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Abstract

Comparing the Properties of Improved Breads with Omega-3 and Flaxseed Oil and Examining its Effect on Rheological and Sensory Characteristics

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Omega-3 is one of the essential fatty acids and is monumental for human health. But it is not produced by the human body, so it must be provided by food. In this study, flaxseed oil and fish oil as sources of omega-3 in 7 g and 12 g have been added to wheat flour dough. The production of breads has been done in the traditional way. Rheological characteristics of bread samples have been determined, the organoleptic properties of omega-3 breads are maintained for 1, 3, 5 days and evaluated by sensory method. The sensory properties of bread with flaxseed improved on the first day, but over time, the sensory quality of bread decreased. Bread containing fish oil received low points in terms of organoleptic and rheological, it was not accepted. Fatty acid profile showed the level of omega3, DHA, DPA, PUFA, MUFA, ALA and SFA in these two tests did not change for 5 days. Due to the high amount of omega-3s in flaxseed bread compared to fish oil bread, bread enriched with flaxseed oil on the first day of baking is suitable for production, both in terms of nutrients (omega-3 content) and sensory and rheological.

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