

## The Palm Oil in Food Products: Frequency of Consumption and Composition

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**Abstract :** The palm oil is the vegetable oil the most used by the food-processing industry in the world. It is chosen for its economic and technologic advantages. However, this oil arouses the debate because of its high content in saturated fatty acids, which are fats promoting atherosclerosis. Purposes of the work: To study the frequency and the rate of consumption of industrial products containing some palm oil and specify the rate of this oil in certain consummated products. Methodology: We proceeded to a consumer survey using a questionnaire collecting a list of food containing the palm oil, sold on the Tunisian market. We then analyzed the most consumed food to specify their fat content by "Soxhelt's" method. Finally, we studied the composition in various fatty acids of the extracted fat using the chromatography in the gas phase (CPG) Results: Our results show that investigated individuals having a normal weight have a more important and more frequent consumption of products rich in palm oil than overweight subjects. The most consumed foods are biscuits, cakes, wafers, chocolates, chips, cereal, creams to be spread and canned pilchard. The content in palm oil of these products varies from 10 % to 31 %. The analysis by CPG showed an important content in saturated fatty acid, in particular in palmitic acid, ranging from 40 % to 63 % of the fat of these products. Conclusion: Our study shows a high frequency of consumption of food products, the analysis of which proved a high content in palm oil. Theses facts justifies the necessity of a regulation of the use of palm oil in food products and the application of a label detailing the type and fat rates used.

**Keywords :** palm oil, palmitic acid, food industry, fatty acids, atherosclerosis

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