

LE STUDIUM WEBINARS

NaDES for biomass valorization: new insight of a green technology

September 6, 2022 – September 7, 2022

THIS CERTIFICATE IS AWARDED TO

Dr Nemanja Teslic – invited speaker from Institute of Food Technology,
University of Novi Sad - Serbia

for giving a talk : “ *Carotenoids and ellagic acid extraction with Natural deep eutectic solvents – potential application for cosmetic industry ?* ”



Dr Aurélien MONTAGU

LE STUDIUM - Scientific Relations Manager
Orléans, France - www.lestudium-ias.com

A handwritten signature in blue ink, appearing to read 'A. Montagu'.

06-07 September 2022

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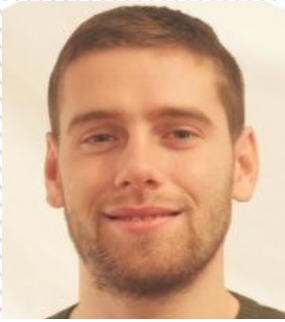
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WEBINARS

06-07 SEPTEMBER 2022

ABSTRACTS

NaDES for biomass valorization: new insight of a green technology



Dr Nemanja Teslic

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Dr. Teslić is a research associate at the Institute of food technology. In 2018 he earned PhD at the Department of agricultural and food science, University of Bologna. He was a team leader of WP on project „Natural Deep Eutectic Solvents for Green Agri-Food Solutions” and participating on project „Novel extracts and bioactive compounds from under-utilized resources for high-value applications”. Current field of research is valorization of bioactive compounds from food industry by-products and agricultural waste by novel green extraction techniques and solvents. In 2019 he received award R. Ferrarini for the best PhD in viticulture issued by Italian association of enology and viticulture. In 2021 he received award for the best young investigator issued by Institute of Food Technology.

Carotenoids and ellagic acid extraction with Natural deep eutectic solvents – potential application for cosmetic industry ?

The cosmetic industry faces the challenges of sustainable production due to high negative impact of the industry on the environment. To tackle such challenges cosmetic industry requires development of innovative and eco-friendly solutions to exploit agro-food waste and as natural resources for the next generation of cosmetic products. These solutions should also be aligned with the principles of “green chemistry”. One of the potential solutions could be the usage of natural deep eutectic solvents (NADES) composed only of edible, recyclable, non-toxic compounds which are present in nature. More precisely, organic acids, water, sugars, fatty acids, amino acids, terpenes, alcohols, and other compounds some of which are already used by the cosmetic industry, can be mixed in the certain ratio to create solvents with specific features suitable for a wide range of applications. Since large number of NADES combinations can be made these solvents can be used as extraction medium for natural polar/non-polar compounds, stabilization medium of extracted compounds etc. Due to NADES edible and nontoxic properties obtained extracts are ready-to-use and in certain cases may be applied in cosmetic products without additional separation technology which reduces cost of production. Some of the examples are application of NADES is carotenoids recovery from pumpkin pulp and ellagic acid from by-product raspberry seeds which could be potentially incorporated in anti-aging and skin repair products.