# DEVELOPMENT AND QUALITY ANALYSIS OF VEGAN CURD FROM GROUNDNUT AND RICEMILK BY USING GREEN CHILLI PEDICLES

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# ABSTRACT

The development of plant-based dairy products has been fueled by the rising desire for healthier and more sustainable dietary options. The production and quality evaluation of vegan curd using rice and groundnut milk fermented with Lactic Acid Bacteria isolated from green chilli pedicels are the main objectives of this work. In order to determine the vegan curd's nutritional value, safety, and customer acceptability, the study compares various formulations ($T_0$-$T_3$) and analyzes its physicochemical, microbiological, and sensory characteristics. The vegan curd's pH levels ranged from 3.9±0.04 to 4.05±0.01, indicating ideal fermentation conditions, while its protein concentration reached up to 1.25±0.01% and fat content reached 6.03±0.05%, according to chemical tests. The product's stability and safety were guaranteed by microbiological analysis, which verified the low Yeast and Mold levels and lack of coliforms. Overall acceptability scores were similar to those of commercial plant-based yogurts, and sensory analysis emphasized the curd's delectable texture, flavor, and aroma. Utilizing LAB from green chilli pedicels improved the fermentation process and added to the curd's distinct flavor and health advantages. The results showed that vegan curd is a good substitute for conventional dairy curd and gives consumers a nutrient-dense, sustainable choice. The study emphasized how creative, environmentally beneficial food products may be made from agricultural waste, such as chilli pedicles. To further improve the product's quality and market potential, future studies should concentrate on increasing production volume, refining fermentation conditions, and investigating the functional characteristics of LAB. This study provided a reproducible model for creating plant-based dairy substitutes and added to the expanding corpus of information on sustainable food production.

**Key words:** Functional Properties, Green Chilli Pedicels, Lactic Acid Bacteria, Sustainability and Vegan Curd.

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