

Mushrooms well medicinal values but it is also

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Mushrooms are important for their food values as well medicinal values but it is also popular due to their delicacy and flavour (Chandra and Samsher, 2006). *A. auricula* contained 18.3g protein, 18.9g carbohydrates and 50g dietary fiber per 100g of dry fruit body (Khan et al.

, 2009; Kim et al., 2007 and Ma et al., 2010) and it plays crucial role in China mushroom industry due to containing of high nutritional value therefore to be processed into a variety of foods (Fan et al., 2009).

According to Usha and Suguna, (2014) *A. polytricha* has high carbohydrate (28.5%), protein (36%) Crude fibre (22.35%) content but low fat (3.40%) content and it makes them a much ideal food item for diabetic, cancer and cardiac patients.

This high protein and low fat characteristics of the edible mushrooms has been previously reported by many researchers (Diez and Alvarez 2001; Longvah and Deosthale 1998). *A. auricula-judae* is a poor source of protein containing about three times lower protein than *Lentinus connatus* and *Pleurotus ostreatus* (Celestine et al., 2015) in Spain, similar finding was also observed by other researchers from different countries (Kakon et al., 2012 and Gbolagade et al., 2006) in case of *A. polytricha*. The proximate and mineral element compositions of five wild growing mushrooms species in Abakaliki area of Nigeria was investigated by Celestine et al.

, (2013) They found that *A. polytrichia* had the least amount protein (3.77%) but highest amount of carbohydrate (80.85%) whereas *P. ostreatus* had the highest amount protein (16.

35%) but least carbohydrate value (44.41%) studied in Nigeria. They also reported that mushrooms are also good sources of nutritionally important mineral elements but they did not contain toxic levels of Cd and Pb. The proximate composition, mineral element components of two selected wild edible mushrooms like, *Lentinus squarrosulus* and *A. politricha* from three regions from the center of Côte d'Ivoire was investigated (Anno et al., 2016). Anno et al.

, (2016) observed that these two mushrooms contained high level of proteins, crude fibre, carbohydrate, ash but fat content was very less and rich in potassium, phosphorus, calcium and magnesium but Cd and Pb contents of both species was generally very low. Similar finding was also reported by Okechukwu et al. (2011) where the protein content was 10.50% and 14.88% in *A. polytrichia* and *P. ostreatus*, respectively, in Nigeria. Hung and Nhi (2012) observed that in comparison to other studied mushrooms, *A.*

polytrichia had protein and lipid content was lowest but carbohydrate content was highest, in Vietnam. The difference in protein contents of in different mushrooms is due to the number of factors like, type of mushroom, stage of development, part of the samples, level of nitrogen availability and the location (Longvah and Deosthale, 1998). Gbolagade et al., (2006) and Johnsy et al., (2011) reported that the ash content of *A.*

polytrichia was 5.2% and 8.7% respectively, on dry weight basis. According to some researcher generally, fresh mushrooms contain a relatively high amount of fibre which may be responsible for its relatively high amount of ash (Cheung, 1998). *A. auricula-judae* contains 3.6% of ash, 12.

5% of protein, 1.7% of fat and a large amount of carbohydrates (66.1%) per dry matter in India.

A. auricula-judae contains 3.6% of ash, 12.5% of protein, 1.7% of fat and a large amount of carbohydrates (66.1%) per dry matter (Irina et al., 2015) in China.

Johnsy et al., (2011) reported that *A. auricular* contained carbohydrates (33.23%), lipids (1.63%), protein (36.3%), fibre (8.4%) and ash (7.07%) and it was ranged in between other studied mushrooms.

Ezeibeke et al., (2009) found that *A. auricular* and *P. squarrosulus* contained low protein, ash, fat and carbohydrate contents in compared with *P. tuber-regium* in Nigeria. Wild and cultivated mushroom of *A. auricular*, nutritionally rich in carbohydrates, protein, but lowest value fat, ash content and low levels of macro- and micro-elements was recorded (Obodai et al., 2014).

The protein content of mushrooms is known to be highly variable due to different reasons like, strain of species, tissue type and stage of development, substrate and method of analysis (Usha and Suguna, 2014).

From the above findings it was found that *Auricularia* spp. didn't very much differ from other edible mushrooms in its nutritional composition. Therefore this relative high carbohydrate content as well as food energy values in *Auricularia* spp.

suggests that they are excellent source food items (Chukwu, 2000) and these mushrooms are used as raw material to produce low-calorie dietary food items (Irina et al., 2015), as well as a good source of biologically active

beneficial components. Most of the *Auricularia* Sp. contain high amount of carbohydrate but low amount of fat. In some species the protein content may be high up to 36%. This mushroom rich in potassium, phosphorus, calcium and magnesium, but cadmium and lead content generally very low. Due to presence of excellent nutrients *Auricularia* may be a choice dietary item for diabetic, cardiac, and cancer patients. There are many species of *Auricularia* available in wild conditions but it is necessary to identify these species at the molecular level.

The documentation and characterization of various species of *Auricularia* is very much important, because it is the fourth most important cultivated mushroom in all over the world after *Agaricus*, *Lentinus* and *Pleurotus*.