

Second International
Conference on
Radiation and Dosimetry in
Various Fields of Research



www.rad2014.elfak.rs

May 27 - 30, 2014 | Faculty of Electronic Engineering | Niš | Serbia



**Second International
Conference on
Radiation and Dosimetry in
Various Fields of Research**

www.rad2014.elfak.rs

May 27 - 30, 2014 | Faculty of Electronic Engineering | Niš | Serbia

BOOK OF ABSTRACTS

PUBLISHER: University of Niš, Faculty of Electronic Engineering
P.O.Box 73, 18000 Niš, Serbia
www.elfak.ni.ac.rs

FOR THE PUBLISHER: Prof. Dr. Dragan Tasić

EDITOR: Prof. Dr. Goran Ristić

COVER DESIGN: Vladan Nikolić, M.Sc.

TECHNICAL EDITING: Sasa Trenčić and Vladan Nikolić

PROOF-READING: Saša Trenčić, MA

PRINTED BY: Nais Print, Niš

PRINT RUN: 350 copies

ISBN 978-86-6125-100-9

The Second International Conference on Radiation and Dosymetry in Various Fields of Research (RAD 2014) and the Second East European Radon Symposium (SEERAS) were financially supported by:

- Central European Initiative (CEI)
- International Union of Pure and Applied Physics (IUPAP)*
- Ministry of Education, Science and Technological Development

*To secure IUPAP sponsorship, the organisers have provided assurance that RAD 2014 Conference will be conducted in accordance with IUPAP principles as stated in the IUPAP resolution passed by the General Assembly in 2008. In particular, no bona fide scientist will be excluded from participation on the grounds of national origin, nationality, or political considerations unrelated to science.

CIP - Katalogizacija u publikaciji
Narodna biblioteka Srbije, Beograd

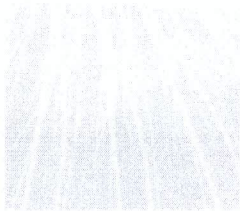
539.16(048)

INTERNATIONAL Conference on Radiation and
Dosimetry in Various Fields of Research (2nd
; 2014 ; Niš)
Book of Abstracts / The Second
International Conference on Radiation and
Dosimetry in Various Fields of Research, RAD
2014, May 27-30, 2014, Niš, Serbia ; [editor
Goran Ristić]. - Niš : Faculty of Electronic
Engineering, 2014 (Niš : Nais Print). - 450
str. ; 30 cm

Nasl. str. prištampanog teksta: Book of
Abstracts / Second East European Radon
Symposium SEERAS, May 27-30, 2014, Niš,
Serbia. - Oba rada štampana u međusobno
obrnutim smerovima. - Tiraž 350. -
Bibliografija uz pojedine apstrakte.

ISBN 978-86-6125-100-9

a) Јонизујуће зрачење - Дозиметрија -
Апстракт
COBISS.SR-ID 207273996



The Second International Conference on Radiation and Dosimetry in Various Fields of Research

www.rad2014.elfak.rs

MAY 27 - 30, 2014 | FACULTY OF ELECTRONIC ENGINEERING | NIŠ | SERBIA



Gold sponsor

LANDAUER
EUROPE

Silver sponsor



RCA

SEERAS

WELCOME

ABOUT CONFERENCE

FIRST CALL

TOPICS

RAD 2012

VENUE | CONTACT

APL

ABSTRACTS

TITLE LIST

SCHEDULE

PROGRAM

STATISTICS

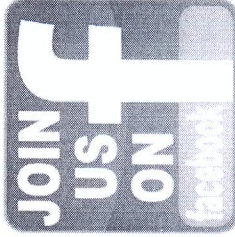
PAPERS

IMPORTANT DATES

SCIENTIFIC COMMITTEE

SCIENTIFIC COMMITTEE

- ✿ Olivera Ciraj Bjelac, Vinča Institute, Serbia
- ✿ Rodolfo Cruz Suarez, IAEA, Austria
- ✿ Daniele Giuffrida, EC Joint Research Centre, Italy
- ✿ Aleksandar Jakšić, Tyndall National Institute, Ireland
- ✿ Vladimir Jurišić, University of Kragujevac, Serbia
- ✿ Ines Krajcar Bronić, Ruđer Bošković Institute, Croatia
- ✿ Gregor Kramberger, Jožef Štefan Institute, Slovenia
- ✿ Ahmed Meghziifene, IAEA-VIC, Austria
- ✿ Michael Moll, CERN, Switzerland
- ✿ Alberto Palma, University of Granada, Spain
- ✿ Tatjana Paunesku, Northwestern University, USA
- ✿ Ioana Pintilie, NIMP Bucharest, Romania
- ✿ Guenther Reitz, DLR, Germany
- ✿ Anatoly Rozenfeld, University of Wollongong, Australia
- ✿ Goran Ristić, University of Niš, Serbia
- ✿ Miroslav Vesković, University of Novi Sad, Serbia
- ✿ Ali Zadeh, ESA-ESTEC, The Netherlands
- ✿ Marko Zavrtnik, Jožef Štefan Institute, Slovenia





IMPACT OF CLIMATE CHANGES ON INCREASED LEVELS OF AFLATOXINS IN FEEDSTUFFS AND RAW MILK FROM REPUBLIC OF MACEDONIA

**Elizabeta Dimitrieska-Stojkovic, Biljana Stojanovska-Dimzoska,
Gordana Ilievska, Katerina Davceva, Risto Uzunov,
Aleksandra Angeleska, Zehra Hajrulai-Musliu, Aleksandra Angelova**

University Sts Cyril and Methodius, Faculty of Veterinary Medicine, Institute for Food, Skopje,
Republic of Macedonia

Since the beginning of the 21st century there are a numerous reports and modeling simulations by competent expert bodies, as well as published articles, showing that climate changes affect significantly the agricultural production, treating, thereby, food safety as well as public health. Drought stresses reduces the crop plants resistance, and extreme precipitations and heat waves increases the possibility of growth of plant pathogenic moulds, which produce the toxic metabolites – mycotoxins, both prior to and post harvest. Aflatoxins are highly toxic, mutagenic, teratogenic and carcinogenic fungal metabolites from *Aspergillus* found in foods and feeds. The attention to the presence of aflatoxins in feed is important due to the possible contamination of the milk produced by animals fed with aflatoxin-contaminated feed. Aflatoxin M₁ (AFM₁), the hydroxylated metabolite of Aflatoxin B₁ (AFB₁), may be found in milk and milk products obtained from livestock that have ingested contaminated feed. At the end of 2012 and beginning of 2013 the risk of mycotoxins was brought to public attention in Balkans and Central European countries following the European Commission Rapid Alert System for Food and Feed, where ten alerts for the presence of increased amounts of AFB₁ in maize panel, have been reported. Additionally, several investigations from the countries in this region revealed an increased occurrence of *Aspergillus* strains capable of production aflatoxins. This paper presents part of the results from the survey on AFB₁ and AFM₁ in samples from Macedonia, conducted during the 2013. In total 117 samples of feedstuffs and 3099 samples of raw milk were tested for the presence of AFB₁ and AFM₁, respectively. AFB₁ has been detected in 47 % of the samples tested; the revealed average concentration has been 5.30 µg/kg, and in comparison to the years before, when AFB₁ has been sporadically detected, this was a significant increase. Unlike the previous years, when AFM₁ was detected over the limit of detection of the method being applied only in few cases, during this survey the prevalence has been 31.4 %. This was not unexpected, having on mind the fact that Macedonia is highly dependent on import of feedstuffs from the region. Since the border control has been performed on the risk analysis and risk assessment from the obtained data in the previous years, the reason for detection of such increased levels of aflatoxins in feedings and milk is quite understandable.