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Moringa oleifera Based Nutririch Soup Premix

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ABSTRACT

The present study was carried out with the objectives of Moringa oleifera based nutririch soup premix. Soup is a primarily liquid food, generally served warm or hot (but may be cool or cold), that is made by combining ingredients of meat or vegetables with stock, milk, or water. Hot soups are additionally characterized by boiling solid ingredients in liquids in a pot until the flavours are extracted, forming a broth. Specific vegetables may offer more health advantages to certain people, depending on their diets, overall health, and nutritional needs. The effect of additional levels of Moringa leaves powder, salt, and different green leafy vegetables and sensory attribute were investigated. In India malnutrition contributes to more than one-third of deaths in children below the age of five years. About 42% of Indian children are underweight, and 58% have stunted growth by two years of age. Malnutrition was mostly observed in tribal areas or among those who were in the transformation transition from rural to urbanization. They observed that the Moringa soup was very nutritious and energy sources drink. The flavour of Moringa soup was also suitable for use as a food additive in different types of food.

Keyword: *Moringa oleifera, Soup premix Malnutrition, Attribute.*

INTRODUCTION

Now a day, attention is focused on product development with a health claim on the label, which can result in value-added products for the producer companies. A often has a lower fat content and is large volume. Moringa leaves are one of the common useful multi-nutritional leafy vegetable harvested from the Moringa oleifera tree. Nutritionally Moringa leaves are a rich source of minerals, vitamins, and other essential nutrients. *Moringa oleifera* provides more than 90 nutrients and 46 types of antioxidants. In Moringa leaves, minerals like potassium, calcium, magnesium, iron, zinc, copper and vitamins such as β-carotene, including vitamin- B such as folic acid, vitamin C, vitamin D and vitamin E, are higher as compared to other leafy vegetables. Each part of Moringa tree carries a specific nutritional and medicinal property in significant quantity.

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The leaves, flowers, fruits and roots of the Moringa plant are used in the preparation of several delicacies in Indian cuisines. The young pods are used as vegetables and reportedly have a taste reminiscent of asparagus. The green peas and surrounding white material are removed from larger pods and cooked in various ways such as soup, delicious rice mix, curries and pods are also used in making of *dhal*, sambhar chutney and soups instant etc Nutritionally Moringa leaves are a rich source of minerals and vitamins and other essential nutrients. Moringa oleifera provides more than 90 nutrients and 46 types of antioxidants. In Moringa leaves, minerals like potassium, calcium, magnesium, iron, zinc, copper and vitamins such as β-carotene, including vitamin- B such as folic acid, vitamin C, vitamin D and vitamin E, are higher as compared to other leafy vegetables.

MATERIALS AND METHODS

Procurement of raw materials:

Raw ingredients such as *Moringa oleifera*, green leafy vegetables, carrots were procured from my place Pondishankar Janjgir Champa. The Moringa leaves were selected for study based on the physical properties of fresh and healthy leaves like dark green, matured, and healthy.

Further, the procured leaves were graded based on their morphological properties, such as dimensions and Colour.

Fig.1 Moringa sample before and after drying

Procedure:

All dry ingredients, such as beans, carrots, green leafy vegetables, tomato, salt, mushroom powder, black paper, and corn flour, were mixed. Boiled with water and cooked at low flame for 5 minutes.

Processing of raw materials:

Simple techniques were used for the processing of Moringa leaves and other ingredients. The Moringa leaves were dried in different methods such as hot air oven, microwave, and sun drying. Vegetables such as tomato, ginger, carrots, green leafy vegetables and mushrooms were sorted and washed under running water to remove damaged parts, dust particles and other impurities. They were cut into small pieces and dried in the oven, some were dried in sun drying, and some were dried in microwave drying. Dried materials were ground separately in a mixture grinder to prepare powder.

Fig.2 Final product Moringa soup

Fig.3 Final product in powder form

Sensory Evaluation:

Acceptability of the product was assessed on 9- point Hedonic scale with the help of a selected panel of judges. The panellist was asked to record the level of liking or disliking by giving marks for various characteristics of the product as taste, flavour, texture, Colour and appearance and overall acceptability.

Quality assessment:

Development instant mixes were subjected to the following quality characteristics in the present investigation.

1. Physico-chemical properties (wettability, viscosity, swelling index and bulk density)
2. Nutritional evaluation (Proximate, total dietary fiber and minerals content)

RESULT AND DISCUSSION

The study observed that the Moringa leaves were dried at different methods such as oven drying, hot air oven, sun drying methods applied for drying propose. They observed that the best result was obtained in the sun drying method. The sun drying methods gave the good quality of soup premix. The sun drying retained all the nutritional value. In Moringa leaves, the nutritional value was not lost by sun drying. The overall sensory evaluation was good. The panellist was asked to record the level of liking or disliking by giving marks for various characteristics of the product as taste, flavour, texture, Colour and appearance and overall acceptability.

CONCLUSION

They observed that the best result was obtained in sun drying method. The sun drying methods gave good quality of soup premix. The sun drying retained all the nutritional value of highly perishable vegetables Moringa leaves and other ingredients, (*Moringa oleifera*) were used for the preparation of Moringa soup powder. For reconstitution, 20g of soup powder was mixed with 500 ml of hot water and this Moringa powder mixture was boiled for 5 minutes.

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Conflict of Interest:

There is no such evidence of conflict of interest.

Author Contribution

Both authors contributed equally to establishing the research and design experiment topic.

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