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Date: 17/9/2021
Code: PELEI_01

**For the attention of:
Mr. Ioannou Georgios
“PELEI EAGLES”**

ANALYTICAL RESULTS REPORT

A. Method-Results

The olive oil sample from the area of Pelei, Argolida, with laboratory code PELEI_01, was analyzed for the determination of:

- i) Acidity, peroxide value, K values (K_{232} , K_{268} , K_{272} , K_{264} , ΔK)
- ii) Bioactive content

Sampling: The sampling was carried out by the client and the sample was delivered in the lab on on 29-7-2021.

Date of Analysis: From 06-09-2021 to 14-09-2021.

Method of Analysis: The methods used for the analysis are described in the table below.

Analysis	Method description
Acidity	European Regulation 61/2011
Peroxide value	ISO 3960:2001
K_{232} , K_{268} , K_{272} , K_{264} , ΔK	European Regulation 61/2011
Bioactive content	Liquid chromatography coupled to high resolution mass spectrometry (quadrupole- time of flight mass analyzer, (LC-QTOF/MS))

B. Report of Analysis

- i) Acidity, peroxide value, K values (K_{232} , K_{268} , K_{272} , K_{264} , ΔK)

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Analysis	Αποτελέσματα
Acidity	0.37%
Peroxide value	15.1 meq/kg
K ₂₃₂	2.25
K ₂₆₈	0.15
K ₂₇₂	0.14
K ₂₆₄	0.16
ΔK	<0.001

The results show that olive oil with code **PELEI_01** is classified in the category of extra virgin olive oil with an acidity of 0.37% (<0.80%), peroxide value of 15.1 meq / kg (<20 meq / kg), K₂₃₂ of 2.25 (<2.50), K₂₆₈ of 0.15 (<0.22) and ΔK <0.001 (<0.01).

ii) Bioactive content

Analyte	PELEI_01 (mg/kg)
10-Hydroxy decarboxymethyl oleuropein aglycone*	0.11
10-Hydroxy-10-Methyl oleuropein aglycone*	0.07
10-Hydroxyoleuropein aglycone*	0.09
1-Acetoxy-pinoreosinol	0.13
Apigenin	0.58
Elenolic acid	0.26
Eriodictyol	2.24
Hydroxylated form of elenolic acid	0.06
Hydroxytyrosol*	0.65
Hydroxytyrosol acetate*	0.18
Ligstroside aglycone*	22.9
Luteolin	0.08
Methyl oleuropein aglycone*	0.04
Naringenin	0.05
Oleacein*	18.7
Oleocanthal*	69.8
Oleocanthalic acid*	6.53
Oleokoronol*	22.9
Oleomissional*	80.3

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Oleuropein aglycone*	19.6
p-coumaric acid	0.02
Pinoresinol	1.83
Syringaresinol	0.41
Tyrosol*	14.5
Vanillin	0.03
Sum of Hydroxytyrosol, Tyrosol and Oleuropein derivatives*	256
Total Phenolic Content	262

The total content of hydroxytyrosol, tyrosol and oleuropein derivatives, as it is described by the EU 432/2012 legislation, is above 250 mg/kg for the sample with sample code **PELEI_01 (256 mg/kg)**. Therefore, the sample belongs to the class of olive oils that protect LDL cholesterol from oxidation, maintaining high HDL levels and protecting from cardiovascular diseases (EFSA, 2012).

The Analysts

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