

Irina DIANU

PhD student, Technical University of Moldova

<https://orcid.org/0000-0001-8632-8987>

E-mail: irina.dianu@doctorat.utm.md

Artur MACARI

Dr., assoc. prof., Technical University of Moldova

<https://orcid.org/0000-0003-4163-3771>

E-mail: artur.macari@tpa.utm.md

Effect of sea buckthorn powder supplementation on the sensory properties of processed cheese

Influența adaosului de pudră din cătină albă asupra caracteristicilor senzoriale ale brânzei topite

Sensory analysis is a fundamental tool for evaluating the quality and acceptability of innovative dairy products. In this context, the present study explores the influence of white sea buckthorn powder addition on the sensory characteristics of processed cheese. Processed cheese samples were prepared with different concentrations of sea buckthorn powder (1.5%, 2.5%, 4.0%, 5.0%) and compared with a control sample (no additive). Sensory evaluation was performed using a 5-point hedonic scale, based on taste, flavor, consistency, appearance, and color.

The results indicated that the sample with 2.5% white sea buckthorn powder achieved the highest overall acceptability scores, receiving maximum ratings for all evaluated attributes, suggesting a significant improvement in sensory quality. The 1.5% and 2.5% additions were rated as “very good,” indicating a clear enhancement in sensory profile, particularly in terms of flavor and consistency. In contrast, higher concentrations of sea buckthorn powder (4.0% and 5.0%) led to a decline in scores, especially for taste and color, due to the intensification of slightly acidic and bitter notes characteristic of sea buckthorn, as well as a more intense color. Consistency was not significantly affected by concentrations up to 2.5%, but higher levels resulted in observable textural changes due to the fiber content in the sea buckthorn powder.

The conclusion of this study is that white sea buckthorn powder can be successfully used as a functional ingredient in processed cheese, with an optimal concentration of 2.5% for achieving a balanced and acceptable sensory profile. This highlights its beneficial role in improving the quality of processed cheese, while

higher concentrations may negatively affect the overall acceptability of the product. The study provides valuable direction for the use of sea buckthorn in functional dairy products.

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