Product Information

# dermosoft® Octiol

## The Product: dermosoft® Octiol

This multifunctional additive combines a multitude of cosmetic properties with a strong antimicrobial activity. In combination with other **dermosoft®** types, there will be no need for traditional preservatives. Alternatively, it helps to reduce the amount of traditional preservatives.
Moreover, **dermosoft® Octiol** shows co-emulsifying properties by improving the emulsification efficacy of the main emulsifier or solubilizer and enhances the dispersibility of pigments.

### CHARACTERISTICS

- INCI: Caprylyl Glycol
- Appearance: Clear, almost colorless liquid (at 30°C, at lower temperatures waxy solid)

- Cosmetic functions due to its amphiphilic properties:
  - Wetting, hydrating
  - Co-emulsifying, emulsification efficacy improvement
  - Co-solubilizing
  - Enhances dispersibility of pigments
  - Viscosity regulating
  - Antimicrobial efficacy

- Lowers the energy demand for emulsification processes
- Improves performance of solubilizers
- Supports pigment dispersion

- Serves as a boosting agent for other preservatives
- Synergistic in combination with organic acids
- Suitable for all types of emulsions

- pH independent

### DOSAGE

| Product Concept | Dosage |
|---|---|
| Emulsions | 0.3 – 0.7 % *<br>(in some cases up to 1%) |
| Wet Wipe Lotions | 0.3 – 0.5 % |

*do not exceed 0,3 % for eye care and sensitive skin products

### ANTIMICROBIAL EFFICACY

| Gram + | Gram – | Yeast | Mould |
|---|---|---|---|
| + | ++ | ++ | + |

Legend: + = good, but needs a co-active | ++ = very good alone

Note: The antimicrobial efficacy in surfactant based products is lower due to micellar inclusion

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# How to work with dermosoft® Octiol

## MANUFACTURING PROCEDURE *(LABORATORY SCALE)*

**Emulsions:**

1. Dissolve **dermosoft® Octiol** in the water or oil phase and heat to 75°C.
2. Proceed according to your manufacturing process. **dermosoft® Octiol** is heat and pH stable under standard conditions during the manufacturing of cosmetic products.
3. Please consider in product development, that **dermosoft® Octiol** may have an impact on emulsion viscosity and stability.

*Note:* The influence on stability and reduction of viscosity in emulsions is dependent on the emulsifier system and raw material dosage.

Recommended to add before homogenization.

**Surfactant based products:**
**dermosoft® Octiol** can be dissolved clearly.
The antimicrobial performance of **dermosoft® Octiol** is depending on the surfactant matrix.
**dermosoft® Octiol** might be included into micelles and is hence inactivated.
The stability of formulations is dependent on surfactant base; stability tests are required.

**Aqueous or hydroalcoholic products (e.g. wet wipe lotions):**
For transparent formulations, the addition of solubilizing agents or glycols may be necessary.

## FORMULATION ADVICE

| | |
|---|---|
| Achieve best antimicrobial performance | Combine with organic acids |
| Reduction of performance might occur with | Polar oil phases |
| | Polar preservative |
| | Polymer structures in water phase |
| | Hydrocolloids |
| | Pigments (due to absorption on surfaces) |
| | PEG-derivatives |
| | High levels of surfactants |
| Avoid migration into oil phase | Add solvents to water phase (e.g. Glycols) |
| | Reduce polarity of oil phase |
| Consider for processing Lecithin emulsions | It is required to hydrate Lecithin first and add **dermosoft® Octiol** to the oil phase |

## APPLICATION IDEAS

**dermosoft® Octiol** is perfectly suitable for every type of emulsion.

Works well also in wet wipe lotions or color cosmetics.

For more formulation ideas visit us at:
https://www.dr-straetmans.de/en/products/Proof of Performance

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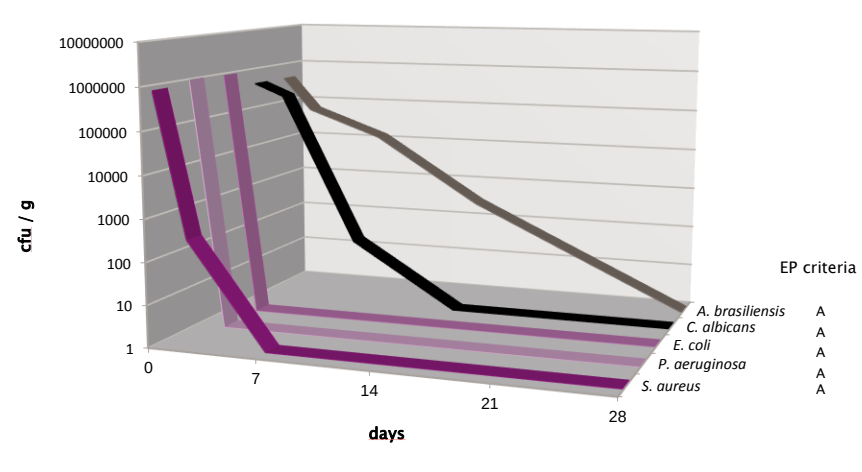
# Proof of Performance

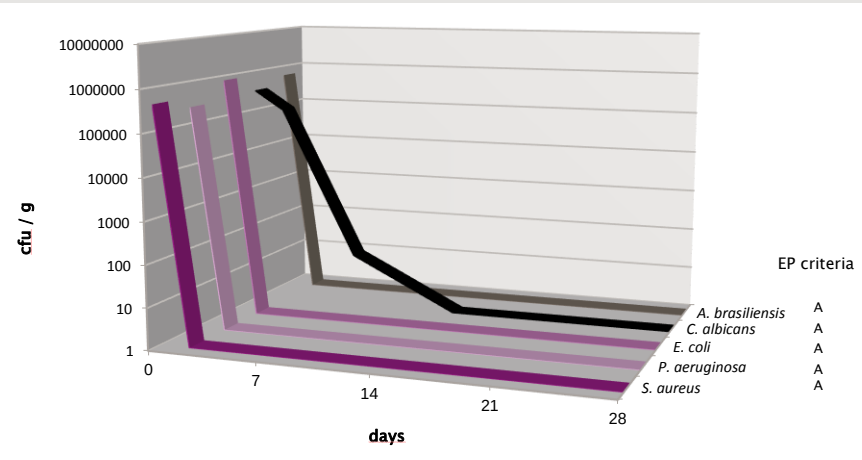
## MICROBIOLOGICAL CHALLENGE TESTS

**Basic emulsion O/W with 0.3% dermosoft® Octiol (pH 6.0)**




Many cosmetic formulations can be antimicrobially protected with **dermosoft® Octiol**. In order to improve the efficacy, we recommend the combination with organic acids:

**Body Lotion O/W with 0.5% dermosoft® Octiol and 0.25% Sodium Benzoate (pH 5.4)**

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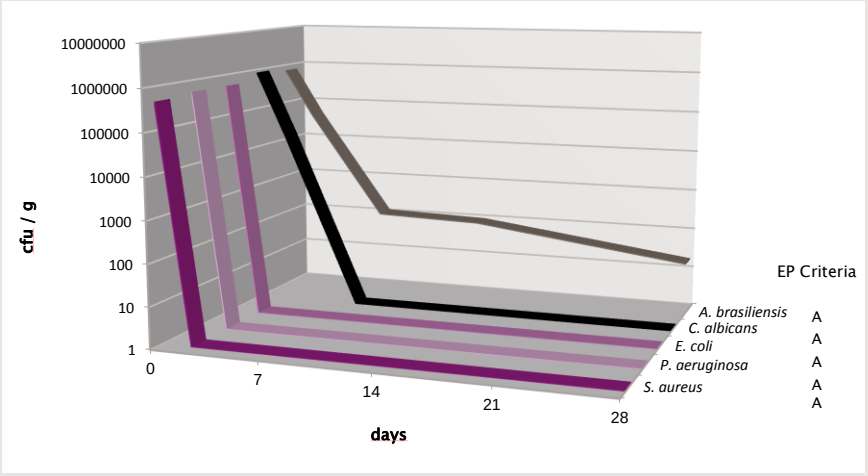
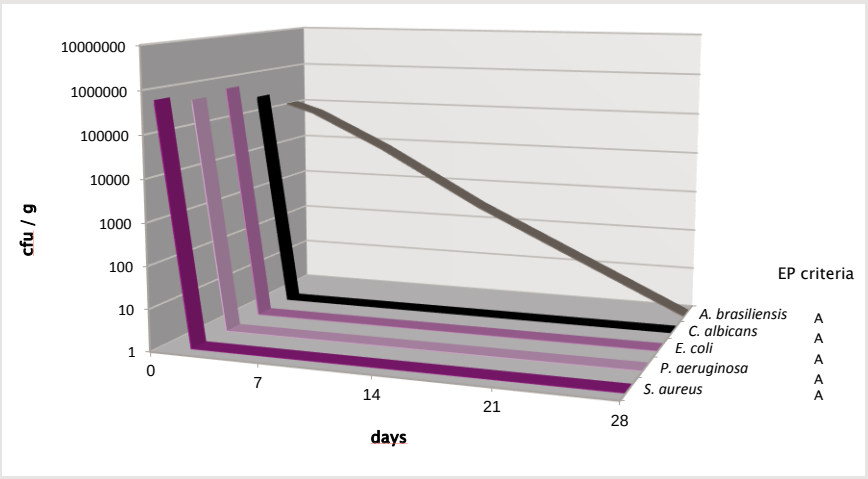
**Protect Hand Cream O/W with 0.2 % dermosoft® 688 and 0.3 % dermosoft® Octiol (pH 5.4)**




**dermosoft® Octiol** works well also at higher pH levels

**Basic emulsion with 0.5 % dermosoft® Octiol (pH 6.2)**

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## Trade Information

| | |
|---|---|
| **International Approval*** | EU, USA, Canada, Australia, China, Japan, Korea |
| **Packaging** | 16 kg / 180 kg |
| **Shelf life (stored in original container)** | 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 contact our regulatory department or refer to our regulatory status statement.

## LITERATURE

Thiemann, A.; Scholze, J.; Salmina-Petersen, M.; Jänichen, J. Wetting Agents: Friends or Enemies of Solubilizers. *SOFW*, **2014**, Nov, 46-53.
Thiemann, A.; Grandke, N.; Gröne, S.; Salmina-Petersen, M; Jänichen, J. Wetting Agents – Their Concentration-Dependent Effects on the Energy Demand in the Formation of Stable Emulsions. *SOFW*, **2015,** Mar, 10-16.
Thiemann, A.; Gröne, S.; Salmina-Petersen, M; Jänichen, J. Wetting Agents – Multifunctional Ingredients in Color Cosmetics. *SOFW*, **2015**, Sept, 34-40.

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