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Effect of Germination and Roasting on Physiochemical and Sensory Analysis of Soup Pre-mix Developed Using Pulses

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ABSTRACT

Introduction: Pulses are rich sources of essential nutrients but contain antinutritional factors that can affect bioavailability.

Aim: This study evaluates the effect of germination and roasting on the physicochemical and sensory properties of a soup pre-mix formulated using green gram (moong dal), black gram (urad dal), and split Bengal gram (chana dal), along with foxnuts (makhana) and dehydrated vegetables.

Materials and Methods: The pre-mix will be developed in four compositions: one with raw pulses, one with roasted pulses, one with germinated pulses, and a final combination incorporating both germination and roasting. Germination is expected to improve protein digestibility, enhance nutrient bioavailability, and reduce antinutritional factors, while roasting may enhance sensory attributes, impart desirable flavour, and improve shelf stability. Each formulation will undergo physicochemical characterisation, particle size analysis, and sensory evaluation to determine the optimal combination for enhanced nutritional quality and consumer acceptance.

Results: This study aims to optimise processing techniques to develop a functional, nutrient-dense, and convenient soup pre-mix, promoting the utilisation of pulses in value-added food products and contributing to health, dietary diversity, and sustainable food innovation.

Keywords: Germination, Roasting, Premix Soup, Pulses, Sensory Evaluation

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