

E-Leen Green C

The innovative and alternative solution for self-preserved natural formulations

E-Leen Green C is a multifunctional blend, designed for **creating self-preserved** cosmetics and for the **moisturizing and conditioning of the skin**.

E-Leen Green C consists of **100 % nature-derived components**, produced from renewable resources. Its major ingredient, **bio-sourced** Pentylene Glycol, is **sustainably made** from sugar cane bagasse. The blend is **COSMOS-approved** and suitable for **eco-certified cosmetics**.

E-Leen Green C shows a **broad spectrum anti-microbial activity** and helps to protect all kinds of cosmetic products against microbial degradation. This blend is **free of listed preservatives** and is especially effective against bacteria and yeasts. It contains Glyceryl Caprylate/Caprate, a **humectant** and a co-emulsifying **emollient** with re-fatting properties.

E-Leen Green C is **mild to the skin** thanks to its non-ionic nature, which also ensures a **good efficacy up to pH 7**.

E-Leen Green C exhibits a **long-lasting skin moisturizing effect**, and it contributes to a pleasant, non-sticky and non-greasy skin feel.

Functions

- Self-preservation of formulations
- Moisturizer
- Emollient
- Re-fatting agent

Applications

- Skin Care
- Hair Care
- Make up
- Toiletries



Specifications and characteristics

INCI	Pentylene Glycol (and) Glyceryl Caprylate/Caprate
CAS Reg. No	[5343-92-0]; [85536-07-8, alternate CAS Reg. numbers: 91744-32-0/85409-09-2]
Appearance	Clear colourless liquid
Odour	Odourless or faint
Density at 20 °C	0.97 – 0.98 g/ml
Refractive index	1.435 – 1.445
Recommended pH of use	4.0 – 7.0
Recommended use level	1.0 to 3.0 % (max. 5.5 %)
Regulatory status	Globally approved; safety and regulatory datasheets are available upon request
Origin, ISO 16128	Derived natural Natural origin index: 1 Contains 100 % renewable carbon
Chemical structures 	

The above information is accurate to the best of our knowledge. Customers are advised to make their own studies on the usefulness of any ingredient for a particular application. Recommended usage information is only provided as indication and should not be considered as recommendations to use Minasolve SAS's products in violation of any laws, patents, or official regulations dealing with manufacture, composition, local procedures, product design, or end usage.

E-Leen Green C

Application of E-Leen Green C in cosmetic products

a) O/W-cream - pH 7.0

Phase	Ingredient	INCI name	%
A	Water	Aqua	ad 100.0
	Xanthan Gum ¹⁾	Xanthan Gum	0.5
B	Emulgade PL 68/50 ²⁾	Cetearyl Glucoside (and) Cetearyl Alcohol	5.0
	Shea Butter ³⁾	Butyrospermum Parkii (Shea) Butter	3.0
	Joboba Oil ³⁾	Simmondsia Chinensis (Jojoba) Oil	3.0
	Hazelnut Oil ⁴⁾	Corylus Americana (Hazel) Seed Oil	3.0
C	Bioxan T70 ⁵⁾	Tocopherol	0.1
D	E-Leen Green C ⁶⁾	Pentylene Glycol (and) Glyceryl Caprylate/Caprate	3.0
E	Citric Acid (25 % aq.)	Water (and) Citric Acid	ad pH 7.0

b) O/W-cream - pH 5.5

Phase	Ingredient	INCI name	%
A	Water	Aqua	ad 100.0
	Xanthan Gum ¹⁾	Xanthan Gum	0.5
B	Emulgade PL 68/50 ²⁾	Cetearyl Glucoside (and) Cetearyl Alcohol	5.0
	Shea Butter ³⁾	Butyrospermum Parkii (Shea) Butter	3.0
	Joboba Oil ³⁾	Simmondsia Chinensis (Jojoba) Oil	3.0
	Hazelnut Oil ⁴⁾	Corylus Americana (Hazel) Seed Oil	3.0
C	Bioxan T70 ⁵⁾	Tocopherol	0.1
D	E-Leen Green C ⁶⁾	Pentylene Glycol (and) Glyceryl Caprylate/Caprate	3.0
E	Sodium Hydroxide (10 % aq.)	Water (and) Sodium Hydroxide	ad pH 5.5

c) Intimate cleansing gel - pH 4.5

Phase	Raw material	INCI name	%
A	Water	Water	ad 100
	Allantoin	Allantoin	0.2
	Glycerin	Glycerin	2.0
	Sorbitol	Sorbitol	2.0
	Sodium Gluconate	Sodium Gluconate	0.4
	Xanthan Gum ¹⁾	Xanthan Gum	0.5
B	Plantacare 2000 UP ²⁾	Decyl Glucoside	10.0
	Tego Betain 810 ⁷⁾	Capryl/Capramidopropyl Betaine	3.0
C	E-Leen Green C ⁶⁾	Pentylene Glycol (and) Glyceryl Caprylate/Caprate	2.0
D	Lactic acid (20% aq.)	Water (and) Lactic Acid	ad pH 4.5

Raw material suppliers: 1) Jungbunzlauer; 2) BASF; 3) Caesar & Loretz; 4) SanaBio
 5) BTSA; **6) Minasolve**; 7) Evonik

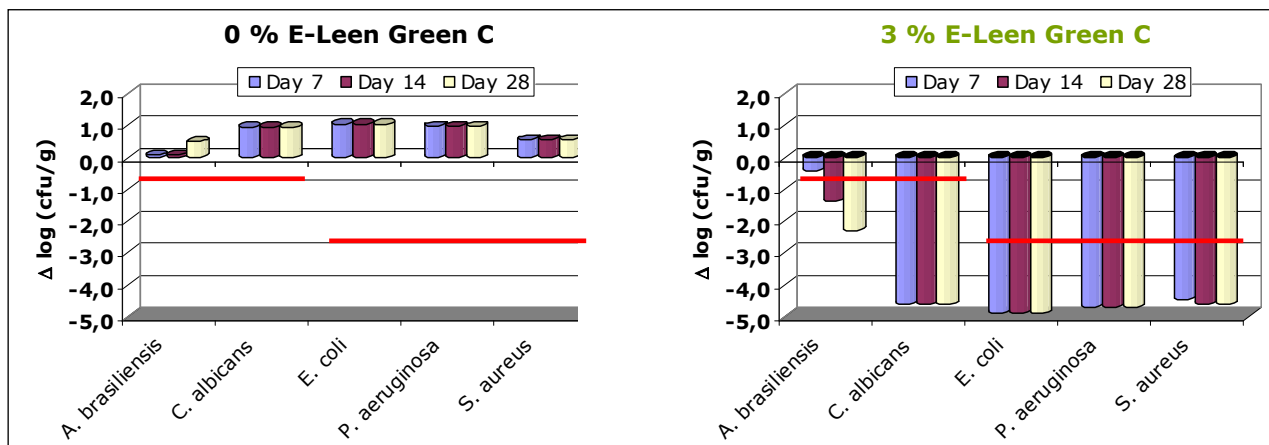
The above information is accurate to the best of our knowledge. Customers are advised to make their own studies on the usefulness of any ingredient for a particular application. Recommended usage information is only provided as indication and should not be considered as recommendations to use Minasolve SAS's products in violation of any laws, patents, or official regulations dealing with manufacture, composition, local procedures, product design, or end usage.

E-Leen Green C

Anti-microbial performance of E-Leen Green C (Challenge Tests, ISO 11930)

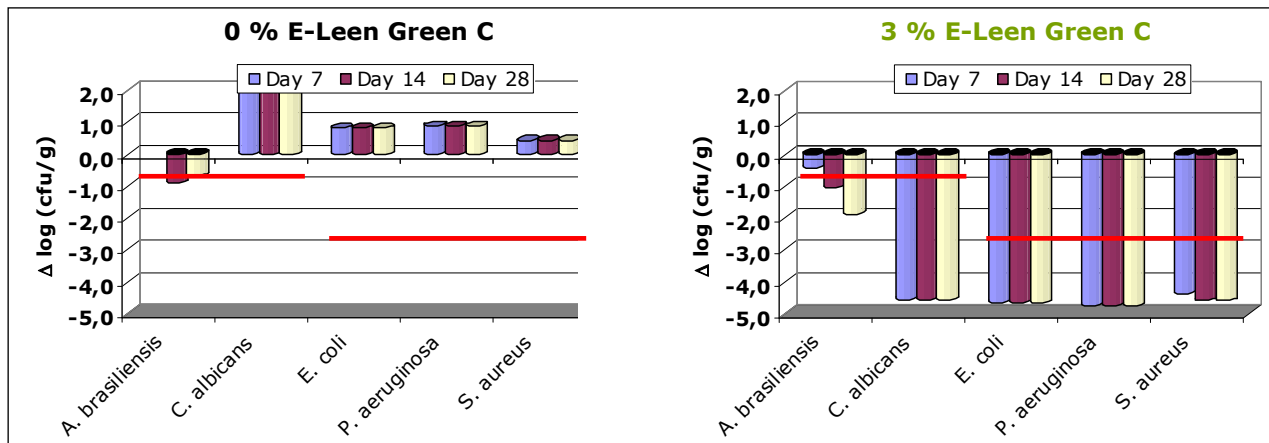
a) O/W- cream – pH 7.0

→ fulfils criteria A according to ISO 11930



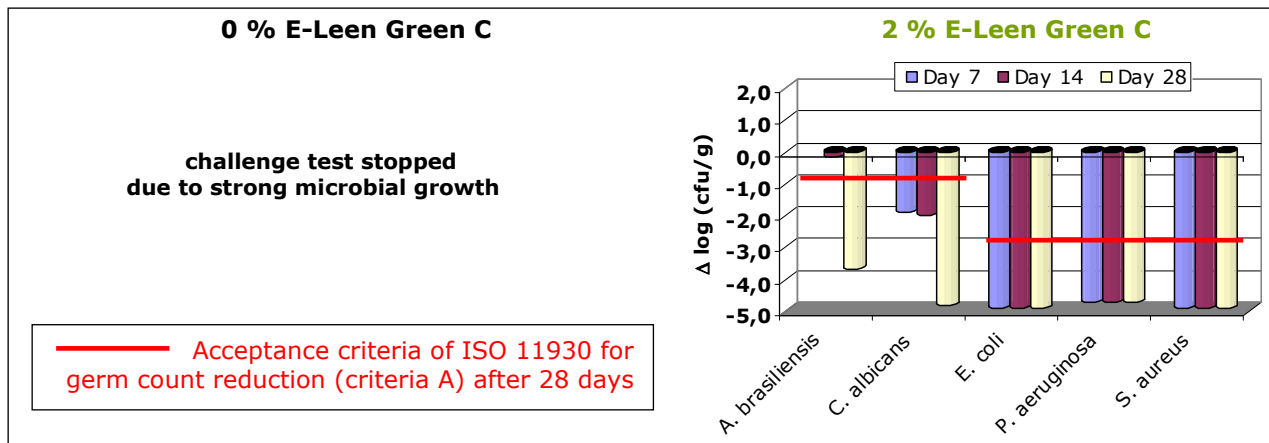
b) O/W-cream – pH 5.5

→ fulfils criteria A according to ISO 11930



c) Intimate cleansing gel – pH 4.5

→ fulfils criteria A according to ISO 11930

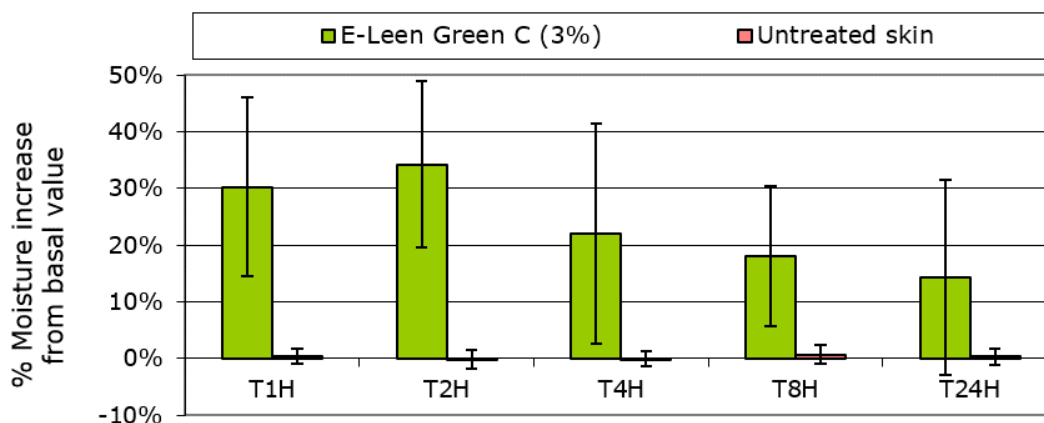


The above information is accurate to the best of our knowledge. Customers are advised to make their own studies on the usefulness of any ingredient for a particular application. Recommended usage information is only provided as indication and should not be considered as recommendations to use Minasolve SAS's products in violation of any laws, patents, or official regulations dealing with manufacture, composition, local procedures, product design, or end usage.

E-Leen Green C

Corneometry study of aqueous solution

E-Leen Green C is an effective **skin humectant**. Its long-lasting moisturizing effect was demonstrated in a corneometry study over 24 hours. The test substance was applied as a 3 % aqueous dispersion to the forearm areas of 15 female panellists, aged 18 - 65.



Application in cosmetic formulations

E-Leen Green C can be dispersed in water at low concentrations and is soluble in water at high concentrations. It is miscible with alcohols, polar oils and emollient esters.

% E-Leen Green C in H ₂ O									
10 %	20 %	30 %	40 %	50 %	60 %	70 %	80 %	90 %	100 %
hazy mixture			clear solution						

E-Leen Green C can be added at any stage of the production process. It is preferably incorporated into an aqueous phase. The blend is suitable for hot or cold processing, and it is compatible with common cosmetic ingredients.

Further readings

- Konaté N. et al., "Sustainably Sourced Pentylene Glycol – a Green Allrounder", *SOFW Journal*, October **2016**.
- "Amended Safety Assessment of Monoglyceryl Monoesters as Used in Cosmetics", *Cosmetic Ingredient Review*, **2015**.
- "Final Report of the Amended Safety Assessment of Glyceryl Laurate, [...], Glyceryl Caprylate/Caprates, [...]", *International Journal of Toxicology*, 23 (2), suppl. 55-94, **2004**.
- Pillai R. et al., "1,2-Alkanediols for Cosmetic Preservation", *Cosmetics & Toiletries Magazine*, 123 (10), 53-61, **2008**.
- Schnittger S. et al., "Use of alkanediols in personal care formulations – closer look at antimicrobial activity", *Proceedings of the SCC Annual Scientific Meeting & Technology Showcase*, New York, **2006**.

The above information is accurate to the best of our knowledge. Customers are advised to make their own studies on the usefulness of any ingredient for a particular application. Recommended usage information is only provided as indication and should not be considered as recommendations to use Minasolve SAS's products in violation of any laws, patents, or official regulations dealing with manufacture, composition, local procedures, product design, or end usage.