



Multifunctional Additives

Product Information

dermosoft® decalact deo

Product features



Antimicrobial active

Effective blend against skin odor

100 % natural

Performance tested in-vivo

ECOCERT registered

dermosoft® decalact deo

dermosoft® products cover many cosmetic functions

The product line

dermosoft® products are carefully chosen multifunctional cosmetic ingredients. The well balanced product profiles are tailored to the needs of cosmetic formulations. Basic cosmetic functions like hydrating, conditioning, masking and others are combined with an excellent antimicrobial profile. **dermosoft®** products will meet many of your requirements for the improvement of cosmetic formulations and along the way protect the product against microorganisms. With the aid of **dermosoft®** cosmetic products can easily be formulated without traditional preservatives.

dermosoft® decalact deo is an active ingredient for deodorant applications

dermosoft® decalact deo

The product's active principle is based on a mixture of middle chain acyl lactylate produced from 100 % natural components mixed with plant derived Triethyl Citrate and sage oil. The antimicrobial efficacy of **dermosoft® decalact deo** is optimized for use in deodorant applications. Sage oil exhibits additional antimicrobial effect¹ as well as astringent, antihidrotic, anti-inflammatory and analgesic action.

Application

dermosoft® decalact deo is a transparent liquid. In O/W-emulsions the incorporation into the water or oil phase is possible. The dosage of **dermosoft® decalact deo** is typically between 0,3 and 1,0%. When used at higher concentrations **dermosoft® decalact deo** may affect the emulsion stability. **dermosoft® decalact deo** may influence the performance of some polymeric gelling agents. As frequently observed for anionic surface active ingredients the pH of the final formulation with **dermosoft® decalact deo** may shift to lower values. If a pH above 5,0 is mandatory the use of buffer systems is recommended. In aqueous or alcoholic solutions the use of a solubilizer may be necessary. The water solubility is increasing with increasing pH.

| Characteristics of dermosoft® decalact deo | |
|---|---|
| Appearance | Amber liquid |
| Chemical Name | Sodium decanoyl dodecanoyl lactylat; Triethylcitrate; Sage, Salvia officinalis lavandulifolia, ext. |
| INCI | Sodium Caproyl/Lauroyl Lactylate Triethyl Citrate; Salvia Officinalis (Sage) Oil |
| Recommended dosage | 0,3 – 1,0 % |
| pH-range | 4,0 - 7,5 |
| Regulatory status CMR-ingredients | Registered in EU, Japan No |

Lit. 1: Hammer KA, Carson CF and Riley TV. Antimicrobial activity of essential oils and other plant extracts. *J. Applied Microbiol.* 1999, **86**, 985-990.

dermosoft® decalact deo

dermosoft® decalact deo shows excellent in-vitro activity against odor causing microorganisms

Activity of **dermosoft® decalact deo** as active substance for deodorants

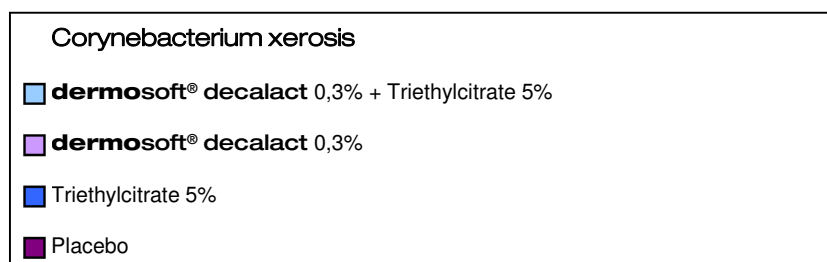
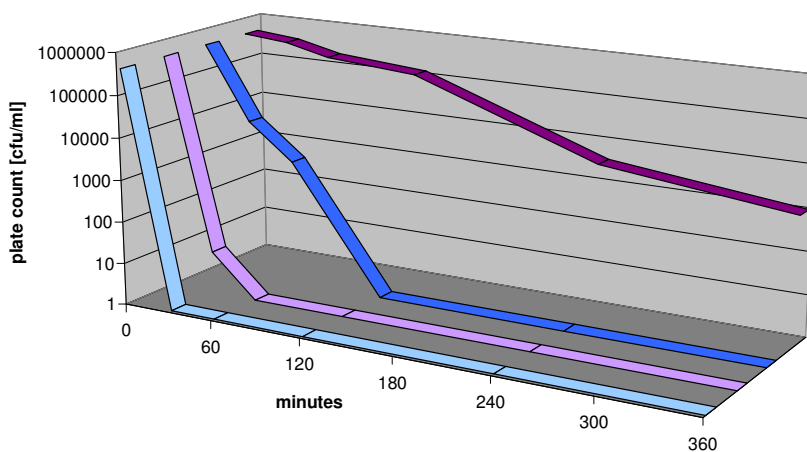
Deodorant formulations are based on three pillars:

- prevention of sweat formation
- prevention of odor formation
- masking of odor

The role of **dermosoft® decalact deo** in concepts against body odor is to control those microorganisms being responsible for the degradation of sweat into odorous compounds. The component Triethyl Citrate has the ability to block the esterase enzyme that is responsible for the degradation of sweat. However, it is recommended to increase the dosage of Triethyl Citrate in the deodorant formulation by addition of **dermofeel® TEC eco** if it is desired to make use of this effect to full extent.

In-vitro studies show the excellent activity of **dermosoft® decalact** against *Corynebacterium xerosis*:

aqueous solution with 1% Polyglyceryl-10 Laurate pH 5,0



dermosoft® decalact deo

The performance of **dermosoft® decalact deo** has been demonstrated in an in-vivo sniff test study. **dermosoft® decalact deo** is more effective than Ethylhexylglycerin.

dermosoft® decalact deo
outperforms benchmark
in-vivo (sniff test)

General description:

Comparative assessment of the deodorant efficacy of two deo roll on formulations. olfactometric expert grading of the intensity of axillary sweat odour before and after treatment over a total of one week.

Test Institute:

SGS Institute Fresenius, Germany

Test design:

Panel size: 20 volunteers

Application: daily for one week

Assessment: initial value (t0), 6 h (t1) and 24 h after first application (t2), 6 h (t3) and 24 h after last application (t4).

Test area: left and right axilla, half side test, randomized

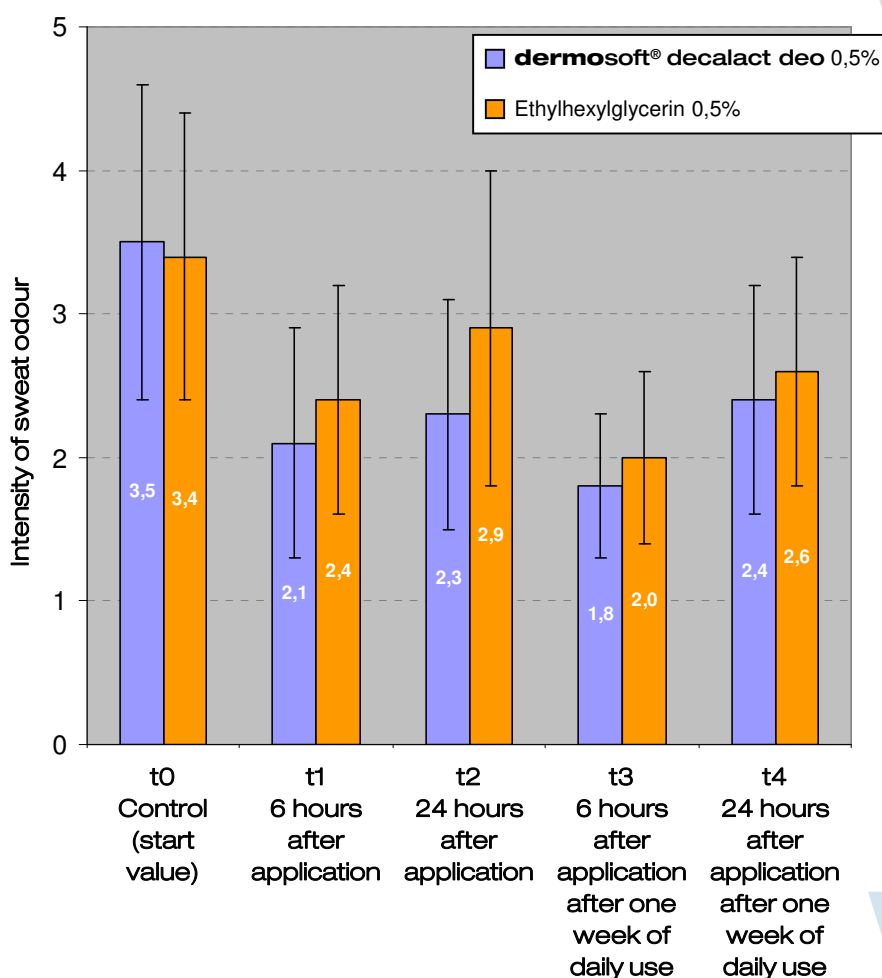
Test products: Deo Roll on D033-8.11-811 with 0,5% **dermosoft® decalact deo**

Deo Roll on D033-8.12-811 with 0,5% Ethylhexylglycerin

Results:

The intensity of the axillary sweat odour was significantly reduced by both test products in comparison to the initial value. The deo roll on formulation with **dermosoft® decalact deo** showed a **significant reduction 6h and 24h** after single application as well as after one week of application.

Sniff test **dermosoft® decalact deo** versus Ethylhexylglycerin



dermosoft® decalact deo

Deo Roll on 24-hour

D033-8.17-1111

Claims*: smooth skin feel with quick absorption
24h-deodorant activity
dermosoft® decalact deo as proven active

| Phase | Ingredient | INCI | Supplier | % |
|-------|--------------------------------|---|-----------------------|---------------|
| A | Deionised Water | Aqua | | 70.60 |
| | Glycerol (85%) | Glycerin | Merck | 5.00 |
| | dermosoft® OMP | Methylpropanediol; Caprylyl Glycol; Phenylpropanol | Dr. Straetmans | 2.00 |
| A1 | Permulen TR 2 | Acrylates/C10-30 Alkyl Acrylate Crosspolymer | Noveon | 0.40 |
| B | dermofeel® sensolv | Isoamyl Laurate | Dr. Straetmans | 2.00 |
| | Dry-Flo PC | Aluminum Starch Octenylsuccinate | Akzo Nobel | 2.00 |
| | dermosoft® decalact deo | Sodium Caproyl/Lauroyl Lactylate, Triethyl Citrate, Salvia Officinalis (Sage) Oil | Dr. Straetmans | 0.50 |
| | dermofeel® TEC eco | Triethyl Citrate | Dr. Straetmans | 5.00 |
| C | dermofeel® G10LW | Polyglyceryl-10 Laurate; Aqua, Citric Acid | Dr. Straetmans | 2.00 |
| | Ethanol (86%) | Alcohol denat. | Merck | 10.00 |
| | Perf. Aqua Power Frag 49312174 | Parfum | Drom | 0.50 |
| | Sodium Hydroxide (sol. 10%) | Sodium Hydroxide | Merck | q. s. |
| | | | | 100.00 |

Manufacturing Procedure:

1. Premix phase A. Dissolve A1 in phase A under high force stirring until it is completely dissolved.
2. Premix phase B. Add phase B to phase A while stirring.
3. Homogenize for 1-2 min using Ultra Turrax.
4. Premix phase C and add under medium stirring to phase A/A1/B. Adjust pH value if necessary

Specification Values:

Appearance: Milky liquid.

pH value: 4.5 – 5.0.

Viscosity (Brookfield: Helipath TF; Speed 10): Approx. 1.000-3.000 mPa.s.

Stability:

More than 3 months stable at 20°C, 40°C, and 4°C.

Microbiological Stability: Proven.

* deo-efficacy supported by in vivo and in vitro studies

dermosoft® decalact deo

Deo Cream 24-hour

129-2.3-0212

Claims*: Soft and elegant skin feel with quick absorption
24h-deodorant activity
dermosoft® decalact deo as proven active

| Phase | Ingredient | INCI | Supplier | % |
|-------|--|---|-----------------------|---------------|
| A | Deionised Water | Aqua | | 70.15 |
| | Presolution of dermosoft® 688 eco (sol 10%) | Aqua, Glycerin, Sodium Anisate | Dr. Straetmans | 2.00 |
| | dermosoft® Octiol | Caprylyl Glycol | Dr. Straetmans | 0.30 |
| B | symbio®muls GC | Glyceryl Stearate Citrate, Cetearyl Alcohol, Glyceryl Caprylate | Dr. Straetmans | 6.00 |
| | dermofeel® sensolv | Isoamyl Laurate | Dr. Straetmans | 6.00 |
| | Xiameter PMX 1184 | Dimethicone, Trisiloxane | Dow Corning | 6.00 |
| | dermofeel® TEC eco | Triethyl Citrate | Dr. Straetmans | 3.00 |
| | dermosoft® decalact deo | Sodium Caproyl/Lauroyl Lactylate, Triethyl Citrate, Salvia Officinalis (Sage) Oil | Dr. Straetmans | 0.50 |
| B1 | Carbopol Ultrez 10 | Carbomer | Noveon | 0.35 |
| C | Glycerol (86%) | Glycerin | Merck | 3.00 |
| | Dry-Flo PC | Aluminum Starch Octenylsuccinate | Akzo Nobel | 2.00 |
| D | Sinodor CQ | Citronellyl Methylcrotonate | Quest | 0.50 |
| E | Perf. Grapefruit | Parfum | Cosnaderm | 0.20 |
| | | | | 100.00 |

Manufacturing Procedure :

1. Heat phases A and B separately up to 80°C.
2. Disperse B1 in B. Emulsify phase B into phase A while stirring. Homogenize for 1-2 min. using an Ultra Turrax.
3. Cool down to 40°C and add premix of phase C and D.
4. Adjust pH value to pH 4.0 – 5.0 and cool down to room-temperature.

Specification Values:

Appearance: white emulsion.

pH-value: 4.0 – 5.0.

Viscosity (Brookfield: Helipath TF; Speed 10): Approx. 50.000 – 70.000 mPa.s.

Stability: More than 3 months stable at 20°C, 40°C and 4°C.

Microbiological Stability: Proven.

* deo-efficacy supported by in vivo and in vitro studies

dermosoft® decalact deo

Natural Deo Spray non Aerosol

122-50.9A-0312

Claims*: Long-lasting odour protection & refreshing
PEG-free for normal skin
dermosoft® decalact deo as proven active



| Phase | Ingredient | INCI | Supplier | % |
|----------|-----------------------------------|--|-----------------------|-------------|
| A | Deionised Water | Aqua | | 80.75 |
| | Tri-Natriumcitrat-Dihydrat | Sodium Citrate | Merck | 1.00 |
| B | symbio®solv XC | Caprylyl/Capryl Wheat Bran/Straw Glycosides, Aqua; Fusel Wheat Bran/Straw Glycosides, Polyglyceryl-5 Oleate, Sodium Cocoyl Glutamate, Glyceryl Caprylate | Dr. Straetmans | 1.80 |
| | Perf. Classic Style Nat. P0250188 | Parfum | Frey & Lau | 0.25 |
| | dermofeel® TEC eco | Triethyl Citrate | Dr. Straetmans | 4.50 |
| | dermosoft® decalact deo | Sodium Caproyl/Lauroyl Lactylate, Triethyl Citrate, Salvia Officinalis (Sage) Oil | Dr. Straetmans | 0.50 |
| | dermosoft® GMCY | Glyceryl Caprylate | Dr. Straetmans | 0.50 |
| | Ethanol (86%) | Alcohol denat. | Merck | 10.00 |
| C | LaraCare A200 | Galactoarabinan | Larex | 0.20 |
| | Herbasec Marigold (Calendula) | Maltodextrin, Calendula Officinalis Flower Extract | Cosmetochem | 0.50 |
| D | Citric Acid (sol 20%) | Citric Acid | Merck | q. s. |
| | Sodium Hydroxide (sol. 10%) | Sodium Hydroxide | Merck | q. s. |
| | | | | 100.00 |

Manufacturing Procedure:

1. Mix phase A and pre-dissolve phase B separately.
2. Add phase A to phase B while stirring. Add phase C.
3. Adjust pH value with phase D if necessary.

Specification Values:

Appearance: clear light orange solution.

pH value: 5.8 – 6.4.

Stability: More than 3 months stable at 20°C, 40°C and 4°C.

Microbiological Stability: Proven.

* deo-efficacy supported by in vivo and in vitro studies

dermosoft® decalact deo

Dozens of formulation examples are compiled in our Formulary

Formulations with our products are available for both, traditional and natural cosmetics concepts. Please refer to the Dr. Straetmans homepage for formulation inspirations.

Toxicology

dermosoft® decalact deo is not sensitizing and does not contain genetically modified material, dioxine, phthalates, BSE-related material or CMR-material. It has been evaluated as a safe cosmetic and food ingredient with an excellent toxicological profile.

Packing units

dermosoft® decalact deo is available in 10 kg net plastic cans.

Environmental Information

dermosoft® decalact deo is produced in an environmentally unobjectionable process by esterification of pure natural components. **dermosoft® decalact deo** is readily biodegradable. **dermosoft® decalact deo** has not been tested on animals.

Handling and storage

In closed original containers **dermosoft® decalact deo** can be stored for at least 3 years. **dermosoft® decalact deo** does not need to be preserved and thus does not contain any preserving agents.

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