

# Formulation of value-added flavored Peanut spread enriched with Jackfruit seed powder

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## Abstract

This study aimed to develop value-added and flavored peanut spread formulations enriched with jackfruit seed powder, an underutilized agricultural by-product, to enhance nutritional quality while promoting sustainability. Jackfruit seed powder was incorporated for its functional benefits, including dietary fiber, starch, minerals, and antioxidant properties, while peanuts contributed high-quality protein, healthy fats, and essential micronutrients. Three different flavored formulations (garlic (F2), vanilla (F3), cocoa (F4)), and a control (F1) formulation were developed using peanut, jackfruit seed powder, sunflower oil, honey, vinegar, and salt. Sensory evaluation of the formulated spreads was conducted using a five-point hedonic scale to assess appearance, texture, spreadability, aroma, flavor, mouthfeel, and overall acceptability using 35 semi-trained panelists. Based on sensory scores, the garlic flavor incorporated formulation (F2) was identified as the most acceptable treatment. Chemical analysis of the selected garlic-flavored peanut spread enriched with jackfruit seed powder (F2) formulation revealed a moisture content of 4.08%, pH of 6.3, ash content of 3.33g/100g, acidity of 7.95%, fat content of 33.83g/100g, and yeast and mold count of less than  $1 \times 10^2$  CFU/g, indicating good product stability and microbiological safety. This research demonstrates the potential of jackfruit seed powder as a functional ingredient in peanut spread, adding value to an often- discarded by-product while supporting sustainable food innovation and functional food development.

**Keywords:** Cocoa, Garlic, Jackfruit seed powder, Peanut, Vanilla