

The Serbian Society for Ceramic Materials  
Institute for Multidisciplinary Research (IMSI), University of Belgrade  
Institute of Physics, University of Belgrade  
Center of Excellence for the Synthesis, Processing and Characterization of  
Materials for use in Extreme Conditions "CEXTREME LAB" - Institute of  
Nuclear Sciences "Vinča", University of Belgrade  
Faculty of Mechanical Engineering, University of Belgrade  
Center of Excellence for Green Technologies, Institute for Multidisciplinary  
Research, University of Belgrade  
Faculty of Technology and Metallurgy, University of Belgrade

# PROGRAMME and the BOOK of ABSTRACTS

6CSCS-2022

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the Serbian Society for Ceramic Materials  
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Edited by:  
**Branko Matović**  
**Aleksandra Dapčević**  
**Vladimir V. Srdić**

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## **BLUEBERRY WINE BIOLOGICALLY ACTIVE COMPOUNDS PROTECT AGAINST OXIDATIVE STRESS**

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Fruit and derived product represent a rich source of biologically active compounds which exhibit beneficial health effect on human organism. Among fruit especially berries it is important to highlight blueberries. One of derived products with added value from this fruit is wine. The aim of this study was to investigate *in vitro* activity of blueberry wine by monitoring activities of antioxidant protection enzymes and lipid peroxidation (malondialdehyde level) in isolated rat synaptosomes. Fruit wines were produced in controlled conditions of different microvinifications in which pure culture of selected wine yeast was used. Synaptosomes were isolated from the brain of Wistar albino rats. Analyzed wine samples influenced on the activity of antioxidant protection enzymes. Wine samples also showed ability to decrease malondialdehyde level. Activity for superoxide dismutase in synaptosomes was in range (6.47–7.21 U/mg) while catalase activity was (0.045–0.061 U/mg). Glutathione peroxidase activity was in range (0.0212–0.0232 U/mg), as well as malondialdehyde level (2.17–2.35 nmol/mg). Obtained results indicate that blueberry wines possess antioxidant properties and abilities to protect against free radicals generated during oxidative stress.