



УНИВЕРЗИТЕТ У БАЊОЈ ЛУЦИ
UNIVERSITY OF BANJA LUKA
ТЕХНОЛОШКИ ФАКУЛТЕТ
FACULTY OF TECHNOLOGY



BOOK OF ABSTRACTS

OCTOBER 18-19, 2024

ACADEMY OF SCIENCES AND ARTS
OF THE REPUBLIC OF SRPSKA,
BANJA LUKA, REPUBLIC OF SRPSKA, B&H

INTERNATIONAL SCIENTIFIC CONFERENCE

**XV
CONFERENCE**

OF CHEMISTS,
TECHNOLOGISTS AND
ENVIRONMENTALISTS
OF REPUBLIC OF SRPSKA

XV CONFERENCE OF CHEMISTS, TECHNOLOGISTS AND
ENVIRONMENTALISTS OF REPUBLIC OF SRPSKA
BOOK OF ABSTRACTS

Publisher:

University of Banja Luka, Faculty of Technology

Editorial board:

Borislav Malinović, PhD, dean

Design and computer processing:

Pero Sailović, PhD

Msc Branka Ružičić

CIP - Каталогизација у публикацији
Народна и универзитетска библиотека
Републике Српске, Бања Лука

66(048.3)(0.034.2)
661:663/664(048.3)(0.034.2)
663
677(048.3)(0.034.2)
655(048.3)(0.034.2)
502(048.3)(0.034.2)

CONFERENCE of Chemists, Technologists and Environmentalists of
Republic of Srpska (15 ; Banja Luka ; 2024)
Book of Abstracts [Електронски извор] / XV Conference of
Chemists, Technologists and Environmentalists of Republic of Srpska,
Banja Luka, October 18-19, 2024 ; [editorial board Borislav Malinović]. -
Onlajn izd. - Ел. зборник. - Banja Luka : University in Banjaluka,
Faculty of Technology = Tehnološki fakultet, 2024

Системски захтјеви: Нису наведени. - Наћин pristupa (URL):
[https://savjetovanje.tf.unibl.org/wp-
content/uploads/2024/10/Book_of_abs_2024.pdf](https://savjetovanje.tf.unibl.org/wp-content/uploads/2024/10/Book_of_abs_2024.pdf). - Ел. публикација
у ПДФ формату опсега 178 стр. - Насл. са насловног екрана. - Опис
извора дана 14.10.2024.

ISBN 978-99976-14-05-6

COBISS.RS-ID 141552129

Organizing Committee:

Pero Sailović, *President*, Maja Milijaš, *Secretary General*, Zoran Gazibarić, *Secretary*
Members: Darko Bodroža, Branka Ružičić, Maja Katić, Sara Lakić, Dario Marjanović,
Sanda Pilipović, Biljana Vasić, Jovanka Kotur, Dajana Dragić, Đorđe Vujčić, Tijana Đuričić,
Biljana Pećanin, Nebojša Suvajčević, Sanja Novaković, Dušan Šljivić, Nebojša Gorgi,
Students: Jovan Savić, Vladimir Ivković, Marina Ivezić, Violeta Božić, Đorđe Samardžić,
Ivana Ivanović

Scientific Committee:

Prof. Borislav Malinović, PhD, chairman, Faculty of Technology University of Banja Luka, **B&H**; Prof. Dejan Tanikić, PhD, co-chairman, Technical faculty in Bor, University of Beograd, **Serbia**; Prof. Dragan Vujadinović, PhD, co-chairman, Faculty of Technology Zvornik, University of East Sarajevo, **B&H**; Prof. Dani Đorđević, PhD, co-chairman, University of Veterinary and Sciences, Brno, **Czech Republic**; Miroslav Sokić, PhD, co-chairman, Institute for Technology of Nuclear and Other Mineral Raw Materials, **Serbia**; Academician Vlada Veljković, PhD, Faculty of Technology, Leskovac, University of Niš, **Serbia**; Prof. Todor Vasiljević, PhD, Victoria University, Melbourne, **Australia**; Prof. Teresa Bandosz, PhD, City College of New York, **USA**; Prof. Ryusuke Futamura, PhD, Faculty of Science, Department of Chemistry, Shinshu University, Matsumoto, **Japan**; Rodolfo Cruz Silva, Senior Researcher, Center for Research in Applied, Chemistry – CIQA, Saltillo, **Mexico**; Prof. Sanja Mahović-Poljačak, PhD, Faculty of Graphic Arts, University of Zagreb, **Croatia**; Prof. Csaba Horvath, PhD, University Obuda, Budapest, **Hungary**; Prof. Mihail Kochubovski, PhD, Institute of Public Health, Skopje, **North Macedonia**; Prof. Massimiliano Fenice, PhD, Department of Biological and Ecological Sciences, Tuscia University, **Italy**; Prof. Georgij Petriaszwili, PhD, Faculty of Production Engineering, Warsaw University of Technology, **Poland**; Prof. Veselinka Grudić, PhD, Faculty of Metallurgy and Technology, University of Montenegro, **Montenegro**; Prof. Pospiech Matej, PhD, University of Veterinary and Sciences, Brno, **Czech**; Prof. Iskren Spiridonov, PhD, University of Chemical Technology and Metallurgy, Sofia, **Bulgaria**; Prof. Laura Benea, PhD, West University of Timisoara, **Romania**; Prof. Savvas G. Vassiliadis, PhD, University of West Attica, Athens, **Greece**; Prof. Helena Prosen, PhD, Faculty of Chemistry and Chemical Technology, University of Ljubljana, **Slovenia**; Prof. Srećko Stopić, PhD, RWTH Aachen University, **Germany**; Prof. María J. (Iosune) Cantalejo, PhD, Public University of Navarra, Pamplona, **Spain**; Prof. Ramunė Rutkaitė, PhD, Faculty of Chemical Technology, Kaunas University of Technology, **Lithuania**; Prof. Jurislav Babić, PhD, Faculty of Food Technology, Josip Juraj Strossmayer University, **Croatia**; Prof. Svetomir Milojević, PhD, University of Kosovska Mitrovica, **Serbia**; Prof. Petar Uskoković, PhD, Faculty of Technology and Metallurgy, University of Belgrade, **Serbia**; Prof. Mitja Kolar, PhD, Faculty of Chemistry and Chemical Technology, University of Ljubljana, **Slovenia**; Prof. Dragiša Savić, PhD, Faculty of Technology in Leskovac, University of Niš, **Serbia**; Prof. Biljana Pajin, PhD, Faculty of Technology, University of Novi Sad, **Serbia**; Prof. Nemanja Kašiković, PhD, Faculty of

Technical Sciences, University of Novi Sad, **Serbia**; Prof. Husein Vilić, PhD, Biotechnical faculty, University of Bihać, **B&H**; Prof. Bojana Danilović, PhD, Faculty of Technology in Leskovac, University of Niš, **Serbia**; Prof. Sead Ćatić, PhD, Faculty of Technology, University of Tuzla, **B&H**; Prof. Radoslav Dekić, PhD, Faculty of Natural Sciences and Mathematics, University of Banja Luka, **B&H**; Prof. Farzet Bikić, PhD, Faculty of Engineering and Natural sciences, University of Zenica, **B&H**; Prof. Sanjin Gutić, PhD, Faculty of Science, University of Sarajevo, **B&H**; Prof. Milica Balaban, PhD, Faculty of Natural Sciences and Mathematics University of Banja Luka, **B&H**; Prof. Ljiljana Topalić-Trivunović, PhD, Faculty of Technology University of Banja Luka, **B&H**; Prof. Slavica Sladojević, PhD, Faculty of Technology University of Banja Luka, **B&H**; Prof. Pero Dugić, PhD, Faculty of Technology University of Banja Luka, **B&H**; Prof. Slavica Grujić, PhD, Faculty of Technology University of Banja Luka, **B&H**; Prof. Branka Rodić-Grabovac, PhD, Faculty of Technology University of Banja Luka, **B&H**; Prof. Rada Petrović, PhD, Faculty of Technology University of Banja Luka, **B&H**; Prof. Dragana Grujić, PhD, Faculty of Technology University of Banja Luka, **B&H**; Prof. Svjetlana Janjić, PhD, Faculty of Technology University of Banja Luka, **B&H**; Prof. Tatjana Botić, PhD, Faculty of Technology University of Banja Luka, **B&H**; Prof. Mladen Stančić, PhD, Faculty of Technology University of Banja Luka, **B&H**; Prof. Pero Sailović, PhD, Faculty of Technology University of Banja Luka, **B&H**; Prof. Mirjana Žabić, PhD, Faculty of Technology University of Banja Luka, **B&H**.

NOTE:

The authors have full responsibility for the originality and content of thier own papers



УНИВЕРЗИТЕТ У БАЊОЈ ЛУЦИ
UNIVERSITY OF BANJA LUKA
ТЕХНОЛОШКИ ФАКУЛТЕТ
FACULTY OF TECHNOLOGY



International scientific conference

„XV CONFERENCE OF CHEMISTS, TECHNOLOGISTS AND ENVIRONMENTALISTS OF REPUBLIC OF SRPSKA“

under the auspices of



**MINISTRY OF SCIENTIFIC AND TECHNOLOGICAL DEVELOPMENT
AND HIGHER EDUCATION**

MINISTRY OF AGRICULTURE, FORESTRY AND WATER MANAGEMENT



ACADEMY OF SCIENCES AND ARTS OF THE REPUBLIC OF SRPSKA

MICROBIOLOGICAL CHARACTERISTICS OF WATER OF DIMITROVGRAD CITY

Gordana J. Devic¹, Mila Ilic¹, Srdjan Miletic¹

¹University of Belgrade, Institute of Chemistry, Technology and Metallurgy National Institute of the Republic of Serbia, Njegoševa 12, 11000 Belgrade, Serbia

Abstract

Surface water pollution from organic materials originating from human activity is a worldwide issue. Because microorganisms can quickly adapt to changes in their environment, they are the best markers of organic contamination in surface waters. Due to the economic situation and lack of law implementation, most wastewaters in Serbia are released directly into a surface water recipient without any, or a limited, treatment. In this paper we conducted seasonal monitoring of the Nišava River's near Dimitrovgrad bacteriological quality in southeastern Serbia to assess the extent of its organic and faecal pollution. A total number of heterotrophs, *Escherichia coli* and intestinal enterococci counts were determined by standard cultivation methods in samples from seven locations along the river. In most instances, the bacteriological quality of Nišava water, near Dimitrovgrad, belonged to the classes of low or moderate organic and faecal pollution (classes I or II). Intestinal enterococci and *E. coli* counts indicated high to moderate faecal contamination in one sample taken downstream of the city of Dimitrovgrad, Class III. Regular monitoring and protection measures are necessary for optimal watershed management to provide a safe and sanitary drinking water supply.

Keywords: Surface water, Dimitrovgrad, organic and faecal pollution, *Escherichia coli* and intestinal enterococci.