

## SAFETY AND QUALITY OF SOME VEGETABLE OILS MARKETED LOCALLY IN THE GOVERNORATE OF AL-HASA, SAUDI ARABIA

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**Abstract.** The aim of this research to identify the pattern of consumption of vegetable oils to families in the Governorate of Al-Hasa, Saudi Arabia, also, examining the safety and quality of some varieties vegetable oil marketed locally, and compare the results obtained from physical and chemical properties of eight oil samples with Saudi Arabia and International standard specification. Data were collected by the survey form was distributed to the housewife and the form included questions about the types of oils most often used in cooking and frying. The results obtained indicated that the oil most commonly used in cooked and frying foods is sunflower oil (*Noor brand*) (51.20% and 48.00%), respectively. On the other hand, the results of physical and chemical properties showed the significant differences between different kinds of oils. Also, there are significant differences in the values of oxidative stability, which ranged from 7.04 hr. for sunflower oil to 44 hr. for palm oil. Also, found that there were clear differences in the composition of fatty acids of oil samples, where results showed that predominant unsaturated fatty acids are linoleic acid or oleic acid and predominant saturated fatty acids is palmitic in most oil samples. Also, found that the percentage of *trans* fatty acids had reached 1.17 % and 5.66% in olive oil (*Al-Wazeir brand*) and oil (*Al-Arabi brand*), respectively. These percentages more than allowed in the Saudi Arabia and International standard specifications. While, mineral content of oil samples did not exceed the permissible limits according to the specifications.

**Key words:** Oils, fats, fatty acids, oxidative stability, *trans* fatty acids.

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