

The influence of the operating conditions adopted during the extraction on the qualitative and typical characteristics of Tuscan mono-varietal oils (Moraiolo, Leccino, Frantoio)

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As widely reported in literature, recent studies have remarked and describe the safety and nutritional quality of extra-virgin olive oil (EVOO), focusing on its wealth of bioactive compounds (polyphenols, tocopherols, etc.) in preventing oxidation of the lipid components and, therefore, the formation of free radical damaging for human health. These bioactive actions seem to be due both to the quality of raw material (olive fruits) and to the technology adopted for the extraction, indeed the chemical composition and the sensory characteristics of the EVOO is deeply influenced by the technological parameters adopted. In particular the utilization of suitable working conditions (time and temperature used during the individual phases of the extraction process) could potentially offer the real possibility to plan the concentration of phenolic and volatile components in olive oil and to modulate its nutraceutical

properties as well as sensorial perception profile. The main aim of this research project was to describe the influence of the operating conditions (i.e. climate trends, water regime (irrigated or not-irrigated) on the qualitative and typical characteristics showed by Tuscan mono-varietal EVOOs (Moraiolo, Leccino, Frantoio) during two different crop seasons (2014 vs 2015) characterized by very different climate trends; moreover, during the same year (2015), different water regime (irrigated or non-irrigated) were also compared. The experimental data collected show the suitability of the adopted operational decisions to the different conditions (cultivar, climate, water regime) allowing to obtain oils with more favorable compositional indices than those provided by extra virgin olive oil according to the regulation for "Tuscan Protected Geographical Indication".

Biography

Anita Nari is graduated in Food Biosafety and Quality. She is a PhD student (II year) in Agriculture, Food and Environment at the University of Pisa with a research project about producing olive oil with a high nutraceutical and organoleptic quality using innovative operative technique (extraction and storage methods). She is interested in R&D activities, development and validation of analytical methods for food quality of raw materials and products, qualification, characterization and monitoring of food technologies.

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