



**ELETTRA**

**HIGH PHENOLIC**

**PREMIUM  
EXTRA VIRGIN OLIVE OIL**

**ENHANCES THE BODY'S DEFENSE**

[www.elettraoliveoil.com](http://www.elettraoliveoil.com)

# HEALTH CLAIM



OLIVE OILS THAT CONTAIN **>5mg OF PHENOLS PER 20gr** ARE IN THE “HEALTH CLAIM” CATEGORY AS THEY PROTECT BLOOD LIPIDS FROM OXIDATIVE STRESS (EU 432/2012).



The levels of the significant polyphenols, oleocanthal and oleacein, in our olive oil, are higher than the average values of the samples analyzed in the international study performed at the University of California, Davis.

An extra virgin olive oil which has a “health claim”, when used in cooking and consumed in meals, allows for the absorption of a high amount of phenols which act to fortify the resistance of our body. It is noteworthy to mention that both polyphenols, oleocanthal and oleacein, present significant biological activity, acting as anti-inflammatories, antioxidants whilst enhancing cardioprotective and neuroprotective activities.



MEMBERS OF THE  
WORLD OLIVE CENTER FOR HEALTH

Medical studies conducted over the past four (4) years have demonstrated that the high phenolic extra virgin olive oil bearing a “health claim” is a natural medicine against cardiovascular disease, diabetes, cancer, leukemia as well as Alzheimer’s disease.



# ELETTRA GOLD

## HIGH PHENOLIC EXTRA VIRGIN OLIVE OIL

GEOGRAPHICAL AREA: **Petalidi, Messinia, in Peloponnese  
(Southern Greece)**

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VARIETY: **Koroneiki**

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PHYSICAL PROPERTIES: **Intense pungent and bitter character  
with a fruity flavor**

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HARVEST: **October 2019**

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ANALYSIS: **Total of analyzed compounds: 1161mg/kg**

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Our olive oil belongs in the category of a high phenolic extra virgin olive oil.

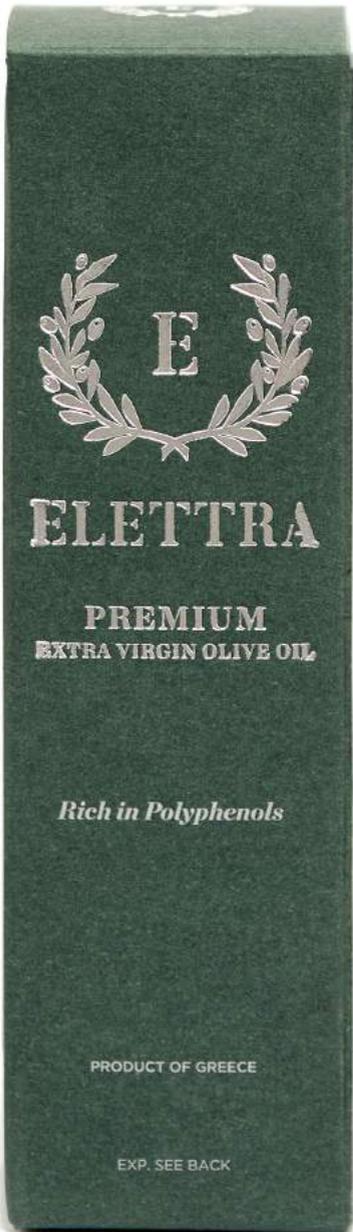
Based on the results of a laboratory analysis\* which was conducted, the daily consumption of 20gr of our olive oil provides 23.2mg of phenols or their derivatives.

Olive oils that contain >5mg of phenols per 20gr are in the "health claim" category as they protect blood lipids from oxidative stress. Subsequently, our olive oil contains four (4) times the amount of phenols than the average aforementioned values in accordance with Regulation 432/2012 of the European Union.

\*The chemical analysis was performed according to the method published in J. Agric. Food Chem., 2012, 60 (47), pp 11696–11703, J. Agric. FoodChem., 2014, 62(3), 600–607 and OLIVAE, 2015, 122, 22–33.

### INSTRUCTION FOR USE

According to regulation 432/2012 of the European Union, a daily dose of 20gr of olive oil contains 250mg/kg polyphenols and is sufficient to offer protection to the human body from oxidative stress. This recommended daily dose can be taken by simply drinking 5ml of gold ELETTRA EVOO.



# ELETTA SILVER

## HIGH PHENOLIC EXTRA VIRGIN OLIVE OIL

GEOGRAPHICAL AREA: **Petalidi, Messinia, in Peloponnese  
(Southern Greece)**

VARIETY: **Koroneiki**

PHYSICAL PROPERTIES: **Intense pungent and bitter character  
with a fruity flavor**

HARVEST: **October 2019**

ANALYSIS: **Total of analyzed compounds: 792mg/kg**

Our olive oil belongs in the category of a high phenolic extra virgin olive oil.

Based on the results of a laboratory analysis\* which was conducted, the daily consumption of 20gr of our olive oil provides 15.8mg of phenols or their derivatives.

Olive oils that contain >5mg of phenols per 20gr are in the "health claim" category as they protect blood lipids from oxidative stress. Subsequently, our olive oil contains three (3) times the amount of phenols than the average aforementioned values in accordance with Regulation 432/2012 of the European Union.

\*The chemical analysis was performed according to the method published in J. Agric. Food Chem., 2012, 60 (47), pp 11696–11703, J. Agric. FoodChem., 2014, 62(3), 600–607 and OLIVAE, 2015, 122, 22–33.

### INSTRUCTION FOR USE

According to regulation 432/2012 of the European Union, a daily dose of 20gr of olive oil contains 250mg/kg polyphenols and is sufficient to offer protection to the human body from oxidative stress. This recommended daily dose can be taken by simply drinking 10ml of silver ELETTA EV00.

# POLYPHENOLS

## OLEOCANTHAL

### 1 LOW DOSAGES OF OLEOCANTHAL PROVE TO BE PROTECTIVE AGAINST ALZHEIMER'S DISEASE

This study of Pitt et al indicates that oleocanthal is a substance capable of altering the assembly state of soluble oligomers of amyloid- $\beta$ 1-42 peptide (ADDL), which peptide is a neurotoxin that causes Alzheimer's disease (AD). The results show that Oleocanthal protects the neurons from the negative effects of Alzheimer's disease even at low doses and as a result in the future it could be used in a potential therapy.

### 2 OLIVE OIL RICH IN OLEOCANTHAL EFFECTS THE CARDIOVASCULAR SYSTEM'S FUNCTION

Olive oil oleocanthal levels, can significantly affect the cardiovascular benefits from its consumption. In this study, participants consumed 40ml of extra virgin olive oil (EVOO), with a known polyphenols concentration, so that they can evaluate the effects on blood platelets function, blood ingredients that are related to blood coagulation. The results were compared with ibuprofen action; a powerful antioxidant factor. This study showed that EVOO samples rich in oleocanthal and oleacein caused a significant decrease in platelet aggregation levels (more than 25% reduction), that is the main cause for blood clotting, indicating that oleocanthal intake holds the bigger part.

Finally, seems that the effects of EVOO polyphenols is independent from their antioxidant action and turns out that the chemical profile of olive oil effects directly the cardiovascular system's function.

### 3 OLEOCANTHAL: A NATURAL ANTI-INFLAMMATORY COMPOUND

Freshly extracted extra virgin olive oil contains oleocanthal, a substance responsible for a strong "pinch" feeling in the throat, similar to the effect of ibuprofen intake, a strong anti-inflammatory drug. According to this study, oleocanthal inhibits some certain enzymes related to inflammation, showing the same action as ibuprofen, although structurally show many differences.

### 4 THE ROLE OF OLEOCANTHAL IN BREAST AND PROSTATE CANCER

Oleocanthal is a compound found in extra virgin olive oil showing a strong anti-inflammatory action. Research of Enagar and his colleagues showed that oleocanthal, at a cellular level, blocks the development and the metastatic action of breast or prostate cancer cells. Even in low dosage, oleocanthal and by extend extra virgin olive oil have a powerful healing role in breast and prostate cancer.

## 5 THE ANTICANCER ACTIVITY OF OLEOCANTHAL

Pei and his colleagues studied the anticancer action of oleocanthal in human liver cancer cells. The results showed that oleocanthal reduced the proliferation of cancer cells, suspended tumor growth and at the same time caused the death of many cancer cells. Also, in an experiment that was held testing the antimetastatic action of the substance, oleocanthal blocked the metastasis on the lungs. These results, give hope for the use of this compound not only on a cellular level, but on the human organism.

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## 6 OLEOCANTHAL PROMOTES ONLY THE DEATH OF CANCER CELLS AND NOT OF NORMAL CELLS

LeGendre and his colleagues studied the effects of oleocanthal in human cancer cells. Their results showed that oleocanthal causes the death of cancer cells within 30 minutes, while normal cells don't stand the same fate. This happens because oleocanthal acts on a certain cell mechanism that cancer cells are much more sensitive than normal cells, leading to their death while normal cells are not damaged.

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## 7 OLEOCANTHAL'S ANTICANCER ACTIVITY IN CUTANEOUS MALIGNANT MELANOMA

The aim of this study is to investigate the anticancer activity of oleocanthal against cutaneous malignant melanoma. Oleocanthal had a remarkable and selective activity for human melanoma cells versus normal dermal cells, even at low dosages.

## 8 THE EFFECT OF OLEOCANTHAL ON BREAST CANCER

The aim of this study is to investigate the effect of oleocanthal treatment on specific breast cancer cells, even at low dosages. The results have shown that oleocanthal reduces the impact of a protein, that plays an important role in the development of cancer cells and of breast cancer as well.

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## 9 ANTICANCER EFFECTS OF OLEOCANTHAL IN HEPATOCELLULAR (HCC) AND COLORECTAL CARCINOMA (CRC)

Oleocanthal (OC) shows an anti-inflammatory and anticancer activity in liver and colon cancer cells. OC inhibits the growth of cancer without affecting normal cells, providing a strong support of the potential use of extra virgin olive oil as chemotherapeutic.

# OLEACEIN

## 1 OLEACEIN PROTECTS RED BLOOD CELLS (RBCS) FROM OXIDATIVE INJURY

In this work, Pavla-Martins *et al.*, studied the capacity of oleacein to protect red blood cells (RBCs) from oxidative injury. Oleacein was shown to significantly protect RBCs from oxidative damage in a dose-dependent manner. Even at low dosages exhibited a remarkable protective role for RBCs.

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## 2 OLEACEIN: A POTENTIAL ANTIATHEROSCLEROTIC DRUG

Oleacein may play a special role in decreasing the progression of atherosclerosis, the most important cause of stroke or heart attack. Some bioactivities of oleacein have been already documented, further studies are needed about the usefulness of this compound in antiatherosclerotic therapy.

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## 3 THE ANTI-INFLAMMATORY EFFECT OF OLEACEIN AND MECHANISMS OF ACTION

Filipek *et al.* examined the ability of oleacein to increase the production of specific anti-inflammatory proteins. In particular, oleacein is either associated with specific blood components and induces the production of some anti-inflammatory proteins or inflammatory-related protein. Thus it seems that oleacein may play an important role in the prevention of inflammatory disease related to atherosclerosis.

## 4 OLEACEIN PROTECTS CELLS FROM AGING

Oleacein was examined if is able to protect cells from aging and hence from their death. Endothelial progenitor cells exposed to oleacein showed a significant increase of proliferation in a dose-dependent manner.

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## 5 OLEACEIN AND ITS ANTI-INFLAMMATORY EFFECT

Oleacein is one of the most potent inhibitors of 5-lipoxygenase, an enzyme associated with early stages of inflammation. Its action is more potent in comparison with oleocanthal and oleuropein. Thereby it is necessary to develop an anti-inflammatory drug based on oleacein.

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## 6 OLEACEIN REDUCES THE ISCHEMIC STROKE RISK

Oleacein has an effect against the destabilization of carotid plaques, by affecting the production of specific proteins associated with atherosclerosis. Ex vivo experiments showed that oleacein has the potential to attenuate the destabilization of carotid plaques and may be useful in reducing the risk of ischemic stroke.



# LIGSTROSIDE AGLYCONE

## 1 LIGSTROSIDE AGLYCONE AGAINST METASTATIC BREAST CANCER

In the study of Busnena *et al.*, ligstroside aglycone showed the best antimigratory activity in experiments performed in highly metastatic human breast cancer cells. Due to its particular chemical structure, it inhibits the activity of a specific protein, the c-MET protein, associated with the development of malignant tumor.

## 2 THE EFFECT OF LIGSTROSIDE AGLYCONE ON BREAST CANCER

Menendez *et al.* in their study explored the ability of ligstroside aglycone to modulate HER2 tyrosine kinase receptor-induced, which is present in large amounts in breast cancer cells and causes their uncontrolled proliferation. Ligstroside aglycone was one of the most active inhibitors of HER2 expression in cells, with a reduction 63%, even in very small doses and eventually the cancer cells were led to programmed cell death. These findings provide an excellent and safe platform for the design of new anti-breast cancer drugs.

# OLEUROPEIN AGLYCONE

## 1 EXPERIMENTS ON MICE SHOW THE BENEFICIAL EFFECT OF OLEUROPEIN AGLYCON ON THE PROGRESSION OF ALZHEIMER'S DISEASE

In their research, Grossi *et al.* used special mice, which produce a special mutant human protein, which is associated with Alzheimer's disease. The dietary supplementation of oleuropein aglycone for 8 weeks at the dose of 50 mg/kg showed a remarkable improvement of the cognitive performance of mice. The effect of oleuropein aglycone on the stabilization of disease progression was also examined by biochemical analysis of mouse brains, showing significant results. These results support the beneficial role of oleuropein aglycone against Alzheimer's disease.

## 2 THE BENEFICIAL EFFECT OF OLEUROPEIN AGLYCONE AGAINST TYPE II DIABETES

Here, Rigacci S. *et al.* investigated the effects on amylin aggregation and cytotoxicity of the oleuropein aglycon. Amylin is a substance that is quite similar to insulin. When amylin aggregates in pancreatic cells, it generates amyloid, which is directly related to the pathogenesis of type II diabetes. Specifically, oleuropein aglycone inhibits the aggregation of amylin and its toxicity action on pancreatic cells. These results provide a molecular basis for some of the benefits potentially coming from extra virgin olive oil consumption and pave the way to further studies on the possible pharmacological use of oleuropein to prevent or to slow down the progression of type II diabetes.



## 3 THE EFFECT OF OLEUROPEIN AGLYCONE ON BREAST CANCER

Menendez *et al.* in their study explored the ability of oleuropein aglycone to modulate HER2 tyrosine kinase receptor-induced, which is present in large amounts in breast cancer cells and causes their uncontrolled proliferation. Oleuropein aglycone was one of the most active inhibitors of HER2 expression in cells, with a reduction 63%, even in very small doses and eventually the cancer cells were led to programmed cell death. These findings provide an excellent and safe platform for the design of new anti-breast cancer drugs.





## ABOUT US

**To make this elixir of health,  
four families joined together**

Since the late 18<sup>th</sup> century we have been growing the sacred tree of the goddess Athena. This historical experience has been transformed into an art form. Our high phenolic extra virgin olive oil is a product of a traditional early harvesting, storing and bottling process. Discover the elixir that only Natur can miraculously create!

**The Bouzalas and Gardiakos Families**

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Our early harvest organic extra virgin olive oil which we produce in the blessed messinian land has received awards each year since 2015 due to its high content of beneficial polyphenols. Throughout our 25 years of scientific experience in environmental and ecological issues, we have developed the traditional harvesting and extraction of olives by using natural and biological methods of caring for our olive groves as well as careful scientific practices in the production of olive oil. The result of this effort is to create a delicious nutritional treasure and at the same time a natural preventative medicine for the human body. Our motto is "Respect to Human kind and Gratitude to Nature"!

**The Aggelopoulou & Tsimpidou Families**

**Bouzas Family  
Kleisoura, Messinia Region  
Peloponnese, P.C. 240 04, Greece**

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