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TECHNICAL FACULTY IN BOR



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MANAGING THE HAZARDOUS CHEMICAL WASTE IN LABORATORIES: ARE WE ON THE RIGHT PATH?

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Abstract

- **Introduction and scope**

The use of hazardous chemicals during laboratory analyses, experiments, and research leads to the generation of hazardous waste [1]. Proper primary sorting of this waste can be challenging due to the necessity of preventing unwanted interactions and the formation of even more hazardous secondary substances [2]. The aim of this study is to provide insight into the management of hazardous chemical waste in Serbian laboratories.

- **Methodology**

A preliminary survey conducted in August 2023 with chemists and physical chemists (n=11) employed in different laboratories in Serbia was based on two fundamental questions: (1) How do you sort hazardous chemical waste, and (2) Do you believe it is necessary to have additional education and training on this issue?

- **Results**

The survey results are as follows: 73% of participants primarily sort liquid hazardous chemical waste into three categories: inorganic, halogenated organic, and non-halogenated organic waste. In addition, 100% of respondents consider it would be necessary to have additional education on laboratory hazardous chemical waste and its primary categorization since it is a part of their daily work.

- **Conclusion**

From presented results and after studying the existing Serbian legal regulations in the field of hazardous waste management [3] [4], a lack of clear and unambiguous protocols defining precise methods for the primary sorting of laboratory hazardous chemical waste can be observed. In the context of future studies, a more in-depth exploration of this subject is warranted, with a particular emphasis on offering recommendations for the enhancement of the legal framework within this domain [5].

Keywords: Hazardous chemical waste, Laboratory waste, Primary sorting, Legal regulation, Waste management

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