HELLENIC REPUBLIC
National and Kapodistrian University of Athens
FACULTY OF PHARMACY
Department of Pharmacognosy and Natural Products Chemistry
Professor Skaltsounis A.L.

PharmaGnose

CERTIFICATE OF OLIVE OIL POLYPHENOLS ANALYSIS

Description	Olive oil sample
Producer / Distributor	VATKALI E.-ROUMELIOTIS CH.
Origin	KARAGKIOLI ESTATE
Type of Cultivation	Conventional
Date of reception	10/11/2016
Date of analysis	21/02/2016
Packaging	Glass bottle
ANALYSIS*	**1.** Extraction/Sample preparation
	2. Quantitative determination of Hydroxytyrosol (**HT**) and Tyrosol (**T**) using the HPLC-DAD technique, according to the IOC method with some modifications (http://www.internationaloliveoil.org/documents/viewfile/4141-met29eng).
	3. Semi-quantitative determination of Oleacein (**OLEA**) and Oleocanthal (**OLEO**) using the HPLC-DAD technique.
	4. HPLC-DAD determination of total phenols, expressed as Hydroxytyrosol (**HT**) and Tyrosol (**T**) equivalents, after acid hydrolysis of the biophenols olive oil extract, according to Mastralexi et al. (2014)[1].

**Experimental details: available upon request.* *[1]* Mastralexi et al., 2014. Addressing analytical requirements to support health claims on "olive oil polyphenols" (EC Regulation 432/2012), *J Agric Food Chem*, 26;62(12):2459-61.

RESULTS

QUANTITATIVE AND SEMI-QUANITATIVE ANALYSIS OF OLIVE OIL POLYPHENOLS (HPLC-DAD)

mg /Kg Olive oil				TOTAL OF ANALYZED COMPOUNDS (mg)		ACID HYDROLYSIS[1]	
HT	T	OLEA	OLEO	mg/Kg Olive oil	mg/20 g Olive oil	mg HT & T/20 g Olive oil	mg HT, T and their derivatives /20 g Olive oil [1]
2,52	4,57	86	169	262,09	5,2	4,97	11,68

HT: Hydroxytyrosol, **T**: Tyrosol, **OLEA**: Oleacein, **OLEO**: Oleocanthal

Comments

Based on the results of olive oil analysis, the specific olive oil sample analyzed on the above-mentioned date, was found to contain **11,68 mg HT, T and their derivatives /20 g olive oil**. Thus, it can be concluded that the analyzed olive oil sample meets the specifications of the **EU regulation 432/2012** concerning the health claim on olive oil polyphenols (http://www.efsa.europa.eu/sites/default/files/scientific_output/files/main_documents/2033.pdf).

Professor A. L. Skaltsounis

PharmaGnose,
Analytical Department

PHARMAGNOSE ΒΙΟΤΕΧΝΟΛΟΓΙΚΗ ΑΕ
ΥΠΗΡΕΣΙΕΣ ΕΡΕΥΝΑΣ & ΠΕΙΡΑΜΑΤΙΚΗΣ ΑΝΑΠΤΥΞΗΣ
ΚΕΝΤΡ.: ΠΑΠΑΘΑΝΑΣΙΟΥ 24 - ΧΑΛΚΙΔΑ Τ.Κ. 34100
ΥΠΟΚ.: 57ο ΧΑΜ. Ε.Ο. ΑΘΗΝΩΝ-ΛΑΜΙΑΣ Τ.Κ. 32011 ΟΙΝΟΦΥΤΩΝ
Α.Φ.Μ. 800487737 - Δ.Ο.Υ. ΧΑΛΚΙΔΑΣ