

The General Characteristics and Cultivation of some Nigerian Mushrooms.

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Abstract:

Sixteen mushroom species, namely, Agrocybe broawayi, Chlorophyllum molybdites, Coprinus africanus, Coprinus congregatus, Lentinus subnudules, Lepiota bionata, Plerotus tuber-regium, Psathyrella atroumbonata, Termitomyces microcarpus, Termitomyces robustus, Termitomyces striatus, Termitomyces species, Tricholoma lobayensis, Volvariella esculents, Volvariella speciosa, and an unidentified species were studied.

Maltose- and glucose-glutamic acid liquid media supported good mycelial growth of the five species investigated. Some of the species contain various amounts of protein, fats, fiber, and carbohydrates.

Mycelial growth of the five species investigated was temperature and pH dependent. Minimal and maximal growth temperatures were 10°C and 40°C respectively for each of the species. Optimal temperature requirements varied between 25°C and 40°C. The mushroom species grew best around pH values of 6.5 and 7.0

The greatest amount of protein (>50%) occurred in V. esculenta. Most of the mushrooms contained the major as well as the trace elements in measureable concentrations. Aluminium occurred in very high concentrations in all the species tested. Arsenic was virtually absent in all the mushroom species studied. Alkaloids and tannins were detected in most of the species tested. Saponins were not detectable in any of the species analysed.

C. molybdites was as good as casein in promoting growth of white albino rats, but it made such rats extremely excited and aggressive. T. stratus was found to be highly toxic. All the rats that were fed on a diet containing the mushroom died within 4 days. P. tuber-regium and P. atroumbonata were successfully cultivated in the field. C. congregatus and T. lobayensis were cultivated in the laboratory using Blighia sapida and Terminalia ivorensis (Black Afra) wood chips together with their saw dust.

Keywords: mushroom species/ mycelial growth/alkaloids/ tannins/ wood chips/ saw dust

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