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SCIENTIFIC EVALUATION REPORT FOR THE OLIVE OIL "Brezza Tirrena"

In 21 October 2015 we received in our laboratory a sample of olive oil with the brand name "Brezza Tirrena" (Sample F1) originating from Italy which was produced during October 2015.

The sample was analyzed based on a validated method that has been published in the Journal of the American Chemical Society J. Agric Food Chem., 2012, 60 (47), pp 11755-11703 and J. Agric Food Chem., 2014, 62 (3), 600-607.

Using the same method, more than 2000 olive oil samples from the 2010-2011, 2011-2012, 2012-2013, 2013-2014 and 2014-2015 periods have been analyzed in collaboration with the laboratory of Pharmacognosy and Natural Products Chemistry of the faculty of Pharmacy of the Athens University. The origin of the samples is mainly from Greece, California, Italy, Spain, Croatia, Tunisia, Cyprus and a small number from France, Argentina, Chile, Morocco, Israel and the database contains data from more than 30 different varieties of olives. For all olive oil samples there is a detailed archive.

The chemical analysis of the olive oil "Brezza Tirrena" showed the following results:

Oleocanthal: 201 mg/Kg
Oleacein: 239 mg/Kg
Oleuropein aglycone monoaldehyde form: 104 mg/Kg
Ligstroside aglycone monoaldehyde form: 27 mg/Kg
Oleuropein aglycone dialdehyde forms: 403 mg/Kg
Ligstroside aglycone dialdehyde forms: 685 mg/Kg
Total hydroxytyrosol derivatives: 746 mg/Kg
Total derivatives of tyrosol: 913 mg/Kg
Total of analyzed compounds: 1659 mg/Kg

Comparing these results with the olive oil database results we are in the position to certify the following:

1. The oleacein concentration (239 mg/Kg) is higher than 87% of the samples included in the database and more than 2 times higher than the average value (105 mg/Kg) of the samples included in the international study performed at the University of California, Davis. http://www.oliveoiltimes.com/phenolic-compounds-olive-oils-bought-california

2. The oleocanthal concentration (201 mg/Kg) is higher than 61% of the samples included in the database and 1.5 times higher than the average value (135 mg/Kg) of the samples included in the international study performed at University of California, Davis (http://www.oliveoiltimes.com/phenolic-compounds-olive-oils-bought-california).
3. The oleuropein aglycon (monoaldehyde form) concentration (104 mg/Kg) is higher than 91% of the samples included in the database
4. The ligstroside aglycon (monoaldehyde form) concentration (27 mg/Kg) is higher than 55% of the samples included in the database
5. The oleuropein and ligstroside aglycons (dialdehyde forms) concentration (403 and 685 mg/Kg) is higher than 95% of the samples included in the database
6. The total of analyzed compounds (tyrosol and hydroxytyrosol derivatives (1659 mg/Kg) is among the top 2.5% of the samples for the period 2010-2015.

HEALTH CLAIM

1. The daily consumption of 20 g of the analyzed olive oil sample provides 33 mg (>5 mg) of hydroxytyrosol, tyrosol or their derivatives and consequently the oil belongs to the category of oils that protect the blood lipids from oxidative stress according to the Regulation 432/2012 of the European Union.
2. The total tyrosol and hydroxytyrosol derivatives are 6.6 times higher than the limit of the European regulation which makes sure that 18 months after harvesting the oil will still exceed the limit provided keeping in place away from high temperature and direct sunlight.
3. It should be noted that oleocanthal, oleacein and oleuropein aglycon present important biological activity and they have been related with anti-inflammatory, antioxidant, cardioprotective and neuroprotective activity.

OVERALL EVALUATION

Based on the above presented results we can certify that it is a top quality extra virgin olive oil that stands out from the usual oils due to its high content of specific polyphenols which have major health protecting properties.

It is an oil which is recommended to all consumers looking for olive oil with enhanced antioxidant properties for health protection.

This oil has a peppery/pungent and bitter taste that is characteristic of the polyphenols which it contains.

The responsible for the scientific evaluation report

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