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Elaboration of enriched margarine with lentisk oil and honey: Formulation, characterization, and monitoring of oxidative stability

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Abstract

This study focused on the use of lentisk oil and honey as natural sources to formulate margarine with ameliorated quality and oxidative stability. For this, five margarines were formulated with honey and different concentrations of lentisk oil. Analyses were performed on oil and honey used, and then physicochemical characterization and several oxidative stability tests were applied to assess margarine quality. The results showed a significant richness of lentisk oil and honey in total phenolics and total flavonoids and expressed good antioxidant activities. As well as the evaluation of oxidative stability of enriched margarines during 3 months of storage demonstrated that margarine added with 2% lentisk oil (M1) had the best resistance properties and longer Rancimat induction time (22.26 h), better than the control and margarines added with 5% (M2), 10% (M3), and 15% (M4) lentisk oil. Globally, margarines prepared with high concentrations of lentisk oil (M2–M4) were not different from the control, whereas only M1 was permitted to ameliorate the stability of margarine with a slight influence on physicochemical parameters. The elaboration of margarine supplemented with 2% lentisk oil improves the properties of the product, which could then be applied to margarine manufacturing.

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