

Enhancement nutritional properties of value added anaemic soup powder & its sensory evaluation

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Abstract

Value added anaemic soup powder is very beneficial for health because it contain large amount of nutrients. Out of these nutrients it largely contains iron along with some other major nutrients such as- protein, fiber, carbohydrate, vitamins, minerals and etc. The various ingredients used in the preparation of value added soup, Beetroot, Tomato, Pea, Carrot, Ragi Flour, Corn Flour. Sensory evaluation is an analytical method e.g. Flavour, Texture, Test, Colour, Appearance etc. The main objective of the study to know the Value Added Anaemic Soup Powder etc. organoleptic properties evaluation.

Keywords: anaemic soup powder, nutritional properties, sensory evaluation

Introduction

Anaemia is condition characterized as a low level of haemoglobin in the blood, as evidenced by a reduced quality of red blood cell which decreases oxygen-carrying capacity to tissues. To overcome such problems value added anaemic soup powder are very helpful. Value added anaemic soup powder is very beneficial for health because it contain large amount of nutrients. Out of these nutrients it largely contains iron along with some other major nutrients such as- protein, fiber, carbohydrate, vitamins, minerals and etc. Iron-deficiency anaemia is the commonest nutritional deficiency worldwide, affecting mainly women and children. It's most serious consequences are the effects on the health of mothers and new-borns, because pregnancy related anaemia is linked with a high risk of maternal and fetal deaths as well as an increase in low-birth- weight babies and prenatal mortality. The control of absorbed iron is in two namely here form and ferrous form. Quantity of dietary iron affects the iron absorption. Hence, iron is assimilated in part by intestinal mucosa, whereas the iron is related from porphyrin complex. (Lawless 1994) [4].

Anaemia may be diagnosed with confidence when the haemoglobin concentration is lower than level considered for the person's age/ sex group. When the anaemia is due to iron deficiency, increasing the person's intake of absorbable iron will raise the haemoglobin concentration (Baker, S.J.1979) [1].

Tomato: Vitamin C is the main ingredient in tomatoes along with lycopene. The Vitamin C in tomatoes helps in easy absorption of iron. Tomatoes are also rich in beta carotene and vitamins E and hence help in natural conditioning of the hair and skin.

Beetroot: Beetroot is known to be very effective in fighting anaemia. It will help in repairing and reactivating your red blood cells. Once the red blood cells are activated, the supply of oxygen to all parts of the body increases.

Ragi: Ragi is an excellent plant source of natural iron. Its consumption helps in anaemia. Vitamin C increases iron absorption.

Corn Flour: Corn helps prevent anaemia caused by a deficiency of these vitamins. It also has a significant level of iron, which is one of the essential minerals needed to form new red blood cells.

Carrot: The mixture of carrot and beetroot is rich in vitamin A and iron, both these compounds are essential for the production healthy red blood cells and haemoglobin.

Peas: Green peas help reduce cholesterol levels in the blood. They have a large amount of iron and antioxidants that help to strengthen the immune system and reduce the risk of various forms of cancer.

Sensory Evaluation

Sensory evaluation is an analytical method in which the human senses serve as a measurement tool to determine the quality and/ or to describe the condition of a food product. It is a scientific discipline that analyses and measures human response to the composition of food and drinks, e.g. appearance, touch, odour, texture, temperature and test. This discipline requires panel of specialist and trained panellist by whom the products are tested, and responses are recorded by them.

By applying statistical techniques to the result it is possible to make inferences and insights about the product under test. Food quality can be evaluated by sensory evaluation. Sensory quality is the combination of different sense of perception coming in to play in choosing and eating a food. Appearance, flavour and mouth feel decides the acceptance of the product. In this study the sensory evaluation is done in our Department of food science and technology by trained and expert nutrition staff member, and the technique of sensory evaluation was 9- point Hedonic Scale.

Shelf life of preserved value added anaemic soup powder:

Its shelf life would be long duration if its process of farming and packing carried out correctly, & it would not come in air content for long period.

Methodology

Processing and Packaging of Value Added Anaemic Soup Powder

Material used in Processing of Value Added Anaemic Soup Powder: Beetroot, Tomato, Ragi Flour, Corn Flour, Carrot, and Pea.

Processing of value added anaemic soup powder: For processing the selection of row ingredient 2kg beetroot, 3kg tomato, 300gm pea, 400gm carrot. After it washing and cut into small pieces of row ingredient and after it sundry & oven dry of all row ingredient and make in powder from beetroot & tomato. After it selection of ragi flour 200gm, corn flour 100gm. than mix its beetroot and tomato powder, ragi flour and corn flour. In last added small pieces of carrot and pea, & after it pack the 15gm soup powder for each person.

Material use in packaging of soup powder: Transparent Polythene.

Packaging of soup powder: 15gm soup powder packed of transparent polythene and sealed with the help of sealing machine.

Sensory evaluation of soup powder: preparation of value added anaemic soup powder evaluated by the panellist. Than score card were filling by panellist. The best sensory evaluation by colour, texture, flower, test appearance & nutritional evaluation component and that it evaluated by the give score of panellist. Calculate the give score.

Shelf life of preserved soup powder: Preservation of Value Added Anaemic Soup Powder packed for transparent polythene and stores the packed soup powder in room temperature.

Result and Discussion

Sensory evaluation of packed and processed Value Added Anaemic Soup Powder by expert panel of member on hedonic scale

Treatments

Table 1: One sample is taking

Treatments	Sample preparation
T1	Value added soup beetroot, tomato, pea, carrot, ragi flour, corn flour

Parameter-1 Flavour

Table 2: Individual Marking for Flavour

Panellist	Member 1	Member 2	Member 3	Total
T1	8	7	8	23

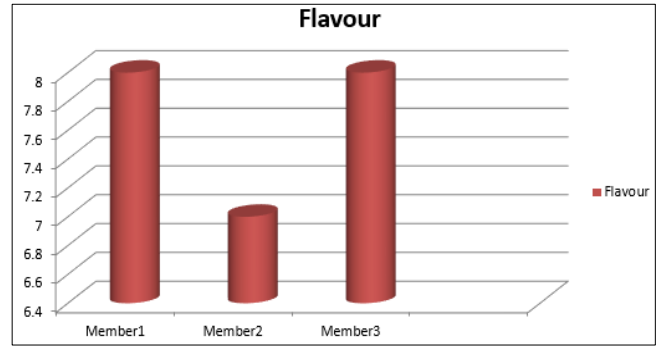


Fig 1: Graphical Representation- Flavour

Result shows that the member 1 and member 3 both are equally accepted the Flavoured of anaemic soup powder

Parameter 2- Texture

Table 3: Individual Marking for Texture

Panellist	Member 1	Member 2	Member 3	Total
T1	9	7	8	24

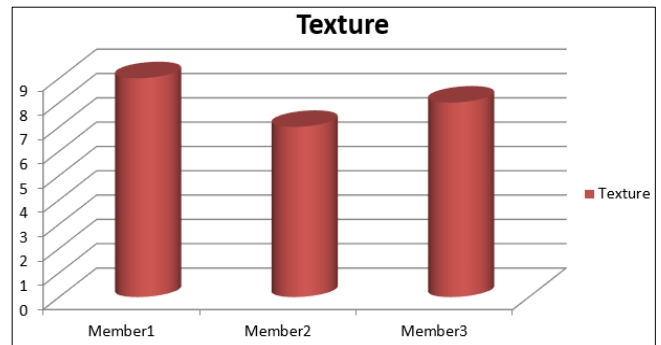


Fig 2: Graphical Representation-Texture

Result shows that the member 1 high accepted texture of anaemic soup powder

Parameter 3-Taste

Table 4: Individual marking for Taste

Panellist	Member 1	Member 2	Member 3	Total
T1	9	9	8	26

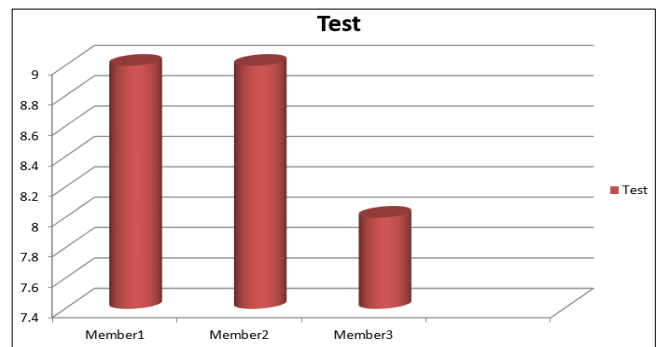


Fig 3: Graphical Presentation Taste

Result shows that the member 1 and member2 both are equal accepted the Taste of anaemic soup powder.

Parameter 4-Colour

Table 5: Individual marking for colour

Panellist	Member 1	Member 2	Member 3	Total
T1	9	9	9	27

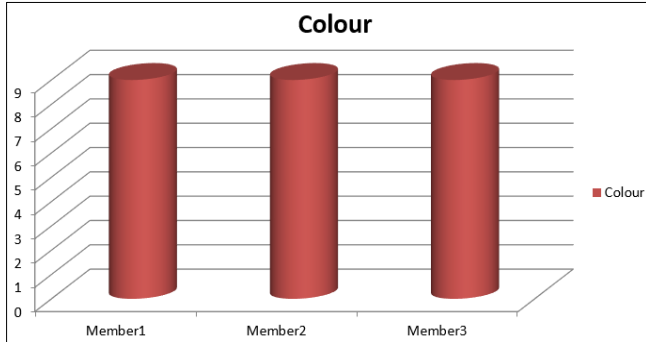


Fig 4: Graphical Representation-Colour

Result shows that the member1, member2, member3, are equal accepted the colour of anaemic soup powder.

Parameter 5- Appearance

Table 6: Individual marking for Appearance

Panellist	Member 1	Member 2	Member 3	Total
T1	7	7	8	22

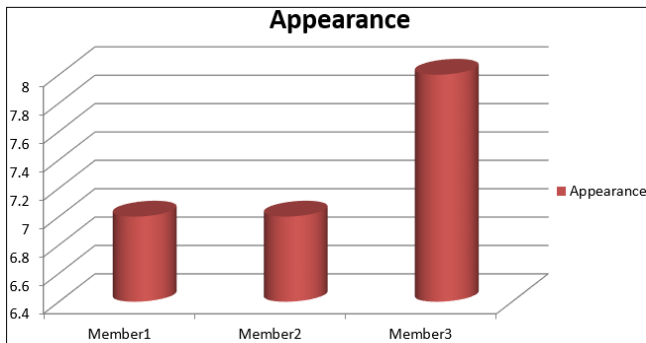


Fig 5: Graphical Representation Appearance

Result shows that the member 3 high accepted Appearance of anaemic soup powder

Parameter 6- Over all Acceptability

Table 7: Individual marking for over all Acceptability

Sample Code	Appearance	Colour	Flavour	Texture	Taste
Percentage	22	27	23	24	26

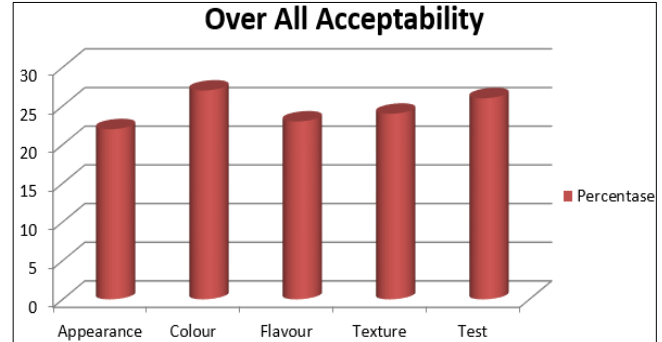


Fig 6: Graphical representation over all appearance

Result shows that the colour of anaemic soup powder was highly (27%) accepted by the panel member, which taste was (26%) accepted, whereas (23%) of flavour and (24%) texture accepted. Less than (22%) appearance was accepted by the panale member.

Nutritional Value

Nutritional value and physiochemical characteristics of value added soup Value added soup are assessed in the food analysis laboratory with different specific equipment for each nutritional parameter like protein, iron carbohydrate, total energy and moisture content.

Table 8: Nutritional Value

Nutritional Value	Value Addea Soup
	Result
Protein %	9.36
Iron %	330
Fat%	0.64
Total energy %	337
Carbohydrate %	73.52
Moisture%	11.64

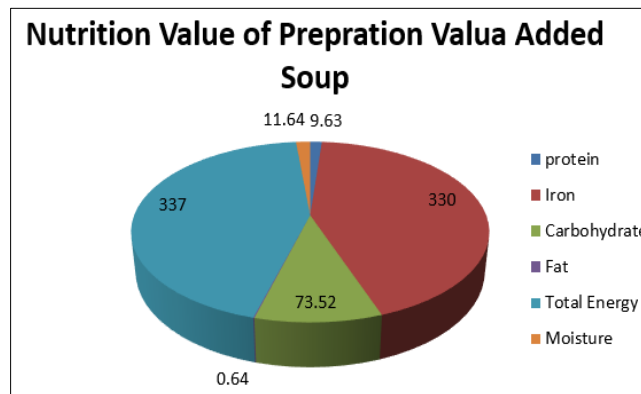


Fig 7: Nutrition Value of Preparation Value Added Soup

Summary and conclusions

Anaemic soup powder is as it contain meant for anaemic person, is very nutrients beetroot, tomato, carrot, pea, ragi

flour, and corn flour in different ratio. The sensory evaluation of the anaemic soup powder by using 9-point hedonic scale by a panel of 3 members. The scoring for each of the sample

of the soup by various parameter i.e. texture, flavour, taste, colour & appearance and overall acceptability. Packaging for transparent polythene proper process soup powder. Packaging was done properly increase the shelf life of processed for value added anaemic soup powder.

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