

STRESZCZENIE PRACY W JĘZYKU ANGIELSKIM

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The subject of the doctoral dissertation:

"Sea buckthorn as a source of substances that improve the quality and moisturizing properties of cosmetic emulsions".

The dissertation deals with the issue of assessing the impact of selected plant extracts on the quality and anti-aging properties of developed prototypes of moisturizing cosmetic emulsions. The aim of the study was to determine the properties of water-glycerin extracts and sea buckthorn fruit extract (juice) as well as to examine the quality of emulsions produced from them.

The dissertation consists of two parts: literature and experimental. The first one discusses the contemporary cosmetics market, its trends and consumer expectations towards cosmetics. The characteristics of the quality of cosmetic extracts and emulsions are also described. Considerable attention was paid to discussing the health-promoting properties of sea buckthorn and its use in medicine and cosmetology. In the experimental part, the aim of the dissertation, research hypotheses, the selection of research material and research methodology were formulated. Then the results of the research were presented and their discussion was conducted. Then the results were summarized and conclusions were drawn.

The research material consisted of water-glycerin extracts from fresh and dried sea-buckthorn berries made for the purposes of the research and fresh fruit juice. Then, prototypes of moisturizing cosmetic emulsions based on water-glycerin extracts from fresh and dried sea buckthorn berries were produced in order to assess the properties of sea buckthorn as a source of active substances that improve the quality of moisturizing cosmetic emulsions.

Based on the developed methodology, research on extracts and prototypes of cosmetic emulsions was performed. The antioxidant activity of water-glycerin extracts from sea buckthorn berries was assessed as the content of total polyphenolic compounds and the ability to scavenge free radicals. The content of vitamin C in all extracts was also determined. The tested quality factors determining the moisturizing properties of cosmetic emulsions with sea buckthorn water-glycerin extract were: viscosity, flow limit, texture, pH, color, emulsion

stability over time and determination of the stability of preparations by means of temperature stress tests, as well as microbiological purity. The sensory evaluation of the emulsion and the impact of the moisturizing cosmetic emulsion with sea buckthorn on the skin were also assessed.

The obtained research results made it possible to verify the quality of sea buckthorn extracts, and the selected determinants were the basis for a comprehensive assessment of the quality of moisturizing emulsions based on previously tested sea buckthorn extracts and confirmed the potential possibility of using this extract on a larger scale in the cosmetics industry.

Keywords: plant extracts, sea buckthorn, cosmetic emulsions, quality of emulsions

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