



CIRCULATORY SUPPORT\* | ATHLETIC PERFORMANCE\* | WELLNESS & VITALITY\*

# Mystery No More: Mediterranean Diet Secret Discovered

Olive oil is the heart health gem of the Mediterranean diet, and oleanolic acid is the key to those cardiovascular benefits.\* The Mediterranean diet has long been touted for its associations with optimal cardiovascular health, powerful antioxidant support, and general longevity and vitality. Speculations abound regarding the reasons for this diet's demonstrated whole health support. Finally, we have lab and clinical science that has established one of the components in olive oil as the gem of Mediterranean cuisine.

If the Mediterranean diet is one of the healthiest options on Earth, then olive oil may be its healthiest ingredient. Honing our focus even further, the most heart-healthy component of olive oil is likely oleanolic acid (OA). OA is found in the highest concentrations in *orujo* olive oil, the form most commonly used in traditional Mediterranean cooking.

OA is a natural antioxidant triterpenoid. While several olive oil components have been researched—including polyphenol hydroxytyrosol and another triterpenoid called erythrodiol —we now know that OA is the most active in the presence of human cells. Even compared to erythrodiol, OA has from been found to convey the strongest effects in cardiovascular cells.\*

#### Olive Oil's Powerhouse in a Highly Concentrated Form

Oleano 35<sup>™</sup> provides OA at a 35% concentration. At a typical 250 mg dosage, Oleano 35<sup>™</sup> provides as much oleanolic acid as 30-35 tablespoons of high-quality extra virgin olive oil.

While olive oil itself is a heart-healthy food, consumers don't always have the time for complex recipes, and many aren't fond of the taste. Additionally, olive oil product quality, especially in the US, is often compromised. Many brands sell product whose quality is so low, much of the purported olive oil health benefits are negated by the time the consumer purchases the oil.

OA supplementation is an effective and convenient solution. Supplemental OA preserves and successfully conveys one of the chief benefits of the Mediterranean diet. In lab



the contract studies. A has been found to convey vasorelaxant support to human vascular studies. That effect and several others, result in exciting label claims for your

smooth muscle cells. That effect and several others, result in exciting label claims for you athletic and cardio health blends:\*

Promotes healthy circulation and vasodilation\* Provides powerful antioxidant support\* Helps maintain balanced cholesterol levels already in the normal range\*

Researchers continue to study OA's effects, and such studies are beginning to get coverage in the mainstream media. As consumers become increasingly aware of olive oil's benefits and its specific heart-healthy components, they grow sensitive to the value of ingredients like OA. Condition-specific blends that contain concentrated extracts from the Mediterranean diet are especially valuable to those with cardio health goals.\*

# What is Oleanolic Acid? Science Highlights

Oleanolic acid (OA) is a pentacyclic triterpenoid found in olive oil. Lab analyses have found that OA demonstrates powerful antioxidant support and encourages immune-balancing activities in human cells.\*

**Circulatory Support:** It appears that OA supports healthy vascular prostaglandin I<sub>2</sub> (PGI<sub>2</sub>) release in human vascular smooth muscle cells, which results in vasorelaxant effects. The PGI<sub>2</sub> release occurs via a COX-2 pathway, similar to the route by which HDL (good cholesterol) provides its vascular support. This natural alteration of cytokine production results in the vasoexpansion that is so beneficial for the circulatory system. OA ultimately promotes healthy vasodilation and circulation. This is an invaluable effect for anyone with goals for athletic performance and recovery or cardiovascular health.\*

**Healthy Blood Pressure:** In animal studies, OA's effect on the circulatory system translates into maintenance of healthy blood pressure levels. Human clinical trials are needed to fully establish this effect and determine exact dosing, but studies utilizing human vascular cells have already established this connection.\*

**Other Effects:** As a powerful antioxidant, OA has been found to help maintain healthy cholesterol levels already in the normal range. Its antioxidant activities may also be involved in its ability to help maintain healthy blood glucose levels as seen in animal studies. OA's antioxidant and immune balancing effects also appear to promote cellular health and normal cellular apoptosis throughout the body.\*

A recommended 250 mg dose of Oleano 35<sup>™</sup> provides as much oleanolic acid as 30-35 tablespoons of extra virgin olive oil.





## Oleano 35<sup>™</sup> Ingredient Summary

Oleano 35<sup>™</sup> Oleanolic Acid is derived from *Olea europea* olives. Hydro-alcoholic extraction optimizes Oleano 35<sup>™</sup> for general wellness and multi-ingredient sports nutrition blends.\*

#### **Demonstrated safe**

Acute oral toxicity established at 5000 mg/kg body weight

Ames' bacterial reverse mutation assay, conducted under GLP, confirmed its non-mutagenic potential

BSE/TSE free

## Manufacturing Versatility

### GMO-free

Manufactured in NSF-GMP certified plant Versatility in blends Slightly soluble in water

Soluble in organic solvents

Suitable for broad encapsulation and tableting scenarios. Also versatile in beverage applications. Blends well with grape juice, berries, orange juice, vegetable puree and smoothies.

## References

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# Oleanolic Acid in Your Existing and New Product Lines

Oleano 35<sup>™</sup> provides OA at a 35% concentration. At a typical 250 mg dosage, Oleano 35<sup>™</sup> provides as much oleanolic acid as 30-35 tablespoons of high-quality extra virgin olive oil.



Basic wellness and vitality blends

Total health beverage mixes

Mediterranean thematic blend or full product line

Secondary ingredient in metabolic and weight management blends\*

**Sports nutrition blends** 

## About Cepham

Cepham is an NSF and GMP certified manufacturer of fine herbal ingredients. We draw upon our vast research experience in the pharmaceutical industry to find the most bioactive compounds in herbal medicine. We have offices in both the U.S. and India, and our ethnobotanists travel the globe looking for the most promising and efficacious herbal solutions for human health goals.

Our quality control team monitors every step in our manufacturing processes to ensure full compliance with all GMPs and regulations in Europe, North America, and Asia. We also make it our goal to obtain NSF certification for our products, as well as USDA Organic Certifications and Kosher Certifications when applicable. We're committed to upholding the highest standards for purity, safety, and efficacy.



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