

**THE UTILIZATION OF LOCAL PLANT KELAKAI-STENOCHLAENA
PALUSTRIS AS NORI SPRINKLES**

By

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STENOCHLAENA PALUSTRIS AS NORI SPRINKLES

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.


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ABSTRACT

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Indonesia's high demand for nori products is largely met through imports, creating a need for sustainable, locally sourced alternatives. This research investigates the potential of the edible Indonesian fern, Kelakai (*Stenochlaena palustris*), as a raw material for a value-added nori-style sprinkle. The study aimed to establish an optimal production process by evaluating the selection of raw materials, processing effects, and the acceptability of the final product. The research was conducted in three phases. First, metabolomics and proximate analyses were employed to select the optimal raw material from six locations, identifying Kelakai from peat soil due to its superior nutritional profile and sustainability. Second, various drying pre-treatments and methods were evaluated. A minimal pre-treatment (quenched, non-soaked, non-ground) was found to best preserve the plant's natural metabolites, while the oven-drying method produced the most desirable sensory characteristics. Third, a hedonic sensory test was conducted with 43 panelists on the final sprinkle formulation. The results showed that the oven-dried Kelakai Nori Sprinkle was highly accepted, scoring significantly higher in taste and overall preference than control samples. This study successfully demonstrates a standardized route for processing Kelakai into a novel, nutritious, and consumer-accepted food product, highlighting its potential to reduce reliance on imports.

Keywords: Kelakai (Stenochlaena palustris), Metabolomics, Drying, Nori sprinkle, Nutrient preservation.



DEDICATION

This work is dedicated to my family, whose unwavering support, encouragement, and belief in the value of education have guided every step of this journey, and to my dear friends, who provided invaluable companionship and motivation.



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(Title: KELAKAI LEAVES AND OVERRIPE NON-SOY TEMPE AS Nori Sprinkle (FURIKAKE): Solution for Nutritional Problem of Mother during Pregnancy and Children).

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