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HIBISCIN® HP LS 9198

TROPICAL BOTANICAL MILK

ACTIVE INGREDIENT FOR COSMETOLOGY
SKIN

DEFINITION / COMPOSITION

HIBISCIN® HP LS 9198 contains native proteins (average molecular weight ~500,000 Daltons) from the seeds of *Hibiscus esculentus L.*

Hibiscus esculentus L.

Hibiscus esculentus L. (family: *Malvaceae*) grows in India, Malaysia, the Philippines and Central Africa. *Hibiscus esculentus L.* is used widely in traditional medicine, especially for its antiseptic benefits for cleaning and healing wounds.

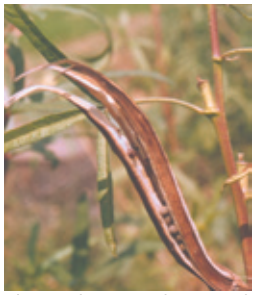

Fig. 1 *- Hibiscus esculentus seed.*

Fig. 2 *- Hibiscus esculentus flower.*

The seeds of *Hibiscus esculentus* contain proteins, calcium and vitamins, and offer excellent nourishment as a food source. The proteins of *Hibiscus esculentus* are similar to those of soy beans or milk casein because their amino acid content is similar. A comparison of the amino acid composition of the proteins of HIBISCIN® HP LS 9198 and milk casein is shown in Table I.

Amino acid	HIBISCIN® HP LS 9198 (%)	Milk Casein (%)
Aspartic Acid	10.2	6.7
Threonine	3.2	4.3
Serine	4.9	5.6
Glutamic Acid	17.9	19.8
Proline	4.6	10.8
Glycine	7.3	1.8
Alanine	4.2	2.9
Valine	4.1	6.3
Cysteine	1.8	0.3
Methionine	2.0	2.6
Isoleucine	2.9	5.1
Leucine	6.5	8.9
Tyrosine	4.8	5.4
Phenylalanine	4.5	4.9
Lysine	5.8	8.2
Histidine	3.4	2.7
Arginine	9.4	3.5
Tryptophane	2.4	ND

Table I *- Comparison of the amino acid composition of proteins of HIBISCIN® HP LS 9198 and milk casein.*

Main components:
An ~5% aqueous solution of native proteins (~500,000 D) from Hibiscus esculentus.

SKIN BENEFITS

The composition of *Hibiscus esculentus* protein, resembling closely that of milk protein, suggests that HIBISCIN® HP LS 9198 may be considered a **botanical milk** from exotic tropical fruit. The nutritional value of *Hibiscus esculentus* protein has been highlighted in a comparative study that found *Hibiscus esculentus* protein and casein superior to soy protein.

In cosmetics HIBISCIN® HP LS 9198 offers a strong, immediate **tensor effect** and, with continued use, a significant **firming effect** (see clinical test overleaf). HIBISCIN® HP LS 9198 also **improves moisturization** of the stratum corneum. Consequently, the skin's softness and suppleness are improved.

COSMETIC USE

- Facial anti-age and firming care.
- Softening, repairing and anti-wrinkle care.
- Body care products.

DOSAGE / SOLUBILITY / MODE OF INCORPORATION

1. **Dose of use**: 2 to 5%.
2. **Solubility**: HIBISCIN® HP LS 9198 is soluble in water, insoluble in oils and fats.
3. **Mode of incorporation**: HIBISCIN® HP LS 9198 is incorporated in cosmetic products below 50°C, during the finishing process, or at room temperature for cold processing.

ANALYTICAL CHARACTERISTICS

1. **Aspect**: opaque liquid, beige, of weak odor.
2. **Specifications**: upon request.

TOLERANCE

Good.

EFFICACY

Test summaries overleaf.

STORAGE

In its original container, at 15 - 25°C.

INCI NAME

Water (and) Hibiscus Esculentus Seed Extract.

MANUFACTURER

Laboratoires Sérobiologiques S.A.

EFFICACY TESTS

MOISTURIZING EFFECT *IN VIVO* ON VOLUNTEERS

Aim
The moisturizing effect of a cream containing 5% HIBISCIN® HP 9198 was compared to that of a placebo cream.

Protocol
Double blind clinical study performed on 10 healthy female volunteers having very dry, squamous skin on their legs.

Twice daily treatment for 4 weeks, with randomization, using:
- a placebo cream,
- a cream containing 5% HIBISCIN® HP LS 9198.

Measurement of the moisturizing effect by evaluation of the dielectric conductivity of treated skin:
- immediately after application and then 15, 30 and 60 minutes later,
- after 4 weeks treatment.

Results

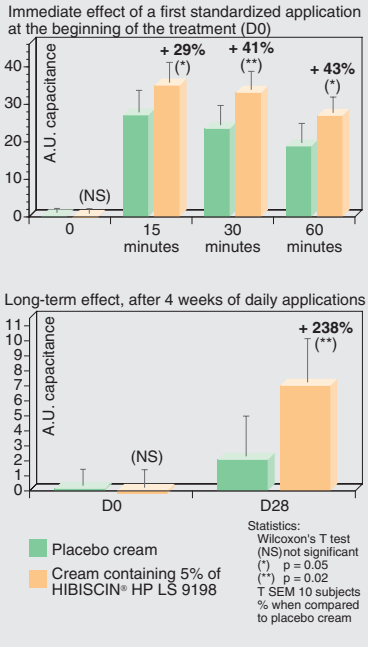

Fig. 3 *- Measurement of dielectric conductivity.*

Conclusion
HIBISCIN® HP LS 9198 at 5% in a cream provides a good immediate moisturizing effect, lasting at least 1 hour, after a single application. It also produces a significant long-term, cumulative moisturizing effect (238% increase versus a placebo), after 4 weeks treatment.

IMPROVEMENT OF SKIN MOISTURIZATION, SUPPLENESS AND SOFTNESS - SENSORIAL TEST ON VOLUNTEERS

Aim
The moisturizing efficacy of HIBISCIN® HP LS 9198 at 5% in a gel, and the resulting improvement of skin suppleness and softness, were compared to that obtained with a placebo gel.

Protocol
A trained panel of 10 people compared the sensorial effects on skin of application of a gel containing 5% HIBISCIN® HP LS 9198 to that of a placebo gel.

Skin moisturization and softness were evaluated immediately after application and skin suppleness 45 minutes later. Effects were scored on a 7 level scale.

Results

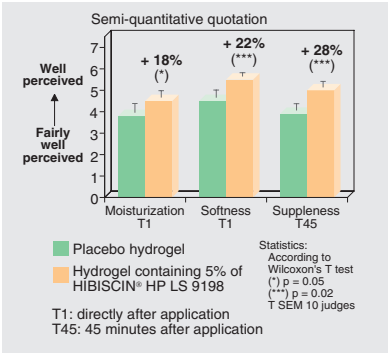

Fig. 4 *- Evaluation of skin moisturization, softness and suppleness.*

Conclusion
The hydrogel containing 5% HIBISCIN® HP LS 9198 improved skin moisturization, suppleness and softness significantly more than the placebo.

LONG-TERM SKIN FIRMING EFFECT - CLINICAL STUDY ON VOLUNTEERS

Aim
The long-term skin firming effect of a cream containing 5% Hibiscin® HP LS 9198 was compared to that of a placebo cream using horizontal extensiometry.

Protocol
Double blind clinical study performed on 10 healthy female volunteers.

Twice daily randomized treatment for 4 weeks with:
- a placebo cream on one half of the forehead,
- a cream containing 5% HIBISCIN® HP LS 9198 on the other half of the forehead.

Skin firmness was measured using a Ball Bearing Electrodynamometer (BBE) developed by the Research & Development Department of Laboratoires Sérobiologiques. BBE measures the viscoelasticity of the stratum corneum, a direct measure of the skin's firmness.

Results (Fig. 5)

Conclusion
The cream containing 5% HIBISCIN® HP LS 9198 improved skin firmness significantly more than the placebo.

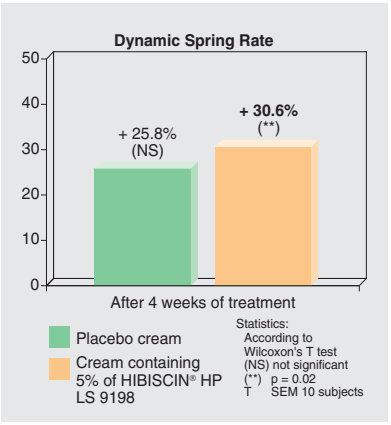

Fig. 5 *- Measurement of horizontal extensiometry.*

IMMEDIATE SKIN TENSOR EFFECT - CLINICAL STUDY ON VOLUNTEERS

Aim
The immediate skin firming effect of a gel containing 5% Hibiscin® HP LS 9198 was compared to that of a placebo cream and a gel containing 5% serum using horizontal extensiometry.

Protocol
Double blind clinical study performed on 25 healthy female volunteers.

Single application of:
- a placebo gel on the hand,
- a gel containing 5% HIBISCIN® HP LS 9198,
- a gel containing 5% serum.

Skin firmness was measured using a Ball Bearing Electrodynamometer (BBE) developed by the Research & Development Department of Laboratoires Sérobiologiques. BBE measures the viscoelasticity of the stratum corneum, a direct measure of the skin's firmness.

Results

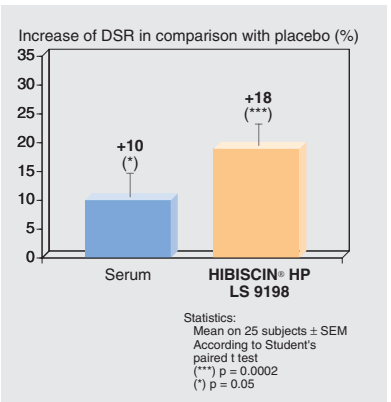

Fig. 6 *- Measurement of skin firmness by BBE.*

Conclusion
The gel containing 5% HIBISCIN® HP LS 9198 has a stronger immediate tensor effect than the placebo gel or the gel containing 5% serum.