

Technical Information

dermosoft® decalact liquid MB**The Product: dermosoft® decalact liquid MB**

This low viscous blend combines our multifunctional **dermosoft® decalact MB** and Triethyl Citrate for easy-handling and boosted antimicrobial efficacy. **dermosoft® decalact liquid MB** features selective antimicrobial activity against microorganisms causing skin disorders like dandruff or athlete's foot. Thus, it is a suitable alternative to active materials like Triclosan, Climbazole and Piroctone Olamine. Moreover, it can be used in certified natural cosmetics.

CHARACTERISTICS

- INCI: *Sodium Caproyl/Lauroyl Lactylate; Triethyl Citrate*
- Appearance: clear, yellow to brownish liquid
- 100% naturally derived; COSMOS approved and compliant with other standards for natural cosmetics; please contact us for further information

- Naturally derived alternative to traditionally used active substances
- Efficient against
 - *Malassezia furfur* (causing dandruff)
 - *Trichophyton* species (causing athlete's foot and nail fungus)
 - *Candida albicans* (causing candidosis)

- Clear incorporation into aqueous formulation with help of solubilizers

- pH-limits for processing: 4.0 – 6.5
- pH-range for optimum activity: 4.5 – 5.5

DOSAGE

| Product Concept | Dosage |
|--------------------|-------------|
| Rinse off products | 0.7 – 1.2 % |
| Emulsions | 0.5 – 1.0 % |

How to work with dermosoft® decalact liquid MB

MANUFACTURING PROCEDURE (LABORATORY SCALE)

For rinse-off products

1. Mix **dermosoft® decalact liquid MB** with the concentrated surfactant base at room temperature.
2. Do not heat above 60°C, this leads to separation of the formulation.
3. Keep the pH between 4.0 and 6.5 during processing. Adjust pH to 4.5 – 5.5 in the finished formulation.

Note: **dermosoft® decalact liquid MB** may lead to turbidity in surfactant bases. Check carefully.

For O/W-emulsions

1. It is recommended to add **dermosoft® decalact liquid MB** to the oil phase. An addition to the water phase is possible.
2. Heat only moderately, up to 80 °C possible. Do not keep the temperature up for longer periods of time.

For aqueous based products

1. Dilute with the help of ethanol and/or a solubilizer before addition to the water phase.
2. Use buffer system (e.g. Tri-Sodium-Citrate) to stabilize the pH

In gel formulations:

- Addition to the water phase after the formation of the gel network recommendable
- Compatibility with natural gelling agents needs to be tested (formulations with Xanthan Gum possible)

FORMULATION ADVICE

| | |
|---------------------------------------|---|
| Do not heat above | 80°C in emulsions 60°C in surfactant based formulations |
| Solubilization in water possible with | TAGAT® CH 40 (PEG-40 Hydrogenated Castor Oil) or other efficient solubilizer |
| | Ethanol only in high dosage (35 – 40 %) Combination of Ethanol (approx. 10%) with solubilizer (e.g. symbio®solv clear plus MB) |
| Compatibility | Surfactants |

APPLICATION IDEAS

Perfectly suitable for rinse off products and emulsions.

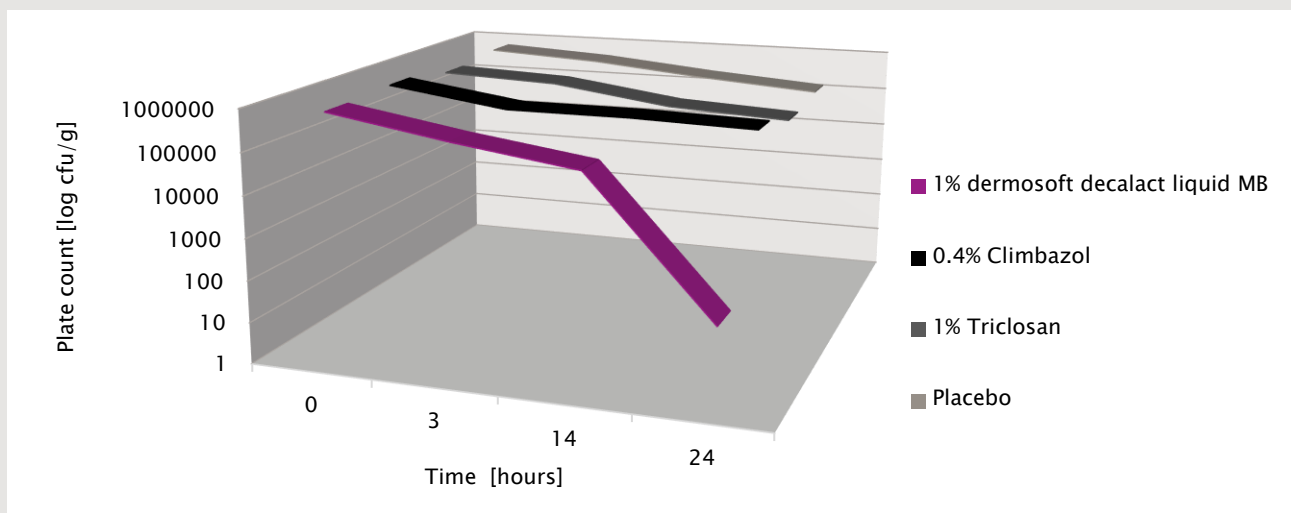
For more formulation ideas visit us at:

<https://www.dr-straetmans.de/en/products>

Proof of Performance

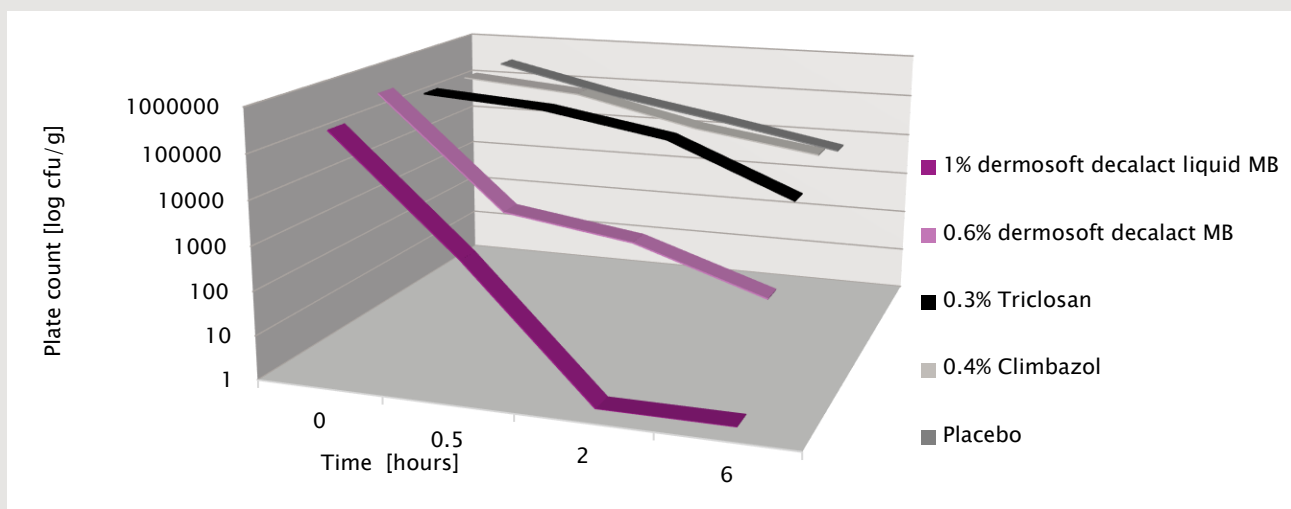
MICROBIOLOGICAL CHALLENGE TESTS

In vitro test: Antimicrobial effectiveness testing against *Candida albicans*:
Reduction of *Candida albicans* after inoculation in surfactant base (pH 4.5)



dermosoft® decalact liquid MB shows the best performance against *Candida albicans*.

In vitro test: Antimicrobial effectiveness testing against *Trichophyton mentagrophytes*
Activity against *Trichophyton mentagrophytes* after inoculation in a foot cream formulation at pH 5.3



dermosoft® decalact liquid MB shows the best performance against *Trichophyton mentagrophytes* in foot cream formulation. In comparison with **dermosoft® decalact MB** at comparable active matter level, the **dermosoft® decalact liquid MB** shows superior performance thanks to the boosting additive Triethyl Citrate.

Trade Information

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| International Approval* | EU, USA, Japan, Korea. |
| Packaging | 25 kg |
| Shelf life (<i>stored in original container</i>) | 36 months |

* Information is based on our best knowledge and reviewed for the most requested regions only. We recommend to check current regulatory requirements in individual target countries. For more information, refer to Product Data Record (PDR) document chapter 5.

Literature

Dr. Straetmans (2012). "A modern, multifunctional anti-dandruff agent". Personal Care Europe April, 64–68.

For further information, please contact:
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