

REPORT
to occupy the academic position:

"Professor"	
"Associate Professor"	X
	one of the academic positions indicated shall be marked with the sign "X"

Candidates to occupy the position:

1	Chief Assist. Prof.	Ph.D.	Temenuzhka	Hristova	Radoykova	UCTM, Analytical Chemistry Department
№	academic position	scientific degree	name	middle name	last name	workplace

Scientific area:

4	Natural Sciences
code	name

Professional area:

4.2.	Chemical Sciences
code	name

Scientific specialty:

Analytical Chemistry

The competition has been announced:

64	05.08.2025	Analytical Chemistry	Faculty of Chemical Technology
in SG issue	date	for the needs of the Department	Faculty

The report was written by:

Prof.	Ph.D.	Dancho	Lyubenov	Danalev	UCTM, Biotechnology Department
academic position	scientific degree	name	middle name	last name	workplace

1. Report for the candidate:

Chief Assist. Prof.	Ph.D.	Temenuzhka	Hristova	Radoykova
academic position	scientific degree	name	middle name	last name

1.1. Meeting the minimum requirements under the Regulations:

A) The candidate meets the minimum requirements	20 points	X
B) The candidate doesn't meet the minimum requirements	0 points	
		one of the answers given is marked with the sign "X"

It must be filled in if answer B is marked. The publication activity of the candidate is analyzed. The response of the results achieved (quoted) is analyzed.

In order to participate in the current contest for the academic position of "associate professor", the only candidate, Chief Assistant Professor Dr. Temenuzhka Hristova Radoykova, presented **28** publications in journals referenced in the global databases Web of Science and Scopus. The defended doctoral dissertation on the topic "Obtaining, research and application of low-molecular phenolic compounds from plant biomass" contributed **50** points under indicator A. With **8** of the works submitted for participation in the contest, the candidate replaced a habilitation work according to the requirements under indicator group B4 with a total point asset of **112** points, with 100 points required under the indicator. The remaining **20** publications were presented under indicator 7 and with 200 points required under the indicator according to the Act for development of the academic staff of the Republic of Bulgaria, they carry a total of **219** points. Under indicator group D, the candidate presented a total of **58** citations, with which she collected **116** points out of 50 points required, which significantly exceeds the required minimum points. In addition, according to the requirements of the internal regulations for the application of the Act for development of the academic staff of the Republic of Bulgaria, Chief Assistant Professor Radoykova presents a Published University Textbook or a Textbook that is used in the school network under indicator E20 in co-authorship, which brings her a point asset of **10** points. Also, Dr. Radoykova presents participation in scientific projects under indicators E14 and E15 with a total point asset of 60 points. Thus, with a point asset of **507** points, the candidate fully covers, and in some places significantly exceeds, all the minimum requirements of the Act for development of the academic staff of the Republic of Bulgaria for occupying the academic position of "associate professor".

1.2. Relevance of scientific and / or applied research:

A) The research is relevant. Part of the research is pioneering (no results are known on the topic by other authors)	8 points	
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B) Research is relevant. Results from other authors are known for each of the topics and / or applications studied.	6 points	X
C) Most of the research is relevant, but also some results are presented that have no scientific and / or applied value	4 points	
D) The smaller part of the research is relevant	2 points	
E) Research is not relevant	0 points	
		one of the answers given is marked with the sign "X"

The evaluation of the relevance of the research must be substantiated.
<p>The presented by the candidate scientific works can be summarized in three general directions:</p> <ul style="list-style-type: none"> - Preparation and characterization of low-molecular phenolic compounds from lignocellulose materials with potential application as inhibitors of the oxidation process; - Characterization and study of the possibility of biomass waste products' application (hydrolysis lignocellulose materials, bark and agricultural waste) as sorbents; - Characterization and application of waste and secondary industrial products. <p>All of them are in the area of ecology, and various chemical and analytical techniques have been applied to achieve the goals set in the studies. In addition, they are directly related to reducing the carbon footprint of various toxic products and their reuse, which fully coincides with one of the axes of the National Strategy for Scientific Research until 2030, which shows that Dr. Radoykova is developing her research and science in a direction with proven value for both science and practice.</p>

1.3. Objectives of the research:

A) Realistic and of scientific and / or applied interest	8 points	X
B) Realistic, but not of scientific and / or applied interest	4 points	
C) Unattainable (unrealistic)	0 points	
		one of the answers given is marked with the sign "X"

Objectives must be specified. The type of the set objectives must be justified
<p>The goals set by the candidate for the academic position of "associate professor" are clearly defined in the three formulated areas of her work and they are completely realistic and of a large scientific and applied interest. From a fundamental point of view, the conditions for the utilization of waste products from the ligno-cellulose and agricultural industries have been considered, experiments have been conducted using different temperature conditions and chemical reagents, as well as enzymatic hydrolysis using</p>

different commercial enzyme products. A lot of data has been accumulated and applied, and conclusions have been drawn about the most suitable conditions. Modern chromatographic methods have been applied to characterize the secondary products obtained as a result of the decomposition, and from an applied point of view, their potential applications as inhibitors of the oxidation process have been discussed.

1.4. Candidate research contributions:

A) With lasting scientific and / or applied response, they form the basis for new research and applications	20 points	X
B) They are of significant scientific and / or applied interest, complete and / or summarize previous research	16 points	
C) They are of scientific and / or applied interest	12 points	
D) Lack of significant contributions	8 points	
E) Lack of contributions	0 points	
		one of the answers given is marked with the sign "X"

Contributions must be specified. The type of results achieved must be justified.

The candidate's scientific contributions can be fully attributed to the claimed Professional Direction for holding the academic position of "associate professor". In all developments, in addition to being a chemical engineer, she also participated as a specialist in the chromatography and all the results obtained as a result of the research conducted were interpreted, summarized and presented by her with the necessary accuracy and understanding, which proves her knowledge, skills and competence in the claimed Professional Direction. The contributions could be directed to both fundamental and scientific-applied area and can be thematically separated into three main directions:

- Preparation and characterization of low-molecular phenolic compounds from lignocellulose materials with potential application as inhibitors of the oxidation process;
- Characterization and study of the possibility of biomass waste products' application (hydrolysis lignocellulose materials, bark and agricultural waste) as sorbents;
- Characterization and application of waste and secondary industrial products.

All obtained data can be used both as a basis for in-depth future developments in the field of ligno-cellulosic and agricultural waste utilization, and some of them can be directly applied in practice as a basis for utilization of these wastes and direct application of the obtained products. They have a lasting impact in the scientific community, which is also proven by the large number of citations of the presented studies in the scientific literature, which has brought to Dr. Radoykova a fairly good *h-index* of 9.

1.5. Participation of the candidate in the achievement of the presented results:

A) The candidate has at least an equal participation in the submitted papers	8 points	X
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B) The candidate has at least an equal participation in most of the submitted papers	7 points	
C) The candidate has a secondary participation in most of the submitted papers	4 points	
D) The candidate participation is unnoticeable	0 points	
		one of the answers given is marked with the sign "X"

Critical notes must be provided if one of the items C or D is marked.
In 20 of the total 28 publications presented for participation in the contest for the academic position of "associate professor" or this make 71%, the candidate is the first or second author, which undoubtedly indicates her main participation in the studies.

1.6 Pedagogical activity:

A) The candidate has effective and sufficient pedagogical activity at the university. The textbooks issued are modern and useful (they meet the requirements of the Regulations). The work with undergraduate and doctoral students is at a high professional level.	8 points	X
B) The candidate has sufficient pedagogical activity at the university. The textbooks issued satisfy the requirements of the Regulations.	6 points	
C) The pedagogical activity and / or textbooks issued are insufficient (do not meet the requirements of the Regulations)	0 points	
		one of the answers given is marked with the sign "X"

Critical notes must be provided if one of the items B or C is marked.
Over the past few years (2021-2025), since she has been part of the Department of Analytical Chemistry of the University of Chemical Technology and Metallurgy, Chief Assistant Professor Radoykova has been assigned and has Headed a large number of courses in the Bachelor's and Master's programs for various specialties, which shows her competences in the area of the professional field claimed in the contest.

1.7. Critical notes:

A) Lack of critical notes	8 points	X
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B) Critical notes of a technical nature	7 points	
C) Critical notes that would partially improve the results achieved in a small part of the research	5 points	
D) Critical notes that would partially improve the results achieved in most of the research	3 points	
E) Significant critical notes	0 points	
		one of the answers given is marked with the sign "X"

Critical notes must be provided if one of the answers C, D or E is marked.
All presented documents are neatly arranged and described and allow for a quick and thorough assessment of the production of the candidate in the contest for the academic position of "associate professor".

1.8. Conclusion

A) The evaluation of the candidate's activity is POSITIVE	This evaluation is assigned to a total number of at least 50 points	X
B) The evaluation of the candidate's activity is NEGATIVE	This evaluation is assigned to a total number below 50 points	
		one of the answers given is marked with the sign "X"

To be filled in if requested by the member of the scientific jury
I know Chief Assistant Professor Radoykova from our joint work over the years and I believe that she fully meets the requirements of the Act for development of the academic staff of the Republic of Bulgaria, as well as the knowledge, skills and competencies that a lecturer with the academic position of "associate professor" in Professional Direction 4.2. Chemical Sciences must possess. I had the pleasure of working with her as her direct supervisor at the time when I was Director of the Central Scientific Research Laboratory of the University of Chemical Technology and Metallurgy, and she held the position of Head of the Accredited Laboratory within the Central Scientific Research Laboratory, and I have been convinced of both her knowledge, skills and capabilities as an excellent specialist in the chromatography, and as a manager who strictly and with great understanding, managed the work of the Accredited Laboratory, which, in addition to the above analysis of all scientometric and teaching data, gives me grounds to vote positively and to

recommend to the members of the Faculty Council of the Faculty of Chemical Technology to award her the academic position of "associate professor" in the Field of Higher Education 4. Natural Sciences, Professional Direction 4.2. Chemical Sciences in the field of Analytical Chemistry.

01.12.2025	The report was written by:	
date		signature