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Quality evaluation of dried vegetables for preperation of soups

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Abstract

Soup is very easy to make and use ingredients that are easy to purchase and not costly. Soup also provides a very, healthy and nutritious meal. , They are also rich in vitamin C and vitamin E, which are both very powerful antioxidants As well as containing large amount of vitamin A, vitamin B and k plus minerals such as potassium, calcium, phosphorous manganese and iron. Tomato, mushroom and spinach soup powder was prepared by sun drying method.Moreover, powder was analyzed for its various physiochemical attribute i.e. moisture, ash by A.O.A.C. (1970) method,protein by Micro-kjeldahl method fatby SOCS PLUS system and calcium. The spinach soup powder was high in all nutrients such as fat; calcium and mineral in comparison of tomato and mushroom, but the protein value are high in mushroom.

Key words: Soup, nutrients, antioxidants, physiochemical

Introduction

A 'soup' is a food that is made by combining ingredients such as meat or vegetables in stock or hot/ boiling water until the flavour is extracted forming a broth. Soup is often used to help in the recovery of sickness, particularly if the patient is only able to digest liquids.Soup serves two purposes-

1. An appetizer taken at the beginning of a meal to stimulate the appetite and aid in the flow of digestive juices in the stomach
2. An actual part of the meal when it must contain sufficient nutritive material to permit it to be considered as the part of the meal instead of merely an addition. This not only provides you warmth against the cold but also provides much nutrition to your body.

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Soups are regarded as beneficial for those who wish to reduce their weight and live a healthy and fulfilling life. A wholesome type of food, soup is a filling type of food and also low in calories and other fats. Soups help the body fight diseases and infections. It provides relief from cold. It is especially low in saturated fats and cholesterol. Soup is easier to digest as compared to other foods. It provides the required fluids and minerals to the body without damaging the system in any way. Green leafy vegetables such as spinach are also rich in vitamins C and E, which are both very powerful antioxidants. This means that eating dark green vegetables daily could help to protect the body from developing cancerous cells and from suffering heart disease.

Red, orange and yellow coloured fruits and vegetable such as tomatoes, carrots and apricots contain lots of vitamins A, C and E, which all help to fight certain types of cancer and act by neutralizing free radicals in the body.

Materials and Methods

The raw materials chosen for the present study were Tomato, Spinach, and Mushroom. These vegetables were purchased from local market of Kanpur city. Tomato, Spinach and Mushroom were taken for further investigation. These vegetables were washed and clean to improve the impurities present in it and after that cut into very Small pieces or slices and placed the slices in a cotton cloth and covered it with transparent sheet and dried it by sun drying method (temperature is 70- 80 °c) for 15-18 hours and then grind into powdered form.

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Result and Discussion

Table 1 Mean and standard error of nutritive value of tomato, spinach and mushroom soups (Sun dry basis)

Sample	Protein (gm)	Fat (gm)	Calcium (mg)	Ash (%)	Moisture (%)
Tomato	2.48	3.72	76.52	1.4	4.87
Spinach	3.47	4.89	121.75	2.32	4.77
Mushroom	3.19	3.75	67.37	1.37	4.5
*SE(diff)	0.02	0.49	0.49	0.31	0.55
**CD (5%) level	0.04	1.57	1.57	0.05	1.78

**CD- Critical difference

Table 1 show that spinach soup powder had higher protein content (3.47%) than the mushroom (3.19%) and tomato (2.48%) respectively.

A perusal of data presented in table 1indicates that the ether extractive content differed significantly in the tomato, spinach and mushroom soup sample prepared by sun drying method. Tomato soup contained 3.72 gm. ether while spinach soup 4.89 gm. whereas mushroom contained 3.75 gm. ether.

Calcium content in sun dried tomato, spinach and mushroom soup differed significantly. Calcium content of tomato soup was found 76.52 mg, while in spinach soup 121.75mg, whereas in mushroom soup calcium content was 67.37 mg.

Data on total ash content of tomato, spinach and mushroom soup is presented in table 1 indicates that spinach had 2.32 percent ash, while mushroom had 1.37 percent and tomato 1.4 percent.So we can say that spinach soup had more ash content than mushroom and tomato soup.

The moisture content differed marginally but significantly. Tomato soup had higher moisture content (4.77%) than the spinach (4.77%) and mushroom (4.5%).

Conclusion

It may be concluded that tomato, spinach and mushroom powder can be easily prepared under optimized process conditions. Soup is not onlyeconomical to make but also provide very healthy and nutritious liquids. It contains vitamins, minerals, proteins and antioxidants. Soups help the body fight diseases and infections. The soup contains mucilage and soluble fibers of vegetables and this will reduce absorption of glucose in the intestine. It may also be concluded that drying vegetables is the most convenient and cast effective method of food preservation. These vegetables powder can be used for preparing soups rich of nutrients for health promotion.

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