

Chemical Profile of Extra Virgin Olive Oil from Frantoio Cultivar Growing in Calabria, Italy

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Abstract : Extra Virgin Olive Oil (EVOO) is a major source of fat in the Mediterranean diet and its nutritional properties are the main reason for the increment of its consumption all over the world in recent years. In terms of olive oil production, Italy ranks the second in the world. EVOO is obtained exclusively by physical methods from the fruit of *Olea europea* L. Frantoio cv is spread in all the Italian territory. The aim of this work is to identify the phenolic and fatty acids profile of EVOO from Frantoio cv growing in different area of Calabria (Italy). The phenolic profile was obtained by HPLC coupled to a diode array detector and mass spectrometry. Analyses revealed the presence of phenolic alcohols, phenolic acid, several secoiridoids, and two flavones as main components. Hydroxytyrosol and tyrosol are present in reasonable content. Fatty acids were monitored by gas chromatography. Oleic acid was the most abundant compounds. A moderate level of linoleic acid, in accordance with the general observations for oils derived from Mediterranean countries, was also found.

Keywords : extra virgin olive oils, frantoio cv, phenolic compounds, fatty acids

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