



SIXTH INTERNATIONAL CONFERENCE
ON RADIATION AND APPLICATIONS IN VARIOUS FIELDS OF RESEARCH

BOOK OF ABSTRACTS

18. 06. - 22. 06. 2018 | Metropol Lake Resort | Ohrid | Macedonia





CAESIUM-137 AND POTASSIUM-40 IN BLUEBERRY-BASED PRODUCTS ON THE MARKET IN SERBIA

**Borjana Vranješ¹, Velibor Andrić²,
Mila Vranješ², Jelena Ajtić¹, Branislava Mitrović¹**

¹ Faculty of Veterinary Medicine, Beograd, Serbia

² Vinča Institute of Nuclear Science, Beograd, Serbia

The aim of the work presented in this paper was investigation of the activity concentration of ¹³⁷Cs and ⁴⁰K in blueberry-based products that are available on the market in the Republic of Serbia. Samples were bought in stores during September 2017 and in total, ten packaged juices, two jams, two sweets and one fresh wild blueberry were measured. Blueberries are abundant in beneficial vitamins, minerals and other elements, and have an extraordinary nutritional and pharmaceutical value. The collected blueberry-based juices show the caesiums-137 activity concentration ranging from the minimal detectable activity (MDA) to 4 Bq/kg. Activity concentration of caesium-137 in jams ranges from MDA to 21 Bq/kg, and in blueberry-based sweets from 0.6 Bq/kg to 28 Bq/kg. A content of caesium-137 in fresh wild blueberry is 4 Bq/kg. In Serbia, the recommended level of activity concentration for caesium-137 in juices and sweets is 15 Bq/kg and 150 Bq/kg in fresh blueberries. The tested samples of juices, jams, fresh wild blueberry and one of the sweets meet the set criteria for caesium-137 while one sweets sample exceeds the limit. Naturally occurring radionuclide potassium-40 is detected in all the samples with the activity concentrations of 4–55 Bq/kg in juices, 14–19 Bq/kg in jams, 17–227 Bq/kg in sweets, and 32 Bq/kg in fresh wild blueberry.



rad-conference.org

Silver sponsor

