



Mirjana Jankulovska

Date of birth: 5 Feb 1976 |

Nationality: Macedonian/citizen of the Republic of North Macedonia |

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jankulovska@fzhn.ukim.edu.mk |

Address: Str. 16-ta Makedonska brigada No 3 P.O. Box 297, 1000, Skopje, North Macedonia (Work)

WORK EXPERIENCE

1 JAN 2022 – CURRENT Skopje, North Macedonia

FULL PROFESSOR IN SCIENTIFIC AREA OF CHEMISTRY SS. CYRIL AND METHODIUS UNIVERSITY IN SKOPJE, FACULTY OF AGRICULTURAL SCIENCES AND FOOD - SKOPJE

LECTURES:

Undergraduate studies (BSc) - subjects: chemistry, analytical chemistry and food packaging at Faculty of Agricultural Sciences and Food - Skopje, and basics of organic chemistry at Faculty of Pharmacy.

Postgraduate studies (MSc) - subjects: analytical chemistry - selected chapters, spectroscopic methods of analyses and food packaging at Faculty of Agricultural Sciences and Food - Skopje.

Doctoral studies (PhD) - methods of scientific research work, natural and synthetic food additives - selected chapters and instrumental methods of analyses at Faculty of Agricultural Sciences and Food - Skopje.

LABORATORY EXERCISES:

Undergraduate studies (BSc) - subjects: chemistry and analytical chemistry at Faculty of Agricultural Sciences and Food - Skopje.

SCIENTIFIC AND RESEARCH WORK:

Synthesis of organic compounds (hydrazones) with possible biological activity and their identification by elemental analyses, IR and NMR techniques.

Investigation of acid-base equilibria and calculation of dissociation constants of organic compounds in acidic and basic media with UV-Vis spectroscopy.

Development and validation of analytical methods for identification and quantification of bioactive compounds and additives in food samples and agricultural products by chromatographic methods (HPLC/UV-DAD) and UV-Vis spectroscopic methods.

Determination of physical and chemical composition of pesticide formulations and pesticide residues in samples of food and water using chromatographic methods.

Familiar with usage and interpretation of data gained with various instrumental techniques such as: LC-MSD-Trap-SL, HPLC-MS, HPLC-MS/MS, ISP, electrophoresis and so on.

MENTOR: diploma work (BSc studies) and master thesis (MSc studies)

EDITOR - Journal of Agricultural, Food and Environmental Sciences (JAFES) - an international peer-reviewed open access scientific journal (2018 - ongoing).

THIRD CYCLE - DOCTORAL STUDIES: Head of the Council of the study program - Quality and safety of agricultural products (2018 - ongoing).

OTHER ACTIVITIES:

Member of faculty working groups (accreditation and re-accreditation of study programs, secretariat for International Symposium for Agriculture and Food (ISAF), promotion materials and brochures, bibliography of FZHN, preparing web page for JAFES, sport and student activities and so on)

1 MAR 2018 – 1 JAN 2022 Skopje, North Macedonia

ASSOCIATE PROFESSOR IN SCIENTIFIC AREA OF CHEMISTRY SS. CYRIL AND METHODIUS UNIVERSITY IN SKOPJE, FACULTY OF AGRICULTURAL SCIENCES AND FOOD - SKOPJE

LECTURES:

Undergraduate studies (BSc) - subjects: chemistry, analytical chemistry and food packaging at Faculty of Agricultural Sciences and Food - Skopje, and organic chemistry - theoretical principles at Faculty of Pharmacy.

Postgraduate studies (MSc) - subjects: spectroscopic methods of analyses and food packaging at Faculty of Agricultural Sciences and Food - Skopje.

Doctoral studies (PhD) - food packaging at Faculty of Agricultural Sciences and Food - Skopje.

LABORATORY EXERCISES:

Undergraduate studies (BSc) - subjects: chemistry and analytical chemistry at Faculty of Agricultural Sciences and Food - Skopje.

RESEARCH WORK:

-Synthesis of organic compounds (hydrazones) with possible biological activity and their identification by elemental analyses, IR and NMR techniques.

-Investigation of acid-base equilibria and calculation of dissociation constants of organic compounds in acidic and basic media with UV-Vis spectroscopy.

-Development and validation of analytical methods for identification and quantification of bioactive compounds and additives in food samples and agricultural products by chromatographic methods (HPLC/UV-DAD) and UV-Vis spectroscopic methods.

-Determination of physical and chemical composition of pesticide formulations and pesticide residues in samples of food and water using chromatographic methods.

1 JUL 2013 – 1 MAR 2018 Skopje, North Macedonia

ASSISTANT PROFESSOR IN SCIENTIFIC AREA OF CHEMISTRY SS. CYRIL AND METHODIUS
UNIVERSITY IN SKOPJE, FACULTY OF AGRICULTURAL SCIENCES AND FOOD - SKOPJE

LECTURES:

Undergraduate studies (BSc) - subjects: chemistry, analytical chemistry and food packaging at Faculty of Agricultural Sciences and Food - Skopje, and organic chemistry - theoretical principles at Faculty of Pharmacy.

LABORATORY EXERCISES:

Undergraduate studies (BSc) - subjects: chemistry and analytical chemistry at Faculty of Agricultural Sciences and Food - Skopje.

RESEARCH WORK:

-Synthesis of organic compounds (hydrazones) with possible biological activity and their identification by elemental analyses, IR and NMR techniques.

-Investigation of acid-base equilibria and calculation of dissociation constants of organic compounds in acidic and basic media with UV-Vis spectroscopy.

-Development and validation of analytical methods for identification and quantification of bioactive compounds and additives in food samples and agricultural products by chromatographic methods (HPLC/UV-DAD) and UV-Vis spectroscopic methods.

-Determination of physical and chemical composition of pesticide formulations and pesticide residues in samples of food and water using chromatographic methods.

2 DEC 2011 – 1 JUL 2013 Skopje

ASSISTANT IN SCIENTIFIC AREA OF CHEMISTRY SS. CYRIL AND METHODIUS UNIVERSITY IN
SKOPJE, FACULTY OF AGRICULTURAL SCIENCES AND FOOD - SKOPJE

LABORATORY EXERCISES:

Undergraduate studies (BSc) - subjects: chemistry, analytical chemistry and chemical and physical hazards of food at Faculty of Agricultural Sciences and Food - Skopje.

RESEARCH WORK:

-Synthesis of organic compounds (hydrazones) with possible biological activity and their identification by elemental analyses, IR and NMR techniques.

-Investigation of acid-base equilibria and calculation of dissociation constants of organic compounds in acidic and basic media with UV-Vis spectroscopy.

-Familiar with basic principles of chromatography and its application in food analyses.

1 SEP 2001 – 2 DEC 2011 Skopje

DEMONSTRATOR IN SCIENTIFIC AREA OF CHEMISTRY SS. CYRIL AND METHODIUS UNIVERSITY IN SKOPJE, FACULTY OF AGRICULTURAL SCIENCES AND FOOD - SKOPJE

Period of contracts:

LABORATORY EXERCISES:

Undergraduate studies (BSc) - subjects: inorganic chemistry, organic chemistry and analytical chemistry at Faculty of Agricultural Sciences and Food - Skopje.

1 OCT 2010 – 31 DEC 2010 Skopje, North Macedonia

CHEMISTRY TEACHER IN HIGH SCHOOL HIGH MEDICAL SCHOOL - DSMU DR PANCE KARAGJOZOV IN SKOPJE

High school teacher - subject chemistry

-students in second grade: dental technician, nurses, pharmacy technician, medical laboratory technician.

22 OCT 2010 – 2 MAR 2011 Skopje

CHEMISTRY TEACHER IN HIGH SCHOOL HIGH CONSTRUCTION AND GYMNASIUM SCHOOL - SGUGS ZDRAVKO CVETKOVSKI IN SKOPJE

High school teacher - subject chemistry

-students in second grade: gymnasium

7 DEC 2005 – 30 JAN 2006 Skopje, North Macedonia

CHEMISTRY TEACHER IN HIGH SCHOOL HIGH ELECTRO TECHNICAL SCHOOL - SETUGS MIHAJLO PUPIN IN SKOPJE

High school teacher - subject chemistry

-students in first grade: electrical mechanic

6 MAR 2003 – 31 AUG 2004

CHEMISTRY TEACHER IN HIGH SCHOOL HIGH MEDICAL SCHOOL - DSMU DR PANCE KARAGJOZOV IN SKOPJE

High school teacher - subject chemistry

-students in second grade: dental technician, nurses, pharmacy technician, medical laboratory technician, physiotherapeutic technician.

1 JAN 2000 – 31 MAY 2000 Skopje

CHEMISTRY TEACHER IN PRIMARY SCHOOL OU BRAKA MILADINOVCI IN SKOPJE

Primary school teacher - subject chemistry

-students in eight and ninth grade.

● EDUCATION AND TRAINING

Skopje, North Macedonia

DOCTORAL STUDIES - PHD IN CHEMISTRY Ss. Cyril and Methodius University in Skopje, Faculty of Natural Sciences and Mathematics

Address Str. Arhimedova, No. 3, 1000, Skopje, North Macedonia | **Website** <https://www.pmf.ukim.edu.mk/> |

Field of study Chemistry |

Thesis INVESTIGATION OF ACID-BASE EQUILIBRIUMS OF SOME NEWLY SYNTHESIZED ARYLHYDRAZONES OF SUBSTITUTED BENZHYDRAZIDES

1 JAN 2000 – 10 OCT 2006 Skopje, North Macedonia

MASTER STUDIES - MSC IN CHEMISTRY Ss. Cyril and Methodius University in Skopje, Faculty of Natural Sciences and Mathematics

Website <https://www.pmf.ukim.edu.mk/> | **Field of study** Chemistry |

Thesis BEHAVIOUR OF NEWLY DERIVATIVES OF 1,2,4-TRIAZOLINE-3-THIONE IN DIFFERENT MEDIA

1 OCT 1995 – 25 NOV 1999 Skopje, North Macedonia

BACHELOR STUDIES - CHEMISTRY TEACHER Ss. Cyril and Methodius University in Skopje, Faculty of Natural Sciences and Mathematics

Website <https://www.pmf.ukim.edu.mk/> | **Field of study** Chemistry |

Thesis SQUARE-WAVE VOLTAMETRIC METHOD FOR QUANTITATIVE DETERMINATION OF ACONITIC ACID

● LANGUAGE SKILLS

Mother tongue(s): **MACEDONIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1
SPANISH	C1	C1	B2	C1	C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● DIGITAL SKILLS

Microsoft Word | Microsoft Office | Microsoft Powerpoint | Outlook | Microsoft Excel | Zoom | Skype | Google Drive | Google Docs

● PUBLICATIONS

1999

Determination of aconitic acid by square wave voltammetry

L. Šoptrajanova, I. Spirevska, R. Gulaboski, M. Jankulovska, Determination of aconitic acid by square wave voltammetry, 16th Congress of chemists and technologists of Macedonia with international participation, Book of papers, 2, 415, 28-30 October, Skopje, Republic of Macedonia (1999).

Link <https://repository.ukim.mk/handle/20.500.12188/13113>

2006

Behaviour of some newly synthesized substituted 1,2,4-triazoline-3-thiones in sulfuric acid media

Jankulovska, M., Spirevska, I., & Čolančevska-Ragenović, K. (2006). Behaviour of some newly synthesized substituted 1, 2, 4-triazoline-3-thiones in sulfuric acid media. *Macedonian Journal of Chemistry and Chemical Engineering*, 25(1), 29-37. e here the description...

Link <https://mjce.org.mk/index.php/MJCCE/article/view/276>

2006

Determination of the dissociation constants in sodium hydroxide media of some newly synthesized derivatives of 1,2,4-triazoline-3-thione

Jankulovska, M., Spirevska, I., & Šoptrajanova, L. (2006). Determination of the dissociation constants of some newly synthesized derivatives of 1, 2, 4-triazoline-3-thione in sodium hydroxide media. *Macedonian Journal of Chemistry and Chemical Engineering*, 25(2), 99-106.

Link <https://mjccce.org.mk/index.php/MJCCE/article/view/289>

2010

Investigation of solvent effects on electronic absorption spectra of some substituted 1,2,4-triazoline-3-thiones

Jankulovska, M., Šoptrajanova, L., Spirevska, I., Čolančevska-Ragenović, K., & Ristovski, S. (2010). Investigation of solvent effects on electronic absorption spectra of some substituted 1, 2, 4-triazoline-3-thiones. *Macedonian Journal of Chemistry and Chemical Engineering*, 29(1), 43-50..

Link <https://mjccce.org.mk/index.php/MJCCE/article/view/171>

2011

A UV study of the behavior of some benzaldehyde hydrazones in acid medium

Jankulovska, M., Spirevska, I., & Dimova, V. (2011). A UV study of the behavior of some benzaldehyde hydrazones in acid medium. *Journal of the Iranian Chemical Society*, 8, 502-512.

Link <https://link.springer.com/article/10.1007/BF03249084>

2011

Determination of the dissociation constants of some p-substituted aromatic hydrazones

Jankulovska, M., Spirevska, I., & Ragjenovikj, K. C. (2011). Determination of the dissociation constants of some p-substituted aromatic hydrazones. *Contributions, Sec. Math. Tech. Sci., MANU*, 1-2.

Link <http://csnmbs.manu.edu.mk/index.php/csnmbs/article/view/30/0>

2012

Synthesis and characterization of new p-substituted aromatic hydrazones

Jankulovska, M., Colanceska-Ragenovik, K., Dimova, V., Spirevska, I., & Makreski, P. (2012). Synthesis and characterization of new p-substituted aromatic hydrazones. *Organic Chemistry-An Indian Journal*, 8 (9), 326-334 (2012).

M. Jankulovska, K. Čolančeska-Raženović, et al., 2012, *Org. Chem.:An Ind. J.*, 8(9), 326-334.

Link <https://www.tsijournals.com/articles/synthesis-and-characterization-of-new-psubstituted-aromatic-hydrazones.pdf>

2012

Investigation of behavior of some triazoline-3-thione in sulfuric acid solution

V. Dimova, M. Jankulovska, I. Jordanov, D. Dimitrovski, Investigation of behavior of some triazoline-3-thione in sulfuric acid solution, XIV YuCorr International Conference, Exchanging experiences in the fields of corrosion, materials and environmental, Proceedings 142-146, 17-20 April, Tara, Republic of Serbia, (2012).

2014

Analysis of acid-base properties of some p-substituted aromatic hydrazones in aqueous perchloric acid by spectrophotometric and semiempirical methods

Jankulovska, M. S., & Spirevska, I. (2014). Analysis of acid-base properties of some p-substituted aromatic hydrazones in aqueous perchloric acid by spectrophotometric and semiempirical methods. *Macedonian Journal of Chemistry and Chemical Engineering*, 33(1), 85-96.

Link <https://mjccce.org.mk/index.php/MJCCE/article/viewFile/370/301>

2016

High-performance liquid chromatography method for determination of preservatives in beverages

Jankulovska, M. S., Velkoska-Markovska, L., Petanovska-Ilievska, B., & Trpkovska, S. (2016). High-Performance Liquid Chromatography Method For Determination Of Preservatives In Beverages. *Journal of Agricultural, Food and Environmental Sciences, JAFES*, 67, 18-25.

Link <https://journals.ukim.mk/index.php/jafes/article/view/1081>

2016

Development of high speed RRLC method for quantitative determination of some pesticide residues in apple juice

Petanovska-Ilievska, B., Velkoska-Markovska, L., Stojanovska, I., & Jankulovska, M. S. (2016). DEVELOPMENT OF HIGH SPEED RRLC METHOD FOR QUANTITATIVE DETERMINATION OF SOME PESTICIDE RESIDUES IN APPLE JUICE. *Journal of Agricultural, Food and Environmental Sciences, JAFES*, 67, 26-32.

Link <https://journals.ukim.mk/index.php/jafes/article/view/1082>

2016

SPE-RRLC determination of some pesticide residues in apple juice

Velkoska-Markovska, L., Petanovska-Ilievska, B., Stojanovska, I., & Jankulovska, M. S. (2016). SPE-RRLC DETERMINATION OF SOME PESTICIDE RESIDUES IN APPLE JUICE. *Journal of Agricultural, Food and Environmental Sciences, JAFES*, 67, 11-17.

Link <https://journals.ukim.mk/index.php/jafes/article/view/1080>

2016

Change in the quality properties of two different pepper varieties in fresh and dried condition

Babanovska-Milenkovska, F., Karakasova, L., Petanovska-Ilievska, B., Manasievska-Simic, S., Miskoska-Milevska, E., Velkoska-Markovska, L., & Jankulovska, M. (2016). Change in the quality properties of two different pepper varieties in fresh and dried condition. *Agriculture & Food* 4, 250-259.

2017

Development of reverse-phase high-performance liquid chromatography method for simultaneous determination of sodium benzoate and potassium sorbate in beverages

Petanovska-Ilievska, B., Velkoska-Markovska, L., & Jankulovska, M. S. (2017). Development of reverse-phase high-performance liquid chromatography method for simultaneous determination of sodium benzoate and potassium sorbate in beverages. *Acta Chromatographica*, 29(3), 345-358.

Link <https://doi.org/10.1556/1326.2017.29.3.05>

2017

Investigation of acid-base properties of aromatic hydrazones in basic media at constant ionic strength

Jankulovska, M. S., Dimova, V., & Spirevska, I. (2017). Investigation of acid-base properties of aromatic hydrazones in basic media at constant ionic strength, RAD Conference Proceedings, 2 296-299.

Link [10.21175/RadProc.2017.59](https://doi.org/10.21175/RadProc.2017.59)

2017

An Exclusive Delicacy or Last Meal

Chibishev, A., Zdravkovska, M., & Jankulovska, M. (2017). Wild Mushrooms: An Exclusive Delicacy or Last Meal. Official journal of the American College of Gastroenterology| ACG, 112(6), 971-972.

Link [10.1038/ajg.2017.86](https://doi.org/10.1038/ajg.2017.86)

2017

QSAR modeling of antimicrobial activity of some p-substituted aromatic hydrazones

Dimova, V., & Jankulovska, M. (2017). QSAR Modeling of Antimicrobial Activity of some p-substituted Aromatic Hydrazones, *Journal of Scientific & Industrial Research*, 76(9), 550-555.

Link <http://nopr.niscair.res.in/handle/123456789/42694>

2018

Development and validation of high performance liquid chromatography method for determination of some pesticide residues in table grape

Velkoska-Markovska, L., Petanovska-Ilievska, B., Jankulovska, M. S., & Ilievski, U. (2018). Development and validation of high-performance liquid chromatography method for determination of some pesticide residues in table grape. *Acta Chromatographica*, 30(4), 250-254.

Link [0.1556/1326.2017.00330](https://doi.org/10.1556/1326.2017.00330)

2018

Investigation of Dissociation Process of Some 4-Methoxybenzaldehyde Benzoylhydrazones in Sodium Hydroxide Media by UV Spectroscopy

Jankulovska, M. S., Spirevska, I., & Dimova, V. (2018). Investigation of Dissociation Process of Some 4-Methoxybenzaldehyde Benzoylhydrazones in Sodium Hydroxide Media by UV Spectroscopy. *Letters in Organic Chemistry*, 15(6), 515-522.

Link [10.2174/1570178615666180111143208](https://doi.org/10.2174/1570178615666180111143208)

2018

A quantum chemical investigation of N1-substituted 1, 2, 4-triazole

Dimova, V., Jankulovska, M. S., & Jankulovska, M. (2018). A QUANTUM CHEMICAL INVESTIGATION OF N1-SUBSTITUTED 1, 2, 4-TRIAZOLE. In RAD Conference Proceedings. RAD Conference Proceedings, 3, 231-235.

Link [10.21175/RadProc.2018.48](https://doi.org/10.21175/RadProc.2018.48)

2019

Application of high performance liquid chromatography for determination of metalaxyl, acetamiprid and azoxystrobin in tomato samples

Jankulovska, M. S., Velkoska-Markovska, L., Petanovska-Ilievska, B., & Ilievski, U. (2019). Application of high performance liquid chromatography for determination of metalaxyl, acetamiprid and azoxystrobin in tomato samples. *Journal of analytical chemistry*, 74, 339-344.

Link <https://link.springer.com/article/10.1134/S1061934819040075>

2019

Determination of Bisphenol A in beverages by RP-HPLC

Petanovska-Ilievska, B., Jankulovska, S., Velkoska-Markovska, L., & Spasovska, J. (2019). Determination of Bisphenol A in beverages by RP-HPLC. *Agriculture & Forestry*, 65(1), 243-255.

Link [10.17707/AgricultForest.65.1.24](https://doi.org/10.17707/AgricultForest.65.1.24)

2019

Antimicrobial evaluation of some hydrazone derivatives

Jankulovska, M. S., Dimova, V., & Doneva-Sapceska, D. (2019). Antimicrobial evaluation of some hydrazone derivatives. *Journal of Agricultural, Food and Environmental Sciences, JAFES*, 73(1), 92-100.

Link <https://journals.ukim.mk/index.php/jafes/article/view/997>

2019

Practical application of QSAR technique for prediction of biological activity of selected hydrazones

Jankulovska, M. S., & Dimova, V. (2019). Practical application of QSAR technique for prediction of biological activity of selected hydrazones. *Journal of Agricultural, Food and Environmental Sciences, JAFES*, 73(1), 101-109.

Link <https://journals.ukim.mk/index.php/jafes/article/view/998>

2019

Protonation of citraconic and glutaconic acid in perchloric acid media

Jankulovska-Petkovska, M., Jankulovska, M. S., & Dimova, V. (2019). Protonation of citraconic and glutaconic acid in perchloric acid media. *Technologica Acta: Scientific/professional journal of chemistry and technology*, 12(1), 1-8.

Link <https://hrcak.srce.hr/222399>

2019

UV spectrophotometric determination of thermodynamic dissociation constants of some aromatic hydrazones in acid media

Jankulovska, M. S., Spirevska, I., Dimova, V., & Jankulovska, M. (2019). UV spectrophotometric determination of thermodynamic dissociation constants of some aromatic hydrazones in acid media. *Journal of the Mexican Chemical Society*, 63(4), 132-145.

Link <http://dx.doi.org/10.29356/jmcs.v63i4.794>

2020

Development and validation of RRLC-UV method for determination of chlorogenic acid in green coffee

Velkoska-Markovska, L., Jankulovska, M. S., Petanovska-Ilievska, B., & Hristovski, K. (2020). Development and validation of RRLC-UV method for determination of chlorogenic acid in green coffee. *Acta Chromatographica*, 32(1), 34-38.

Link [10.1556/1326.2019.00547](https://doi.org/10.1556/1326.2019.00547)

2020

Application of topological descriptors in QSAR modeling: substituted hydrazones used as a model system

Dimova, V., & Jankulovska, M. S. (2020). Application of topological descriptors in QSAR modeling: substituted hydrazones used as a model system. *Letters in Drug Design & Discovery*, 17(3), 253-263.

Link [10.2174/1570180816666181226145411](https://doi.org/10.2174/1570180816666181226145411)

2020

JRU METROFOOD-MK as a part of the european research infrastructure for promoting metrology in food and nutrition

Najdenkoska, A., Arsova-Saradinovska, Z., Velkoska-Markovska, L., Jankulovska, M. S. J., Stamenkovska, I. J., & Simikj, S. M. (2020). JRU METROFOOD-MK as a part of the european research infrastructure for promoting metrology in food and nutrition. *Journal of Agricultural, Food and Environmental Sciences, JAFES*, 74(2), 1-4.

Link [10.55302/JAFES20742001n](https://doi.org/10.55302/JAFES20742001n)

2021

Comparison of theoretical and experimental investigation of protonation process of some thiones in acid media

Jankulovska, M. S., Dimova, V., Spirevska, I., & Jankulovska, M. (2021). Comparison of theoretical and experimental investigation of protonation process of some thiones in acid media. *Zastita Materijala*, 62(1), 9-21.

Link [10.5937/zasmat2101009j](https://doi.org/10.5937/zasmat2101009j)

2021

Spectroscopic Determination of Dissociation Constants of Some 4-nitrobenzaldehyde-4-substituted phenyl-1-carbonylhydrazones in Sodium Hydroxide Media

Jankulovska, M. S., Spirevska, I., Dimova, V., & Jankulovska, M. (2021). Spectroscopic Determination of Dissociation Constants of Some 4-nitrobenzaldehyde-4-substituted phenyl-1-carbonylhydrazones in Sodium Hydroxide Media. *Current Pharmaceutical Analysis*, 17(6), 812-821.

Link [10.2174/1573412916999200502025457](https://doi.org/10.2174/1573412916999200502025457)

2021

HPLC method for determination of active ingredients in pesticide formulation switch 62, 5 WG

Velkoska-Markovska, L., Davitkova, J., & Jankulovska, M. S. (2021). HPLC method for determination of active ingredients in pesticide formulation switch 62, 5 WG. *Journal of Agricultural, Food and Environmental Sciences*, JAFES, 75(2), 11-18.

Link [10.55302/JAFES21752011vm](https://doi.org/10.55302/JAFES21752011vm)

2022

Folin-Ciocalteu method for determination of total polyphenols in onion

Sokolovska, V., & Jankulovska, M. S. (2022). Folin-Ciocalteu method for determination of total polyphenols in onion. *Journal of Agricultural, Food and Environmental Sciences*, JAFES, 76(2), 12-19.

Link <https://journals.ukim.mk/index.php/jafes/article/view/1794>

2022

Spectrophotometric determination of total polyphenolic and flavonoid content in tomato

Stojchevska, S., Jankulovska, M. S., Velkoska-Markovska, L., & Bogevska, Z. (2022). Spectrophotometric determination of total polyphenolic and flavonoid content in tomato. *Journal of Agricultural, Food and Environmental Sciences*, 76(1), 1-8.

Link <https://journals.ukim.mk/index.php/jafes/article/view/1789>

2022

Comparison and QSAR study of thermodynamic pKBH⁺ values of benzoylhydrazones determined by UV-Vis spectroscopy

Jankulovska, M., Dimova, V., & Jankulovska-Petkovska, M. (2022). Comparison and QSAR study of thermodynamic pKBH⁺ values of benzoylhydrazones determined by UV-Vis spectroscopy. *Technologica Acta: Scientific/professional journal of chemistry and technology*, 15(1), 53-60.

Link [10.5281/zenodo.6922018](https://doi.org/10.5281/zenodo.6922018)

2023

Extraction and spectrophotometric quantification of total polyphenolic content in onion

Jankulovska, M. S., Sokolovska, V., Velkoska-Markovska, L., Bogevska, Z., Karakasova, L., Manasievska, S., ... & Markoski, M. (2023). Extraction and spectrophotometric quantification of total polyphenolic content in onion. *Agriculture & Forestry*, 69(2), 217-226.

Link [10.17707/AgricultForest.69.2.17](https://doi.org/10.17707/AgricultForest.69.2.17)

2023

Spectrophotometric method for determination of total polyphenolic content in sweet corn

Josimovska, T., & Jankulovska, M. S. (2023). Spectrophotometric method for determination of total polyphenolic content in sweet corn. *Journal of Agricultural, Food and Environmental Sciences*, JAFES, 77(2), 73-79.

Link <https://journals.ukim.mk/index.php/jafes/article/view/2316>

● CONFERENCES AND SEMINARS

28 MAY 1998 – 29 MAY 1998 Skopje, Macedonia

3rd Congress of Pure and Applied Chemistry for the Students of Macedonia with international participation

M. Jankulovska, A. Todorovska, N. Goceva, L. Jovevska, **Isolation of monoterpenes from orange peel and caraway seed**, 3rd Congress of Pure and Applied Chemistry for the Students of Macedonia with international participation, Book of abstracts, 28-29 May Institute of chemistry, Skopje, Republic of Macedonia, 24-25 (1998), oral presentation (presenter).

29 OCT 1999 – 30 OCT 1999 Skopje, Macedonia

16th Congress of chemists and technologists of Macedonia with international participation

L. Šoptrajanova, I. Spirevska, R. Gulaboski, M. Jankulovska, **Determination of aconitic acid by square wave voltammetry**, 16th Congress of chemists and technologists of Macedonia with international participation, Paper book 2, 415, 29-30 October, Skopje, Republic of Macedonia (1999), oral presentation (presenter).

14 SEP 2003 – 17 SEP 2003 Istanbul, Turkey

2nd Black Sea Basin Conference on Analytical Chemistry

S. Petrovska-Jovanović, V. Pavlova, M. Jankulovska, B. Jordanovski, V. Mirčeski, **Square-wave and cyclic voltammetry investigation of electrochemical behaviour of uranium**, 2nd Black Sea Basin Conference on Analytical Chemistry, 14-17 September, Sile-Istanbul, Turkey, 196 (2003), oral presentation.

1 MAR 2004 – 3 MAR 2004 Cairo, Egypt

Biannual Conference on Chemistry, The Department of Chemistry, Cairo University-Faculty of Science

L. Šoptrajanova, M. Jankulovska, I. Spirevska, **The behavior of aconitic acid in aqueous and non-aqueous solutions of strong acids**, Biannual Conference on Chemistry, The Department of Chemistry, Cairo University-Faculty of Science, 1-3 March, Cairo, (2004), oral presentation.

23 SEP 2004 – 25 SEP 2004 Ohrid, North Macedonia

XVIII Congress of Chemists and Technologists of Macedonia

M. Jankulovska, I. Spirevska, L. Šoptrajanova, **Determination of the pKa values of aconitic acid in aqueous solutions**, XVIII Congress of Chemists and Technologists of Macedonia, 23-25 September, Ohrid, R. Macedonia (2004), oral presentation (presenter).

1 DEC 2005 – 2 DEC 2005 Skopje, Macedonia

6th Congress of Pure and Applied Chemistry for Macedonian Students

M. Jankulovska, I. Spirevska, L. Šoptrajanova, **Determination of dissociation constants of some newly synthesized derivatives of 1,2,4-triazolin-3-thion**, 6th Congress of Pure and Applied Chemistry for Macedonian Students, Abstract communication, 1-2 December, Skopje, Republic of Macedonia, 20 (2005), oral presentation (presenter).

10 SEP 2006 – 14 SEP 2006 Ohrid, Macedonia

5th International Conference of the Chemical Societies of the South-East European Countries

M. Jankulovska, I. Spirevska, L. Šoptrajanova, **Behavior of some newly synthesized derivatives of 1,2,4-triazoline-3-thione in protic and aprotic solvents**, 5th International Conference of the Chemical Societies of the South-East European Countries, 10-14 September, Ohrid, Republic of Macedonia, (2006), poster presentation (presenter).

23 SEP 2010 – 26 SEP 2010 Ohrid, Macedonia

XXI Congress of Chemists and Technologist of Macedonia

M. Jankukulovska, K. Čolančeska-Raženović, I. Spirevska, P. Makreski, **Synthesis and characterization of new aromatic hydrazones**, XXI Congress of Chemists and Technologist of Macedonia, 23-26 September, Ohrid, Republic of Macedonia (2010), poster presentation (presenter).

23 SEP 2010 – 26 SEP 2010 Ohrid, Macedonia

XXI Congress of Chemists and Technologist of Macedonia

M. Jankukulovska, I. Spirevska, K. Čolančeska-Raženović, V. Dimova, **Study of acid-base equilibria of some newly synthesized aromatic hydrazones**, XXI Congress of Chemists and Technologist of Macedonia, 23-26 September, Ohrid, Republic of Macedonia (2010), poster presentation (presenter).

17 APR 2012 – 20 APR 2012 Tara, Republic of Serbia

XIV YuCorr International Conference, Exchanging experiences in the fields of corrosion, materials and environmental

V. Dimova, M. Jankulovska, I. Jordanov, D. Dimitrovski, **Investigation of behavior of some triazoline-3-thione in sulfuric acid solution**, XIV YuCorr International Conference, Exchanging experiences in the fields of corrosion, materials and environmental, Proceedings, 17-20 April, Tara, Republic of Serbia, (2012), poster presentation.

5 SEP 2012 – 9 SEP 2012 Ohrid, Macedonia

XXII Congress of Chemists and Technologist of Macedonia

M. Jankulovska, I. Spirevska, V. Dimova, **Determination of the dissociation constants of some p-substituted aromatic hydrazones**, XXII Congress of Chemists and Technologist of Macedonia, 5-9 September, Ohrid, Republic of Macedonia (2012), poster presentation (presenter).

12 DEC 2012 – 14 DEC 2012 Skopje, Macedonia

International symposium for agriculture and food XXXVII faculty-economy meeting

B. Petanovska-Ilievska, L. Velkoska-Markovska, M. S. Jankulovska, **Development of RP-HPLC method for simultaneous determination of benzoates and sorbates in beverages**, International symposium for agriculture and food XXXVII faculty-economy meeting, 12-14 December, Skopje, Republic of Macedonia, (2012), oral presentation (presenter).

26 JUN 2013 – 29 JUN 2013 Belgrade, Serbia

8th International Conference of the Chemical Societies of the South-East European Countries (ICOSECS 8)

M. S. Jankulovska, I. Spirevska, V. Dimova, **Thermodynamic dissociation constants of some newly synthesized p-nitro-p-substituted benzoilhydrazones in acid media**, 8th International Conference of the Chemical Societies of the South-East European Countries (ICOSECS 8), Breakrough Science – Analytical Science (BS-AS) P20, 27-29 June, Belgrade, Serbia, (2013), poster presentation (presenter).

27 JUN 2013 – 29 JUN 2013

8th International Conference of the Chemical Societies of the South-East European Countries (ICOSECS 8)

V. Dimova, M. S. Jankulovska, **Solvent effects on the electronic absorption spectra of the biologically active N1-substituted 1,2,4-triazole derivatives using the Catalón solvent parameter sets**, 8th International Conference of the Chemical Societies of the South-East European Countries (ICOSECS 8), Breakrough Science – Analytical Science (BS-AS) P19, 27-29 June, Belgrade, Serbia, (2013), poster presentation.

14 OCT 2015 – 16 OCT 2015 Milan, Italy

EFSA's 2nd Scientific Conference, SHAPING THE FUTURE OF FOOD SAFETY TOGETHER

Mirjana S. Jankulovska, Lenche Velkoska-Markovska, Ugrin Ilievski, Biljana Petanovska-Ilievska, **Simultaneous determination of azoxystrobin, acetamiprid and metalaxyl pesticide residues in tomato by solid-phase extraction and rapid resolution liquid chromatography**, EFSA's 2nd Scientific Conference, SHAPING THE FUTURE OF FOOD SAFETY TOGETHER, 14-16 October, Milan, Italy, Proceedings supplement, 130 (2015), poster presentation (presenter).

5 OCT 2015 – 7 OCT 2015 Ohrid, Macedonia

2nd international symposium for agriculture and food – ISAF

Jankulovska M. S., Velkoska-Markovska L., Petanovska-Ilievska B., Trpkovska S., **High-performance liquid chromatography method for determination of preservatives in beverages**, 2nd international

symposium for agriculture and food – ISAF, 5-7 October, Ohrid, Republic of Macedonia, Book of abstracts, 132, (2015), oral presentation (presenter).

5 OCT 2015 – 7 OCT 2015 Ohrid, Macedonia

2nd international symposium for agriculture and food – ISAF

Petanovska-Ilievaska B., Velkoska-Markovska L., Stojanovska I, Jankulovska S. M., **Development of high speed RRLC method for quantitative determination of some pesticide residues in apple juice**, 2nd international symposium for agriculture and food – ISAF, 5-7 October, Ohrid, Republic of Macedonia, Book of abstracts, 145, (2015), oral presentation.

5 OCT 2015 – 7 OCT 2015 Ohrid, Macedonia

2nd international symposium for agriculture and food – ISAF

Velkoska-Markovska L., Petanovska-Ilievaska B., Stojanovska I., Jankulovska S.M, **SPE-RRLC determination of some pesticide residues in apple juice**, 2nd international symposium for agriculture and food – ISAF, 5-7 October, Ohrid, Republic of Macedonia, Book of abstracts, 152, (2015), oral presentation.

11 SEP 2016 – 14 SEP 2016 Ohrid, Macedonia

24th Congress of Chemists and Technologists of Macedonia with international participation

Mirjana S. Jankulovska, Ilinka Spirevska, Vesna Dimova, **Acid-base properties of some p-substituted benzoylhydrazones in sodium hydroxide media**, 24th Congress of Chemists and Technologists of Macedonia with international participation, 11-14 September, Ohrid, Macedonia, Book of abstracts, 263 (2016), poster presentation (presenter).

11 SEP 2016 – 14 SEP 2016 Ohrid, Macedonia

24th Congress of Chemists and Technologists of Macedonia with international participation

Vesna Dimova, Mirjana S. Jankulovska, QSAR modeling of antimicrobial activity of some aromatic hydrazones, 24th Congress of Chemists and Technologists of Macedonia with international participation, 11-14 September, Ohrid, Macedonia, Book of abstracts, 264 (2016), poster presentation.

20 JUN 2016 – 24 JUN 2016 Elenite Holiday Village, Bulgaria

Fourth International Conference, Agriculture & Food, Bulgaria

Frosina Babanovska-Milenkovska, Ljubica Karakasova, Biljana Petanovska-Ilievaska, Silvana Manasievska-Simic, Elizabeta Miskoska-Milevska, Lence Velkoska-Markovska, Mirjana Jankulovska, **Change in the quality properties of two different pepper varieties in fresh and dried condition**, Fourth International Conference, Agriculture & Food, 20-24 June 2016, Elenite Holiday Village, Bulgaria, Book of papers, 250 (2016), poster presentation.

12 JUN 2017 – 16 JUN 2017 online

Fifth international conference on radiation and applications in various fields of research, RAD

Mirjana S. Jankulovska, Vesna Dimova, Ilinka Spirevska, **Investigation of acid-base properties of aromatic hydrazones in basic media at constant ionic strength**, Fifth international conference on radiation and applications in various fields of research, RAD, 12-16 June Budva, Montenegro, Book of abstracts, 468 (2017), presenter.

12 JUN 2017 – 16 JUN 2017 online

Fifth international conference on radiation and applications in various fields of research, RAD

Vesna Dimova, Mirjana S. Jankulovska, **QSAR modeling of antimicrobial activity of some substituted hydrazones**, Fifth international conference on radiation and applications in various fields of research, RAD, 12-16 June, Budva, Montenegro, Book of abstracts, 18 (2017), presenter.

2 JUL 2017 – 7 JUL 2017 Ohrid, Macedonia

17th International Symposium and Summer School on Bioanalysis, CEEPUS

Lenche Velkoska-Markovska, Mirjana S. Jankulovska, Biljana Petanovska-Ilievaska, Kristijan Hristovski, **RRLC-UV chromatographic method used for determination of chlorogenic acid in green coffee**, 17th

International Symposium and Summer School on Bioanalysis, CEEPUS, 2-7 July Ohrid, Macedonia, Book of abstracts, P-16, 64 (2017), poster presentation, presenter.

2 JUL 2017 – 7 JUL 2017 Ohrid, Macedonia

17th International Symposium and Summer School on Bioanalysis, CEEPUS

Mirjana S. Jankulovska, Vesna Dimova, Ilinka Spirevska, **UV spectroscopy method used in determination of dissociation constant of some p-nitro-p-substituted benzoylhydrazones**, 17th International Symposium and Summer School on Bioanalysis, CEEPUS, 2-7 July Ohrid, Macedonia, Book of abstracts, P-22, 70 (2017), poster presentation, presenter.

2 JUL 2017 – 7 JUL 2017 Ohrid, Macedonia

17th International Symposium and Summer School on Bioanalysis, CEEPUS

Vesna Dimova, Mirjana S. Jankulovska, **Study of the relationships between the structure and biological activity of some substituted aromatic hydrazones**, 17th International Symposium and Summer School on Bioanalysis, CEEPUS, 2-7 July Ohrid, Macedonia, Book of abstracts, P-23, 71 (2017), poster presentation, presenter.

2 JUL 2017 – 7 JUL 2017 Ohrid, North Macedonia

17th International Symposium and Summer School on Bioanalysis, CEEPUS

Romina Kabranova, Zlatko Arsov, Zoran Dimov, Mirjana S. Jankulovska, **Chemical properties of certain varieties of tobacco**, 17th International Symposium and Summer School on Bioanalysis, CEEPUS, 2-7 July Ohrid, Macedonia, Book of abstracts, P-20, 68 (2017), presenter.

18 OCT 2017 – 20 OCT 2017 Ohrid, Macedonia

3rd international symposium for agriculture and food - ISAF

Mirjana S. Jankulovska, V. Dimova, D. Doneva-Sapceska, **Antimicrobial evaluation of some hydrazone derivatives**, 3rd international symposium for agriculture and food - ISAF, 18-20 October Ohrid, Republic of Macedonia, Book of abstracts, 180 (2017), poster presentation, presenter.

18 OCT 2017 – 20 OCT 2017 Ohrid, Macedonia

3rd international symposium for agriculture and food - ISAF

Mirjana S. Jankulovska, Vesna Dimova, **Practical application of QSAR technique for prediction of biological activity of selected hydrazones**, 3rd international symposium for agriculture and food - ISAF, 18-20 October, Ohrid, Republic of Macedonia, Book of abstracts, 183 (2017), poster presentation, presenter.

18 OCT 2017 – 20 OCT 2017 Ohrid, Macedonia

3rd international symposium for agriculture and food - ISAF

Ilievski Ugrin, Petanovska-Ilievska Biljana, Velkoska-Markovska Lenche, Jankulovska S. Mirjana, **Simultaneous determination of some pesticide residues in apple samples using HPLC DAD**, 3rd international symposium for agriculture and food - ISAF, 18-20 October Ohrid, Republic of Macedonia, Book of abstracts 167 (2017), oral presentation.

5 OCT 2017 – 8 OCT 2017 Jahorina, Bosnia and Herzegovina

VIII International Scientific Agriculture Symposium, "AGROSYM 2017"

Lenche Velkoska-Markovska, Biljana Petanovska-Ilievska, Mirjana S. Jankulovska, Ugrin Ilievski, **Application of the RRLC-UV-DAD method for determination of captan, folpet and metalaxyl residues in table grapes**, VIII International Scientific Agriculture Symposium, "AGROSYM 2017", 05 - 08 October, Jahorina, Bosnia and Herzegovina (2017), poster presentation.

18 JUN 2018 – 22 JUN 2018 Ohrid, Macedonia

Sixth international conference on radiation and applications in various fields of research, RAD

Mirjana S. Jankulovska, Vesna Dimova, Milena Jankulovska, **The application of the semiempirical methods to determine the proton transfer of some benzoyl hydrazones**, Sixth international conference on radiation and applications in various fields of research, RAD, 18-22 June 2018, Ohrid, Macedonia, Book of abstracts, 434 (2018), poster presentation (presenter).

18 JUN 2018 – 22 JUN 2018 Ohrid, Macedonia

Sixth international conference on radiation and applications in various fields of research, RAD

Vesna Dimova, Mirjana S. Jankulovska, Milena Jankulovska, **A quantum chemical investigation of N1-substituted 1,2,4-triazole**, Sixth international conference on radiation and applications in various fields of research, 18-22 June 2018, Ohrid, Macedonia, Book of abstracts, 435 (2018), poster presentation (presenter).

19 SEP 2018 – 22 SEP 2018 Ohrid, Macedonia

25th Congress of Chemists and Technologist of Macedonia with international participation

Mirjana S. Jankulovska, Ilinka Spirevska, Vesna Dimova, Milena Jankulovska, **Thermodynamic dissociation constants of some benzoylhydrazones**, 25th Congress of Chemists and Technologist of Macedonia with international participation, 19-22 September, Ohrid, Macedonia, Book of abstracts, 53 (2018), poster presentation (presenter).

19 SEP 2018 – 22 SEP 2018 Ohrid, Macedonia

5th Congress of Chemists and Technologist of Macedonia with international participation

Vesna Dimova, Mirjana S. Jankulovska, Milena Jankulovska, **Quantum chemical studies of some p-substituted benzoylhydrazones derivatives**, 25th Congress of Chemists and Technologist of Macedonia with international participation, 19-22 September, Ohrid, Macedonia, Book of abstracts, 52 (2018), poster presentation (presenter).

19 SEP 2018 – 22 SEP 2018 Ohrid, Macedonia

25th Congress of Chemists and Technologist of Macedonia with international participation

M. Jankulovska-Petkovska, M. S. Jankulovska, V. Dimova, **Protonation of citraconic and glutaconic acid in aqueous perchloric acid solutions**, 25th Congress of Chemists and Technologist of Macedonia with international participation, 19-22 September, Ohrid, Macedonia, Book of abstracts, 155 (2018), poster presentation (presenter).

1 NOV 2018 – 2 NOV 2018 Podgorica, Montenegro

International GEA (Geo Eco-Eco Agro) conference

Biljana Petanovska, Lenche Velkoska-Markovska, Irena Stojanovska and Mirjana S. Jankulovska, **Determination of some pesticide residues in apple juice by RRLC**, International GEA (Geo Eco-Eco Agro) conference, Book of Abstracts 78, 1-2 November, Podgorica, Montenegro, (2018), oral presentation (presenter).

1 NOV 2018 – 2 NOV 2018 Podgorica, Montenegro

International GEA (Geo Eco-Eco Agro) conference

Biljana Petanovska, Mirjana S. Jankulovska, Lenche Velkoska-Markovska and Jasmina Spasovska, **Determination of Bisphenol A in beverages by RP-HPLC**, International GEA (Geo Eco-Eco Agro) conference, Book of Abstracts 79, 1-2 November, Podgorica, Montenegro, (2018), oral presentation (presenter).

2 AUG 2020 – 4 SEP 2020 Ohrid, North Macedonia

NUTRICON, Food Quality and Safety, Health and Nutrition Congress

Anita Najdenkoska, Zorica Arsova-Saradinovska, Svetlana Toshevska, Lenche Velkoska-Markovska, Mirjana S. Jankulovska, Biljana Petanovska-Ilievska, Ivana Janeska Stamenkovska, Silvana Manasievska-Simik, **JRU METROFOOD-MK as a part of METROFOOD-RI - Infrastructure for promoting metrology in food and nutrition**, NUTRICON, Food Quality and Safety, Health and Nutrition Congress, 2-4 September Ohrid, Republic of North Macedonia, (2020), poster presentation (presenter).

20 JUL 2020 – 24 JUL 2020 online

Eight international conference on radiation in various fields of research, RAD

Mirjana S. Jankulovska, Vesna Dimova, Milena Jankulovska-Petkovska, **Comparison of thermodynamic pKBH+ values of aromatic benzoylhydrazones determined spectrophotometrically**, Eight international

conference on radiation in various fields of research, Book of abstracts, pp. 164, 20-24 July, Virtual conference, (2020), online presentation (presenter).

Link www.rad-conference.org

20 JUL 2020 – 24 JUL 2020 online

Eight international conference on radiation in various fields of research, RAD

Vesna Dimova, Mirjana S. Jankulovska, Milena Jankulovska-Petkovska, **QSPR analysis of substituted hydrazones using experimentally determined constants of protonation and set of physicochemical descriptors**, Eight international conference on radiation in various fields of research, Book of abstracts, pp. 165, 20-24 July, Virtual conference, (2020), online presentation (presenter).

Link www.rad-conference.org

16 SEP 2020 – 18 SEP 2020 Prague, Czech Republic

5th international conference on metrology in food and nutrition, IMECO

Najdenkoska A., Arsova Sarafinovska Z., Velkoska-Markovska L., Jankulovska S. M., **Joint Research Unit – METROFOOD-MK and its Contribution to Food Safety and Quality**, 5th international conference on metrology in food and nutrition, IMECO, 16-18 September, Prague, Czech Republic, (2020), poster presentation (presenter).

19 OCT 2021 – 20 OCT 2021 online

3rd word conference on sustainable life sciences, WOCOLS science for life, E-conference

Mirjana S. Jankulovska, Viktorija Sokolovska, Lenche Velkoska-Makovska, Zvezda Bogevska, Ljubica Karakasova, Silvana Manasievska-Simikj, Elizabeta Miskovska-Milevska, Frosina Babanovska-Milenkovska, Mile Markoski, **Determination of total polyphenols and flavonoids in different populations of onions**, 3RD word conference on sustainable life sciences, WOCOLS science for life, E-conference, 19-20 October, online, (2021), online presentation (presenter).

Link <http://wocols.com>

18 OCT 2021 – 20 OCT 2021 online

3rd word conference on sustainable life sciences, WOCOLS science for life E-conference

Mirjana S. Jankulovska, Viktorija Sokolovska, **Spectrophotometric determination of total polyphenols in onion under different extraction conditions**, 3RD word conference on sustainable life sciences, WOCOLS science for life E-conference, 19-20 October, online, (2021).

12 OCT 2022 – 14 OCT 2022 Ohrid, North Macedonia

4th International Symposium for Agriculture and Food – ISAF

Mirjana S. Jankulovska, Teodora Josimovska, Lenche Velkoska-Makovska, **Simultaneous determination of acesulfame – K, sodium saccharin and aspartame in beverages by RP-HPLC**, 4th International Symposium for Agriculture and Food – ISAF, 12-14 October, Ohrid, North Macedonia, (2022).

12 OCT 2022 – 14 OCT 2022 Ohrid, North Macedonia

4th International Symposium for Agriculture and Food – ISAF

Mirjana S. Jankulovska, Lenche Velkoska-Makovska, Biljana Petanovska-Ilievaska, Anita Najdenkovska, Zoriza Arsova-Sarafinovska, **Spectrophotometric determination of total phenolic content in rice**, 4th International Symposium for Agriculture and Food – ISAF, 12-14 October, Ohrid, North Macedonia, (2022).

12 OCT 2022 – 14 OCT 2022 Ohrid, North Macedonia

4th International Symposium for Agriculture and Food – ISAF

Viktorija Sokolovska, Mirjana S. Jankulovska, **Folin–Ciocâlțeu method for determination of total polyphenols and flavonoids in onion**, 4th International Symposium for Agriculture and Food – ISAF, 12-14 October, Ohrid, North Macedonia, (2022).

12 OCT 2022 – 14 OCT 2022 Ohrid, North Macedonia

4th International Symposium for Agriculture and Food – ISAF

Lenche Velkoska-Makovska, Simona Stojcevska, Mirjana S. Jankulovska, **HPLC determination of sodium benzoate, potassium sorbate and caffeine in soft drinks**, 4th International Symposium for Agriculture and Food – ISAF, 12-14 October, Ohrid, North Macedonia, (2022).

12 OCT 2022 – 14 OCT 2022 Ohrid, North Macedonia

4th International Symposium for Agriculture and Food – ISAF

Velkoska-Markovska Lenche, Jankulovska S. Mirjana, Petanovska-Ilievska Biljana, Najdenkoska Anita, Arsova-Srafinovska Zorica, Simona Stojcevska, Mirjana S. Jankulovska, **METROFOOD-MK and its contribution to development of RP-HPLC method for determination of B vitamins in rice**, 4th International Symposium for Agriculture and Food – ISAF, 12-14 October, Ohrid, North Macedonia, (2022).

12 OCT 2022 – 14 OCT 2022 Ohrid, North Macedonia

4th International Symposium for Agriculture and Food – ISAF

Vesna Dimova, Mirjana S. Jankulovska, Maja Petrevska Sencheva, **Vitamin C equivalent antioxidant capacity prediction for set of flavones which influence food quality**, 4th International Symposium for Agriculture and Food – ISAF, 12-14 October, Ohrid, North Macedonia, (2022)

12 OCT 2022 – 14 OCT 2022 Ohrid, North Macedonia

4th International Symposium for Agriculture and Food – ISA

Vesna Dimova, Mirjana S. Jankulovska, Maja Petrevska Sencheva, **Applicability of QSAR analyses for pesticide properties prediction**, 4th International Symposium for Agriculture and Food – ISAF, 12-14 October, Ohrid, North Macedonia, (2022)

21 OCT 2022 – 22 OCT 2022 Banja Luka, Bosnia and Herzegovina

XIV Counseling for Chemists, Technologists and Ecologists of the Republic of Srpska

Mirjana S. Jankulovska, Vesna Dimova, Milena Jankulovska-Petkovska, **Determination of dissociation constants and QSAR study of some aromatic benzoylhydrazones**, XIV Counseling for Chemists, Technologists and Ecologists of the Republic of Srpska, Banja Luka, Bosnia and Herzegovina, 21st and 22nd October (2022)

21 OCT 2022 – 22 OCT 2022 Banja Luka, Bosnia and Herzegovina

XIV Counseling for Chemists, Technologists and Ecologists of the Republic of Srpska

Mirjana S. Jankulovska, Viktorija Sokolovska, Lenche Velkoska-Markovska, **Evaluation of antioxidant capacity of onion extracts using UV-Vis spectroscopy**, XIV Counseling for Chemists, Technologists and Ecologists of the Republic of Srpska, Banja Luka, Bosnia and Herzegovina, 21st and 22nd October (2022).

● **PROJECTS**

1997 – 2000

Study of indoles and weak organic acids and development of methods for their determination

Study of indoles and weak organic acids and development of methods for their determination, financed by the Ministry of Education and sciences, R. Macedonia, participant in national project, (1997-2000).

2001 – 2004

Optimization of conditions to establish analytical methods for determination of organic acids and indoles at different samples

Optimization of conditions to establish analytical methods for determination of organic acids and indoles at different samples, financed by the Ministry of Education and sciences, R. Macedonia, participant in national project, (2001-2004).

2015 – 2016

Change in the content of carotenoids in pepper (*Capsicum annum*) industrial (kurtovska kapija) and spicy (horgos) during drying

Change in the content of carotenoids in pepper (*Capsicum annum*) industrial (kurtovska kapija) and spicy (horgos) during drying, participant in national project, UKIM, (2015)

2017

PRO-METROFOOD “Progressing towards the construction of METROFOOD-RI”-Infrastructure for promoting metrology in food and nutrition

PRO-METROFOOD “Progressing towards the construction of METROFOOD-RI”-Infrastructure for promoting metrology in food and nutrition, Grant Agreement n°. 739568 (H2020 INFRADEV-02-2017), participant in international project, (2017).

2021

xKIC Circular Economy Consumer Engagement Labs in Western Balkans

xKIC Circular Economy Consumer Engagement Labs in Western Balkans, Faculty of Agricultural Sciences and Food – Skopje coordinator of workshops and dissemination of results, participant in international project, (2021).

2019 – 2022

METROFOOD-PP - METROFOOD-RI Preparatory Phase Project

ENEA (Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile), METROFOOD-PP - METROFOOD-RI Preparatory Phase Project H2020-INFRADEV-2018-2020/H2020-INFRADEV-2019-2 (2019-2022), participant in international project, (2022).

2021 – 2022

Determination of total polyphenolic content and analyses of antioxidant activity of onion extracts

Determination of total polyphenolic content and analyses of antioxidant activity of onion extracts, national project funded by UKIM, principal investigator in national project, (2021-2022).

2021 – 2022

Upgrade with Learner – centered approach

Еразмус+ project – „Upgrade with Learner – centered approach“, coordinations: Katolícka univerzita v Ružomberku, Slovakia and Center for innovations and digital education Dig-Ed, North Macedonia, Co-funded by the Erasmus+ Programme of the European Union, grant number 2020-1-SK01-KA203-078306, participant in international project, (2021-2022).

2021 – 2023

Development and validation of analytical method for simultaneous determination of preservatives, sweeteners and caffeine in beverages

Development and validation of analytical method for simultaneous determination of preservatives, sweeteners and caffeine in beverages, national project of public interest (support for development of laboratory resources), funded by Ministry of Science and Education, participant in national project, (2021-2023).

2021 – 2023

Using Games to Learn Cyber Security and Misinformation

„Using Games to Learn Cyber Security and Misinformation: GaCySeMI“, funded by U.S. Embassy grants program, Award number: SMK80021GR3050, participant in international project, (2021 – 2022). The project was realized by NGO - Center for innovation and digital education (Dig-Ed), my role was management and preparation of final report for the project.

15 JUN 2023 – CURRENT

TechCamp Project for Countering Misinformation and disinformation

TechCamp Project for Countering Misinformation and disinformation is implemented by the Dig-Ed Center for Innovation and Digital Education together with the Embassy of the United States of America in North Macedonia and the TechCamp team of the US State Department from Washington, and is financed by the Embassy of the United States of America in North Macedonia.

The type and duration of the activities will be in the period from 15.6.2023 to 14.1.2025, according to the grant agreement number SMK80023CA0002, signed between the Center for Innovation and Digital Education and the Embassy of the USA in the Republic of North Macedonia.

Objectives: increased media literacy, digital literacy, and critical thinking skills, development of open educational resources in local languages ready for use in the classroom.

1 SEP 2023 – CURRENT

Creating the Network of Excellent ULCA Schools

Erasmus+, Action Type KA220-HED - Cooperation partnerships in higher education

The project's main objective is to create educational institutions of modern times by creating education courses and setting up an international ULCA association/network, thereby expanding the ULCA schools, which we will enrich with more complex education in this follow-up NELCA project. We create and connect a community of teachers, managers, administrative workers, owners, and founders who want to set the organizational culture of their schools in the context of innovative approaches.

● **BOOKS AND TEACHING MATERIALS**

2014

Food packaging

Teaching material - internal script

Mirjana S. Jankulovska L. Velkoska-Markovska, Food packaging, internal script for students of the study program quality and food safety, Faculty of Agricultural Sciences and Food in Skopje, 2014.

2014

Chemical and physical hazards in food

Teaching material - diary of laboratory exercises

B. Petanovska-Ilievska, L. Velkoska-Markovska Mirjana S. Jankulovska, Chemical and physical hazards in food - Diary of laboratory exercises for students of the study program quality and food safety, Faculty of Agricultural Sciences and Food in Skopje, 2014.

2014

Chemistry

Teaching material - Chemistry - diary of laboratory exercises

B. Petanovska-Ilievska, L. Velkoska-Markovska, Mirjana S. Jankulovska, Chemistry - Diary of laboratory exercises in chemistry for students of all study programs, Faculty of Agricultural Sciences and Food in Skopje, 2014.

2020

General and inorganic chemistry

Teaching material - internal script

Mirjana S. Jankulovska, L. Velkoska-Markovska, General and inorganic chemistry – internal script for students at FASF – Skopje, 2020.

2020

General and inorganic chemistry – internal script with questions and tasks

Teaching material - General and inorganic chemistry – internal script with questions and tasks

Mirjana S. Jankulovska, L. Velkoska-Markovska, General and inorganic chemistry – internal script with questions and tasks for students at FASF – Skopje, 2020.

2020

Organic chemistry

Teaching material - organic chemistry internal script

L. Velkoska-Markovska, Mirjana S. Jankulovska, Organic chemistry – internal script for students at FASF – Skopje, 2020.

2020

Organic chemistry - internal script with questions and tasks

Teaching material - Organic chemistry - internal script with questions and tasks

L. Velkoska-Markovska, Mirjana S. Jankulovska, Organic chemistry - internal script with questions and tasks for students at FASF – Skopje, 2020.

2021

General and inorganic chemistry

Book General and inorganic chemistry for students of Faculty of Agricultural Sciences and Food - Skopje
Mirjana S. Jankulovska, L. Velkoska-Markovska, General and inorganic chemistry - reviewed book, 2021.

2021

Organic chemistry

Book - Organic chemistry for students of Faculty of Agricultural Sciences and Food - Skopje
L. Velkoska-Markovska, Mirjana S. Jankulovska, Organic chemistry - reviewed book, 2021.

2022

Physical Chemistry

Book - vocational high school
Mirjana S. Jankulovska, Milena Jankulovska - Petkovska, Physical Chemistry - book for the vocational high school (second year), chemical laboratory technician, environmental protection technician, Ministry for Science and Education, 2022.

2022

Analytical Chemistry

Book - Analytical Chemistry for the vocational high school
Mirjana S. Jankulovska, Analytical Chemistry - book for the vocational high school (second year), medical technician, laboratory-sanitary technician, pharmaceutical technician, Ministry for Science and Education, 2022.

● **PROFESSIONAL TRAININGS**

2011

Eco-sustainable food packaging based on polymer nanomaterials

Short training course: Deepening the knowledge in the field of polymer nanomaterials for food packaging and other potential uses: theory and practice, COST ACTION FA0904 Eco-sustainable food packaging based on polymer nanomaterials, Skopje, R. Macedonia, (2011).

7 FEB 2016 – 26 FEB 2016

International R&D Course on postharvest physiology, pathology & handling of fresh commodities

International R&D Course on postharvest physiology, pathology & handling of fresh commodities, 7-26 February, Israel, (2016).

15 JAN 2022 – 25 FEB 2022

Extraction of polyphenols from tomato and their determination with spectroscopic and chromatographic methods

Participate in research activities in the Analysis of Polymers and Nanomaterials research group within the field of determination and control of antioxidants in foods, Department of Analytical Chemistry, Nutrition and Bromatology, University in Alicante, Spain, the staying period of time from January, 15th to February, 25th, (2022).

2 APR 2022 – 8 APR 2022

CEEPUS Mobility Grant, scholarship in the academic year 2021/2022

CEEPUS Mobility Grant, scholarship in the academic year 2021/2022. Host institution: University of Debrecen, Faculty of Agricultural and Food Sciences and Environmental Management, April, (2022).

Teaching topic: Instrumental analytics – spectroscopic determination of total polyphenols and flavonoids in food (example fruits and vegetables), theoretical concepts, importance, spectroscopic determination, one practical example, processing and presenting of results.

Determination of polyphenols and elements in onion under different extraction conditions

Participate in research activities in the Analysis of Polymers and Nanomaterials research group within the field of determination and control of antioxidants in foods, Department of Analytical Chemistry, Nutrition and Bromatology, University in Alicante, Spain, the staying period of time from May, 13th to June, 13th, (2023).

3 JUL 2023 – 31 AUG 2023

Breeding for drought tolerance and disease resistance in bean

INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA) - FS-MAK5010-EVT2300593 - TC Fellowship on breeding for drought tolerance and disease resistance in bean - research activities in the laboratory of molecular biology at the Maritsa Vegetable Crops Research Institute, Plovdiv, Bulgaria, I - from 3 July to 31 August, (2023).

11 FEB 2024 – 5 MAR 2024

Evaluation of polyphenolic content in different onion varieties origin Spain and North Macedonia

Participate in research activities in the Analysis of Polymers and Nanomaterials research group within the field of determination and control of antioxidants in foods, Department of Analytical Chemistry, Nutrition and Bromatology, University in Alicante, Spain, the staying period of time from February 2nd to March 5th, (2022).

● **JOB RELATED SKILLS**

1994 – CURRENT

Job related skills

Gained a variety of job-related skills (teaching skills, technical skills, research and development skills, computational skills) during education and carrier in academic and research area.

Ability to develop and implement curricula and lesson plans, skilled in managing classroom dynamics and maintaining a productive learning environment, competence in designing and grading exams and to evaluate student projects, familiar with various teaching methods (lecture-based learning, discussion-based learning, collaborative learning, problem-based learning, reflective-based learning, student-centered learning, team work, digital tools and so on), ability to inspire, motivate and engaged students, making the subject matter accessible and interesting, flexible to adapt teaching methods to diverse learning styles and needs, and so on.

Excellent ability to use standard laboratory techniques - usage of basic laboratory equipment and supplies, solution preparation, titration and so on. Ability to use instrumental methods of analyses such as spectroscopy, chromatography, square-wave voltammetry, electrophoresis and so on. Knowledge to make calculations for predictions related to the structure of the compounds in the area of theoretical organic chemistry (QSAR).

Skills for applying the methods of synthesis of new organic compounds, purification (reflux, crystallization, recrystallization), and identification (elemental analysis, IR, NMR).

Ability to design and conduct experiments, ability to analyze chemical substances, including qualitative (different type of reaction) and quantitative analysis applying methods (classical and instrumental) known from literature and developed and validated methods as well.

Ability to use different separation techniques for sample preparation (filtration, centrifugation, distillation, recrystallization liquid-liquid extraction, solid-phase extraction and so on).

Proficiency in interpreting scientific data, including statistical analysis and use of software like Excel, Origin, ChemDraw and so on.

Experience in managing research projects, including planning, budgeting, and timeline management. Skilled in conducting literature reviews and staying updated with the latest scientific achievements, knowledge of chemical databases and digital tools.

Strong written and oral communication skills for presenting research findings, writing reports, and publishing papers. Ability to work effectively in multidisciplinary teams with international participation and to prioritize tasks and manage time efficiently.

● **COMMUNICATION AND INTERPERSONAL SKILLS**

Communication and interpersonal skills

Excellent communication skills obtained through working with a large number of students (primary schools, secondary schools and university) in the realization of curriculum in the education process.

Effective communication with different audiences acquired from informal and formal public speech at congresses and seminars, as well as with researchers and scientists in international groups with people with different background, interest and knowledge.

Very communicative person, who loves to travel, explore, work and collaborate with different people. Clearly express and share experiences, knowledge and ideas with students, co-workers and colleagues.

Great capacity in teamwork and support through collaboration with others when sharing common interests and experiences. Flexible with capacity to adapt and accept different styles of communication with different people and situations.

Active and reflective listener with clarity and appropriate tone when speaking. Skilled as well in non-verbal communication (body language and eye contact) in order to be better understood and to show confidence and engagement.

Skilled to organize and present information in a manner that is suitable to the audience. Excellent writing skills gained during education and writing teaching materials, books, articles, reports, presentation etc.

Demonstrate high level of empathy in managing and sharing feelings with others, understand others' feelings, perspectives, building professional connection due to respect and understanding.

Successful in giving feedback and receiving feedback calmly that is very important for building confidence in the group during communication with students and members in the research team with common interests. Respects cultural differences in communication styles and has ability to adjust her communication still.

Practice digital communication (email, social media, and other digital tools) and demonstrate professionalism, clarity and ability to engage participants during online lectures and meetings.

Mindful and present in conversations and reflection on interaction with others to identify areas for improvement.

● **ORGANISATIONAL SKILLS**

Organizational skills

Good organizational skills acquired from work experience as a teacher, participation in teamwork with students and colleagues, as well as participation in different working groups and commissions.

Ability to organize and implement tasks within the given time paying attention on details and capability to solve different problems and situations associated with the education and research work.

Ability to identify and focus on tasks that have the highest impact, experience in working on different tasks at the same time during the work experience. Completing tasks with careful attention to all details, planning and organizing time to ensure tasks are completed efficiently.

● **MANAGEMENT AND LEADERSHIP SKILLS**

Management and leadership skills

Leader and participant in different teams (co-workers, project teams, students...) with success and harmony, assigning tasks to appropriate team members to optimize productivity.

Excellent managerial skills acquired during education, scientific and research work such as prioritizations, delegation, planning, risk management, accuracy, data management and so on.

Developing detailed project plans with clear milestones and deadlines, distributing resources effectively to ensure project success and identifying potential risks and developing strategies to mitigate them.

Managing multiple tasks or projects at the same time and adjusting priorities and approaches based on changing circumstances. Providing clear goals and objectives. Motivating and inspiring team members to achieve their best and managing and resolving conflicts constructively.

Establishing long-term and short-term goals, tracking progress towards goals and adjusting strategies as needed and developing innovative solutions to complex issues. Evaluating options and their potential outcomes before making decisions. Planning and controlling financial resources.

● **NETWORKS AND MEMBERSHIPS**

2011 – CURRENT Skopje

SOCIETY OF CHEMISTS AND TECHNOLOGISTS OF MACEDONIA

The Society was founded in 1947 as an association of scientific and research workers who are active in chemistry, applied chemistry and technology. It is part of the Engineering Institution of Macedonia and is a member of the European Chemical Society (EuChemS). Within the Society there are divisions: Terminology and nomenclature, Crystallography, Polymers and Education in Chemistry.

Center for innovations and digital education Dig-Ed (<https://dig-ed.org/>) is Macedonian based non-government organization. The focus of Dig-Ed activities is on empowering teachers' competences and skills to create innovative learning environments that will stimulate students' learning. Different activities for increasing digital competences among educators to provide means for innovative deployment of digital learning tools, are part of the organization's activities. In addition to this, Dig-Ed puts emphasize on creating digital education materials in the local language.

● **DRIVING LICENCE**

Driving Licence: B

● **HOBBIES AND INTERESTS**

Learning and studying

Learning Spanish

Sports and fitness

Running, swimming and cycling
Team sport: basketball and tennis

Outdoor activities

Hiking

Intellectual and educational hobbies

Reading novels, biographies and self-help books for personal growth

Puzzles and games

Sudoku

Media and Entertainment

Watching movies, TV shows and documentaries, listening to podcasts, watching YouTube videos

Cooking and baking

Experimenting with recipes and bread making

Traveling

Exploring new countries and cultures