

New perspectives on oil extraction

Extract Ltd. was founded with the aim to produce high-value products from various sea buckthorn species found in Latvia. At first a research will be done with sea buckthorn berries available in Latvia to identify its most valuable qualities. Based on the results the most product-suitable berries will be selected. The results will be communicated to farmers in order to formulate a common policy to achieve common goals. Sea buckthorn extracts are produced for use in cosmetology, food industry and pharmacy.

Industrial need

Extract Ltd. was interested in identifying the available extraction methods. The company wanted to get a better understanding of the locally grown sea buckthorn variety lipid profile as well as contents of carotenoids.

Extract Ltd. established a contact with their research partner University of Latvia which earlier provided the similar research. The researchers formulated the study question on which sea buckthorn variety yields the most extract using proposed extraction methods and proposed an experiment.

Experiment

The experiment was about to make a supercritical CO₂ extraction of sea buckthorn to obtain oils rich

in bioactive compounds. The experiment gave the information about the oil composition of locally grown sea buckthorn varieties. Supercritical CO₂ extraction was optimized to obtain high yield of sea buckthorn oil.

The experiment provided additional knowledge on locally grown sea buckthorn variety lipid profile as well as contents of carotenoids. The study investigated the possibilities to use solvent-free, innovative extraction methods for valorization of sea buckthorn berries to obtain oils rich with bioactive compounds with possible health benefits.



Photo by Kaur Kristjan



Photo by Christin Hume

Steps ahead

The experiment provided the company with the results that would serve as a basis for making further choices to ensure production of sea buckthorn and its extracts. The variety producing the most oil extract using specific methods will be potentially applied by the company for further experiments to test for biological activity. The obtained results supported the company in their continued work on the product development and extraction methods, as well as exploring possibilities to plant sea buckthorn for production.

Baltic TRAM Industrial Research Center (IReC)

University of Latvia, Department of Science
www.lu.lv

For more information visit www.baltic-tram.eu

