

BOOK OF ABSTRACTS

IV INTERNATIONAL SYMPOSIUM FOR AGRICULTURE AND FOOD

ISAF 2022

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*75 Years Devoted
Faculty of Agricultural Sciences and Food*

IV INTERNATIONAL SYMPOSIUM FOR AGRICULTURE AND FOOD
40th Faculty-Economy Meeting
Association of the Faculties for Agricultural Sciences of South Eastern
Europe – Deans meeting
13th International Conference of the Association of Agricultural
Economists of the Republic of North Macedonia (AAEM) and
celebrating 25th anniversary of AAEM
BALNIMALCON 2022

9th Balkan Animal Sciences Conference
IV МЕЃУНАРОДЕН СИМПОЗИУМ ЗА ЗЕМЈОДЕЛСТВО И ХРАНА,
40-та Средба Факултет-Стопанство
Асоцијација на факултети за земјоделски науки и храна на
Југоисточна Европа – средба на декани
13-та Меѓународна конференција на Здружение на
агроекономистите на Република Северна Македонија (ЗАЕМ) и
одбележување на 25 години постоење на ЗАЕМ
9th Balkan Animal Sciences Conference BALNIMALCON 2022

Organized by the
Faculty of Agricultural Sciences and Food - Skopje
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BOOK OF ABSTRACTS

In this Book of Abstracts you will find more than 250 abstracts classified in 10 thematic sections. The abstracts are published in their original form as provided by the authors. Double-blinded review will apply for the submitted full papers following the Instructions for Authors available at the ISAF 2022 web site. Looking forward to receive your full papers.

On behalf of the Secretariat of the 4th International Symposium for
Agriculture and Food - ISAF 2022,

Ivana Janeska Stamenkovska
President of ISAF 2022 Secretariat

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FRUIT GROWING,
VITICULTURE AND WINE
PRODUCTION

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**ELECTROTHERMAL ATOMIC ABSORPTION SPECTROMETRY (ETAAS)
DETERMINATION OF PB AND CD IN MACEDONIAN WHITE WINES****Ivanova-Petropulos, Violeta¹; Jakobová, Silvia²; Nedelkovski, Dusko³; Pavlik, Vladimír,
Balážová, Želmíra⁵; Hegedűs, Ondrej⁶**

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Abstract

Wine is a very complex natural product consisting of organic and inorganic compounds that have a great influence on wine quality. Mineral composition of wines is an important factor that influences its quality as well as nutritional value. Determination of the elemental composition of wines is very important from toxicological point of view, not only since it could contain harmful elements, such as Pb, As and Cd, but also, from nutritional point of view, since wine contains essential elements for the human organism, such as Ca, Cr, Co, K, Se and Zn. In this study, lead and cadmium were determined in white wines from Smederevka, Chardonnay and Riesling varieties from Tikveš and Skopje regions, applying electrothermal atomic absorption spectrometry (ETAAS) [1]. Wine samples were directly injected into the ETAAS system, using matrix modifiers for Pb and Cd, and obtaining peaks with good shapes, without any interference. The accuracy and precision of the method were checked, obtaining satisfactory results and confirming that the method is accurate and convenient for quantitative analysis of the harmful elements Pb and Cd in wines. The lead and cadmium concentrations ranged between 2–28.5 and 0.4–5.69 µg/L, respectively, confirming that wines did not contain these harmful elements in concentrations above the maximal allowed and wines are safety for consumption. Acknowledgments. This work was financially supported by the SAIA, Slovak Republic and CEEPUS network SK-1516-03-2223 - BioScience, Food and Health.

Keywords: white wine, lead, cadmium, ETAAS.