

Anti- Oxidant Attributes of Four Cultivated Mushrooms in Sri Lanka

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Edible mushrooms are an excellent source good quality protein particularly important to a vegetarian diet to supplement and compliment the protein requirement of less-privileged section of the society. Although therapeutic properties of edible mushrooms are well documented in other countries, similar information is scanty in Sri Lanka. This scenario has led many to become sceptical whether food of fungal origin could hold any nutritional and medicinal promise despite the fact that edible mushrooms are emerging as a functional food in several communities. Therefore a need prevails to raise awareness about the dietary importance of mushrooms based on their anti- oxidant properties. An investigation was carried out to ascertain functional attributes of four selected mushrooms in terms of their free radical scavenging activity. These include *Pleurotus ostresus*, *Ganoderma lucidum*, *Calocybe indica* and *Calocybe spp.* The anti- oxidant activity of the ethanolic and methanolic extract of the above mushrooms on the stable radical 1, 1-diphenyl-2-picrylhydrazyl (DPPH) was determined. Different concentrations of sample were compared with Ascorbic acid and Quercetin as standards. Antioxidant capacity of all the tested mushrooms obtained from three different growth substrates namely sawdust mixed with spent mushroom 1:1(SD+SMS), SD+ paddy straw 1:1 (SD+PS) and conventional SD substrate shows a IC_{50} value of $\leq 100\mu\text{l/ml}$ suggesting that all four tested mushrooms possess moderate DPPH scavenging activity compared to Ascorbic acid and Quercetin. Scientific elucidation of medicinal attributes of Sri Lankan cultivated mushrooms would certainly trigger the demand for edible mushrooms as a functional food.

Biography:

Janakie Chinthra Rajapakse is a researcher by profession and counts 30 years of experience in the field of Mushroom Science, Microbiology and Plant pathology. She holds a BSc. (Hons.) degree in Agriculture from University of Ruhuna, Sri Lanka and Master's degree in Agricultural studies from University of Queensland, Australia. Currently she is pursuing doctoral studies at University of Colombo in Sri Lanka pertaining to bio chemical analysis of selected mushrooms and mushroom derived product development. She has several publications to her credit. Currently she is serving as the Director of Agriculture in Kalutara district in the western province of Sri Lanka.