

Modification and Fortification of Indian traditional Confectionary.

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Abstract: - The project aims to develop a therapeutic diet having pleasurable functional qualities and characteristics which have acceptable consumer parameters. The team of expert realized the true extent of global malnutrition, osteoporosis and age related issues like high blood pressure and diabetes mellitus. A large amount of Indian population suffers from the issue of diabetes mellitus. The product is an initiative taken in order to overcome these deficiencies. The product developed consists of zero Trans fat and bad cholesterol. This is free from refined wheat flour thus it is gluten free. It consists of potent antibiotic, antibacterial, antifungal and germicidal properties along with antioxidants which occur due to presence of cinnamon in the product. The product is enriched with high fiber content and anti diabetic components like jamun seeds powder and fenugreek seed powder. Also it will help to decrease the body cholesterol level due to dry date flour as well as protein fortification done with the help of plant leaf protein that is drumstick leaves. The product have an anti carcinogenic effect on human body. The product is fulfilled with high nutritional content, long shelf life along with cost effective

Keywords: - Anti diabetic, cholesterol lowering properties, Antioxidants.

Introduction: - Pearl millet malt-

Pearl millet (*Pennisetum Glaberrimum*) known as mexoeira and hanzelo in Mozambique, is a draught tolerant cereal crop grown primarily as a food grain in southern Africa. The main constraints in utilization of pearl millet in the industry include: the small size of the grain and the large germ. The utilization of millets is also limited due to presence of various anti nutrients, poor digestibility of proteins and carbohydrates and low palatability. However various process technologies are able to affect positively the physicochemical composition of grains in order to improve their nutritional value. Such primary technologies include malting and fermentation.

Malt:- Malt is germinated cereal grains that have been dried in a process known as malting. The grain are made to germinate by soaking in water, and are then hulled from germinating further by drying with hot air. Malting grains develops the enzyme required for modifying the grain starches into various types of sugar, including monosaccharide glucose, the disaccharide maltose, the trisaccharide maltotriose, and the higher sugar called maltodextrins. It also develops other enzymes such as proteases, which break down the proteins in the grain into forms that can be used by yeast. Depending on when the malting process is stopped one gets a preferred starch enzyme ratio and partly converted starch into fermentable sugars. Malt also contains small amount of other sugars, such as sucrose and fructose, which are not product of starch modification but were already in the grain. Further conversion to fermentable sugars is achieved during the

mashing process. Malted grain is used to make beer, whiskey, malted milkshake, malt vinegar, confections such as Maltesers and Whoppers, flavored drinks such as Horlicks, Ovaltine and Milo and some baked goods such as malt loaf, bagels and rich tea biscuits. A high protein form of malted barley is often a label-listed ingredient in blended flours typically used in manufacturing of yeast breads and other baked goods.

Indian confectionary:- Confectionary is the art of making confections, which are good item that are rich in sugar and carbohydrates. Confectionary is divided into two broad and somewhat overlapping categories bakers confections and sugar confections. Bakers confections also called flour confection includes principally sweet pastries, cakes, and similar baked goods. Sugar confectionary includes candies, candid nuts, chocolate, chewing gum, bubble gum, pastillage and other confections that are made primarily of sugar. In some cases, chocolate confections are treated as separate category, as are sugar free versions of sugar confections.

Fortified functional food :- Enrichment plays a vital role in this product, The addition of micronutrients such as trace elements, vitamins, etc, aimed for public health policy or to reduce dietary deficiency in people. Balushai also improved by bioactive compounds. **Bioactive products:-** These are fortification of bioactive compound or incorporation of essential biomolecules that are typically included in fractional amount and exhibit the capacity to modulate one or more metabolic processes, it is basically done to promote better health.

Materials and Method:- A. Ingredients-

1. Malted prearl millet flour.
2. Cinnamon.
3. Jamun seed flour.
4. Fenugreek seed flour.
5. Dry dates powder.
6. Drum stick leaves extract.
7. High fructose corn syrup.

B. Procedure-

- 1.Trial one: Direct use of whole millet flour that affects the digestibility.
- 2.Trial two: we use malted millet flour.
- 3.Trial three: Digestibility is managed due to use of malted millet flour, but a product displayed a low shelf life hence use of cinnamon oil and cinnamon powder was made into use for attaining a higher shelf life of a product.

Selection of raw materials

Sorting and grading

Malting(24-48 hrs.)

Drying(sundried 3-4 days)

Milling of malted flour

Drum stick extract

Milling of fenugreek, jamun seeds and cinnamon power

Weighing ingredients

Mixing of flours(malted millet flour with all other powers)

Preparation of dough

Hand pounding

Frying in soybean oil

Preparation of HFCS (high fructose corn syrup) by addition of water

Dipping fried balls into HFCS solution

Package and storage

Conclusion and Discussion:-

Normally the confectionary products are high caloric and increase the high sugar level and does not provide any other functional quality part from taste. But the products intends to nourish the consumer with nutritional aspects along with taste.

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