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— F E B R U A R Y 1 9 - 2 1 —

BOOK OF ABSTRACTS

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Rapid Method for Differentiation of Extracts of Wood Used in Balkan Cooperage

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The ageing process of alcoholic beverages in presence of wood is a significant label of their quality, in which important changes in aroma, color, taste and astringency occur due to the interaction between compounds present in the wood and beverages. In Balkan countries, several wood species such as oak, cherry, black locust, and mulberry can be used in that process.

Cyclic voltammetry is simple, rapid and inexpensive method that could be used for measurement of antioxidant capacity. To our knowledge, cyclic voltammetry has not been implemented in characterization of wood extracts before. Therefore, the aim of our work was to characterize the 60% ethanolic extracts of different wood species commonly used in Balkan cooperage (reproducing the condition of ageing process) by cyclic voltammetry and to investigate differences among wood species.

Our results showed that cyclic voltammetry can distinguish investigated wood species, which points to the phenolic profile unique for the wood specie. The same class of wood extract shows similar behavior (based on the peaks position) indicating the presence of the same phenolic compounds. Also, differences based on the current areas are strongly correlated with the geographical origin of the wood. Present study allows application of the rapid, reagentless and sensitive method for the monitoring of the phenolic profiles of the wood, and determination of geographical and botanical origin. Additionally, proposed approach, offers fast and reliable determination of the quality of the used wood barrel, as an important and beneficial fact for the producers of alcoholic beverages.

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