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# **STUDY ON THE MINERAL CONTENT OF MUSHROOMS**

Simion Alda, Liana Alda<sup>\*</sup>, Despina Maria Bordean, Claudia Sirbulescu, Laura Rădulescu, Marcel Danci, Teodor Cristea, Dumitru Spătariuc University of Life Sciences "King Mihai I" from Timisoara, Romania

Abstract: Agaricus bisporus, the most widely consumed mushroom species globally, was the focus of this study. We aimed to determine the mineral profile of Agaricus bisporus samples available on the Romanian market using X-ray fluorescence (XRF) spectrometry. The results from the analysis of seven mushroom samples showed the following concentrations: potassium (31.4–50.5 mg/g dry weight), calcium (1.2–4.8 mg/g dry weight), and in mg/kg dry weight for iron (337–696), manganese (105–150), zinc (113–312), barium (110–160), copper (25–86), rubidium (21–57), nickel (19–22), selenium (9–11), and molybdenum (6– 9). Among toxic metals, mercury was detected in two samples and cadmium in one sample.

*Keywords:* Agaricus bisporus, X-ray spectrometry with fluorescence, toxic elements

### Introduction

Mushrooms are widely recognized as important sources of dietary fiber, vitaminsj and minerals. However, they also have the capacity to accumulate toxic metals such as lead, cadmium, and mercury. Agaricus bisporus, the most widely consumed mushroom species globally, was the focus of this study. We aimed to determine the mineral profile of Agaricus bisporus samples available on the Romanian market. Material and method

# • Results and discussions

The results showed the following concentrations: potassium (31.4–50.5

Determination of samples mineral profiles was made by X-Ray

mg/g DW), calcium (1.2-4.8 mg/g)DW), and in mg/kg DW for Fe(337-696), Mn(105–150), Zn(113–312), Ba(110–160), Cu(25–86), Rb(21–57), Ni(19–22), Se(9–11), and Mo (6–9). Among toxic metals, mercury was detected in two samples (3 and 5 mg/kg dry weight), and cadmium in one sample (3.5 mg/kg dry weight).

# • Conclusions

In conclusion, regular mushroom consumption can contribute to meeting the daily requirements for these essential elements, alongside





