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**Liposoluble sea buckthorn (*Hippophae rhamnoides L.*) extract –
efficient antioxidant for butter**

*Extractul liposolubil din cățina albă (Hippophae rhamnoides L.) –
antioxidant eficient pentru unt*

Butter is one of the most important products of the dairy industry and ranks first among consumer preferences. This is attributed to its high fat content, making it a concentrated source of vitamins A and D, β -carotene, and phospholipids, as well as its compatibility with a wide range of foods. Butter is characterized by a milk fat content ranging from 80% to 90%, a maximum water content of 16%, and up to 2% milk solids-non-fat. Lipid oxidation is the primary challenge in butter storage, as it directly affects product quality and safety. In industrial practice, the oxidative stability of butter is enhanced through the use of synthetic or natural antioxidants. These compounds extend shelf life by protecting the product against oxidative deterioration during storage. The lipophilic extract obtained from sea buckthorn pulp is characterized by a high content of natural antioxidants, including carotenoids, tocopherols, and bioactive fatty acids. To produce butter enriched with sea buckthorn extract, the lipophilic extract is incorporated into pasteurized sweet cream, which is then churned to obtain butter. To evaluate the oxidative stability of butter, the peroxide value was determined as an indicator of primary oxidation products formed during the initial stages of lipid oxidation. The obtained results demonstrated that the addition of the extract at concentrations ranging from 0,5% to 2,5% reduces the peroxide value up to 1,5 times. The main limitation of using the lipophilic sea buck-

thorn extract in butter manufacturing is its impact on the sensory characteristics of the final product, particularly taste and aroma. This study demonstrated that enriching pasteurized sweet cream with lipophilic sea buckthorn extract is an innovative strategy to enhance nutritional quality and oxidative stability while maintaining sensory characteristics. For functional butter production, the incorporation of 1 g of lipophilic sea buckthorn extract per 100 g of final product is recommended.

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