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RESEARCH ARTICLE

A COMPARATIVE STUDY ON NUTRITIONAL PROFILE OF MUSHROOM FORTIFIED NOODLES

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ABSTRACT

Mushrooms are rich sources of proteins, vitamins and minerals. Low content of carbohydrate and fat makes mushrooms an ideal food for diabetes and persons who wish to shed excess fat. Noodles are most preferred food items among all age groups having longer shelf life and good commercial importance. The present study was conducted to compare nutritive value of developed mushroom fortified noodles with that of control group. Mushroom fortified noodles were prepared by fortifying mushroom powder in different levels to the Noodle flour, whereas noodles prepared out of noodle flour were kept as control. Developed product was evaluated on various parameters: sensory evaluation & nutritional analysis. Sensory evaluation of prepared product was carried out using 9 point hedonic scale, out of the three. Hence highest acceptable product was put forth for the nutritional analysis & percentage of protein, calcium, carbohydrates, fat and dietary fibre respectively.

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INTRODUCTION

Edible mushrooms have been widely utilized as human food for centuries and have been appreciated for texture and flavour as well as some medicinal and tonic attributes (Manzi *et al.,* 2001). However, the awareness of mushrooms as a healthy food and as an important source of biological active substances with medicinal value has only recently emerged (Chang, 1996). Mushrooms are considered as healthy food because they are low in calories and fat but rich in proteins and dietary fibers. Mushrooms are good source of iron, copper, calcium, potassium, vitamin D, folic acid, zing, etc. They are also good source of energy about 454 gm of fresh mushrooms providing 120 kilocalories Specially, selected strains of dried mushrooms are used to produce mushroom capsules and extracts. Nowadays, mushroom is being relished throughout the world as food and medicine. Researcher reports revealed that mushrooms are rich in food values being food source, and out of 100g, it contains proteins (3.6g), vitamins B12 (0.26 mg), fats (0.3g), carbohydrates (1.5g), dietary fibres (2.5g) and ash (5.0 g) and the vitamin contains are exceptionally high (Alam and Raza, 2001). Noodles are a value added item made from flour. Amongst processed cereal products in India, noodles have a share of about 45% in terms of output and constitute the largest segment in this sector of the processed food market. Noodles are relatively more popular in the north-eastern region where in some states they are consumed as regular breakfast item. In states like Mizoram, Meghalaya and Nagaland, noodles are popular food item.

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MATERIALS AND METHODS

Pre-treated button mushrooms with one per cent salt, along with 0.5 per cent citric acid were dried for 10 hours and ground into powdered form, grounded mushroom powder were used for fortification in noodle flour. The treatments for preparation of mushroom fortified noodles were as follows.

Treatment Details

T1 - Noodle flour + 20% mushroom powder
T2 - Noodle flour + 30% mushroom powder
T3 – Noodle flour (control)

The mushroom fortified noodles were prepared by mixing the noodle flour with specified amount of mushroom powder as mentioned in the treatments. All the ingredients were dry mixed and kneaded with water into dough. The dough was covered with wet muslin cloth and kept at 28 to 30^0C for 30 minutes for seasoning. Then dough was passed through manual

noodle machine sun dried and packed in a polythene bags. The dried noodles were kept for organoleptic evaluation. The ingredients and method for preparation of cooked noodles by taking 100g of dried noodles for each treatment were boiled in 2 tea spoonful of noodle masala (Kwality), 2 tea spoonful of refined oil, a pinch of salt and chili powder were added to the water for preparation. Organoleptic evolution of mushroom fortified noodles were carried out by a panel 5 judges including teachers of Baba Sahab Bhimrao Ambedkar University, Lucknow.

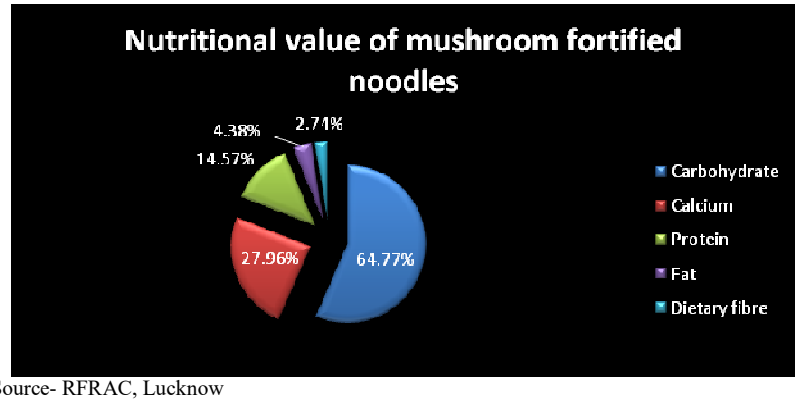
The organoleptic characters of mushroom fortified noodles, whereas colour and appearance, texture, taste and overall acceptability of mushroom fortified noodles were evaluated on nine point hedonic scale.

RESULTS AND DISCUSSION

The data pertaining to the organoleptic evaluation of mushroom fortified noodles was influenced by different treatments were presented in Table 1.

Table 1. Organoleptic evaluation of Mushroom Fortified Noodles for Flavour and taste, body and texture and Colour and appearance

Treatments	Flavour and taste	Body and texture	Colour and appearance	Overall acceptability
T1 - Noodle flour + 20% mushroom powder	41	41	39	40
T2 - Noodle flour + 30% mushroom powder	36	35	34	35
T3 – Noodle flour (control).	30	30	33	31



Source- RFRAC, Lucknow

Fig. 1. Graphical Representation- Nutritional value of mushroom fortified noodles

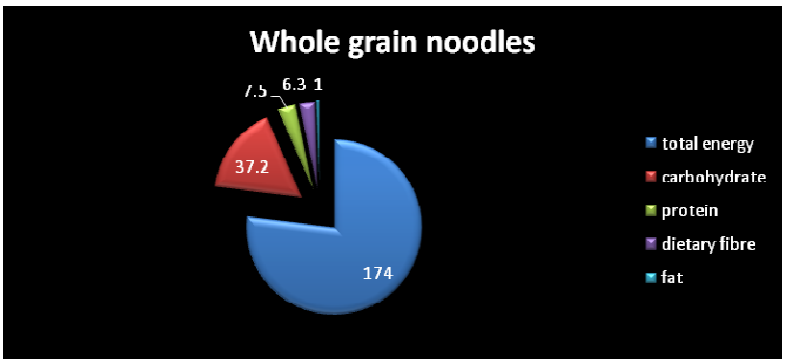


Fig.2. Graphical Representation-Whole grain noodles

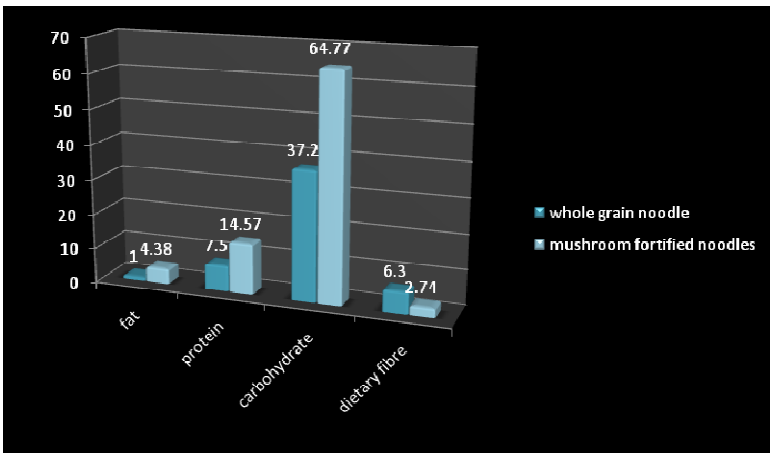


Fig.3. Comparative Graphical representation of whole grain noodles and Mushroom fortified noodles

Sample T1 with highest overall acceptability is most accepted statically, hence T1 is most accepted.

Nutritional value of mushroom fortified noodles

Nutritional value of the developed noodles are assessed in the Food Analysis Laboratory with different specific equipments for each nutritional parameters like protein, fat, calcium, dietary fibre, carbohydrate.

Comparative Graphical Representation

By comparative graph we can see the difference of values side by side from different samples, and how much fluctuations are present in two or more different samples, and it clearly represents the value accordingly.

Summary and Conclusion

- Protein percentage in mushroom fortified noodles was higher (14.8) as compared to whole wheat noodles (7.6) in 100 gm sample weight. As compared to protein & energy with other nutrient viz. fat, carbohydrates among mushroom fortified noodles and whole wheat noodles, higher percentage was founded in mushroom fortified noodles respective above nutrients.
- The calcium content in mushroom fortified noodles is 27.96 mg/100g. The dietary fibre content is 2.74 % in mushroom fortified noodles.

Recommendation and Suggestions

- The noodles should be given to school children and to see health benefit from it.
- It is also good for type 2 diabetes patients and persons who want to shed excess fat as it contains good amount of protein and dietary fibres.
- The noodles should be used as a daily diet in the breakfast or anytime.
- It should be used daily to overcome deficiency of nutrients.

REFERENCES

Alam, D. S. M. and Raza, M. S. 2001. Importance of Mushrooms. NIA, Tando Jam, Pakistan**.**

Kumar* S, G Chand, J. N. Srivastava1 and Md. Shamsher Ahmad, Postharvest Technology of Button Mushroom: *A Socio-Economic Feasibility Journal of Postharvest Technology,* 02 (02): 136-145, April' 2014

Manjula K, *Jhansi D, Sowjanya M and Manjunath V. Formulation, standardization and development of value added spaghetti *International Journal of Food, Agriculture and Veterinary Sciences,* ISSN: 2277-209X.

Sheikh M. A. M., A. Kumar, M. M. Islam1* and M. S. Mahomud, The effects of mushroom powder on the quality of cake *Progress. Agric.,* 21(1 & 2): 205 – 214, 2010.

Shikha Singh1*, NeeruBala2, Anisha Verma3 and Shipra Srivastava4, Development of Noodle Using Banana Peels as a Functional Ingredient *International Journal of pure & Applied Bioscience*, ISSN: 2320 – 7051

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