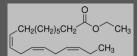


Synovea® EL: Mutifactorial Role of Ethyl Linoleate in Skin Care & Treatment Products



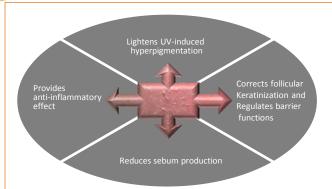


What is Synovea® EL?

Ethyl Linoleate (EL) is a stable form of Linoleic acid (LA).

It is neutral, lipid-soluble form of LA.

EL is hydrolyzed to LA in-vivo [Alcohol Clin Exp Res, 19(2):374-377, 1995].



Ethyl Linoleate (EL) is easy to use and has a high stability against oxidation over Linoleic acid.

EL is reported to accelerate the healing of wounds & clinically proven to be an effective anti-acne agent [*Brit J Dermatol*, 157(3):569-574, 2007].

Key Attributes of Synovea ® EL

Corrects follicular keratinization

- Ethyl linoleate is clinically proven be effective against acne [Brit J Dermatol, 157:569-574, 2007]
- Linoleic acid is significantly reduced in epidermal and comedonal lipids in acne subject [J Am Acad Dermatol, 14:221–225, 1986]
- Lack of Linoleic acid causes Hyperkeratinization, Barrier disruption, Bacterial proliferation

Reduces sebum production

- \circ Acne-prone sebaceous glands have high level of 5 $\alpha\text{-reductase}$ due to low level of Linoleic acid
- ocausing production of high level of sebum
- Linoleic acid is a 5 α -reductase inhibitor [Int J Dermatol,43:701-702, 2004] & reduces sebum production

Lightens skin pigmentation

- Lightens UV-induced skin pigmentation [Arch Dermatol Res, 290:375-381, 1998]
- Works by post-translational degradation of tyrosinase [Biochem J, 394:43-50, 2006]

Provides anti-inflammatory effect

- oEL alleviates inflammatory response by topical applications [US Patent 4,025,645 expired in 2007]; Probably, EL acts as a competitive inhibitor to the production of prostaglandin
- Linoleic acid metabolite has an anti-inflammatory activity [Am J Clin Nutr, 71(suppl):3615–366S, 2007]

Trade Name	Synovea® EL
INCI Name	Ethyl linoleate
CAS#	544-35-4
ELINCS	208-868-4
Appearance	Colorless to yellow liquid
Solubility	Miscible with a wide-range of hydrophobic emollients
Suggested use level	2 to 5%

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