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Comparative study on the nutritional value, antioxidant and antimicrobial properties of Pleurotus sajor-caju (Oyster Mushroom) grown on three different substrates

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The present study was carried out to evaluate the nutritional values, antioxidant activity and antibacterial activity of edible mushroom, *Pleurotus sajor-caju* grown on three different substrates *viz* Paddy Straw, Wheat Straw and Banana Leaves. Samples of mushrooms from the three substrates were analyzed for their protein, carbohydrate and lipid contents. Ethanolic extracts of the mushroom samples were used to determine the antioxidant activity by FRAP, DPPH free radical scavenging activity, hydroxyl scavenging activity, superoxide radical scavenging activity along with the total phenolic and flavonoid contents. Changes in the total phenolic and flavonoid content could be explained by the biosorption capacity from substrate. The antimicrobial activity studies were based on the zone of inhibition formed around the well in well diffusion method. Mushroom extracts exhibited antibacterial activity against both gram-positive and gram-negative bacteria. Therefore, *Pleurotus sajor-caju* can be considered as a nutrient rich edible mushroom with effective antioxidant and antimicrobial properties which could be used daily as a functional food.

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Value added green mango-mint-tulsi squash modified with honey

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Mango pulp is high in prebiotic dietary fibers, vitamin C, polyphenols, carotenoids., vitamins and dietary minerals. Mint leaves are known for its medicinal, aromatic and flavorsome qualities. Mint acts as a powerful antioxidant, protecting the body against the formation of cancerous cells and is rich source of polyphenolic compounds. Tulsi also have antioxidant, adaptogenic, anti-inflammatory, antibacterial and immune-enhancing properties. Honey is natural sweetener and has antiseptic and antibacterial properties. Medicinally, honey is non-irritant, promotes rapid growth of healthy tissues & is useful in pruitus value, bed spores, skin & intestinal disorders, etc. Keeping in mind the beneficial effects of these raw materials, attempt was made to prepare a value added drink from it, which may have medicinal value and good sensory acceptability with objectives to prepare and evaluate the recipe for value added green mango- mint-tulsi beverage and to study the shelf life of the developed value added beverage.

A recipe for squash preparation has been developed using green mango, mint and tulsi as raw materials. Their different ratios were tried and further the best formulation showing high overall acceptability in terms of sensory parameters was selected. The sugar in the best formulation was partially substituted by honey. The squash thus prepared was stored in glass bottles for three months and chemically analyzed for different components when prepared fresh and later on regular interval of 30 days. During storage, the sugar content was observed to increase slightly; acidity and TSS remained same; whereas chlorophyll, carotenoids, total phenols and ascorbic acid contents decreased. The value added squash was diluted three times and the drink was found to have good sensory attributes and nutritive value.

Biography

Sonal R. Zanwar is pursuing M.Sc. Food Science and Technology from Chaudhary Charan Haryana Agril. University, Hisar, Haryana, India and will complete degree by May, 2012. She had attented three national conferences and one international conference where she had presented posters. She has also published one full length paper.

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