



UNIFood2024 Conference
28th-29th June 2024 University of Belgrade
3rd International UNIFood Conference



THE IMPORTANCE OF TRICHINELLA PROFICIENCY TESTS IN FOOD SAFETY

***Sasa D Vasilev¹, Branko D Suvajdzic², Ljiljana Z Sabljic¹, Nedjeljko R Karabasil²,
Milorad D Mirilovic², Ivana D Mitic¹, Dragan D Vasilev²***

¹University of Belgrade, Institute for the Application of Nuclear Energy - INEP, Belgrade, Serbia

²University of Belgrade, Faculty of Veterinary Medicine, Serbia

* Corresponding author: svasilev@inep.co.rs

Public health, consumer health and food safety are very important internationally and are well regulated. Trichinellosis is a serious zoonotic disease (caused by parasitic nematodes of the genus *Trichinella*) and represents public health issue. People acquire trichinellosis by consuming raw or undercooked meat infected with the *Trichinella* larvae. The gold standard in meat inspection for the presence of *Trichinella* larvae is the use of the artificial digestion method. For the prevention of human infection and for international trade purposes there are regulations for the inspection of meat as well as for quality control. European Union Reference Laboratory for Parasites (EURLP), Rome, Italy, organizes once a year quality controls - *Trichinella* Proficiency Tests (PTs) for all National Reference Laboratories for *Trichinella* (NRLTs). The Serbian Reference Laboratory for *Trichinella* successfully participates for many years. According to Regulations National Reference Laboratories for *Trichinella*, in all member states of the European Union, organize *Trichinella* proficiency tests every year and all laboratories performing artificial digestion of meat need to participate. The Accreditation Body of Serbia requires only from accredited laboratories a certificate of participation in *Trichinella* PTs. In Serbia Institute for the Application of Nuclear Energy INEP and Faculty of Veterinary Medicine successfully and independently organize PTs (from 2017 and 2022 respectfully). The results were published in Serbian and international scientific journals. In 2022 Serbian *Trichinella* legislation was changed and now all laboratories which control meat for the presence of *Trichinella* larvae need to participate in PT. It is desirable that all these laboratories have and use reference material (*Trichinella* larvae in alcohol) and, if necessary, request test samples for training purposes. European and our own experience shows that participation in proficiency tests leads to better laboratory results over time and better consumer protection.

Keywords: *Trichinella, Proficiency Test, Food safety*

Acknowledgements: "The study was supported by the Ministry of Science, Technological Development and Innovation of the Republic of Serbia (Contract numbers 451-03-66/2024-03/200019 and 451-03-66/2024-03/200143)."