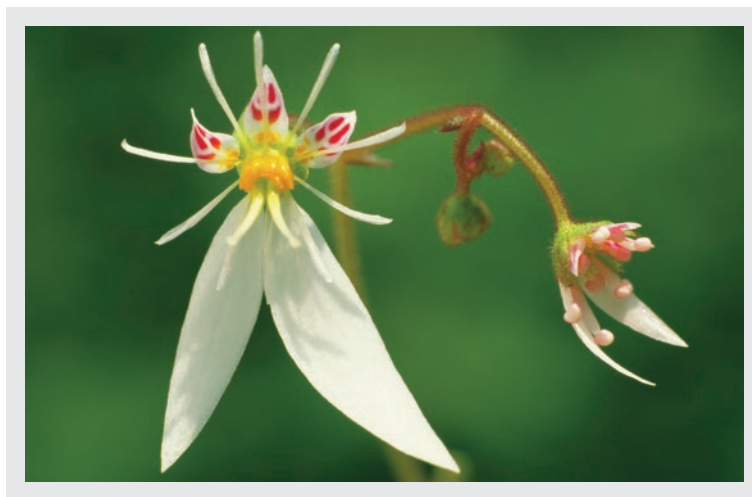


Figure 1: Saxifraga sarmentosa



Figure 2: Psidium Guajava

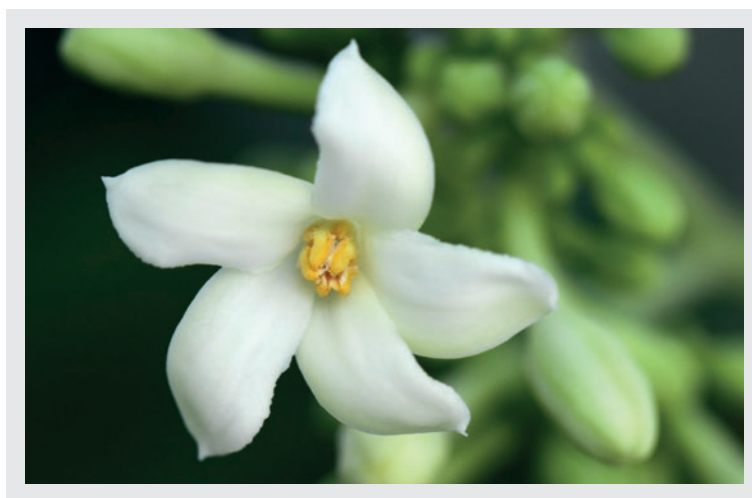


Figure 3: Carica papaya

## In vivo efficacy

**Dermawhite™ WF**, a whitening efficacy higher than placebo as well as kojic acid.

### Our aim

The efficacy of Dermawhite™ WF at 2% was evaluated and compared to a placebo as well as to kojic acid at 2%. Two panels of 34 Indian women, ages 30 to 60, with phototypes IV and V were chosen for the study. The creams were applied twice a day for 12 weeks in the placebo-controlled trial and for 8 weeks in the trial with kojic acid.

### Chromametric evaluation

**Results vs. placebo:** The whitening index  $\Delta ITA$  is improved by 21.6% after 3 months of treatment with Dermawhite™ WF while the improvement with the placebo only reaches 2.6%.

Increase in luminosity is also measured and higher than with the placebo.\* (fig. 4).

**Dermawhite™ WF shows greater whitening efficacy than the placebo.**

**Results vs. kojic acid:** Dermawhite™ WF shows a fast action: a significant improvement of 42,5% is already observed after only 2 weeks of treatment. The whitening index  $\Delta ITA$  is improved by 51.0% after 2 months of treatment with Dermawhite™ WF while the improvement with kojic acid only reaches 20.9%. Increase in luminosity is also measured and higher than with kojic acid.\* (fig. 5).

**Dermawhite™ WF shows greater whitening efficacy than kojic acid and a fast action from 2 weeks of application.**

\* Results available in the scientific brochure.

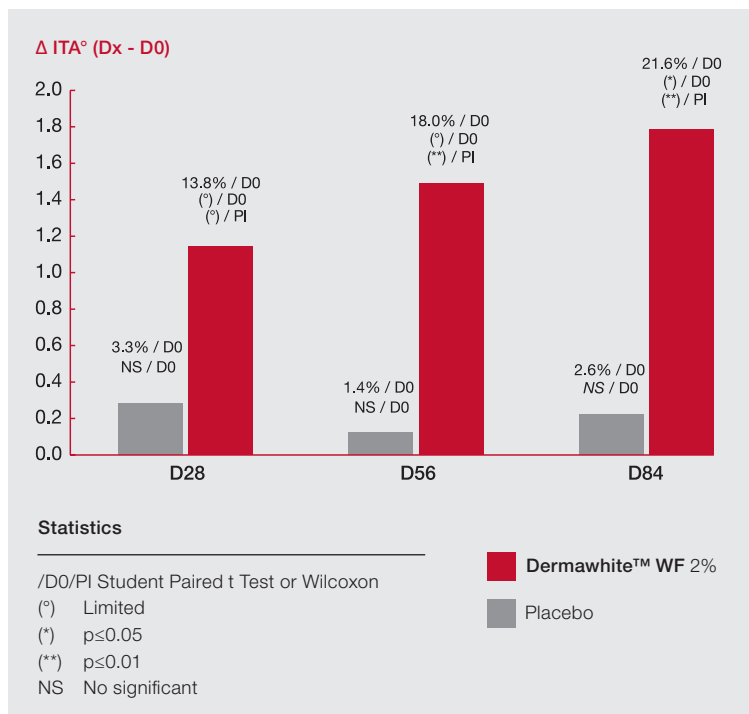


Figure 4: Whitening efficacy of Dermawhite™ WF compared to placebo.

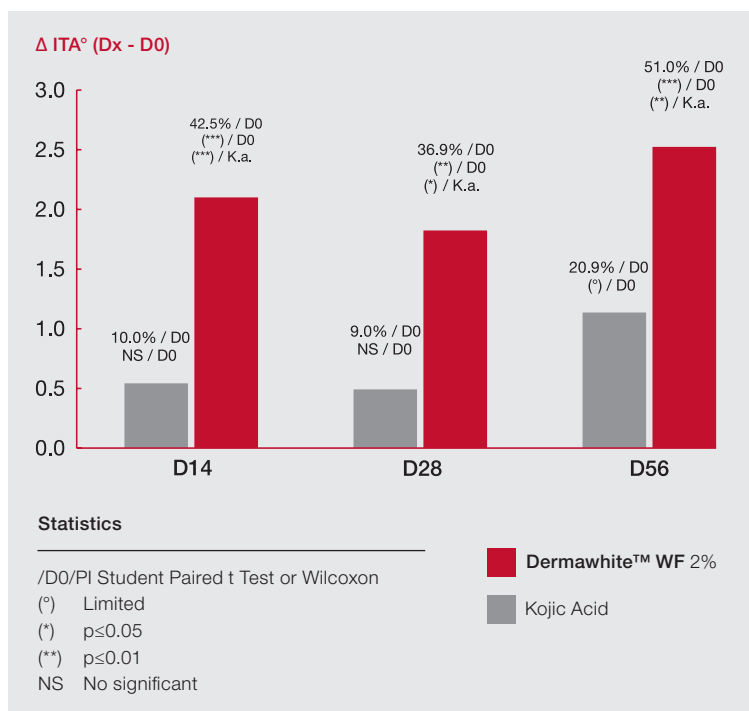


Figure 5: Whitening efficacy of Dermawhite™ WF compared to kojic acid.

**Dermawhite™ WF**, a whitening efficacy perceived by the dermatologist and the volunteers.

**Dermatologic evaluation**

**Results vs. kojic acid:** The complexion is 34% brighter after 8 weeks of treatment with Dermawhite™ WF at 2%. (fig. 6).

**Visible results according to the dermatological evaluation.**

**Volunteer’s self-assessment**

**Results vs. kojic acid (fig. 7):**

- Visibly fairer complexion noted by 94% of the volunteers
- Visibly lighter complexion noted by 94% of the volunteers After-sun care
- Visibly brighter complexion noted by 94% of the volunteers

**Dermawhite™ WF is perceived as being more effective than kojic acid by the volunteers after 2 weeks of treatment.**

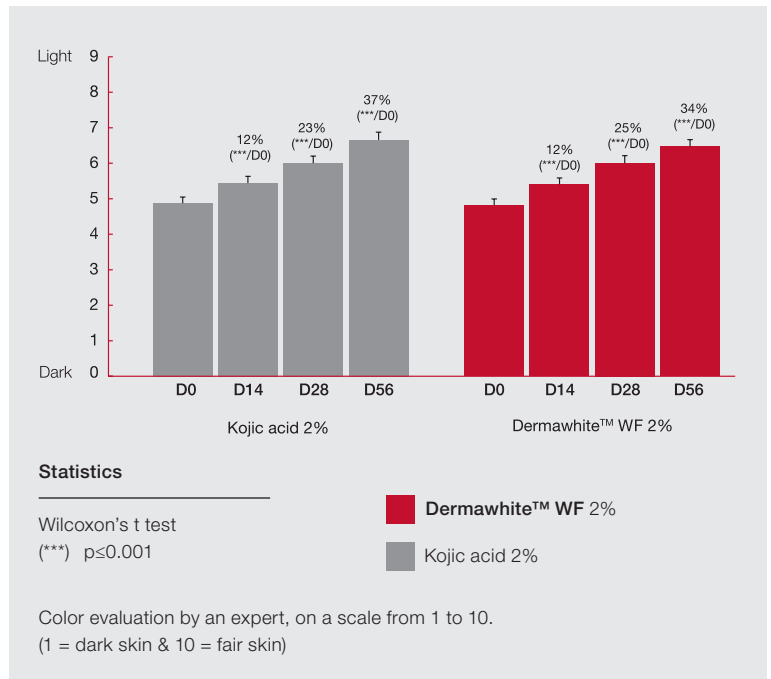


Figure 6: Dermatological evaluation of the brightening efficacy.

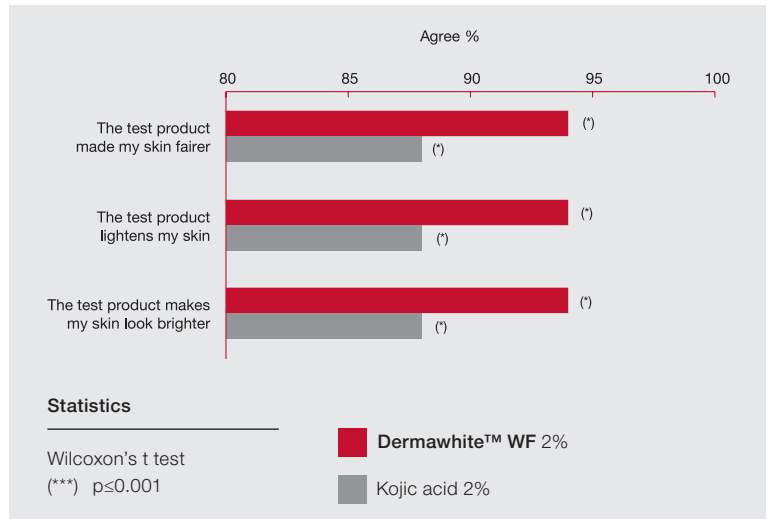


Figure 7: Self-assessment of the brightening efficacy by the panelists.

## Conclusion (in vivo)

Dermawhite™ WF helps lighten the complexion after 2 weeks of product use.

Dermawhite™ WF offers more effective results as compared to both the placebo and kojic acid.

The effectiveness of Dermawhite™ WF was recognized by a dermatologist and perceived by the volunteers.

# DERMAWHITE™ WF

## Origin / Description



**DermaWhite™ WF is a plant complex made of Saxifrage, Papaya and Guava Extracts and reducing agents.**

*Saxifraga Sarmentosa* grows at an altitude of 390–3600 m in China, Russia, Japan and Korea. Traditionally used for wound healing, the TCM also used it to treat measles, tympanitis, erysipelas, hemoptysis, piles, and hair fall.

*Carica papaya* is a tropical fruit with a rich orange pulp. Papaya is a powerhouse of nutrients and a rich source of three powerful antioxidants vitamin C, vitamin A and vitamin E. Papaya can be used for the treatment of numerous diseases like warts, corns, sinuses, eczema, cutaneous tubercles, glandular tumors, blood pressure. It is also a powerful fruit to treat cutaneous disorders such as cuts, rashes, stings and burns. Finally, mashed papaya is used by the Asian and Pacific populations to lighten the skin complexion and age spots.

*Psidium Guajava* is widely cultivated in tropical and subtropical regions around the world. Full of vitamins, tannins, phenolic compounds and flavonoids, the guava is traditionally used in medicine for its antimicrobial properties. It has also demonstrated astringent, healing and skin repair properties. In Mexico the leaves are said to be a remedy for itches. In Amazon and Brazil a decoction of the bark and/or leaves or a flower infusion is used topically for wounds, ulcers and skin sores.

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## Summary file

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### Dermawhite™ WF

BC09993

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### Regulatory Data

**INCI:** Water (and) Tartaric Acid (and) Disodium EDTA (and) Sodium Sulfite (and) Sodium Metabisulfite (and) Glycerin (and) Butylene Glycol (and) Saxifraga Sarmentosa Extract (and) Carica Papaya (Papaya) Fruit Extract (and) Psidium Guajava (Guava) Fruit Extract

**China:** Each component listed in Inventory of Existing Cosmetic Ingredient in China (2014 June 30th version) IECIC

**CAS#:** 7732-18-5; 87-69-4; 139-33-3; 7757-83-7; 7681-57-4; 56-81-5; 107-88-0; 164288-53-3; 84012-30-6; 91770-12-6

**EINECS#:** 231-791-2; 201-766-0; 205-358-3; 231-821-4; 231-673-0; 200-289-5; 203-529-7; 310-127-6; 281-675-0; 294-795-3

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### Appearance

Colorless to pale yellow syrupy liquid

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### Preservative

Sodium sulfite, Sodium metabisulfite

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### Natural Labels

None

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### Formulation Data

**Concentration of use:** 2%

**Solubility:** Soluble in water

**Incorporation method:** Dermawhite™ WF is incorporated into the finished process below 50°C or at a room temperature for cold processing.

**Optimal pH:** 6.5-8.5

### Formulation Data

**Properties:** Powerful inhibitor of melanin synthesis demonstrated *in vitro* and *in vivo*.

### Applications:

- Whitening body and face care
  - Radiance care: complexion perfecter
  - Anti-spots repairing sun care
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### Storage

In its original packaging and protected from freeze, at 10-30°C

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### Shelf Life

18 months

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### Patent family

Patent granted in France (FR2764189B1), in Europe (EP0887072B1 - in DE, ES, FR, GB, IT), in Japan (JP3451184B2), in Rep of Korea (KR100419527B1) and in India (IN191259)

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#### Pictures

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