

**Title: NUTRITIONAL EVALUATION of *Agaricus bisporus* TREATED WITH ESSENTIAL OILS**

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**Abstract:**

Mushrooms are highly prized food since ancient times because of its high nutritive value and medicinal potential. Although, there is not much available information about edible mushrooms cultivated in Brazil, especially about its nutritional compounds. This kind of information has become even more important for its evaluation of quality. Fibers, proteins, minerals and other compounds are essential for human nutrition and consumers prefer food. This study objectives the determination of proximate composition of mushrooms (*Agaricus bisporus*). The determinations of proteins, lipids and minerals occurred in 3x following AOAC (2005). Six treatments (thyme, cinnamon and India Clove essential oils, Sportak fungicide, sick mushroom and negative control) and five repetitions were made in “randomized blocks” by “experimental design”. Data were analyzed, subjected to analysis of variance and mean comparison obtained by the Tukey test. The results showed values of humidity ranging from 82,44 to 89,79%; 44,44 to 58,62% for carbohydrates; 26,25 to 38,15% for proteins; 0,29 to 1,07% for lipids; 6,59 to 9,56% for minerals; 5,06 to 12,8% for fibers. Carbohydrates and proteins were the most present compounds on all treatments. An interesting point is that the sick mushroom treatment had the lowest nutritional values for proteins and fibers coexisting with the highest carbohydrates and minerals values. A significative difference between means of lipids, carbohydrates and fibers on all treatments were observed. Only two treatments significantly differed from others on minerals and proteins quantification. The wide variation on nutrition values can be explained by the different treatments applied on mushrooms. The evaluation of proximate composition on studied mushrooms showed excellent results of proteins, fibers, minerals and low content of lipids despite high values of carbohydrates.

**Keywords:** Edible mushrooms, proximate composition, *Agaricus bisporus*.

**Development agency:** FAPEMIG, CNPq and CAPES.