

## PHENOLICS CHANGES IN OLIVE AND OLIVE OIL DURING RIPENING

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Ripening period of olive fruits may vary depending on factors such as geographical growing location, climatic conditions, farming techniques and olive varieties. Fruit ripening takes approximately 25 weeks and polyphenols accumulate during ripening and, after this period, the fruit is able to achieve the desired color and size. Phenolic compounds in olive fruit are synthesized by partial hydrolysis of glucosyl that causes fat-soluble aglycones. Polyphenols are chemical compounds responsible for astringent, bitter and burning taste in foodstuffs, which contribute to the organoleptic character of olive oil. The primary role of phenolic compounds is to increase oxidation stability, and thus, olive oil has a long shelf life. Important phenolic compounds are found in fruits including: oleuropein, hydroxytyrosol, tyrosol, luteolin-7-glucoside, apigenin-7-glucoside and verbascoside. Variation of olive phenolic composition and content depend on the maturation of fruit. Oleuropein is the major phenolic of olive and there are many studies have been reported focused on the oleuropein content during ripening. Oleuropein content decreases during ripening, due to increased hydrolytic enzyme activity. Total phenol content is used in the quality index formula for the purpose of determining the quality of olive oil. Beneficial health effects attributed to olive oil polyphenols include antimutagenic, anticarcinogenic, antiatherogenic, antiaging, against vascular disease and LDL oxidation.

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