

# **Content of Fat and Fatty Acids Composition in Olive Samples**

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Olives (*Olea europaea*) are one of the most important crops in Mediterranean countries, especially Spain, Italy, Greece and Turkey. Virgin olive oil is the main oil used in the Mediterranean diet. Virgin olive oil is valued for its organoleptic and nutritional characteristics and is resistant to oxidation due to its high monounsaturated fatty acid content (MUFAs), and low polyunsaturated (PUFAs) and the presence of natural antioxidants. The fatty acid composition, especially the MUFA content, and the natural antioxidants provide advantages for health. The aim of this work was to determine the fatty acids composition in olive samples performed by Gas Chromatography using Varian 3400 GC (Varian, Inc., USA), after determination of fat content by two different extraction methods, Soxhlet extraction method using Soxtec System HT2 1045 Extraction Unit (Tecator, Sweden), and an alternative Supercritical CO<sub>2</sub> (SC CO<sub>2</sub>) extraction method using TFE 2000 (Leco, USA). The study was carried out on two olive (*Olea europaea* cv. Picual) samples at different ripeness grade grown in Granada (Spain).

**Keywords:** fat, fatty acids, olive, soxhlet, supercritical CO<sub>2</sub>

## **Acknowledgement**

The authors would like to thank TALENTIA Fellowship Program by the Ministry for Innovation, Science and Enterprise in Andalusia, Spain, for their financial support.