

THERMAL STABILITY OF COMMERCIAL VEGETABLE OILS IN AIR

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Abstract. *The studies carried out in this paper aim at describing certain edible oils by the thermal analysis under dynamic and isothermal conditions. For this purpose, we applied the thermal analysis (TG, DTG) and the evaluation of the thermogravimetric data obtained by using the STAR^e software. The results highlight a degradation which takes place in three or four stages, according to a complex mechanism, with different weight losses, depending on the type of oil. We established the thermal stability range for 8 types of edible oils, taking as criterion the temperature at which their thermal decomposition starts. The tests carried out under isothermal conditions, in the air, showed a better thermal stability for the extra virgin olive oil and for the pumpkin seed oil as compared to the sunflower oil found in stores.*

Keywords: thermal stability, vegetable oils, dynamic and isothermal conditions

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