DETERMINATION OF THE CONTENT OF HEAVY METALS AND NITRITES IN MEAT PRODUCTS (PATES AND MEAT SPREADS) FROM THE MARKET OF THE REPUBLIC OF SRPSKA

Dragan Tošković[1], Danijela Rajić[1], Marija Mitrović[1], Vesna Gojković Cvjetković[1], Milomirka Obrenović[1*]

[1]*University of East Sarajevo, Faculty of Technology Zvornik, Karakaj 34a, Zvornik, Bosnia and Herzegovina, milomirkaskrba95@gmail.com**

Abstract

Animal-based food is significant for human nutrition as it represents an easily digestible source of high-quality proteins, fatty acids, fat-soluble vitamins, and energy. Throughout evolution, humans developed anatomical, metabolic, and biochemical adaptations in the digestive tract, increasing dependence on nutritionally valuable food, such as animal-based products. Animal-based food can be a source of chemical substances harmful to health, such as contaminants (heavy metals, mycotoxins, organochlorine pesticides, dioxins, polychlorinated biphenyls, polycyclic aromatic hydrocarbons...), veterinary drug residues, and additives. The subject of this paper is the determination of the content of essential (copper Cu, iron Fe, and chromium Cr), heavy and toxic (lead Pb, cadmium Cd, arsenic As, and tin Sn) metals, as well as nitrites in meat products, particularly pâtés and meat spreads available in the market of the Republic of Srpska. Determination content of metals was performed using the ICP-OES method, while nitrites were analyzed using the standard SRPS ISO 2918/1999 method. The obtained results indicate that the content of heavy and toxic metals and nitrites is lower than the maximum prescribed by national regulations, namely the Rulebook on Maximum Amounts of Certain Contaminants ("Official Gazette of BA", No. 68/14, 79/16, 84/18) and the Rulebook on Additives in food ("Official Gazette of BA", No. 33/18 and 6/21).

Keywords: *liver pâté, meat spread, heavy metals, nitrites.*