Formulation, Preparation and Evaluation of ZEA May’s Sweet Ball

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Abstract

Sweets are liked by most of the people irrespective of their age. We express our happiness by sharing sweets with others. A zea may’s sweet ball is rich in nutritive value and nutraceutical compounds. Millet is an ancient grain with its milly sweet flavour, tasty, non-acid forming and contains a myriad of beneficial nutrients. Maize is one of the millets most commonly known as corn. Likewise maize is easily digestible, gluten free grain. It contains good source of fibre, carbohydrates, vitamins and minerals. Cereals, when consumed with pulses, improve protein quality due to mutual supplementation. Germinated green gram is rich in protein. Pumpkin seeds are rich in fibre and numerous health promoting antioxidants. It acts as an anti-stress neurochemical in the brain. Jaggery helps to maintain optimum health of a person so we have added underutilized millet, germinated pulses, pumpkin seed and Jaggery to formulate the sweet balls. Zea may’s balls are prepared using the above said ingredients which are rich in fibre, nutritive value and nutraceutical compounds. It is easily digestible and delicious.

Keywords: Instant Maize Flour, ZEA May’s Sweet Ball

I. INTRODUCTION

Junk food can be appealing for a variety of reasons, including convenience, price and taste. For children, who do not always understand the health consequences of their eating habits, junk food may appear especially appetizing. However, regularly consuming fattening junk food is addictive to children and leads to complications like obesity, chronic illness, low self-esteem and even depression. It also affects their performance in school and extracurricular activities. For many parents, helping children develop healthy eating habits is a struggle. With the hectic pace of many families’ lives and with more women working full time, even health-conscious parents are finding it easy to tolerate less than desirable eating habits. It is best to start training children about foods as soon as they can talk since they are most influenced by their families during the preschool years. Additionally, research has shown that heart and blood vessel disease can begin very early and that hardening of the arteries (arteriosclerosis or atherosclerosis) can be associated with a high-fat diet. Parents should carefully read food labels to check nutrients and ingredients. Most kids are attracted to the advertising and packaging of food, including highly sugared cereals. Rees suggests fitting them in occasionally as a treat in an overall diet that is focused on low sugar, low fat, and unprocessed foods. Marketers use sophisticated child psychology to help children leverage "pester power," effectively nagging their parents to buy them the desired item. Food marketers know this well, understanding the amount of money at stake not only from parents’ purchases influenced by children or purchases by children themselves, but also brand loyalty throughout each child’s entire life.

Junk food plays a vital role in the snacks variety, which is hazardous to health. However, because of its taste more people are addicted to it. An attempt is made to prepare a delicious highly nutritive Zea May’s sweet ball which is tastier than junk food and healthy enough to provide high nutrition with phytochemical.

II. OBJECTIVES

- To reduce the consumption of junk food.
- To increase the intake of high nutrition energy food.
- To provide healthy food at lower cost.

A. Significance of ZEA May’s Sweet Ball:

- Zea May’s sweet balls are healthy, delicious and ready-to-eat snack.
- It is made up of natural ingredients.
– It is easy to digest and satisfies the nutritive needs of all age groups.
– It is a low cost snack item.

III. MATERIALS AND METHODS

For preparing Zea May’s sweet ball, an appropriate recipe was explored and required ingredients were considered carefully. The normal procedure commonly employed for preparing confectionery items was studied and was modified slightly in terms of heating time to make it optimal for preparing good quality Zea May’s sweet ball. Several ingredients i.e. Maize flour, pumpkin seed flour, sprouted green gram flour and Jaggery were selected for the study. These ingredients were collected from the local market and selected after conducting exploratory and subsidiary trials. Sensory tests were employed during above trials.

A. Processing of Instant Maize Flour:
Chosen Yellow corn was taken, then washed and soaked for 24 hours. After soaking the maize was cooked and dried by using cabinet drier and ground with an electric grinding machine to make maize flour. The maize flour was then sieved.

B. Production of Instant Sprouted Green Gram Flour:
Good quality green gram was selected for sprouting. The green gram was washed thoroughly in clean water. It was soaked overnight. Soaking reduces the oligosaccharides and also reduces the phytic acid in pulses. After soaking, the water was drained. The green gram was transferred into muslin cloth for sprouting. After sprouting, the green gram was allowed to dry in the cabinet drier. The dried green gram was powdered in a blender to obtain a fine flour.

C. Production of Pumpkin Seed Powder:
Pumpkin seeds are collected from pumpkin. They are washed thoroughly in clean water. They were soaked overnight. The outer skin of the seeds was removed and dried. The dried seeds were powdered by using a blender to obtain a fine powder.

D. Ingredients of Sweet Ball Preparation:

<table>
<thead>
<tr>
<th>S.No</th>
<th>Ingredients</th>
<th>Control</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Zea May’s flour</td>
<td>70</td>
<td>55</td>
<td>50</td>
<td>45</td>
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<tr>
<td>2.</td>
<td>Sprouted green gram flour</td>
<td>-</td>
<td>5</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>3.</td>
<td>Pumpkin seed flour</td>
<td>-</td>
<td>15</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>4.</td>
<td>Jaggery</td>
<td>30</td>
<td>25</td>
<td>30</td>
<td>35</td>
</tr>
<tr>
<td>5.</td>
<td>Water</td>
<td>For Mixing</td>
<td>For Mixing</td>
<td>For Mixing</td>
<td></td>
</tr>
</tbody>
</table>

IV. SENSORY EVALUATION

Various sensory characteristics were evaluated after preparation of Zea May’s sweet ball by a group of minimum 10 trained panelists using a 5 point hedonic scale. The various characteristics involved were Appearance, Colour, Texture, Flavour, Taste and Overall acceptability.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Sample A</th>
<th>Sample B</th>
<th>Sample C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>4.4</td>
<td>4.8</td>
<td>4.1</td>
</tr>
<tr>
<td>Colour</td>
<td>4.0</td>
<td>4.7</td>
<td>4.5</td>
</tr>
<tr>
<td>Texture</td>
<td>4.4</td>
<td>4.7</td>
<td>4.2</td>
</tr>
<tr>
<td>Flavour</td>
<td>4.2</td>
<td>4.9</td>
<td>4.4</td>
</tr>
<tr>
<td>Taste</td>
<td>4.1</td>
<td>4.6</td>
<td>4.2</td>
</tr>
<tr>
<td>Overall acceptability</td>
<td>4.3</td>
<td>4.7</td>
<td>4.1</td>
</tr>
</tbody>
</table>

V. PHYSICAL CHARACTERISTICS

Physical parameters such as diameter, specific volume were determined using AOAC procedure (2000).

A. Size of Zea May’s sweet ball:
Length, Width and depth of the Zea May’s sweet ball were estimated to determine the sweet ball size by a slide caliper. The values of this parameter were taken in centimeter.
B. Weight of Zea May’s Sweet Ball:
The weight of Zea May’s sweet ball was measured by an electric balance. At first, the balance was adjusted to zero mark. The sweet ball was weighed by keeping the sweet ball on the chamber of the balance. Then the reading was taken in gram.

VI. RESULTS AND DISCUSSION

The selection of the ingredients was conducted to see the suitable nutrition needed in order to formulate Zea May’s sweet balls to increase nutritional content.

VII. CONCLUSION

Zea May’s sweet ball is made from maize flour, pumpkin seed powder, sprouted green gram flour and jaggery. It prevents obesity and constipation. It is rich in fibre, protein, anti-oxidant and phytochemicals.

The result from the study showed that the use of maize flour, pumpkin seed powder, sprouted green gram flour and jaggery for the production of Zea May’s sweet ball SAMPLE B showed a positive result and was approved to be the best in all sensory attributes by the panelists. This present study shows that the Zea May’s sweet ball prevents obesity and constipation. This would be of economic importance in many developing countries.

REFERENCES