

EFFECT OF AROMATIC PLANTS AND STORAGE TIME ON THE CHEMICAL AND SENSORIAL PROPERTIES OF SUNFLOWER OIL

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Lipid oxidation is an important issue because of affecting the shelf life and quality of oil negatively. Synthetic antioxidants have been used for many years more than natural ones. However they may cause negative influences on human health. Therefore consumer preferences have been changed in favor of natural antioxidants. In this study, the effect of some aromatic plants on some chemical and sensorial properties of sunflower oil was studied. Commercial Rosemary, Thyme and Sage were added into the sunflower oil. Besides, two different concentrations and three different storage periods have been applied. Free fatty acid, peroxide and iodine value were detected as chemical properties. Colour was determined by using Lovibond Tintometer. Fatty acid composition was identified by using Gas Chromatography. Sensorial analyses were carried out according to five criterias including colour, appearance, flavour, rancidity and general appreciation. Results showed that, first month sample of 2,5% Rosemary was the most effective sample on peroxide value with 3.88 meq O₂/kg oil. Second month sample of 2.5% Sage was the most effective for free fatty acid (0.92% as oleic acid) and 4.0% Sage was the most effective for iodine value (129,18 Wijs). Both first month samples 2.5 and 4.0% Thyme have affected the highest increase of red colour of the oil. The most decrease of oleic acid was found in 4.0% Sage sample from 29.57% (first month) to 26.65% (second month). Sensorial tests showed 2.5% Thyme sample was the most desirable oil.

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