Protein Rich Milk Peanut Chocobar
Malnutrition Supplementary Management

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Abstract: Newly developed Protein Rich Milk Peanut Chocobar is helpful for all age groups and undernourished families. In our Country most of the people in village families and rural area families and slum area urban people did not get sufficient nutritive values. The new product have huge amount of nutritive values and more calories. This is good supplementary food for children, pregnant women, Lactating mother. The Peanut and milk powder are modified as a chocobar because children’s are easily adopted to the new product and very easy to consume easy to carry any place. The storage of the product at any dry places in natural atmosphere conditions. The new product eco friendly with the children's because it taste and aroma never forget once they consume. While the spread form of new product may not be the only therapeutic food that does not require cooking, it is the only one considered in this article because it is the only one which has been locally produced in the developing world using modest technologies. The new product has been shown to be a very effective therapeutic food in the rehabilitation of severely malnourished children, and facilitates home-based therapy of these children’s. The product can be safely and easily produced in small or large quantities in most settings worldwide. The local availability of the necessary ingredients limits its use in some settings, and further investigation to alternative ingredients is needed to overcome this limitation.

I. INTRODUCTION
Protein Rich Milk Peanut Chocobars are designed for specific, usually nutritional, therapeutic purposes as a form of dietary supplement. These foods are used for emergency feeding of malnourished children to supplement the diets of persons with special nutrition requirements. Therapeutic foods are usually made of a mixture of protein, carbohydrate, lipid and vitamins and minerals. The Therapeutic foods are usually produced by grinding all ingredients together and mixing them. The new product also made with same process.

The newly developed food contains highly nutritive values and rich protein Therapeutic food. It is very smooth and soft and good taste. The new product is helpful for human complete requirement of diet. If we take the new product then full fill all nutritive values their requirement of diet. In our country most of the people did not get their requirement of nutritive values with everyday intake of food. So many people in village and remote areas, especially children’s are suffering with the malnutrition. We bring the new product to reduce the difficulties and good supplementary food for all age groups. The peanut / Green pea and milk combination of Protein rich foods are made in Africa countries for poor and under nourished children’s with guidelines of WHO (World Health Organization) and UNICEF (United Nation Integrated child emerging found). It was given good result their children’s physical growth and mental growth. So presently most of Africa countries and Asia countries are fallowing the same food for children’s. The food product prepared as a slurry or paste condition. It is stick on mouth and hands when we are consume of food so it is difficult to consume to the childrens. The newly developed Protein Rich Milk Peanut Chocobar is prepared as a chocolate so it is very easy to consume to the children’s. It is great achievement for solve the difficulties and food supplementary management from the malnutrition.

The World Health Organization's standards for the treatment of malnutrition in children specify the use formulas based on peanut milk powder. These formulas contain a mixture of powdered milk, sugar, peanut and other ingredients designed to provide an easily absorbed mix of carbohydrates and essential micronutrients. The WHO recommends the use of these formulas, with the gradual introduction of other foods, until the child
approaches a normal weight. This nutritional food homogeneous mixture of lipid-rich and water-soluble foods. The lipids used in formulating new product is in a viscous liquid form.

“The mixing process allows for the protein and carbohydrate components of the food to be embedded in the lipid matrix. The size of the particles in the mixture has to be less than 250 μm, which would eliminate the issue of spoilage. Therapeutic foods are designed and manufactured to ensure that they are ready to eat straight from the packaging. Those foods resist bacterial contamination and require no cooking.

The newly produced protein rich milky peanut chocobar is good source of quality protein and highly digestible to the children’s. The milk powder one of the major raw materials of the product. It amino acids very soft and easily digestible because the children’s digestion system very sensitive so the soft protein highly digestible to childrens. The peanut one of another major raw material of the product. It is good level of both mono un saturated and poly saturated fats that keep the heart healthy, lowering blood cholesterol levels, reduce coronary heart diseases. The peanuts contain high concentration of antioxidant polyphenol, p-coumaric acid, Oleic acid these are not only protect the heart but inhibit the growth of free radicals. The roasting of peanuts inhibits the microorganism and gets good taste and aroma.

The preparation of protein rich food take all ingredients should be clean without dust particulars, inorganic matter and organic matter. The newly developed product proximate composition of moisture, protein, Fat, Total ash, Crude Fiber was estimated by the FSSAI standard methods

II. MATERIALS AND METHODS

In preparation of protein rich milk peanut chocobar have so many unit operations occur, the process of raw material cleaning to final product preparation. The cleaning and de stoning process removed the dust particles stones like inorganic matter as well as leaves, wood particles like organic matter, other edible grains remove through cleaning machine and de stoning machine. The cleaning machine has three different types and different size of meshes build inside of the cleaning machine. The air blower also attached the top of cleaning machine. The cleaning machine contains two vibrators that vibrate as per specification. The cleaning machine vibration depend on mote RPM, it can be adjustable motor speed rpm as per their requirement. The speed of motor rpm depends on different grains of raw material. According the grains it will be changed the motor speed as well as the blower speed flow of air also can be adjustable, it will be changed different grain because weight of the grains different so we need to change the speed of air flow of blower. It is helpful for remove the all organic matter and inorganic matter from the seeds. After the cleaning the raw material enter the de stoner to remove the only stone particles this also work with vibration of de stoner and air blower also help for remove the stone particulars.

The roasting of peanuts one of major unit operations for roasting, the roasting of grains are making through sand roster. The roaster contain long drum and rotating indicate speed with specific rpm. The roasting process we are using the long drum this is a sand roaster for roasting the raw material. The drum bottom setup the fire for roasting of raw materials. The roaster maintains the temperature at 120° C to 140°. The peanut roasting continue process, the raw material uniform continue flow enter the roaster inlet, the bottom of drum fire continues applied for roasting. The raw material and sand both are mixed in drum after roasting the raw material is discharged the roaster outlet but the sand sends back in to the drum. The roasted powder have sieve mesh so the sand send back to the roaster drum through the sieve mesh because the sand core size less than the mesh size. The unit operation made for quality roasting, that hot sand reputedly mix with the raw material.

The process deactivates the enzymes and improves the aroma and taste, killed the micro organisms. The grinding of all raw materials are using the grinding machine for grinding, the powder of raw material pass through 200 micron sieve. The fine powder increases the chewiness of the product.

The individual ingredients are grinding fine powder approximate pass through 200 micron sieve. According the formula the new product mixes all ingredients. After mixing all ingredients again grinding the new product, it is coming very soft and increases the chewiness. The product needs to pour any trays for shape, the shape of product depend upon our requirement and client requirement. The shape of product play significant role for sell of product. The new product is packed with suitable packaging material. The shelf life of the product is made after packaging 24month.

III. RESULTS AND DISCUSSIONS

The newly developed Protein Rich Milk Peanut Chocobar product is more soft and chewiness. It is comfortable for consume, when we are taking the chocobar immediately melt in mouth then give good taste and aroma. The quality control analysis of new product follows the FSSAI specifications. As per the analysis the new product contains 100grames of sample 18.5% protein and 24.9% fat, 52% carbohydrates. The product is very easily to transport without damage and contamination, the natural atmosphere conditions are required for simple storage. Through the results of the new product, under nourished people are able to see
visible improvements in their health. This helps to build the trust of the community in health care with new product, which in turn, creates demand for other important services such as physical and mental growth. There is an urgent need for treatment of severe acute malnutrition to become part of essential health services so that every under nourished child who needs treatment receives it. The new product is used as a health treatment for under nourished children’s. So the families of Childers are take care for consume the product to the children’s. There in addition, routine monitoring consumes regularly important elements for effective child health.

Quality control is achieved by adopting operating procedures that are internationally accepted as standards for food production, the ISO 22000 and the Hazard Analysis and Critical Control Point Program (HACCP). These procedures prescribe raw material procurement, storage of ingredients, mixing of ingredients and storage of finished product. In addition to international standards which regulate the production of food, it also prescribes operating standards, conduct inspections of factories and issue licenses to produce food. Product testing is used to verify the quality of the production process, and should be done with every batch of finished product, the finished product is tested for contaminating microbes (salmonella, staphylococcus, total flora of aerobic mesophilic bacteria, coliforms, E. Coli, yeast, mold), aflatoxin and product composition (fat, protein and potassium). Testing is best done in quality control department. The Batches of final product should not be sent to consumers without verification of product quality.

Nutrition composition of new product

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Nutrition composition</th>
<th>Spread per 100g (min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Moisture</td>
<td>2.5% maximum</td>
</tr>
<tr>
<td>2</td>
<td>Protein</td>
<td>15 to 25% total energy</td>
</tr>
<tr>
<td>3</td>
<td>Total Lipid (Fat)</td>
<td>25 to 45% total energy</td>
</tr>
<tr>
<td>4</td>
<td>Carbohydrates</td>
<td>40 to 60% Total energy</td>
</tr>
<tr>
<td>5</td>
<td>Calories</td>
<td>520-550 Kcal/100g</td>
</tr>
</tbody>
</table>

As outlined above, the major future challenge is the potential increased demand for new product as countries adopt and expand in world wide. The WHO and UNICEF are working to prevent the malnutrition and external partners on development of sustainable therapeutic food like new product supply chain. Our concern is the extension of its use in communities, rather than in health facilities, and for prevention of malnutrition, rather than the treatment of malnutrition. In the market an expensive, currently usually imported, commercial product, as the main food to prevent malnutrition is undesirable and unsustainable. It is unable to take poor people present in market. So the free supply from help of ngos may give sufficient result for prevent malnutrition.

IV. ACKNOWLEDGEMENT

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V. REFERENCE


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