INNOVATION IN SUPERFOODS FOR HEALTH AND NUTRITION: NUTRITIONAL CHARACTERIZATION OF *Agaricus blazei* ENRICHED WITH B-GLUCANS

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INTRODUCTION

β-Glucans (β-g), found in fungal cell walls, enhance food processing and exhibit immunomodulatory, anti-inflammatory, and antioxidant properties.

Agaricus blazei Murill mushrooms are particularly noted for their potential in preventing cancer, diabetes, and cardiovascular diseases, especially when enriched with β-g. Research shows that β-g can reduce glucose and insulin levels [1,2].

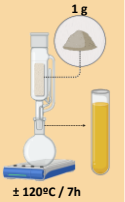
OBJECTIVE + ODS

The objective of this study was to characterize the nutritional components of 2 samples of an AgB extract enriched with β-g, one with >1 years of extraction and the other with <1 year of extraction, in order to investigate its properties as a nutritional functional food.

This work supported SDGs 3 and 9, stimulating health-promoting nutrition and scientific advances in the food sector.

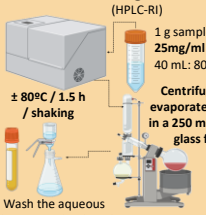
METHODOLOGY

Lipid (AOAC 920.39)



Ash (AOAC 923.03)

Sugar (HPLC-RI)



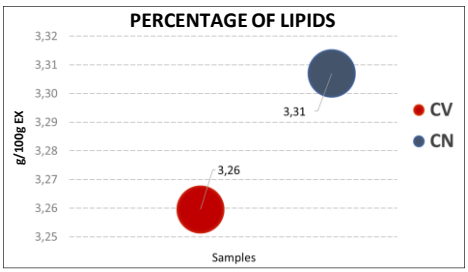
Protein Content Kjeldahl (AOAC 955.04)

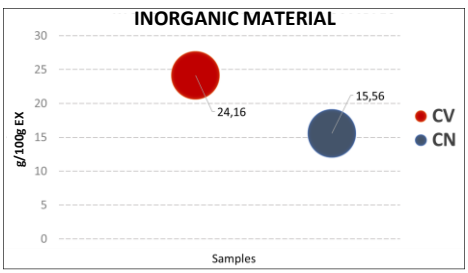
Energy value Análise gravimétrica

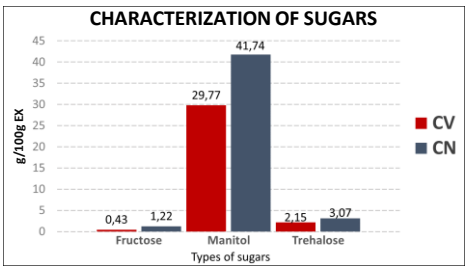
Ergosterol and Vitamin D (HPLC-UV)

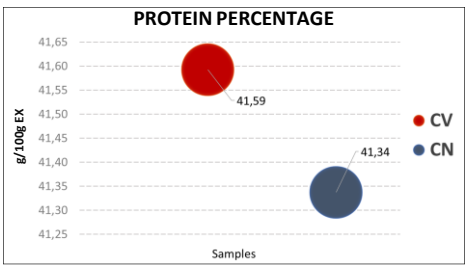
(Knauer, Smartline 1000, Berlim, Alemanha)

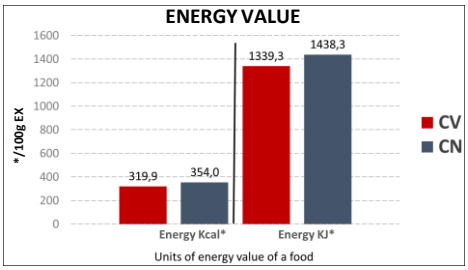
RESULTS











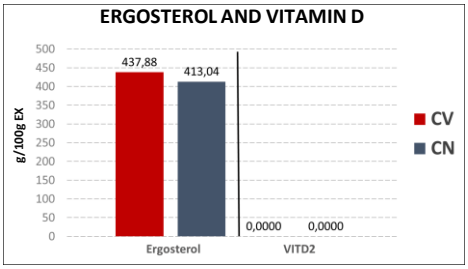


Figure 1: Graphs of the nutritional characterization experiments of the *A. blazei* extract enriched with β-g. **A:** Percentage of lipids/fats in the samples; **B:** Characterization of the inorganic material present in the samples; **C:** Characterization of the sugars present in the samples; **D:** Percentage of proteins present in the samples; **E:** Energy values (Kcal and KJ) of the samples and **F:** Quantification of ergosterols and vitamin D of the samples. **Legend: CV** – Mushroom with <1 year of extraction, **CN** – Mushroom with >1 year of extraction, **EX** – extract, **g** – Gram, **mg** – Milligram, **Kcal** – Kilocalorie, **KJ** – Kilojoules.

CONCLUSION

These varied nutritional profiles of *A. blazei* extract enriched with β-g show their potential to enhance food nutrition and health benefits, emphasizing their dietary versatility.

REFERENCES

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