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Evaluation of deep eutectic solvent in extraction of plant phenolic

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Within 'green economy' approach, growing area of research in the development of green technologies is devoted to designing new, more environmentally friendly solvents. As a promising alternative to traditional organic solvents deep eutectic solvents (DESs) have been dramatically expanding in popularity over the past decade as a new generation of designer solvents with possible applications in various industrial fields. Since deep eutectic solvents consist of simple, cheap, and naturally occurring compounds with a high safety profile, they may be used for highly efficient extraction as replacement for harmful and volatile organic solvents and storage of natural products from plants. Additionally, the components of DESs are abundant in our daily diet and extract may directly be used in food, pharmaceutical, cosmetical and agrochemical applications without need for expensive downstream purification steps. Herein, we are going to present evaluation of DESs in extraction of plant phenolic from a grape skin as one of the world's largest fruit crops. After selection of the most suitable DESs, optimization of extraction is carried out and the parameters that influence the extraction process such as temperature, time, water addition and solid/liquid ratio, are studied. Obtained data will serve for filling gaps for a using green solvent such DESs as promising green technology for the extraction of various natural products from plant material.

Biography

Ivana Radojčić Redovniković, Associate Professor pursued her professional studies at the Faculty of Food Technology and Biotechnology, University of Zagreb where she obtained doctoral degree in 2007. In 2013 she was appointed associate professor at Faculty of Food Technology and Biotechnology in Zagreb. Currently, her major research interests focus on the development and application of new green solvents such as ionic liquid and deep eutectic solvents. Ivana Radojčić Redovniković is author of over 25 scientific papers.

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