

## Sensory and Microbial Properties of Fresh and Canned *Calocybe indica*

**Authors :** Apotiola Z. O., Anyakorah C. I., Kuforiji O. O.

**Abstract :** Sensory and microbial properties of fresh and canned *Calocybe indica* (milky mushroom) were evaluated. The mushroom was grown under a controlled environment with hardwood (*Cola nitida*) and rice bran substrate (4:1) canned in a brine solution of salt and citric acid. Analysis was carried out using standard methods. The overall acceptability ranged between 5.62 and 6.50, with sample S30 adjudged the best. In all, significant differences  $p < 0.01$  exist in the panelist judgment. Thus, the incorporation of salt and citric acid at 3.5g and 1.5g, respectively, improved sensory attributes such as texture, aroma, color, and overall acceptability. There was no coliform and fungi growth on the samples throughout the storage period. The bacterial count, on the other hand, was observed only in the fifth and sixth week of the storage period which varied between 0.2 to  $0.9 \times 10^3$  cfu/g. The highest value was observed in sample S20 of the sixth week of storage, while the lowest value was recorded in sample S30 of the sixth week of storage. Based on 16S rRNA gene sequencing, bacterial species were taxonomically confirmed as *Bacillus thuringiensis*. The percentile compositions and Sequence ID of the bacterial species in the mushroom was 90%.

**Keywords :** bacterial count, microbial property, sensory, sawdust, texture

**Conference Title :** ICFNT 2024 : International Conference on Food and Nutrition Technology

**Conference Location :** London, United Kingdom

**Conference Dates :** June 27-28, 2024