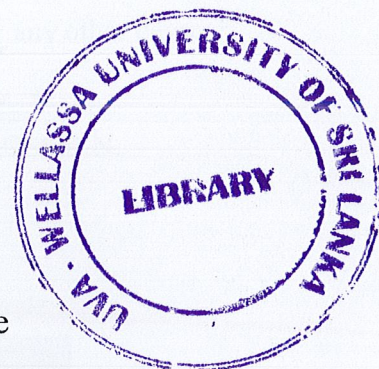


**ASSESSMENT OF PHYSICOCHEMICAL AND  
SENSORY PARAMETERS OF READY TO USE JELLY  
DEVELOPED BY USING *Kappaphycus alvarezii***



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by

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## Abstract

In Sri Lanka, the industry of processing cultured seaweeds for the regular consumer market in the form of food products is in its preliminary stage. However, with the increasing awareness surrounding consumption of healthier food, a gap is being created in the consumer market for nutrient rich seaweed based products. This study was aimed to develop a new seaweed based jelly which would be promoted as a nutrient dense snack. *Kappaphycus alvarezii* is a variety of marine macro red algae which are high in nutritional value due to the favorable climatic conditions and *Kappaphycus alvarezii* is the most commercially available and harvestable seaweed in Sri Lanka.

Seaweed samples (*Kappaphycus alvarezii*) collected from valeipadu farm in Killinochchi, Sri Lanka. To identify the composition of raw materials and ingredients for the development of the jelly product, preliminary trials were conducted. Passion fruit (*Passiflora incarnate*) was used as a flavor enhancer and to mask the odor. Sensory analyses were conducted using three concentrations of passion fruit juice (10, 15, and 20%) mix with cinnamon powder (0.25%) and sugar (25%). Final products were cooled at 3 °C for 1 hour and stored in a refrigerator. The selected final product was analyzed for organoleptic parameters, proximate composition and maintaining quality characters.

The results of this research indicate that the incorporation of passion fruit 20% with seaweed powder 4% allows the most effect on protein content (8.54), fat content (0.53), fiber content (16.65), ash content (35.21), of proximate analysis and acidity (3.03). A sensory evaluation was conducted on the appearance, color, aroma, taste, texture and overall acceptability of the product.

According to physicochemical assessment and microbiological tests, this product was safer for consumption within 4 weeks of production. In conclusion, this seaweed-based jelly product can be introduced as a healthy, fully natural good alternative to diary based yoghurt, especially in the growing vegan market.

**Keywords:** Nutritious jelly; *Kappaphycus alvarezii*; physicochemical properties; Seaweed based product