



MINASOLVE® is an affiliate of MINAFIN® Group

Created in 2004, The Minafin® Group is an expert in Health Chemistry, Green Chemistry and Challenging Chemistry. Activities include industrial subcontracting, development of chemical syntheses and industrial scale-up of custom-made processes as well as proprietary products with high added value for the pharmaceutical, cosmetics, agriculture and high-tech industries. Strong synergies exist between all business units: MINASOLVE, MINAKEM, PENNAKEM, PRESSURE CHEMICAL and MINASCENT.

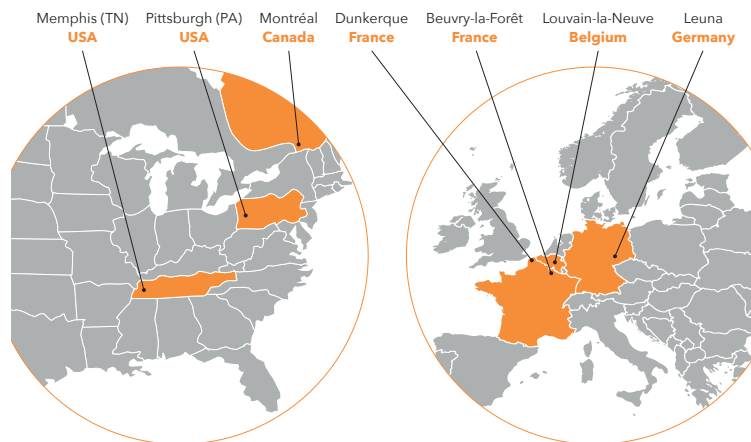
Serving market leaders as well as emerging players we support our customers' efforts to improve the quality of life in the global community by:

- ▶ Improving our chemistry and operational excellence today
- ▶ Creating and innovating for tomorrow
- ▶ Driving our enterprises together to **go beyond expectations**

Specifications and Characteristics

INCI	Pentylene Glycol, Caprylyl Glycol, Bioflavonoids
APPEARANCE	Clear, colourless or light-yellow liquid
ODOUR	Odourless or faint
MELTING POINT	< -20°C
SOLUBILITY	≤ 2% in water
RECOMMENDED pH OF USE	3.0 ▶ 7.0
RECOMMENDED USE LEVEL	0.5 ▶ 1.5%
NATURAL ORIGIN INDEX	1 (ISO 16128)

The given information is accurate to the best of our knowledge. Buyers are advised to make their own studies on the usefulness of any product for a particular application or purpose. Recommended usage information is only provided as indication, and should not be considered as recommendations to use the products in violation of any patents, intellectual property rights, laws, or regulations relating, but not limited to, manufacture, composition, product design or end usage.



300
M€ SALES



1050
EMPLOYEES



150
SCIENTISTS



7
PRODUCTION SITES

MINAFIN
GROUP

E leen 58 GOLD

MULTIFUNCTIONAL SOLUTION WITH PURIFIED CITRUS EXTRACT

- ✓ *Antioxidant bioflavonoids*
- ✓ *Skin humectant*
- ✓ *Natural antimicrobial solution*
- ✓ *Upcycled from food waste*



NATRUE
APPROVED



Approved by
ECOCERT
RAW MATERIAL
COSMOS
APPROVED

MINASOLVE
BIO-INGREDIENTS FOR YOUR APPLICATIONS

green
solving
attitude.

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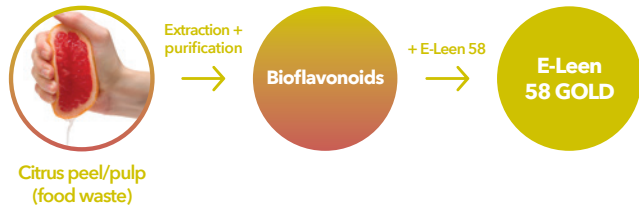
2024.04. V1.1

E-Leen 58 GOLD from MINASOLVE

E-Leen 58 GOLD is a **versatile, multi-functional ingredient**. It is sustainably produced, **100% biobased** as well as COSMOS and NATRUE approved. **E-Leen 58 GOLD** is based on **up-cycled ingredients** from food production and contains an optimised selection of citrus bioflavonoids.

E-Leen 58 GOLD can be used for a wide range of applications:

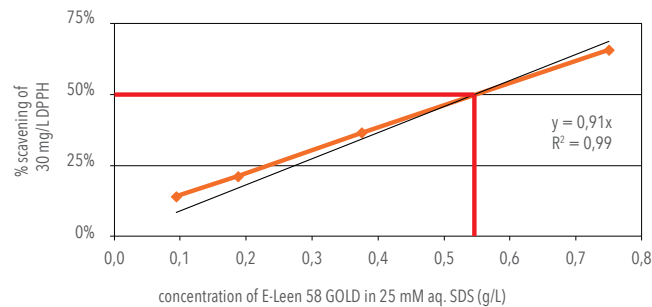
- ▶ **Skin friendly moisturiser** – for a smooth and well-hydrated skin.
- ▶ **Sustainable skin detoxifier** – antioxidant.
- ▶ **Synergistic preservative booster:**
 - ▶ Broad-spectrum antimicrobial effect at low use-level
 - ▶ Creates fully self-preserving formulations



The bioflavonoids in **E-Leen 58 GOLD** are extracted from the peel and pulp of grapefruit (*Citrus grandis*). The extracted natural compounds are **specialily purified** to ensure their safety for use in personal care products.

Antioxidant activity

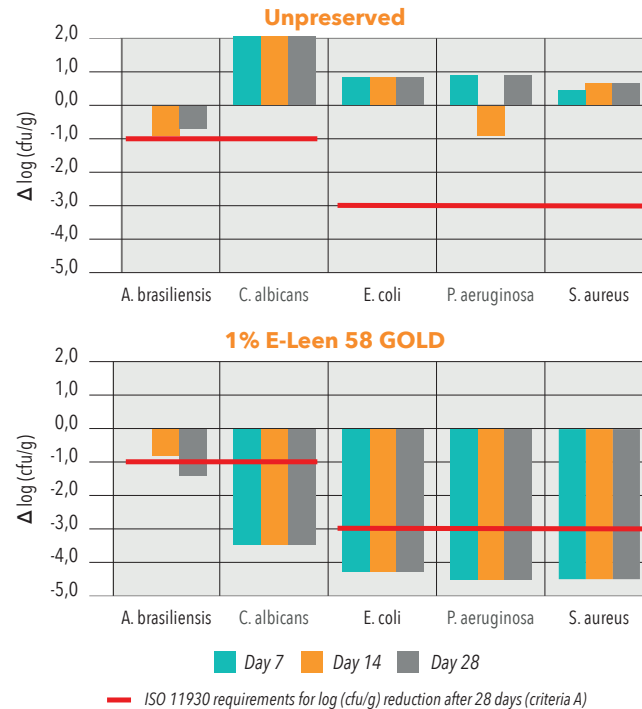
Radical scavenging effect of E-Leen 58 GOLD



E-Leen 58 GOLD at 0,55 g/L neutralizes 50% of the free radicals in a 30 mg/L solution of DPPH.

Antimicrobial activity

Challenge test results (ISO 11930) in O/W emulsion, pH 5.5



E-Leen 58 GOLD turns the formulation into a self-preserving product that **passes the challenge test with criteria A**.

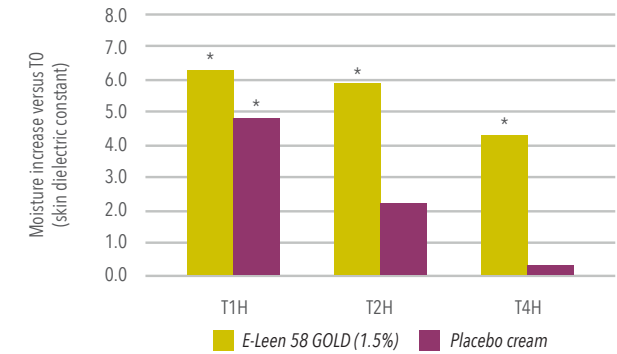
Phase	Raw material	INCI	%
A	Demineralized Water	Aqua	ad 100.00
	Xanthan Gum ⁽¹⁾	Xanthan Gum	0.50
B	Emulgade PL 68/50 ⁽²⁾	Cetearyl Glucoside (and) Cetearyl Alcohol	5.00
	Shea Butter ⁽³⁾	Butyrospermum Parkii (Shea) Butter	3.00
	Jojoba Oil ⁽³⁾	Simmondsia Chinensis (Jojoba) Oil	3.00
	Hazelnut Oil ⁽⁴⁾	Corylus Avellana (Hazel) Seed Oil	3.00
C	Bioxan T70 ⁽⁵⁾	Tocopherol	0.10
D	E-Leen 58 GOLD ⁽⁶⁾	Pentylene Glycol, Caprylyl Glycol, Bioflavonoids	1.00
E	Citric Acid (50%)	Citric Acid (and) Aqua	ad pH 5.5

Raw material suppliers:

⁽¹⁾ Jungbunzlauer ⁽²⁾ BASF ⁽³⁾ Caesar & Loretz ⁽⁴⁾ Sanabio ⁽⁵⁾ BTSa ⁽⁶⁾ Minasolve

Skin moisturizing effect

Corneometry study over 4 hours - 1.5% E-Leen 58 GOLD in O/W emulsion, tested on 10 female volunteers



* Statistically significant moisturizing effect (WILCOXON TEST, P=95%)

E-Leen 58 GOLD at 1.5% in an O/W emulsion **increases skin hydration** (statistically significant at 1, 2 and 4 hours).

Applications

E-Leen 58 GOLD is compatible with all common cosmetic ingredients and can be added at any time during the formulation process. It is **preferably added at the end of the formulation process**. This approach also **maximises the antimicrobial effect**.

E-Leen 58 GOLD is a **cold processable liquid** and can be heated up to **max. 100°C**. It is **compatible with low and neutral pH values**. High pH-values and oxidising agents may lead to deactivation and yellow discoloration.

E-Leen 58 GOLD **dissolves at 2% in demineralised water** and is miscible with lower alcohols and polar vegetable oils. The addition of a solubiliser can be useful to obtain clear aqueous formulations.

The **antimicrobial boosting effect** of **E-Leen 58 GOLD** is well suitable for **O/W emulsions and cleansing products**.



Skin care



Face care



Body care



Toiletries



Men care



Make-up



Wet Wipes



Natural