
Evaluation of proximate nutritional value of edible *Auricularia delicata* and *A. polytricha* from Manipur

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Auricularia delicata and *A. polytricha* collected from the forest of Manipur were cultivated artificially on different sawdust substrates and analysed for their proximate nutritional composition. The fruiting bodies of *A. delicata* and *A. polytricha* contained 93.2 and 87.79% moisture 7.30 and 8.89% crude protein, 1.40 and 5.50% crude fat, 6.90 and 14.00% crude fibre and 4.60 and 5.50% total mineral ash respectively.

Key words: *Auricularia delicata*, *A. polytricha*, substrate, artificial cultivation, nutritional composition

In recent years increasing attention have been paid to the evaluation of nutritional value of edible mushrooms (Crisan and Sands, 1978; Jandaik *et al.*, 1979 and Samajpati, 1978). The consumption of wild edible mushrooms is increasing, even in the developed world, due to its high protein content as well as higher content of trace minerals (Agrahar and Subbulakshmi, 2005; Thimmel and Kluthe, 1998). Due to the favourable climatic condition, the Manipur state possesses a variety of wild edible mushrooms. The local populace of the state collect edible mushrooms for consumption as wild and or purchased from the local markets just after the pre-monsoon shower. Among the wild edible mushrooms found in this state, the genus *Auricularia* (Jew's ear mushroom) has also been one of the delicious and nutritive food value types. In spite of the immense popularity of this genus in the region and due to decline in their availability, we collected two *Auricularia* spp. viz., *A. delicata* and *A. polytricha* and cultivated artificially on different sawdust substrates for determination of their nutritional status. The finding are communicated in this short communication.

Two species of *Auricularia* viz., *Auricularia delicata* and *A. polytricha* locally available in Manipur collected and artificially cultivated. Fruit bodies were analysed for their nutritional compositions viz. moisture, crude protein, crude fat, crude fibre and total ash respectively. Dried powder sample were used for their determination except for moisture content. Hot air oven method following Hart and Fisher (1971) was employed for determination of moisture content. For crude protein Calorimetric Nitrogen Estimation method (Lang, 1958) was employed and conversion factor of 4.38 was used to quantify the nitrogen percentage of the crude protein (Crisan and Sands, 1978). Crude fat was estimated according to Soxhloet extraction method (AOAC, 1970) with diethyl ether and the residue left after the extraction of crude fat was used for determination of the fibre content. Total ashes were estimated by ISI (1982) methods and the incinerated residue obtained at 540°C after 2 h was the total mineral ash of the samples.

The fruiting bodies of *A. delicata* and *A. polytricha* contains 93.21 and 87.79% moisture, 7.30 and 8.89% crude protein, 1.40 and 1.50% crude fat, 6.90 and 14.00% crude fibre and 4.60 and 5.50% total mineral ash respectively (Table 1). The total ash content of *A. delicata* was found to be lower (4.60%)

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than the content of *A. polytricha* (5.50%). The total mineral ash content for both *Auricularia* species has found to be insignificantly different. The results are in conformity with the findings of previous workers (Adriano and Cruz, 1933; Chang and Miles, 1989; Crisan and Sands, 1979; FAO, 1972; Upadhyay, 1999).

Table 1: Proximate composition (%) of *Auricularia* spp. found in Manipur.

Contents	<i>A. delicata</i>	<i>A. polytricha</i>
moisture	93.21	87.79
Crude protein	7.30	8.89
Crude fat	1.40	1.50
crude fibre	6.90	14.00
Total ash	4.60	5.50

* All data presented in percentage of dry weight except moisture content

Auricularia spp. consumed by the indigenous people of Manipur state have always been harvested from the wild. So far no effort has been made to cultivate these edible mushroom on large scale for commercial purpose. Therefore, artificial cultivation and nutritional values of these mushrooms have been set up to retain the information on these unique species. The low concentration of fat content is the main attraction to the nutritionists and recommended as a diet for diabetic patients in the state.

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