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Intensive Lecture Course

Faculty of Natural Sciences and Mathematics
Institute of Chemistry
„Ss. Cyril and Methodius“ University

From Molecules to Functionalised Materials

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16th – 20th March 2011
Skopje
Republic of Macedonia

Scientific Programme

Wednesday, March 16th

arrival of participants in Skopje

Thursday, March 17th

Location: *Institute of Chemistry,
Conference Hall, room 104*

10:00 - 12:00 Kick-off meeting
for coordinators of the SOE project

10:00 – 12:00 Tour around Labs in the Institute
of Chemistry *for student participants*

Location: *Institute of Chemistry,
Lecture room 124*

12:00 - 12:15 Opening session

12:15 - 13:15 Prof. Dr. Trajče Stafilov
*Detection of trace elements in minerals with atomic
absorption spectroscopy*

13:15- 15:15 Lunch

15:15 – 16:15 Ass. Prof. Dr. Petre Makreski
*Vibrational Spectroscopy and X-ray Powder
Diffraction in the Study of Silicate Minerals -
Advantages and Disadvantages of Each
Technique*

16:15 - 17:15 Ass. Prof. Dr. Rubin Gulaboski
New aspects into the chemistry of coenzym Q

17:15 – 17:45 Coffee break

Location: *Institute of Chemistry,
Amphitheater*

18:00 - 19:30 Chemical spectacle
“The Happy Chemists Group”

Friday, March 18th

Location: *Institute of Chemistry,
Lecture room 124*

9:00 - 10:00 Ass. Prof. Dr. Vladimir Ivanovski
*IR reflectance techniques and their application in
surface chemistry investigations*

10:00 - 11:00 Lect. Dr. Luiza Gaina
*Organic synthesis following the green chemistry
principles*

11:00 - 11:30 Coffee break

11:30 - 12:30 Prof. Dr. Blaga Radovanovic
*Methods for measurement of total antioxidant capacity
of nutritional samples*

12:30 – 14:30 Lunch

14:30 - 15:30 Prof. Dr. Evamarie Hey-Hawkins
Phosphorus - the Devil's Element?

15:30 - 16:30 Teach. Ass. MSc. Ahmed Jashari
Synthesis of Novel Diazo Coupled Coumarins

Saturday, March 19th

Location: *Institute of Chemistry,
Lecture room 124*

8:00 - 10:00 Student presentations
(students from Macedonia)

10:00 - 10:30 Coffee break

10:30 - 12:30 Student presentations
*(students from Germany, Romania, Serbia
and Kosovo)*

12:30 - 14:30 Group Lunch

14:30 - 17:00 Excursion to ancient city
Stobi

Sunday, March 20th

departure of participants



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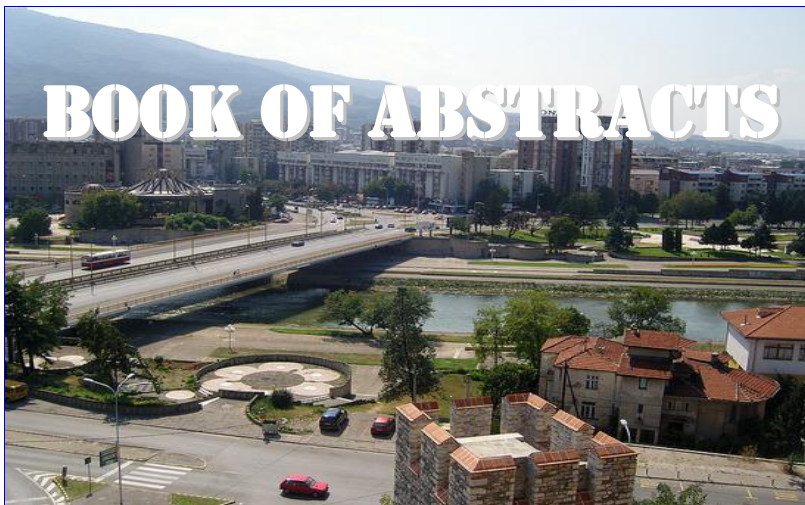


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DETERMINATION OF PHENOL CONTENT AND ANTIOXIDANT ACTIVITY OF LEEK (*ALLIUM PORRUM L.*) EXTRACT

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Phenolic compounds exhibiting antioxidant properties are an important component contributing to the beneficial effect of fruits and vegetables on human health [1-3]. Their ability to affect diseases resulting from oxidative stress has not been sufficiently elucidated. This study was aimed at evaluating the antioxidant activity and phenol content of leek (*Allium porrum L.*) ethanolic extract. Total phenols were determined using the modified Folin-Ciocalteu spectrophotometric method. Antioxidant activity was assessed by scavenging the stable free radical 2,2-diphenyl-1-picrylhydrazyl (DPPH). The results on antioxidant activity were compared with control antioxidants: vitamin C and BHT.

Keywords: Leek extract, total phenol content, antioxidant activity, DPPH assay.

References:

1. A. R. Ness, J. W. Powles, Fruit and vegetables, and cardiovascular disease: a review, **International Journal of Epidemiology**, 26 (1997) 1–13.
2. P. Prieto, M. Pineda, M. Aguilar, Spectrophotometric quantitation of antioxidant capacity through the formation of a phosphomolybdenum complex: specific application to the determination of vitamin E. *Analytical Biochemistry*, 269 (1999) 337–341.
3. S. M. K. Rates, Plants as source of drugs. *Toxicol*, 39 (2001) 603–613.