



16-17 November 2023

## MACRO AND MICRO ELEMENTS IN SPONTANEOUS FLORA MUSHROOMS FROM THE TRANSYLVANIAN REGION

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**Abstract:** The use of edible mushrooms from the spontaneous flora can help complete food diets being considered important sources of micronutrients with positive effects on human health. Two mushroom species were studied, *Boletus edulis* Bull., and *Cantharellus cibarius* Fr. respectively. The mineral elements were quantified using an ED-XRF analyzer. The aim of the research is to determine the macro and micro elemental content of the mushrooms from a specific area. The results of the study revealed that potassium was the most abundant macro element, and iron the most abundant microelement in both mushroom species.

### • Introduction

The identification of the nutritional status of the mushrooms from the Transylvanian area involves identification of species, environmental factors, and qualitative and quantitative physico-chemical mushrooms' traits. The purpose of the research is to determine the macro and micro elemental content of the mushrooms from a specific area to provide a complete picture of their interaction with the environment.

### • Material and method

The samples considered for the analysis consisted of two species of mushrooms *Boletus edulis* Bull. (boletus) and *Cantharellus cibarius* Fr. (chanterelle mushrooms) and determinations of mineral elements were performed using an ElvaX Mobile - a portable Energy Dispersive - X-Ray Fluorescence (ED-XRF) analyzer.

### • Results and discussions

The results of the study revealed that potassium was the most abundant macro element in *Boletus edulis* Bull. followed by calcium.

The same trend was recorded in the case of *Cantharellus cibarius* Fr. samples. Among the microelements, Fe tended to be most abundant in both mushrooms' species.

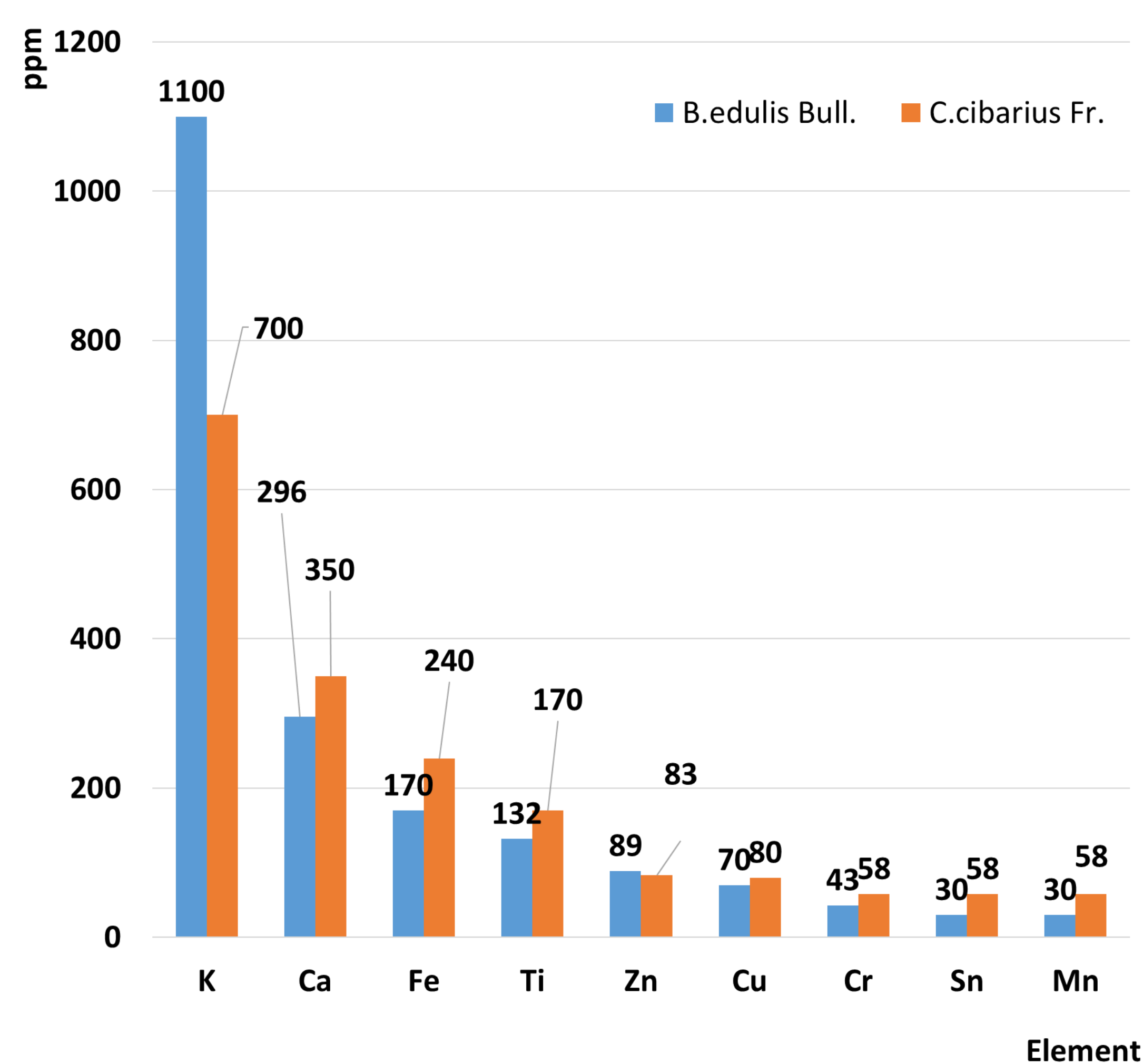


Figure 1. The mean macro-and microelemental content of studied mushroom species

### • Conclusions

The main idea derived from the research carried out is that wild-grown mushrooms are natural food resources, which must be valued due to their flavor and taste on one hand and to their high mineral content on the other hand.