

## **The action of some antioxidants on the stability of vegetable oils**

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### **Abstract**

The present study aimed to investigate the effectiveness of the use of some antioxidants as inhibitors on oxidation of oils from grape seeds, walnuts and corn germs. The oxidation was evaluated during 700 h, in forced conditions. The optimal conditions of the accelerated oxidation process in the analysed systems were established. The progress of lipid oxidation was evaluated by measuring the peroxide index and conjugated dienes and trienes. A series of secondary products of the lipid oxidation were identified: hexanal, octanal and hydroxy-nonadienal. The intensity of the formation of these compounds during oxidation was monitored. The results of this study show that the oil samples with the addition of antioxidants show considerably lower oxidation values compared to the control sample. More effective was the action of L-ascorbic acid and n-octyl gallate, the optimum concentrations - 0.1%. An inhibitory effect of the oxidation process was observed for  $\alpha$ -tocopherol and matcha extract.