Determination of Sensory Charactarestics with Phenolic Compounds and some Chemical Parameters of Virgin Olive Oil from South-East of Marmara Region

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Virgin olive oil is highly prize for its delicious taste and aroma. It is particularly important in the basic mediterranian diet. The phenolic compounds present in olive oil are strong antioxidants and radical scavengers that contribute to a bitter taste, astringency, and resistance to oxidation. Phenolic compounds have a fundamental importance in the nutritional and sensory characteristic of virgin olive oil. Sensory quality plays an important role in the overall quality of olive oil. The fatty acid composition of olive oil varies widely depending on the cultivar, maturity of the fruit, altitude, climate, and several other factors. This renders olive oil more resistant to oxidation because generally, the greater the number of double bonds in the fatty acid, the more unstable and easily broken down by heat, light, and other factors the oil is. Peroxides are the primary products of oxidation of olive oil. The oxidation products have an unpleasant flavor and odor and may adversely affect the nutritional value of the oil. The "acidity" in olive oil is the result of the degree of breakdown of the triacylglycerols, due to a chemical reaction called hydrolysis or lipolysis, in which free fatty acids are formed. Oil extracted carelessly and/or from poor quality fruit suffers from a very significant breakdown of the triacylglycerides into fatty acids. These "broken off" fatty acids are called Free Fatty Acids. Factors which lead to a high free fatty acidity in an oil include fruit fly infestation, delays between harvesting and extraction, fungal diseases in the fruit, prolonged contact between oil and vegetation water and careless extraction methods. Storing olives in heaps or silos to encourage enzymatic breakdown of cell structure, and thus facilitate oil release is certainly not conducive to producing a high quality, low acidity oil.The free fatty acidity is thus a direct measure of the quality of the oil, and reflects the care taken right from blossoming and fruit set to the eventual sale and consumption of the oil. In this study olive oil is examined to obtain chemical, sensorial and phenolic characteristic which olives are grown between 0-300 m sea level at the area of South-east Marmara region. Altough the olives are mostly grown as the table olive which oil produced from these olive have medium and smooth sensory characteristic, the free fatty asidity nearly 0,22, oleic asid is increasing up to %72.