

THE BEST FROM
OLIVE

BIO - MIMETIC

Active
Ingredient



UPCYCLING +

Obtained from the
BY - PRODUCT of
the olive oil refinery



SKIN +

LIPID BARRIER
RESTRUCTURATION
MICROBIOME
PROTECTION



EFFICACY TEST

Relipidization
Anti microbial
Anti inflammatory



%

1,0 - 10,0



OLIVAN Elementum[®]

Oleic acid 75%
Linoleic acid 10%



COSMOS
APPROVED



100% mediterranean

REINFORCING the EPIDERMAL lipid barrier

Effectively INHIBITS GROWTH of BACTERIA

SYNERGISTIC ANTIINFLAMMATORY activity with MULTI -
LAYERED ANTIINFLAMMATORY efficacy

ATANOR 118, S.L. Fontcoberta 31, 08034 Barcelona, CIF:B66642224, atanor118.es



This document is the property of ATANOR 118, S.L. The information in this publication is provided in good faith and is based on our current knowledge. No legally binding promise or guarantee regarding the suitability of our products for specific use is made. ATANOR 118 does not assume any express or implicit responsibility in connection with the presentation or any use of this information, nor should the information found here be construed as the granting of a license to any patent or a guarantee of use of this information or product, infringe the intellectual property rights of third parties.

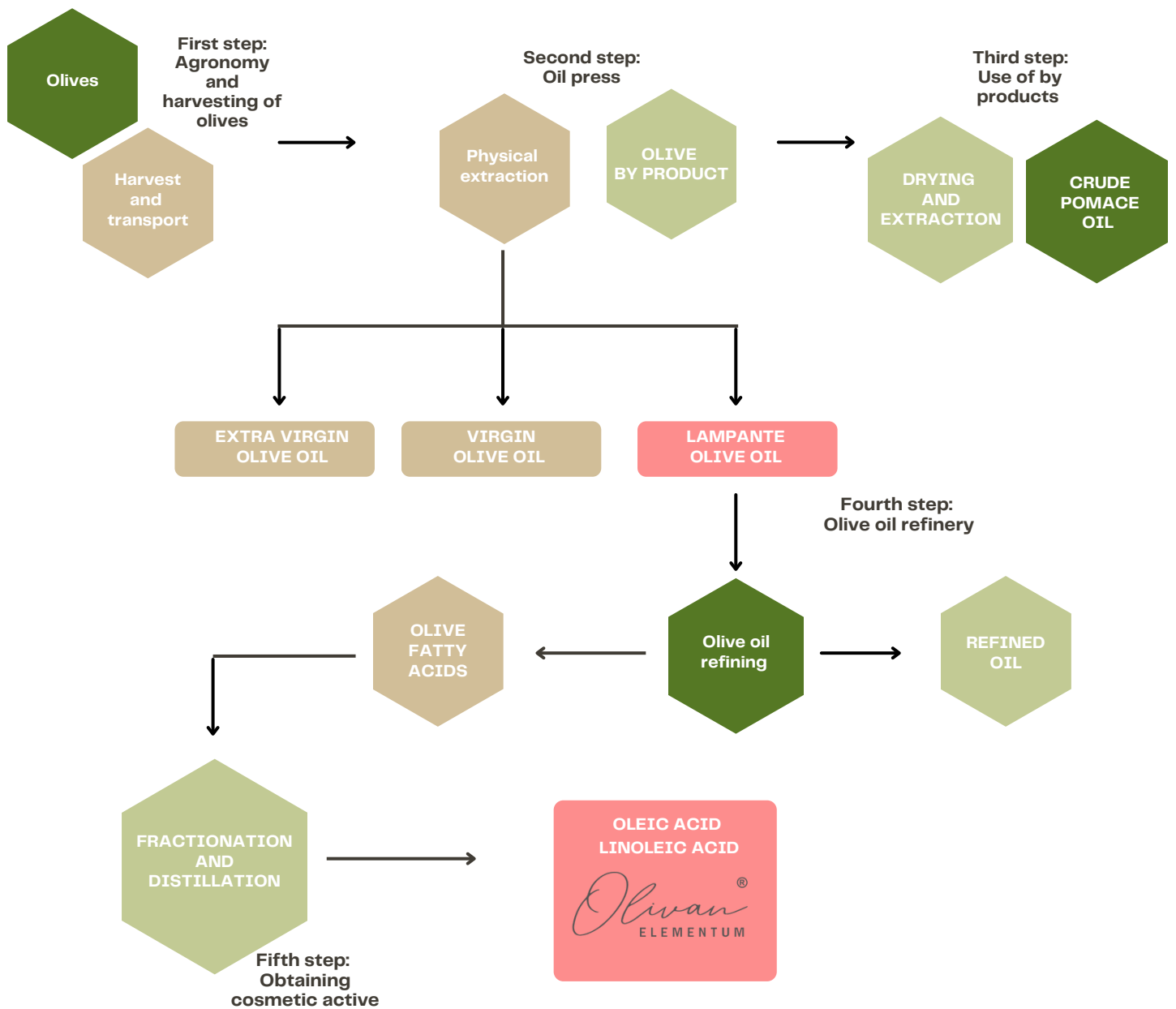


REDUCING WASTE

MAXIMIZING THE USE OF RESOURCES

ADDING THE VALUE TO THE PRODUCT

Obtaining this unique combination of OLEIC and LINOLEIC acid from the BY-PRODUCT of the olive oil refineries; after fractionation and distillation of olive fatty acids.





Actives synergy - **ACTIVITY +
SENSORY +
SKIN TEXTURE +**

Olivan ELEMENTUM consists of **OLEIC ACID** which is mono unsaturated fatty acid and **LINOLEIC ACID** which is poly unsaturated fatty acid.

OLEIC ACID nourishes the skin with moisturizing properties.

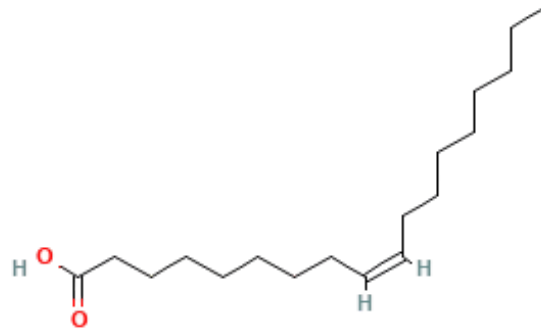
LINOLEIC ACID maintains integrity of the skin barrier.

COMBINATION that **BALANCES** the **OIL PRODUCTION** in the skin.

Oleic heavier texture with the lighter linoleic texture easy to absorb benefits the skin without leaving the skin feeling oily.

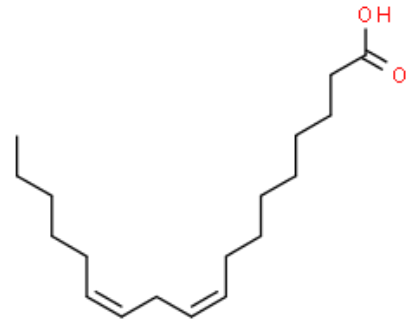
COMBINATION that **SUPPORTS** the **SKIN BARRIER** preventing the moisture loss and protecting the skin from external stressors.

COMBINATION that **PROVIDES** to skin a range of **NUTRIENTS** for better skin health and appearance.



OLEIC ACID
Mono unsaturated fatty acid

LINOLEIC ACID
Poly unsaturated fatty acid



OMEGA 6 & OMEGA 9 & OMEGA 7 MICROBIOME PROTECTION

OLEIC ACID



Improves the level of **HYDRATION** within the dermis.

Improves skin **ELASTICITY**, reduces wrinkles

SOFTENS the skin and protects again drying

PALMITOLEIC ACID



Improves the skin **STRUCTURE..**

Protects from **AMBIENTAL** stress

Stimulates the production of **COLLAGEN**.

LINOLEIC ACID



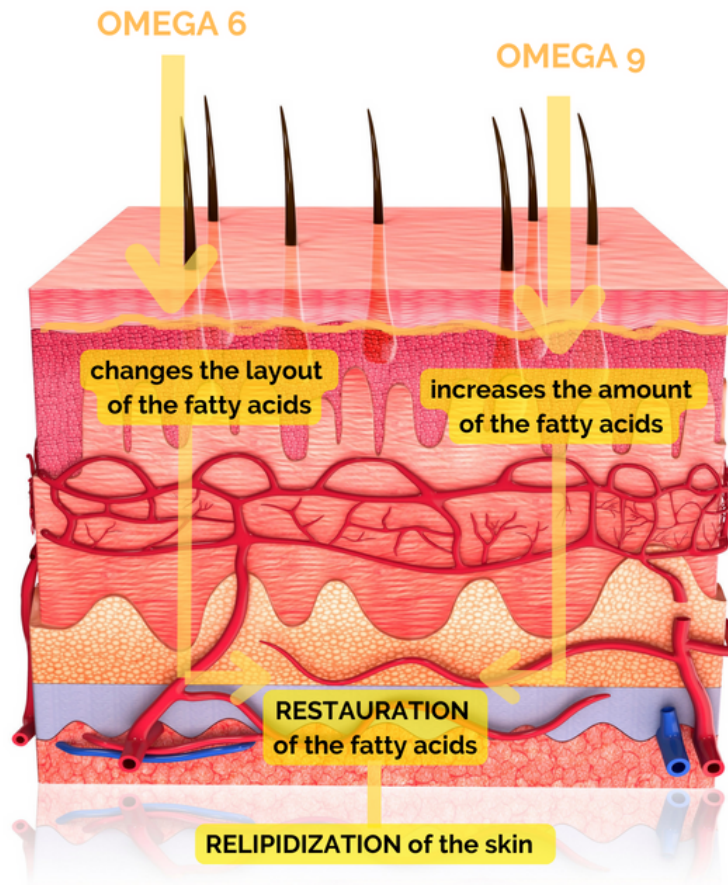
Improves skin **PERMEABILITY** barrier and fatty acids metabolism

Reduces the transepidermal **WATER LOSS**.

Helps skin cells **DIFFERENTIATION** and **MATURATION**

WHITENING the skin via inhibiting enzymes involved in melanin production

Synergy of all 3 OMEGA's helps overall HEALTH of the skin. Helps PROTECT and REGENERATE the skin. Protects the SKIN MICROBIOME.



SKIN RELIPIDIZATION

The **LIPID BARRIER** of the skin is a **PROTECTIVE BARRIER** against the **ENVIRONMENT**. With the addition of **OMEGA 9** and **OMEGA 6**, the **RELIPIDIZATION** of the skin is favored, **REINFORCING** the **EPIDERMAL** lipid barrier that is lost with age.

Linoleic acid (**OMEGA6**) penetrates the skin and changes the **DISPOSITION** of the rest of the fatty acids. While oleic acid (**OMEGA9**) increases the **AMOUNT** of simple fatty acids in the skin.

The **ADDITION** of fatty acids induces the **REDISTRIBUTION** of fatty acids not only in the **STARTUM CORNEUM** but also in the **EPIDERMIS** and **DERMIS**.

A **PENETRATION** of both oils and a **RESTORATION** of fatty acids were **OBSERVED**, and it was concluded that the **RELIPIDIZATION** of the skin is facilitated.

Free fatty acids have bacteriocidal activity and are important components of the INNATE IMMUNE SYSTEM.

TEST IN VITRO

OLEIC ACID effectively inhibits *Staphylococcus aureus* growth.

Figure 1. OLEIC ACID dosage dependent starts to kill the bacteria.

OLEIC ACID was dissolved in 5% dimethylsulfoxide, and as the control group served the bacteria incubated with dimethylsulfoxide.

OLEIC ACID wasn't cytotoxic for a human skin sebocyte cells at any concentration.

Figure 2. OLEIC ACID can effectively eliminate *Staphylococcus aureus* through cell disruption.

TEST

ANTIMICROBIAL

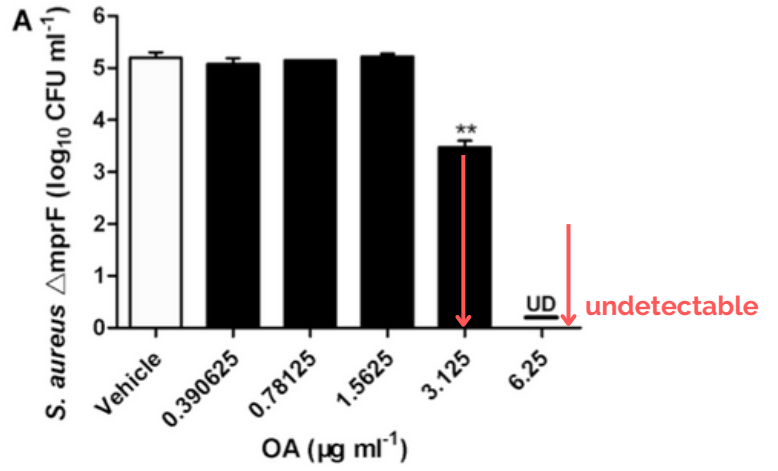


FIGURE 1. Oleic acid exerts bacteriocidal activity against *Staphylococcus aureus*. The results are significant and made of data of three individual experiments.

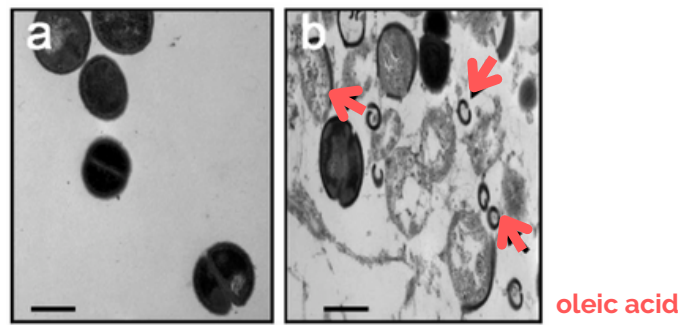


FIGURE 2. Oleic acid kills the *Staphylococcus aureus* bacteria by breaking down the cell walls. The study revealed cell wall separation from cytoplasmic compartments and lysis when treated with Oleic acid.

- Bacteria infected skin treated with dimethylsulfoxide
- Bacteria infected skin treated with Oleic acid

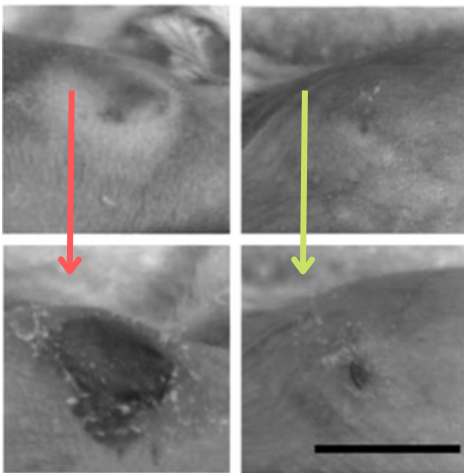


Figure 3.

- Significant decrement of the bacteria colonization in the lesion when treated with Oleic acid

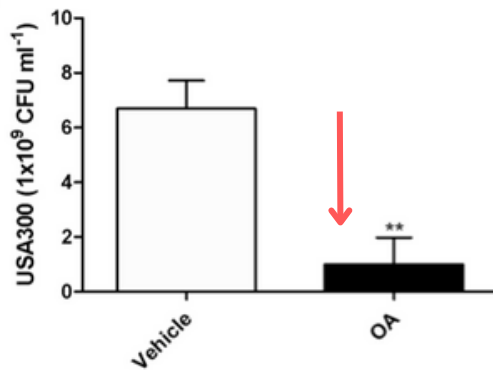


Figure 4.

TEST IN VIVO

Determination of the Oleic acid protection ability against the bacteria infection in vivo.

Figure 3. Oleic acid alleviates lesions in the bacteria infected skins.

Figure 4. Oleic acid decreases the bacteria colonization in the bacteria infected skin.

Chen CH, Wang Y, Nakatsuji T, Liu YT, Zouboulis C, Gallo R, Zhang L, Hsieh MF, Huang CM. An innate bacteriocidal oleic acid effective against skin infection of methicillin-resistant *Staphylococcus aureus*: a therapy concordant with evolutionary medicine. *J Microbiol Biotechnol.* 2011 Apr;21(4):391-9. PMID: 21532323.



ANTI INFLAMMATORY

OLEIC ACID influences cell membrane fluidity, receptors, intracellular signaling pathways and gene expression.

OLEIC ACID directly regulates the synthesis and activities of the antioxidant enzymes.

SYNERGISTIC ANTIINFLAMMATORY ACTIVITY

The anti inflammatory effect of the OLEIC ACID is contributed to the INHIBITION of PRO INFLAMMATORY CYTOKINES and the ACTIVATION of ANTI INFLAMMATORY CYTOKINES.

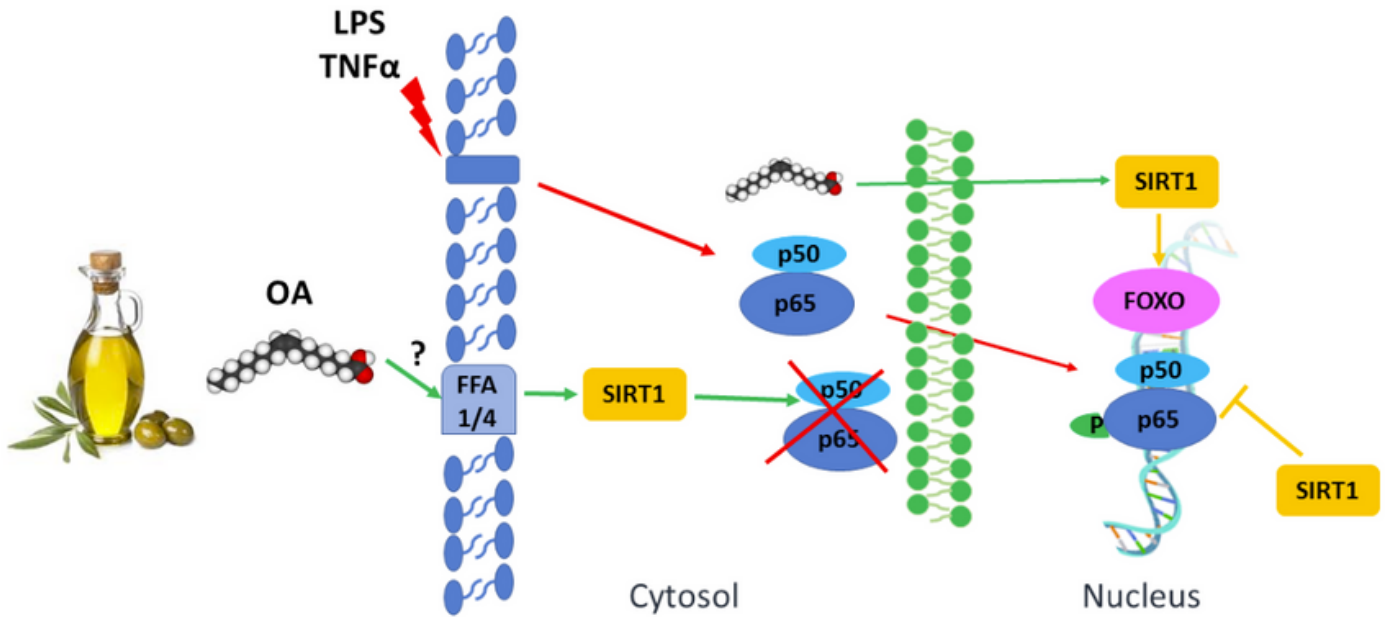


Figure 1. Role of OLEIC ACID in response to inflammatory stimulation, inhibiting NF-κB signaling pathway by promoting SIRT1 activity. Blunt arrow indicate inhibition, while sharp arrows indicate stimulation.

MULTI- LAYERED ANTIINFLAMMATORY EFFICACY

OLEIC ACID is a natural **ACTIVATOR** of sirtuin 1 - **SIRT 1**. SIRT 1 reduces the formation of inflammatory cytokines.

RESVERATROL like

EPIGENETIC

OLEIC ACID exerts beneficial anti-inflammatory effect by **REGULATING** micro **RNA EXPRESSION**.

OLEIC ACID **REDUCES** the intracellular concentration of **ROS**. (Reactive oxygen species)

ANTIOXIDANT

DEXAMETHASONE like

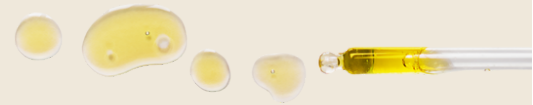
OLEIC ACID acts by **GLUCOCORTICOID** receptor **MEDIATION**. It's anti inflammatory effect similar to dexamethasone without adverse effects.

Santa-María C, López-Enríquez S, Montserrat-de la Paz S, Geniz I, Reyes-Quiroz ME, Moreno M, Palomares F, Sobrino F, Alba G. Update on Anti-Inflammatory Molecular Mechanisms Induced by Oleic Acid. *Nutrients*. 2023;

PRODUCT DESCRIPTION

PRODUCT CODE:	OLEL2023
INCI NAME:	Oleic acid
SOLUBILITY:	Liposoluble Great integration
FORMULATION:	Oleic acid is incorporated in oil phase on a temp. 70-80 C.
RECOMMENDED DOSAGE:	1 - 10%

FORMULATION EXAMPLES



Body oil - 2-8%

Mosturizing cream - 1-4%

Serum - 5-10%

Balms - 1-5%



ATANOR 118, S.L. Fontcoberta 31, 08034 Barcelona, CIF:B66642224, atanor118.es