

ANALYSIS SENSORY PROFILE OF PALM SUGAR (*Arenga Pinnata*) USING QUANTITATIVE DESCRIPTIVE ANALYSIS

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ABSTRACT

RANNA NABIILAH AZ-ZAHRA. Analisis Profil Sensori Gula Aren (*Arenga Pinnata*) Menggunakan Analisis Kuantitatif Deskriptif. Dibimbing oleh Prof. DR. ir. DEDE ROBIATUL ADAWIYAH, M. SI.

Tingginya konsumsi gula di Indonesia memegang peranan penting bagi para produsen. Gula aren yang merupakan produk gula tradisional sangat digemari oleh konsumen sebagai pemanis pada makanan dan minuman. Kualitas sensori dari suatu produk pangan sangat mempengaruhi penerimaannya, sehingga perlu dijaga dan dikontrol dengan baik agar tetap konsisten. Evaluasi sensori bertujuan untuk meningkatkan nilai karakteristik gula aren bagi produsen dan perajin. Evaluasi sensori deskriptif memberikan profil sensori yang rinci, tetapi metode ini memakan waktu dan mahal. Penelitian ini bertujuan untuk mengidentifikasi profil sensori gula aren menggunakan metode Quantitative Descriptive Analysis (QDA), menganalisis karakteristik fisikokimia, dan mengevaluasi kinerja panelis selama uji sensori. Delapan belas sampel gula aren berasal dari provinsi Bangka Belitung dievaluasi oleh panelis terlatih dari LDITP (Laboratorium Departemen Ilmu dan Teknologi Pangan) IPB. Setiap sampel gula aren memiliki karakteristik dominan yang spesifik. Karakteristik sensori sampel gula aren dibagi berdasarkan 2 cluster yang berasal dari daerah yang berbeda. Sifat fisikokimia ditampilkan dalam hasil analisis warna, pH dan nilai Brix. Warna gula aren berwarna kuning kecoklatan. Sedangkan nilai pH ke-18 sampel gula aren berkisar antara pH 5,08 hingga pH 7,27. Nilai brix dari sampel gula aren berkisar antara 10,50 hingga 15,5 pada konsentrasi 15%. Panelis terlatih LDITP memiliki kinerja baik yang di lihat dengan parameter pembeda dan pengulangan.

Kata kunci: *Fisikokimia, Gula Aren, Panelis Terlatih, Profil Sensori, Quantitative Descriptive Analysis*

ABSTRACT

RANNA NABIILAH AZ-ZAHRA. Analysis Sensory Profile of Palm Sugar (*Arenga Pinnata*) using Quantitative Descriptive Analysis. Supervised by PROF. DR. IR. DEDE ROBIATUL ADAWIYAH, M. SI.

The high sugar consumption in Indonesia plays an important role for producers. Palm sugar, a traditional sugar product, is highly favored by consumers as a sweetener in foods and beverages. The sensory quality of a food product greatly affects its acceptance, and therefore, it needs to be well maintained and controlled to remain consistent. Sensory evaluation aims to improve the value characteristics of palm sugar for producers and artisans. Descriptive sensory evaluation provides a detailed sensory profile, but this method is time-consuming and expensive. This study aims to identify the sensory profile of palm sugar using the Quantitative Descriptive Analysis (QDA) method, analyze physicochemical characteristics, and evaluate panelist performance during sensory tests. Eighteen samples of palm sugar from the Bangka Belitung province were evaluated by trained panelists from the LDITP (Laboratory of the Department of Food Science and Technology) IPB. Each palm sugar sample had specific dominant characteristics. The sensory characteristics of the palm sugar samples were categorized into two clusters originating from different regions. The physicochemical properties were presented in the results of color, pH, and Brix value analyses. The color of the palm sugar was yellowish-brown. Meanwhile, the pH values of the 18 palm sugar samples ranged from pH 5.08 to pH 7.27. The Brix values of the palm sugar samples ranged from 10.50 to 15.5 at a 15% concentration. The trained panelists from LDITP exhibited good performance as seen from the parameters of discrimination and repeatability.

Keywords: *Palm sugar, Physicochemical, Trained Panelist, Sensory Profile, Quantitative Descriptive Analysis*

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ANALYSIS SENSORY PROFILE OF PALM SUGAR (*Arenga Pinnata*) USING QUANTITATIVE DESCRIPTIVE ANALYSIS

RANNA NABIILAH AZ-ZAHRA

Final Project
as one of requirements to acquire Undergraduate's degree
in Food Science and Technology

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FOREWORD

The author expresses praise and gratitude to Allah subhanallahu wa ta'ala for all His gifts so that this scientific work can be successfully completed. The theme chosen in the research carried out from November 2023 to May 2024 with the title "Analysis Sensory Profile of Palm Sugar (*Arenga Pinnata*) Using Quantitative Descriptive Analysis".

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The author acknowledges that this research project remains imperfect and is receptive to criticism. We hope that this scientific work will be useful for those in need and for the advancement of science.

Bogor, June 2024

Ranna Nabiilah Az-Zahra

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