

Comparative Study on Organoleptic Characteristics of Developed Momos from Fresh and Dried Mushroom



Home Science

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ABSTRACT

Mushrooms are edible fungi and assume considerable importance in the human diet as they are highly rich in protein and also non-starchy carbohydrates, dietary fiber, minerals, and vitamin-B and are quite low in fat value. Therefore, they form an important constituent of a diet for a population suffering from atherosclerosis. But, when mushroom comes to fungi origin, many people are apprehensive and reject mushroom as a part of their diet. Therefore, its addition or incorporation on traditional foods is not only an effort to enhance the acceptance of mushroom among common people but it can be produce new food at commercial level. Organoleptic evaluation of prepared momos revealed that fresh mushroom momos had better organoleptic characteristic than dried mushroom momos and control sample. The various studies show that the productions of mushroom are not completely utilized because of incomplete knowledge of its use. So, this type of research is a remarkable step in the context of development of enrichment in our daily diets.

Introduction:

Most developing countries like India look forward to solve the acute protein deficiency in the diets of its increasing population. This has led food scientists to seek new sources of protein (Gupta and Sarmah 2004). Mushroom has been recognized as the alternate source of good quality protein. Mushroom contains 20-30% protein (on dry basis) which is higher than in vegetables and fruits and is of high quality. They are rich in histidine and tryptophan, the two essential amino acids which is deficient in cereals. Mushroom has significant amount of carbohydrate, protein, free amino acids and crude fibre whereas low amount of fat signifies its importance as diet for the sufferers of diabetes, obesity, atherosclerosis and high blood pressure (Rai *et al.*, 2007).

In identification of nutritious raw materials "Mushroom" is the magic ingredient having lot of quality nutrients, functional and medicinal properties, their incorporation in prevailing food ingredients will all, make necessity its part in daily diet or food habits of the population. Further there is a great challenge and opportunities to develop the technologies to ready to eat form of those incorporated products as preferences of consumer and high return farming food product industries. Owing to their attractive taste, aroma and nutritional values, edible mushrooms are valuable components of the diet. Mushrooms are now available in fresh pack, processed pack, powdered form as well as canned products. Edible mushrooms are used extensively in cooking, because they are highly nutritious, they are rich in protein, vitamins as well as some mineral such as calcium, potassium, magnesium and iron (Jiskani 2001).

Objectives:

1. To standardize the selected recipe and prepare products by fresh and dried mushroom.
2. To assess the organoleptic acceptability of developed products.

Materials and Methods:

The present study was carried out in the Department of Foods and Nutrition, College of Home Science, MPUAT, Udaipur. The study was aimed at preparation of sample and organoleptic evaluation of the products prepared from fresh and dried mushroom, as well as their control product. Their qualities have been than compared after results obtained.

Selection of recipe: Today, the incidence of different public health diseases as protein energy malnutrition, cardiovascular disease, diabetes etc. is increasing day by day. It is very important to maintain health through diet with medicine in various

diseases and also at various physiological states as pregnancy and lactation. Mushrooms are rich in various nutrients which is essential for normal growth and development. Keeping in view the nutritional benefits of mushroom, it was selected for product development in the present research.

Standardization of recipe: It includes various steps like planning of recipes, procurement of raw materials, preparation of sample and development of products. Recipe for Momos (per 100 g) given in table 1.

a) Planning of recipes: One recipe was selected i.e mushroom momos- first by filling dried reconstituted mushrooms and second by filling fresh mushrooms and the recipe was standardized.

b) Procurement of raw materials: Fresh Oyster mushroom was purchased from Rajasthan College of Agriculture, Udaipur from the section of mushroom research.

c) Preparation of sample: Momos were prepared by using cabbage (control sample), fresh and dried mushrooms. For drying mushrooms, Fresh mushrooms were sorted, washed, trimmed and after that blanched for 3 minutes and drained. Then blanched mushrooms were oven dried at 110°C for 10 hours.

d) Development of products (Momos):

Preparation Time: 10-15 minute, Cooking Time: 15 minute, Pieces: 6-8 momos

Method:

For Dough:

- Mix flour, salt and oil (adding oil in the dough gives softer outer layer) in a bowl.
- Add water to make smooth pliable dough. Just like our poori dough. Keep aside covered.

For Stuffing:

- Half blanch the cabbage \ fresh mushroom \ Reconstitute the dried mushroom.
- Heat a pan with oil, add garlic, and finely chopped onion. Give a stir in high flame.
- Add the chopped blanched mushroom \ Reconstitute the dried mushroom and fry in high flame for a minute.
- Add salt, pepper, soy sauce, chilli sauce and mix well. Lastly add finely chopped coriander leaves and mix for a minute in medium flame. Switch off and keep aside.
- Then rolled the dough into a big disc and used a big lid to cut into smaller discs. After that again roll to make it thin-

ner. Keep some prepared stuffing in the middle. Fold it to make momo shapes. Steam it in a steamer spaced properly, for 15 minutes.

Organoleptic Evaluation of Developed Products (Momos):

The acceptability of momos was evaluated by a panel of 10 judges using 9-point Hedonic Scale (Table 2). Semi -Trained panel did the evaluation. The panelist was asked to record the level of liking or disliking by giving marks for various characteristics of the products as taste, flavour, texture, colour and appearance and overall acceptability. The samples were rated on 9 point Hedonic Scale for quality attributes according to grade descriptions and scoring (Table 3).

Analysis of Data:

Mean scores for the organoleptic evaluation were obtained.

Results:

The developed recipes were analyzed at zero day for organoleptic acceptability. The data of mean score was tabulated and analyzed statistically and the result has been presented in table 4. Table 4 shows the mean score of overall acceptability obtained by organoleptic evaluation between control and developed samples. The mean score of control sample was 7.0 ± 0.0509 while the mean value of T₁ and T₂ samples were 7.3 ± 0.1314 , and 7.2 ± 0.1314 respectively. The overall organoleptic acceptability of different samples of momos showed that fresh mushroom momos had better organoleptic characteristic than other samples.

Conclusion:

Organoleptic Characteristics of developed momos was analyzed by panel members and it was revealed that momos with fresh and dried mushroom were **liked moderately** (on the basis of mean score) by panel members after evaluation by using 9-point hedonic scale. But fresh mushroom momos were highly acceptable as compared to dried mushroom momos. Hence, it may be concluded that more palatable dishes can be obtained with fresh and dried mushroom. Mushrooms have long been used for medicinal and food purposes since decades. As protein sources, they can be used as an additional dietary supplement to make up for the protein deficiency of the Indian population in addition to their satiety factor. Further researches can also be planned and can be different recipes tried out with mushrooms, which is an under-utilized food in India that can be used as nutritious snacks for the people as a healthy replacement to traditional snacks and foods.

Tables and Figures

Table 1: Recipe for Momos (per 100 g):

Ingredients	Amount (g)		
	Control	T ₁ (Fresh Mushroom Momos)	T ₂ (Dried Mushroom Momos)
For dough			
Refined flour	25	25	25
Oil	1 tsp	1 tsp	1 tsp
Water	Acc. to need	Acc. to need	Acc. to need
Salt	Acc. to taste	Acc. to taste	Acc. to taste
For Stuffing			
Cabbage	50	-	-
Dried Mushroom	-	-	50

Fresh Mushroom	-	70	-
Minced Chopped onion	2 tbsp	2 tbsp	2 tbsp
Minced Chopped garlic	2 pics.	2 pics.	2 pics.
Minced Chopped ginger	1 tbsp	1 tbsp	1tbsp
Chopped green chili	2 nos.	2 nos.	2 nos.
Black pepper powder	1/2 tsp	1/2 tsp	1/2 tsp
Chopped coriander leaves	2 tbsp	2 tbsp	2 tbsp
Salt	Acc. to need	Acc. to need	Acc. to need
Soya sauce	2 tsp	2 tsp	2 tsp
Chili sauce	1 tsp	1 tsp	1 tsp
Vinegar	2 tsp	2 tsp	2 tsp

Table 2: 9-point Hedonic Score Graduation Table:

S.No.	Grade	Score
1	Like extremely	9
2	Like very much	8
3	Like moderately	7
4	Like slightly	6
5	Neither like nor dislike	5
6	Dislike slightly	4
7	Dislike moderately	3
8	Dislike very much	2
9	Dislike extremely	1

Table 3: Score Card for Organoleptic Evaluation:

S.No.	Characteristics	Perfect Score	Study Group Product (Momos)
1.	Colour	9	
2.	Flavor	9	
3.	Appearance	9	
4.	Texture	9	
5.	Mouth feel or Taste	9	
6.	Overall Acceptability	9	

Table 4: Mean Score of Organoleptic Evaluation of Developed Momos.

S.No.	Parameters	Study Group Products		
		Control	T ₁ (Fresh Mushroom Momos)	T ₂ (Dried Mushroom Momos)
		0 day	0 day	0 day
1.	Colour	7.2 ± 0.0707	7.5 ± 0.15	7.4 ± 0.15
2.	Flavor	6.5 ± 0.1479	7.1 ± 0.2277	7.1 ± 0.3766
3.	Appearance	7.4 ± 0.1581	7.4 ± 0.15	7.4 ± 0.1090
4.	Texture	7.1 ± 0.2487	7.3 ± 0.1920	7.3 ± 0.1581
5.	Mouth feel or Taste	6.8 ± 0.0707	7.3 ± 0.3561	7.1 ± 0.1785
6.	Overall Acceptability	7.0 ± 0.0509	7.3 ± 0.1314	7.2 ± 0.1023

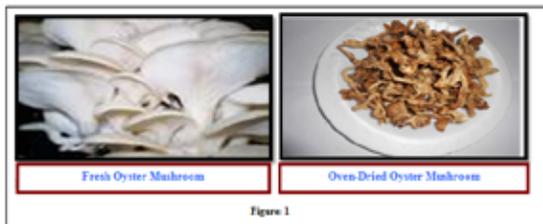


Figure 1



Figure 2

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