

**THE EFFECTS OF ULTRASOUND TREATMENT  
ON THE STRUCTURAL, PHYSICAL AND  
PHYSICOCHEMICAL PROPERTIES OF OILS**

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In recent years the consumption of fats and oils has become one of the most interesting topics in the food technology. Because many food products contain fats and oils that some of them consist these naturally and some of them consist these after adding fats and oils while the food products are being prepared. For this reason the determination of quality is one of the major subjects in the researches on oil and fat technology. By the way many methods have been improved since the researches were begun on this topic. The traditional methods applied to fats and oils have some deteriorative effects such as implementation challenge, high cost, and potential hazard to human health or long treatment duration. Therefore novel food process attracts the attention of scientists and manufactures and gains importance day by day. One of these novel processes is ultrasound treatment. Ultrasound treatment causes changes in structural, physical and physicochemical properties of oils. This method application to oils has been studied from different points like; altering functional properties, ultrasound assisted oil extraction from different oilseed, ultrasonic modification of the viscosity and solid fat profile of oils and fats, ultrasonic trans-esterification and ultrasound assisted emulsification. In addition to these points this method is used for the determination of phenolic compounds, changes in thermal behavior, saturation degree, color and oxidative stability in oil. Consequently ultrasound treatment has several effects on oil properties and the application of this process and evaluation of the results obtained from the literature are significant.

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