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Organoleptic and sensory evaluation of recepies from indigenous foods rich in calcium

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ABSTRACT

Calcium is one of the most essential minerals in the body, available through diet. Dairy products are the richest source of calcium but not liked by everyone. Therefore, there is need to explore more calcium rich indigenous foods and their use in diet. The present study was undertaken with the objective of formulation of recipes rich in calcium. Three recipes of calcium rich Ladoos namely Khus khus coconut ladoo,Til ladoo and Paushtik ladoos were formulated. Sensory evaluation of these recipes was also done. Among the formulated recepies khus khus coconut ladoos were having highest calcium content. The overall acceptability of khus khus coconut ladoos was highest (8.5±0.527) followed by til (7.8±0.632) and paushtik ladoos (7.7±0.483). These recipes ascertain better availability of essential mineral like calcium from sources besides dairy products and help to meet the RDA.

KEY WORDS : Indigenous food, Calcium, Sensory evaluation

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Calcium is one of the most essential minerals in the body, available through diet as human body cannot produce it. Loss of calcium from the body occurs daily through urine, faeces as well as insensible losses (Bhatia 2008). Insensible loss includes losses from skin, nails and hairs, which account about 40-80 mg calcium loss per day (Charles *et al.,* 1983). In adults, the minimum urinary loss is up to 140mg/day (Bhatia, 2008). These losses are unavoidable therefore, a constant supply of calcium through diet is necessary.

Inadequate intake of dietary calcium from food or supplements even for short term results in hypocalcaemia. Symptoms of hypocalcaemia include numbness and tingling in the fingers, muscle cramps, convulsions, lethargy, and poor appetite and abnormal heart rhythm (Weaver and Heaney, 2006). Insufficiency of calcium over a long period can lead to porous and fragile bones as well as tooth decay.

When dietary calcium is inadequate, calcium is drawn from the bones, which serve as a reservoir for calcium. The importance of adequate dietary calcium becomes obvious to prevent this constant withdrawal from the skeleton, which leads to osteoporosis (Halevy *et al.,* 1957).

Dairy products are among the most desirable foods to meet daily calcium requirements (The American Dietetic Association, 1996). But there are individuals who cannot afford and others are intolerable to dairy products. Due to this, they suffer from insufficiency of calcium. Also, there are people who dislike dairy products.

Keeping this in mind, the present study was undertaken with the objective to develop commonly consumed food preparations by incorporating calcium rich sources.

RESEARCH METHODS

Material:

Khus- khus, dessicated coconut powder, sugar, gingelly seeds, jaggery, chickpea and raisins were used to prepare these recipes.

Processing of samples:

All the ingredients of the recepies were procured from the local market of district Kurukshetra. The ingredients were sorted out first and then only edible portions were selected to prepare the recepies.

Development of recipes:

The recipes were evolved using the locally and commonly consumed foods. The method adopted was similar to the one used by local north Indian families. Recipes were formulated from the calcium rich ingredients in such a way that one serving of the recipe provides approximately 500mg of calcium after consumption. The ingredients, method of preparation, weight of the recipes are indicated in Table a.