

ABSTRAK

Rumiris Sianipar: Uji Daya Terima Dan Analisis Serat Pangan Bakpao Isi Pasta Kacang Merah dengan Substitusi *Puree* Kulit Buah Naga Merah (*Hylocereus costaricensis*). Skripsi. Program Studi Gizi. Jurusan Pendidikan Kesejahteraan Keluarga. Fakultas Teknik. Universitas Negeri Medan. 2026.

Konsumsi pangan sumber serat pada masyarakat di Indonesia masih tergolong rendah. Kulit buah naga merah merupakan salah satu bahan pangan yang memiliki kandungan serat yang tinggi dan pemanfaatannya masih terbatas. Salah satu inovasi pengolahannya adalah dengan memanfaatkan kulit buah naga merah sebagai bahan tambahan pangan pada bakpao. Bakpao merupakan makanan tradisional yang banyak diminati masyarakat karena teksturnya lembut, cita rasanya khas, dan praktis dikonsumsi. Penelitian ini bertujuan untuk mengetahui: 1) Daya terima panelis terhadap bakpao isi pasta kacang merah substitusi *puree* kulit buah naga merah dengan formula 20%, 30%, dan 40%; 2) Formula terbaik berdasarkan uji hedonik dan mutu hedonik; 3) Analisis serat pangan formula terpilih bakpao isi pasta kacang merah substitusi *puree* kulit buah naga merah; 4) Kontribusi serat pangan pada produk terpilih per takaran saji terhadap kebutuhan serat sehari. Penelitian ini dilaksanakan di Laboratorium Analisis Zat Gizi dan Laboratorium Kulineri, Fakultas Teknik, Jurusan Pendidikan Kesejahteraan Keluarga, Program Studi Gizi Universitas Negeri Medan, pada September hingga November 2025. Desain penelitian yang digunakan adalah eksperimental dengan metode Rancangan Acak Lengkap (RAL) dengan 4 perlakuan formulasi berbeda. Teknik analisis data menggunakan uji *Kruskall Wallis* dan uji lanjut *Mann Whitney*. Penentuan formulasi terbaik dipilih berdasarkan uji hedonik dan uji mutu hedonik.

Hasil penelitian ini menunjukkan bahwa bakpao isi pasta kacang merah dengan substitusi 30% *puree* kulit buah naga merah merupakan produk yang paling banyak diminati dikarenakan pada parameter uji hedonik dan mutu hedonik formula P2 memiliki nilai rerata tertinggi. Daya kembang pada bakpao yaitu sebesar 7,1428% dan kandungan gizi bakpao isi pasta kacang merah dengan substitusi *puree* kulit buah naga merah sebanyak 30% terdiri dari kadar air 42,64%, kadar abu 0,74%, kadar protein 6,20%, kadar lemak 3,96%, dan kadar serat pangan 7,85% yang dimana termasuk dalam kategori tinggi serat pangan.

Kata kunci: bakpao, *puree* kulit buah naga, kacang merah

ABSTRACT

Rumiris Sianipar: Acceptability Test and Fibre Analysis of Red Bean Paste-Filled Steamed Buns with Red Dragon Fruit Skin Puree Substitution (*Hylocereus costariensis*). Thesis. Faculty of Engineering, State University of Medan. 2026.

Consumption of fiber-rich foods among the Indonesian population remains relatively low. Red dragon fruit peel is a food ingredient with a high fiber content, yet its utilization remains limited. One innovative way to process it is by using red dragon fruit peel as a food additive in bakpao. Bakpao is a traditional food that is widely popular among the public due to its soft texture, distinctive flavor, and convenience. This study aims to determine: 1) The level of acceptance among panelists of red bean paste-filled steamed buns using red dragon fruit peel puree as a substitute at 20%, 30%, and 40% replacement levels; 2) The optimal formula based on hedonic testing and hedonic quality; 3) The dietary fiber content of the selected red bean paste-filled bakpao formula using red dragon fruit peel puree as a substitute; 4) The contribution of dietary fiber in the selected product per serving toward daily fiber requirements. This study was conducted at the Nutritional Analysis Laboratory and the Culinary Laboratory, Faculty of Engineering, Department of Family Welfare Education, Nutrition Study Programme, University of Medan, from September to November 2025. The research design employed was experimental, using a Completely Randomised Design (CRD) with four different formulation treatments. Data analysis techniques utilised the Kruskal–Wallis test and the Mann–Whitney post-hoc test. The optimal formulation was selected based on hedonic testing and hedonic quality assessment.

The results of this study indicate that steamed buns filled with red bean paste and containing a 30% substitution of red dragon fruit peel purée are the most popular product, as Formula P2 achieved the highest average scores in the hedonic test and hedonic quality parameters. The expansion rate of the steamed buns was 7.1428%, and the nutritional composition of the red bean paste-filled steamed buns with a 30% substitution of red dragon fruit peel purée comprised 42.64% moisture, 0.74% ash, 6.20% protein, 3.96% fat, and dietary fibre content of 7.85%, which falls within the high dietary fibre category.

Keywords: bakpao, dragon fruit peel puree, red beans