

**BOOK of ABSTRACTS**

**27<sup>th</sup> Congress  
of Chemists  
and Technologists  
of Macedonia**

**27<sup>th</sup> Конгрес на  
Хемичари и  
Технолози  
на Македонија**

20-23 9 2024 OHRID, RN MACEDONIA





Сојуз на хемичарите и технолозите на  
Македонија  
Society of Chemists and Technologists of  
Macedonia

**27<sup>th</sup> Congress of SCTM**

# **BOOK of ABSTRACTS**

**25–28 September 2024**

**Metropol Lake Resort**

**Ohrid, N. Macedonia**

**Skopje, 2024**



Сојуз на хемичарите и технолозите на Македонија  
Society of Chemists and Technologists of Macedonia  
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The 27<sup>th</sup> Congress of SCTM is a



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recognized event.

Dear Esteemed Colleagues and Participants,

We are pleased to present the Book of Abstracts for the 27<sup>th</sup> Congress of the Society of Chemists and Technologists of Macedonia. Like our previous congresses over the past two decades, this event takes place in the cradle of Slavic literacy—a region with a rich history of intellectual accomplishments. We trust that the heritage, along with the beauty of Lake Ohrid and the city itself, will not only make your stay enjoyable but also serve as an added source of inspiration for your own work.

The SCTM congresses have grown into a prominent platform for regional researchers from all fields of chemistry and chemical engineering. We are honored to welcome plenary and invited speakers not only from Macedonia but also from countries like Czechia, Denmark, Italy, Serbia, Spain, and the United Kingdom. In addition, we are proud to feature a wide range of oral and poster presentations from researchers representing Austria, Azerbaijan, Bosnia and Herzegovina, Bulgaria, Croatia, Germany, Greece, Italy, Kosovo, Montenegro, Poland, Serbia, Slovenia, Spain, Romania, and Russia. With nearly 200 presentations from 550 authors and co-authors, it is especially gratifying to see many attendees returning as regular participants.

We hope this Book of Abstracts serves as both a source of inspiration and a record of the exceptional work presented at the 27<sup>th</sup> SCTM Congress. Let's use this opportunity to celebrate not only our achievements but also our resilience, determination, and steadfast commitment to advancing knowledge. Together, we can overcome challenges and, through our collective efforts, continue to drive innovations that make a positive impact on the world.

We extend our heartfelt gratitude to Prof. Jadranka Blaževska Gilev and Prof. Biljana Angjuševa for once again taking on the challenging task of organizing this year's congress. Their tireless efforts and dedication ensured the event's success. We also wish to thank all the members of the scientific and organizational committees who worked tirelessly behind the scenes, with special recognition to Assoc. Prof. Vojo Jovanov, Marija Prosheva and Despina Kostadinova for their management of the website, Book of Abstracts, and other essential tasks.

Our thanks also go to the reviewers and participants whose contributions have been vital to the success of this Congress. Your commitment to the scientific mission emphasizes the value of collaboration, especially during uncertain times. It is through the exchange of ideas, sharing of knowledge, and building of connections that we strengthen our community and advance our fields. Lastly, we express our sincere gratitude to the sponsors, acknowledged at the end of this book, for their generous support.

Prof. Zoran Zdravkovski, president  
Society of Chemists and Technologists of Macedonia



## AEC P-6

### **Research of Macroelement and Microelement Composition in Domestic Fruit from the Pešter Plateau in the Republic of Serbia**

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Concentrations of five macroelements (Ca, Mg, K, Na, P) and five essential microelements (Fe, Zn, Cu, Se, Cr) were determined in six types of domestic fruit, that were not chemically treated. Total mineral content, after samples mineralization, were analyzed by inductively coupled plasma optical emission spectrometry (ICP-OES).

Domestic fruit (raspberry, cherry, red plum, grape, aronia, red currant, black currant) from the Pešter Plateau in the Republic of Serbia, was selected for investigation. The results showed that aronia is the richest in the Se content, while sour cherries are the poorest. However, sour cherries were abundant in the content of other essential microelements.

Zn was the least abundant in grapes, while Cu, Fe, and Cr were the least abundant in red plum. As far as macroelements are concerned, it turned out that aronia was the richest in Na and Mg, while blackcurrant was abundant in the content of K, Ca, and P. According to the K content, it was observed that his amount in sour cherries are the least. The lowest content of all other examined macroelements was observed in the grape.

**Keywords:** domestic fruits; microelements; macroelements; ICP-OES; Pešter Plateau.