

## Assessment of Peanut Varieties Grown in Sri Lanka for Peanut Butter Production

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Great potential exists for value-added products of peanut (*Arachis hypogaea L.*) due to its functional properties. The study was focused on the development of peanut butter using peanut varieties grown in Sri Lanka to find the best peanut variety and the best method for peanut butter production. Peanuts were roasted and blanched with 90°C hot water for 3 minutes. Vegetable oil (15%), sugar (8%), salt (1%) were added to peanuts and ground using a colloid mill. Peanut butter was filled into sterilized glass bottles and stored at -4°C. The experiment was laid out in a complete randomized design with five treatments; peanut butter prepared from *Tissa*, *Indi*, *Lanka Jambo*, and *ANKGL3* varieties and commercially available product replicated thrice. Proximate, physicochemical, sensory, and microbial analysis were determined against a commercially available product. Peanut butter prepared from *Indi* variety was selected as the best product by sensory evaluation with thirty untrained panelists using a nine-point hedonic scale. The lowest moisture (0.66±0.01%), highest ash (5.21±0.14%), crude protein (26.45±0.82%), carbohydrate (21.95±0.89%) and crude fat (54.85±0.16%) contents were exhibited in peanut butter prepared from *Indi*, *Tissa*, *Indi*, *ANKGL3* and *Indi* varieties. Total soluble solids and titratable acidity were increased, and pH was decreased in all the products and phenolic content and peroxide value were 0.98 mg GAE g<sup>-1</sup> and 0.04 meq g<sup>-1</sup> of peanut butter prepared from *Indi* variety during storage of 3 months. Total plate count and yeast and mold count were less than 101 CFU g<sup>-1</sup>. The best condition for roasting of large nuts: *Lanka Jambo* and *ANKGL3* was 170°C for 30 minutes and for small nuts: *Indi* and *Tissa* were 150°C for 65 minutes. According to shelflife evaluation, there was no significant change in all the peanut butter and no significant microbial count in peanut butter prepared from *Indi* variety throughout 3 months storage period, thus it was selected as the best product.

**Keywords:** *Arachis hypogaea L.*, Peanut butter, Shelflife