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Sunita Kumara Kamal
Krishi Vigyan Kendra, Palamu,
Jharkhand, India

Dilip Kumar Pandey
Krishi Vigyan Kendra, Palamu,
Jharkhand, India

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**Acceptability test of value added products developed
from oyster mushroom. (*Pleurotus florida*)**

Sunita Kumara Kamal and Dilip Kumar Pandey

Abstract

The study the effect of three value added products developed from fresh oyster mushroom. (*Pleurotus Florida*) viz. Mushroom Pickles [one and half kg fresh mushroom, (0.05%) KMS, (0.4%) citric acid, salt (90 gm), black mustard seed powder (35.0 gm), turmeric powder (20.0 gm), red chili powder (10 gm), cumin seed powder (5 gm), Carmon seed (10 gm), Kalonji (50 gm), turmeric powder (20 gm), mustard oil (200 ml) and salt], mushroom dry powder [fresh Oyster mushroom (1 kg), KMS (0.06%), citric acid (0.4%)], Mushroom Bari [fresh mushroom (1kg), Urad dal (500 gm), ginger (50 gm), red chili (1tsp), black pepper (1/2 tsp), green chili (50 gm) and salt according to taste].The study was conducted on 30 selected farm women randomly of age group 20-45. Only female sex group was participated in experimental study of adopted village of Palamau district (Jharkhand). The organoleptic quality of value added mushroom products were determined by score given for sensory characteristics such as colour, flavor, taste, texture and general acceptability of by selected panel member on three developed value added products. In acceptability test the equivalent score for general acceptability above 85% in three value added products that indicates the product has been liked very much even by farm women, for whom these products were developed.

Keywords: Farm women, mushroom, value added products, panel member

Introduction

Oyster mushroom (*Pleurotus Florida*) is highly perishable poses serious marketing problems in the peak seasonal period as well as commercial production resulting in gluts distress safe with a view to ameliorate the problem, processing of mushroom to develop some value added products was undertaken from the fresh oyster mushroom. As mushroom contain high moisture and are delicate in texture. These cannot be stored for more than 24 hours as the ambient condition of the tropics. (Wekchaure *et al.*, 2010) Effective processing technique was not use of mushroom growers to prevent oyster mushroom. Value can be added to the mushroom at various levels. Three types of value added products (Mushroom pickles, Mushroom dry powder, Mushroom Bari) were developed from fresh oyster mushroom at Village levels.

All these value added products have acceptability and organoleptically acceptable for their color, appearance, flavours, taste, texture and general overall acceptability on the 9 point hedonic scale by a rural family and the panel of ten judge. Developed value added products will not only reduce losses but will also enhance the income by adopting appropriate post harvest technology to process surplus mushroom into novel value added products (Arumugantham *et al.*, 2005). Mushroom protein is intermediate in quality vegetables and animal proteins and the supplementary value of mushroom protein in vegetarian diet is of considerable significance. Mushroom can be used as supplementary food items to the growing population of the developing countries were the population mainly depends on cereals food. Due to high quality nutrients and their medicinal and therapeutic properties, Mushroom has become popular worldwide. During peak harvest season, market gets saturated quickly and growers resort to distress sale. Consequently, unsold mushroom become a total loss. Hence, method needs to develop for the production of processed products from Mushroom.

Correspondence
Sunita Kumara Kamal
Krishi Vigyan Kendra, Palamu,
Jharkhand, India

Methods and Materials

Experiment was conducted in adopted village at household level of Palamau districts under Krishi Vigyan Kendra Palamau. 30 Rural women were randomly selected and prepared Value added Products from oyster mushroom (*Pleurotus Florida*) namely mushroom pickles, mushroom dry powder and mushroom Bari.

1. Mushroom Pickles

One and half kg freshly harvested mushroom were graded based on size and washed thoroughly in clean water to remove the foreign matters adhering on the surface for making 1 kg pickles. The cleaned mushroom were cut into small pieces and blanched immediately by dipping them in boiling solution of 0.05% KMS + 0.4% of citric acid and 2% brine solution for 10 minutes. The balanced mushroom were subjected to salt curing process in 10% NaCl and kept for overnight. Next day the excess water out from mushroom was removed and appropriate preservatives (acetic acid and sodium benzoate), salt (90 gm), black mustard seed powder (rai) (35.0 gm), turmeric powder (20.0 gm), red chilli powder (10.0 gm), Cumic seed powder (5 gm), carom seed (ajwain) (10.0 gm), nigella seed (kalonji) (50.0 gm), turmeric powder (20 gm) and mustard oil (200 ml) were mixed to get acceptability and organoleptically acceptable mushroom pickles in rural areas.

2. Mushroom dry powder

One kg fresh mushroom were cleaned, sliced and dipped into two preservatives (0.06 % KMS and 0.4 % citric acid/lit water) for 4-5 hours. The effect of potassium metabisulphide and citric acid on the whiteness and enhance keeping quality of dry oyster mushroom. After soaked mushroom was dry on clean place equally spread under the sun rays for 2-3 days at home scale level. Dehydrated mushroom ready to prepare mushroom dry powder and packaging with small pp pouch and kept in air tight container.

3. Mushroom Bari

In India different type of Bari are popular according to used of different ingredients. Mushroom Bari was prepared by selected rural women in experimental field. 1/2 kg fresh oyster mushroom were clean with fresh water, cut into small chopped pieces (1-1.5 cm), urd dal (Black gram) 1kg soaked

in fresh water overnight, and in morning were washed 2-3 times and drained of water through sieve and muslin cloths. Soaked urd dal grinded and prepared fine paste with mix chopped fresh mushroom, ginger (50 gm), red chili (1tsp), black pepper (1/2 tsp), green chili (50 gm) and salt according to taste. Sun drying methods were available at village level in open space for drying Bari ball but some precautions were maintained from contamination. Dried mushroom Bari ball packed in PP bag and kept in air tight container.

4. Determination of Acceptability Quality

All three value added products (Mushroom Pickle, Mushroom dry powder, Mushroom Bari) evaluated by sensory evaluation using a score card of 9 point hedonic scale (Table 1 and Table 3). Some amount of value added products developed from fresh oyster mushroom served separately to 10 selected panel members for organoleptically testing and 30 selected farm women and family for acceptability testing. The sensory score was converted into equivalent score out of 100.

Table 1: Score card of Acceptability and organoleptic characteristics of value added Products developed Fresh oyster Mushroom (*Pleurotus Florida*).

Products	Colour	Flavour	Taste	Texture	General acceptability
Mushroom Pickles					
Mushroom dry powder					
Mushroom Bari					

Note: Please score as given below:

- Like extremely: 1
- Like very much: 2
- Like moderately: 3
- Like slightly: 4
- Neither like nor dislike: 5
- Dislike slightly: 6
- Dislike moderately: 7
- Dislike very much: 8
- Dislike extremely: 9

Result and Discussion

Acceptability and organoleptic testing of value added products developed from fresh oyster mushroom were determined by the score given for sensory characteristics such as colour, flavor, taste, texture and general acceptability and equivalent score of hundred has been presented table-2 and 3.

Table 2: Acceptability test for sensory characteristics of value added products developed from fresh oyster mushroom (*Pleurotus Florida*).

Products	Colour	Flavour	Taste	Texture	General acceptability
Mushroom Pickles	1.7(91.25)	1.5(93.75)	1.3(96.25)	1.9(88.75)	1.6(92.50)
Mushroom dry powder	1.7(91.25)	1.9(88.75)	1.7(91.25)	1.9(88.75)	1.9(88.75)
Mushroom Bari	1.7(91.25)	1.5(93.75)	1.3(96.25)	1.9(88.75)	1.6(92.50)

Table 3: Organoleptic test for sensory characteristics of value added products developed from fresh oyster mushroom (*Pleurotus Florida*).

Products	Colour	Flavour	Taste	Texture	General acceptability
Mushroom Pickles	1.5(93.75)	1.5(93.75)	1.9(88.75)	1.7(91.25)	2.1(86.25)
Mushroom dry powder	1.4(95.0)	2.3(83.75)	2.5(81.25)	2.7(82.5)	2.7(82.5)
Mushroom Bari	1.3(96.25)	1.4(95.0)	2.0(87.5)	2.0(87.5)	2.3(83.75)

Table 3 find out the performance of mushroom pickles was better for colour, texture, flavor, taste and texture than mushroom Bari and mushroom dry powder. The acceptability of value added products developed from fresh oyster mushroom by farm women has been determined by the acceptance and rejection of food products by the selected farm women. The score of acceptability of the product using 9

point hedonic scale has been expressed in equivalent score out of 100. The data obtained has been presented in table-2. The score for general acceptability of mushroom pickles followed by mushroom Bari and mushroom dry powder. In case of mushroom pickles the equivalent score was 91.25 for colour, 93.75 for flavour, 96.25 for taste, 88.75 for texture and 92.50 for general acceptability. The equivalent score for colour,

flavor taste, texture and score for general acceptability was 91.25, 93.75, 96.25, 88.75 and 92.50 in respectively mushroom bari. The equivalent score for colour, flavor, taste, texture and general acceptability was above 30 in all three value added products has been liked very much by farm women and their family member for as products has been developed at home scale level. The equivalent score for acceptance for all sensory parameters for all three value added products acceptance was above 80. In case of mushroom pickles was more liked than mushroom Bari followed mushroom dry powder. Table no-3, that all three value added products were well accepted by the panel member.

Conclusion

The study revealed that the value added products developed from fresh oyster mushroom (*Pleurotus Florida*) as mushroom pickles, mushroom dry powder and mushroom bari gets wide acceptability more than 80% by farm women and their family member as well as selected panel member. Mushroom pickles and mushroom bari get 92.50% acceptability score while general acceptability on brief of organoleptic test for mushroom pickles in highest (86.25%). Value added products of mushroom enhance farming community interest to grow mushroom during peak season period and get different type of benefit *viz.* home scale off season value added produce consumption as well as sell of produce to get monetary benefits.

Reference

1. Arumunganthan T, Rai RD, *et al.* Studies on development of value added products of fresh mushroom *Agaricus bisporus*. Mushroom research 2005; 14(2):84-87.
2. Chandrasekhar VRD, Rai TK, *et al.* Preparation and stage of mushroom curry in resent pouches. Mushroom Research. 2002; 10(2):103-107.
3. Sahoo M, Prakash J. Formation and standardization of dill Based Gherkin Pickles: A study on physico-chemicals and sensory attributes. The Indian journals of nutrition and dietetics, 2017. DOI: 21048/ijnd.54.4.16558.
4. Sexena RD. Post Harvest Technology of Mushroom. Technical Bulletin No 2.NRCM, Solan, India, 1990.
5. Wekchauare GC, Shirurm M, *et al.* Development and evaluation of oyster, mushroom value added products. Mushroom Res. 2010; 19(1):40-44.