



LABORATOIRES
SÉROBIOLOGIQUES
Division de Cognis France

MELHYDRAN® LS 4420

OPTIMAL HYDRO-REGULATOR

SKIN

DEFINITION / COMPOSITION

Honey, known since the ancient times as a sweetener, is a natural, ecological substance obtained exclusively from the concentrated and hardly modified nectar of flowers.

MELHYDRAN® LS 4420 is a natural hydro-regulating complex, both substantive and emollient, which contains some constituents of its original products (honey and nectar).

Main components:

Our process of purification makes it possible to select the following main components for MELHYDRAN® LS 4420:
Oligosaccharides - Amino-Acids - Organic Acids - Mineral Elements.

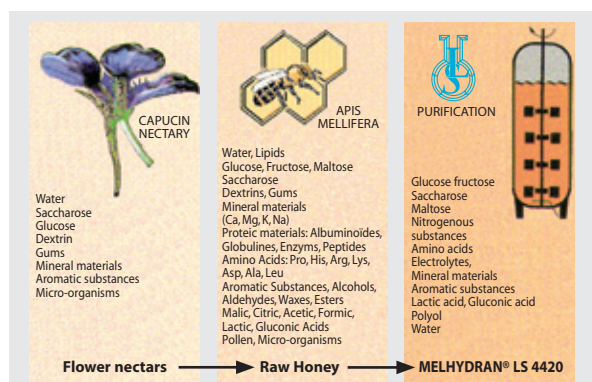


Fig. 1 – Comparative compositions between flower nectar, raw honey and MELHYDRAN® LS 4420.

SKIN BENEFITS

MELHYDRAN® LS 4420 acts specifically on **epidermal horny layer** as a:

- **NMF-like, hygroscopic** factor,
- **hydro-regulator** rate of hydration maintained at ideal levels (12 - 15%),
- **substantive** and **hydro-retaining**.

MELHYDRAN® LS 4420:

- **prolongs moisturization** (substantial activity longer than 24 hours),
- **slows dehydration** (with a non-occlusive effect),
- **smoothes** and **restructures** the microrelief.

Thus, MELHYDRAN® LS 4420 makes it indirectly possible for bound water to play its essential part as a plasticizer, which helps:

- the suppleness, elasticity and extensibility of the skin,
- skin softness, velvetiness, turgescence and comfort
- the skin optical qualities: transparency, reflectance and brightness.

COSMETIC USE

MELHYDRAN® LS 4420 is suitable for:

- **rough, dry skin lacking hydro-retaining substances:**
 - reinforcing the water-absorbing capacity of the stratum corneum,
 - diminishing skin roughness, while improving suppleness, cellular cohesion, velvetiness, comfort and brightness.
- **aged skin** and **prematurely aging**.

MELHYDRAN® LS 4420 is suitable for incorporation into:

- moisturizing care for the face, body and hands,
- sun care, after-shave,
- baths and shower products.

DOSAGE / SOLUBILITY / MODE OF INCORPORATION

1. **Dose of use:** 3 to 7%.

2. **Solubility:** soluble in water, alcohol and glycols, insoluble in oils and fats.

3. **Mode of incorporation:** into the finishing process at 50°C, or at room temperature for cold processing.

MELHYDRAN® LS 4420 is compatible with most cosmetic raw materials when used in a pH between 4 and 8. Avoid direct contact with concentrated acids and bases

ANALYTICAL CHARACTERISTICS

1. **Aspect:** light yellow liquid with a characteristic odor.
2. **Specifications:** upon request.

TOLERANCE

Good.

EFFICACY

Test summaries overleaf.

STORAGE

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

INCI NAME

Honey Extract.

MANUFACTURER

Laboratoires Sérobiologiques, division de Cognis France.

ACTIVE INGREDIENT FOR COSMETOLOGY

EFFICACY TESTS

MOISTURIZING ACTIVITY ON HUMAN HORNY LAYER
- DIELECTRIC CONDUCTIVITY

Aim

Evaluation of the moisturizing activity on stratum corneum of a hydrogel containing 5% MELHYDRAN® LS 4420 in comparison to a placebo hydrogel.

Protocol

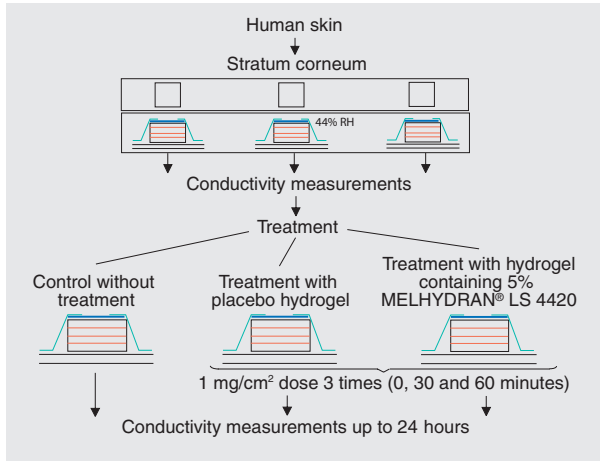


Fig. 2 - Protocol.

Results

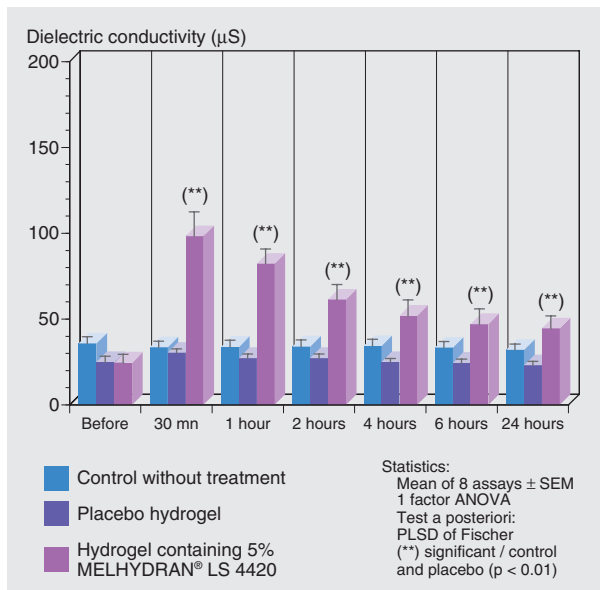


Fig. 3 - Moisturizing effect of MELHYDRAN® LS 4420 at 5% compared to placebo.

Conclusion

MELHYDRAN® LS 4420 has a significant and a long-lasting moisturizing effect in comparison to placebo.

IMPROVEMENT OF THE SKIN MICRORELIEF IN VIVO BY SEM

Protocol

Clinical test on 10 volunteers with a very dry skin (Xerodermal state).

Treatment twice a day during 4 weeks with a gel containing 5% MELHYDRAN® LS 4420.

Skin replicas were taken: - before treatment,
- after treatment.

Evaluation by SEM (Scanning Electron Microscopy).

Results

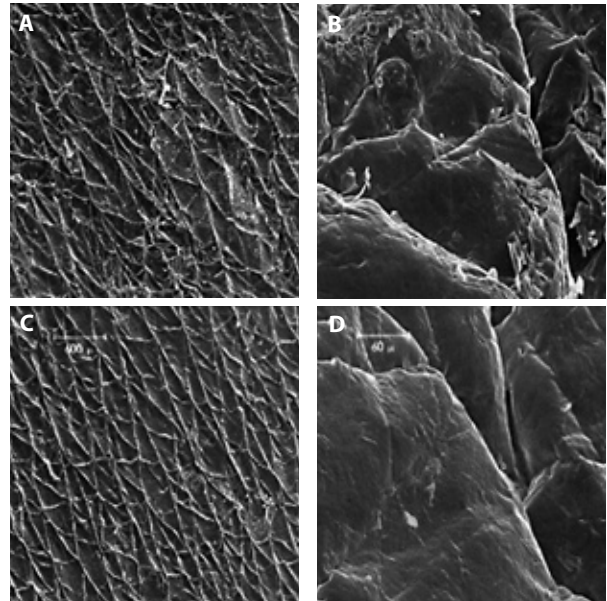


Fig. 4 - Decrease of the skin roughness with MELHYDRAN® LS 4420. SEM micrographs = A and B before treatment; uneven, rough aspect, intense corneocytal exfoliation (intense xerodermy). After treatment (C and D) MELHYDRAN® LS 4420 restores the delicate structure of the lines, gives a turgescence microrelief and a perfect corneocyte cohesion.

Conclusion

The gel containing 5% MELHYDRAN® LS 4420 has improved the skin microrelief, resulting of a better hydro-regulation. Therefore, the cutaneous properties such as suppleness, velvetness and confort are restored.