



**National and Kapodistrian  
University of Athens**

Faculty of Pharmacy  
Department of Pharmacognosy & Natural Products Chemistry  
Panepistimiopolis Zografou  
15771, Athens  
Tel: +30 210 72 74052  
[magiatis@pharm.uoa.gr](mailto:magiatis@pharm.uoa.gr)



Athens, 14/01/2021  
Cert.Num: 2021-C00718

**CERTIFICATE OF ANALYSIS**

**Brand Name:** METAMORPHOSIS  
**Owner:** GOLD METAMORPHOSIS  
**Variety:** KORONEIKI - ATHINOELIA  
**Origin:** MOLAOI LAKONIA GREECE

**Analysis Date:** 30/12/2020

**Chemical Analysis**

Acidity: 0,30 (<0,8)	
Peroxides: 7 meqO <sub>2</sub> /Kg (<20)	
K232: 1,883 (<2,5), K270: 0,161 (<0,22), ΔK: 0,0040	
Oleocanthal	166 mg/Kg
Oleacein	88 mg/Kg
Oleocanthal + Oleacein (index D1)	254 mg/Kg
Ligstroside aglycon (monoaldehyde form)	51 mg/Kg
Oleuropein aglycon (monoaldehyde form)	65 mg/Kg
Ligstroside aglycon (dialdehyde form)	265 mg/Kg
Oleuropein aglycon (dialdehyde form)	134 mg/Kg
Free Tyrosol	<5 mg/Kg
Total tyrosol derivatives	482 mg/Kg
Total hydroxytyrosol derivatives	287 mg/Kg
Total polyphenols analyzed	769 mg/Kg

**Comments :**

The levels of oleocanthal are higher than the average values ( 135 mg/Kg respectively) of the sample included in the international study performed at the University of California, Davis.

The daily consumption of 20 g of the analyzed olive oil provides 15.4 mg of hydroxytyrosol, tyrosol or their derivatives. Olive oils that contain >5 mg per 20 gr belong to the category of oils that protect the blood lipids from oxidative stress according to the Regulation 432/2012 of the European Union.

It should be noted that oleocanthal and oleacein present important biological activity and they have been related with anti-inflammatory, antioxidant, cardioprotective and neuroprotective activity.

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

\*Oleomissional+Oleuropeindial \*\*Ligstrodial+Oleokoronal

Magiatis Prokopios  
**PROKOPIOS MAGIATIS**  
ASSOCIATE PROFESSOR  
UNIVERSITY OF ATHENS  
FACULTY OF PHARMACY  
DEPARTMENT OF PHARMACOGNOSY  
AND NATURAL PRODUCTS CHEMISTRY