

ABSTRAK

Raysha Azrina: Analisis Kandungan Gizi dan Daya Terima Permen Jeli dengan Substitusi labu kuning dan nanas sebagai Camilan Sumber Vitamin A. Skripsi. Fakultas Teknik Universitas Negeri Medan. 2026

Penelitian ini didasari atas empat masalah masyarakat Indonesia yang sampai saat ini masih terjadi yaitu: Kurang Energi Protein (KEP), Anemia Gizi Besi (AGB), Gangguan Akibat Kurang Yodium (GAKY), dan Kurang Vitamin A (KVA). Kandungan gizi yang terdapat dalam bahan substitusi seperti labu kuning yang tinggi akan betakaroten dan nanas sebagai pemberi rasa dan aroma alami, serta kandungan karbohidrat dan mineral yang diharapkan dapat menambah kualitas gizi camilan permen jeli. Penelitian ini bertujuan untuk pengembangan produk permen jeli dengan bahan dan pewarna alami, mengetahui daya terima, mengetahui produk yang dihasilkan dan formula terpilih, mengetahui hasil kandungan zat gizi (kadar air, kadar abu, energi, protein, lemak, karbohidrat, vitamin A) serta mengetahui Tekstur dan Angka Lempeng Total (ALT).

Tempat penelitian kandungan gizi proksimat di Laboratorium Prodi Gizi Fakultas Teknik, Universitas Negeri Medan. Analisis vitamin A dilakukan di Laboratorium Politeknik Teknologi Kimia Industri Medan. Analisis tekstur dilakukan di Laboratorium Instrumentasi Universitas Andalas. Analisis angka lempeng total (ALT) dilakukan di Laboratorium Badan Standarisasi jasa Pangan dan Industri (BSPJI) pada September – Oktober 2025. Desain Penelitian yang digunakan yaitu dengan metode Rancangan Acak Lengkap (RAL) dengan empat perlakuan dengan perbandingan yang digunakan yaitu (Air:labu kuning:nanas) yaitu F0(100% :0%:0%), F1(35%:40%), F2(40%:45%), F3(45%:50%). Uji daya Terima yang dilakukan yaitu Uji Hedonik dan Uji Mutu Hedonik terhadap 40 orang panelis mahasiswa gizi. Teknik analisis dengan data kuantitatif menggunakan SPSS uji *Kruskal Wallis* dan dilanjutkan dengan uji lanjut *Mann Whitney*. Formula terpilih menggunakan Metode Perbandingan Eksponensial (MPE).

Hasil penelitian dari produk permen jeli berhasil dikembangkan substitusi labu kuning dan nanas. Formulasi terpilih berdasarkan MPE yaitu F3 dengan 45% labu kuning dan 50% nanas dengan karakteristik berwarna kuning pucat, cukup beraroma nanas, cukup manis, agak asam, dan agak kenyal dengan hasil analisis zat gizi per 100g yaitu mengandung energi 344,11 kkal, 13,35% protein, 1,97% lemak, 66,39% karbohidrat 17,78% kadar air, 0,51% kadar abu dan 281,68µg Vitamin A, Angka Lempeng Total (ALT) $3,6 \times 10^2$ koloni/g dan pengukuran kepadatan tekstur permen jeli dengan sebesar 9,97 N/Cm².

Kesimpulan pada penelitian ini yaitu formula terpilih pada pengembangan permen jeli substitusi labu kuning dan nanas formulasi F3 dengan penambahan 45% labu kuning dan 50% nanas dengan kandungan sumber vitamin A sebesar 23% pertakaran saji. Sehingga permen ini dapat digolongkan sebagai pangan sumber vitamin A.

Kata Kunci: Daya Terima, Kandungan Gizi, Permen jeli, Labu kuning, Nanas.



ABSTRACT

Raysha Azrina: Nutritional Content Analysis and Acceptability of Jelly Candy with Pumpkin and Pineapple Substitutions as Vitamin A Snacks. Thesis. Faculty of Engineering, State University of Medan. 2026

This research is based on four problems of Indonesian society that still occur today, namely: Protein Energy Deficiency (PED), Iron Nutritional Anemia (AGB), Iodine Deficiency Disorders (GAKY), and Vitamin A Deficiency (VAD). The nutritional content contained in substitute ingredients such as pumpkin which is high in beta-carotene and pineapple as a natural flavor and aroma is expected to increase the nutritional quality of jelly candy snacks. This research aims to develop jelly candy products with natural ingredients and colorings, determine the acceptability, determine the resulting product and the selected formula, determine the results of nutritional content (water content, ash content, energy, protein, fat, carbohydrates, vitamin A) and determine the Texture and Total Plate Count (TLC)..

The proximate nutritional content research was conducted at the Nutrition Study Program Laboratory, Faculty of Engineering, State University of Medan. Vitamin A analysis was conducted at the Industrial Chemical Technology Polytechnic Laboratory, Medan. Texture analysis was conducted at the Instrumentation Laboratory, Andalas University. Total plate count (TLC) analysis was conducted at the Food and Industry Standardization Agency (BSPJI) Laboratory in September–October 2025. The research design used a Completely Randomized Design (CRD) method with four treatments in the following ratios (Water: Pumpkin: Pineapple): F0 (100%:0%:0%), F1 (35%:40%), F2 (40%:45%), and F3 (45%:50%). Acceptability tests included Hedonic Tests and Hedonic Quality Tests on 40 nutrition student panelists. Quantitative data analysis techniques used SPSS, the Kruskal-Wallis test, and the Mann-Whitney test. The selected formula used the Exponential Comparison Method (MPE).

The research results showed that the jelly candy product was successfully developed as a substitute for pumpkin and pineapple. The selected formulation based on MPE was F3, with 45% pumpkin and 50% pineapple. It was characterized by a pale yellow color, moderate pineapple aroma, moderate sweetness, slightly sourness, and a slightly chewy texture. Nutritional analysis results per 100g showed 344.11kcal of energy, 13.35% protein, 1.97% fat, 68.24% carbohydrate, 17.78% water content, 0.51% ash content, and 292.66µg of Vitamin A. A Total Plate Count (TPC) of 3.6×10^2 colonies/g, and a jelly candy texture density measurement of 9.97 N/Cm².

The conclusion of this study is that the selected formula for developing pumpkin and pineapple jelly candies is formulation F3, with the addition of 45% pumpkin and 50% pineapple, with a vitamin A content of 23% of the serving size.

Keywords: Acceptability, Nutritional, Jelly candy, Pumpkin, Pineapple

