Chemical analysis of peanut milk

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Abstract
Peanut have a very high amount of protein, with 25.5 grams per 100g. This makes them beneficial for post workout muscle recovery. They contain very good quality of amino acids. Chemical estimation of moisture, ash, crude fibre content was done by using standard procedures and carbohydrate was calculated by difference method, energy was estimated by calculation method (AOAC, 2005). Protein were estimated by Lowry’s method (1951). Calcium and Iron were estimated by method given by Ranganna (2001).

Keywords: Peanut milk, nutritional, analysis, estimated

Introduction
Peanut or groundnut (Arachis hypogaea L.) is a species in the legumes family. It is a major source of edible oil and protein and therefore considered to be highly valuable in human and animal nutrition (Talcot and Passeretti, 2005) \[10\]. Peanut is also a good source of antioxidant, such as p-coumaric acid, that may be contributing factors to potential health benefits of the consumers (Sunny-Roberts et al., 2004) \[9\]. Peanut and Peanut milk products have nutritional benefits because of their extreme richness in protein, minerals and essential fatty acids such as linoleic and oleic acids, which are considered to be highly valuable in human nutrition (Bensmira and Jiang, 2012) \[2\]. It is extensively used in India and other developing countries by the vegetarians and more recently by children allergic to cow milk proteins. Being free in cholesterol and lactose, Peanut milk is also a suitable food for lactose intolerant consumers, vegetarians and milk allergy patients. Peanut milk may be produced by soaking and grinding full fat raw peanuts with water to get a slurry, subject to filtration. Many ways of producing peanut milk have been done by various researchers (Benchat and Nail, 2006) \[3\].

Methodology
The present investigation was carried out in the Nutrition Research Laboratory of the Department of Food, Nutrition and Public Health, Ethelind College of Home Science, Sam Higginbottom University of Agriculture, Technology & Sciences, Allahabad. Peanut was procured from the local market of Allahabad.

Preparation for peanut milk

- Clean Peanut
- Washing
- Soaking (6-8 hours)
- Drained water
- Removal of outer layer
- Grinding
- Straining with muslin cloth

(Source: J. David, 2014)
Proximate Analysis of Peanut Milk

Proximate analysis - Chemical estimation of moisture, ash, crude fibre content was done by using standard procedures and carbohydrate was calculated by difference method, energy was estimated by calculation method (AOAC, 2005) [1]. Protein were estimated by Lowry’s method (1951) [7]. Calcium and Iron were estimated by method given by Ranganna (2001) [8].

Result and Discussion

Chemical composition of peanut milk (per 100g).

<table>
<thead>
<tr>
<th>Composition</th>
<th>Peanut Milk</th>
</tr>
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<tbody>
<tr>
<td>Moisture (%)</td>
<td>75.8</td>
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<tr>
<td>Ash (g)</td>
<td>-</td>
</tr>
<tr>
<td>Protein (g)</td>
<td>5.1</td>
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<tr>
<td>Fat (g)</td>
<td>3.3</td>
</tr>
<tr>
<td>Crude Fiber (g)</td>
<td>-</td>
</tr>
<tr>
<td>Energy (Kcal)</td>
<td>72</td>
</tr>
<tr>
<td>Carbohydrate (g)</td>
<td>4.7</td>
</tr>
<tr>
<td>Iron (mg)</td>
<td>0.06</td>
</tr>
<tr>
<td>Calcium (mg)</td>
<td>33.47</td>
</tr>
</tbody>
</table>

Nutrient component of peanut milk: The moisture content of peanut milk had obtained 75.8%, the protein content of peanut milk had obtained 5.1g. Similar study was reported by investigated the protein 5.02g/100g. The fat content of peanut milk had obtained 3.3g. Similar study was reported by investigated the fat 2.16g/100g, the energy content of had peanut milk obtained 72 kcal, the carbohydrate content of peanut milk had obtained 4.7 gram, the iron content of peanut milk had obtained 0.06 gram, the calcium content of peanut milk had obtained 33.47 mg.

A study of Giyarto et al. (2011) [6] cleared that peanut milk contained fat 2.69%, protein 2.26%. fat and protein concentrations of peanut milk prepared by were 5.40 and 5.60% respectively. Generally, the variation in peanut to water ratio used for peanut milk extraction affects the peanut milk composition.

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References