

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
Association of the Association of Agricultural
Economists of North Macedonia (AAEM) and
13th International Conference of AAEM
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
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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,
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GC-MS IDENTIFICATION OF VOLATILE COMPOUNDS IN OAK CHIPS AND POWDER**Necev, Boris^{1,2}; Ivanova-Petropulos, Violeta¹; Leitner, Erich³; Stafilov, Trajče⁴; Siegmund, Barbara³**

¹Faculty of Agriculture, University "Goce Delcev" - Stip, Republic of N. Macedonia; ²Bovin Winery, Republic of N. Macedonia; ³Institute of Analytical Chemistry and Food Chemistry, Graz University of Technology, Graz, Austria; ⁴Institute of Chemistry, Faculty of Natural Sciences and Mathematics, Ss Cyril and Methodius University, Republic of N. Macedonia; violeta.ivanova@ugd.edu.mk

Abstract

The volatile composition of untoasted and toasted oak chips and powder samples were determined using gas chromatography–mass spectrometry (GC–MS) coupled with headspace solid phase microextraction (HS-SPME) and using a PDMS/Carboxen/DVB fibre. Samples were produced from oak wood *Quercus* grown in the Republic of Macedonia. A total of 66 volatile compounds were identified, revealing a very complex aroma profile of oak samples composed of acids, alcohols, aldehydes, esters, ketones, lactones, phenolic aldehydes, volatile phenols and other compounds. Phenolic aldehydes dominated in the toasted samples, while total acids prevailed in untoasted oaks. Concerning the toasting temperatures (at 120 and 170 °C), it was observed that toasted samples were significantly richer in total volatiles compared to the untoasted samples. Acknowledgment. This work was supported by a grant from the CEEPUS, CIL-HU-0010-03-0809 Network.

Keywords: volatile compounds, oak, toasting, HS-SPME-GC-MS