

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

Alice Aav

Estonian University of Life Sciences, Estonia

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.

Acknowledgements

This work is supported under the Project: ERA Chair for Food (By-) Products Valorization Technologies of the Estonian University of Life Sciences (VALORTECH) which has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 810630.