

Physicochemical and Biochemical Characterization of Olea europea Var. Oleaster Oil and Determination of Its Effects on Blood Parameters

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Abstract : This present study has allowed to evaluate the physico chemical characteristics, fatty acid composition and the hypolipidemic effect of Oleaster oil *Olea europea* var. Oleaster, from the area of El Kala, "Eastern Algeria" on rats "Wistar albinos". The physico chemical characteristics: acidity (0,73%), peroxide value (14, 16 meqO₂/kg oil) and iodine value (74,08 g iodine/100 g of oil) are consistent with international standards. The dosage of FA revealed a wealth of oil with UFA (76,7%), mainly composed of 65.43% of MUFA whose major fatty acid is oleic acid (63,57%). The experiment on rats receiving a diet rich in saturated fats and hydrogenated oils revealed that the consumption of Oleaster oil at the dose of 10 g and 20 g for 15 and 30 days improves plasma lipid profile by decreasing the rates of TC, TG, TL, and LDL-C with an increase in the rate of HDL-C serum. The importance of these effects depends on the dose and period of treatment.

Keywords : oleaster oil, fatty acid, *Olea europea*, oleic acid, lipid profile

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