

HIGH PROTEIN NUTRITION BAR FOR VEGANS



BY

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Project Report
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FACULTY OF TECHNOLOGY

EASTERN UNIVERSITY

SRI LANKA

2023

ABSTRACT

Protein bars are energy bars that should contain high protein usually 20%-50% of protein. When considering the protein bar in the market, limited numbers of protein bars are found in the sir lanka market. These products contain animal protein like whey protein so vegans can't consume this type of protein bars and some peoples has lactose intolerance.

Therefore the present study was conducted to develop a high protein bar using plant protein sources. Physicochemical properties, proximate composition, sensory evaluation, and shelf life were evaluated. Physico-chemical analysis was conducted using AOAC Methods to determine the moisture content, protein content, fat content, ash content, and pH of the high protein nutrition bar product. Sensory evaluation was conducted to evaluate organoleptic characteristics of the same. The appearance, colour, taste, texture, aroma, and overall acceptability were evaluated using a nine-point hedonic scale. Significance differences at a 5% level were observed in physicochemical composition viz moisture content, protein content, fat content, ash content, and pH of high protein nutritional bar product.

A higher value of crude protein (41.7509%), crude fat (13.966%), and crude fibre (2.6%) were obtained from the "A" sample. The moisture content was 6.9854% and the ash content was 3.4538%. The total carbohydrate value was 33.8439% and the total calorie value was 428.0732 Cal. According to the RHS colour chart (Royal Horticultural Society Color Chart), the current study was recorded; the colour of the protein bars sample was "yellow-green group 153, deep greenish-yellow A" and water activity was

0.467. The Ph value, TSS value, TA value, and antioxidant of the protein bar sample were recorded at 5.74ph, 2.4, 16.2, and 7.473%. A sensory analysis was conducted to determine the best vegan protein bar proportion. The “A” sample (soya protein powder 0.5g: moringa powder 5g) was selected as the most preferred protein bar sample. Considering all the properties of protein bar samples from three formulation methods and sensory parameters, “A” sample was selected as the best protein bar and the final product showed the best quality parameters.

Key words-: protein, vegan, nutrition, protein bar

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