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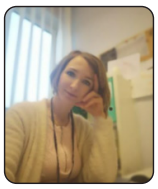
Abstract



Impact of pre-treatments and ultrasound technology on polyphenolic compounds extracted from potato peels

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Abstract:

Potato (Solanum tuberosum L: Solanaceae family) is an important food crop throughout the world and is widely used as a raw material to produce starch, potato chips, fries, flour, etc. Agricultural land under potato production has decreased throughout years in Estonia, being over 5.3 thousand ha in 2019. Majority of the food products utilize peeled potatoes, which leaves behind a great amount of potato peels as a waste. Effective management and disposal of potato peels is necessary to avoid environmental pollution. To overcome this, it is necessary that potato peel waste is used for value addition. Potato peels, a good source for bioactive compounds, mainly contain polyphenolic compounds such as phenolic acids, chlorogenic acid, flavonoids, flavanols and anthocyanins.

These compounds possess many health benefits to humans. Green extraction techniques, such as ultrasound-assisted extraction, are expected to preserve the extracted compounds and retain their pharmacological characteristics. In this paper, results will be presented on the effects of different pre-treatment technologies, applied to potato peels prior to standardizing and commending ultrasound assisted extraction process of polyphenolic compounds.

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Biography:

Alice Aav is a lecturer and a researcher in Estonian University of Life Sciences. She holds PhD in plant pathology. Her main teaching topics are plant-based raw materials and plant-based food technologies. Her research work is based on sustainable food production technologies and valorisation of agricultural- and food by-products using novel and "green technologies". The main crop for her research has been potato. She has also worked with entrepreneurs, developing new plant-based food products for marketing purposes.

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