

# **YELLOW PUMPKIN BASED ENTERAL FORMULATION AGAINST LOW GLYCEMIC INDEX LEVELS IN DIABETES MELLITUS PATIENTS AT PROF. DR. MARGONO SOEKARJO PURWOKERTO**

Rahma Ayu Syafitri<sup>1</sup>, Tjarono Sari<sup>2</sup>, Tri Siswati<sup>3</sup>

Dietitian Professional Education, Department of Nutrition, Poltekkes Kemenkes  
Yogyakarta

Jl. Tata Bumi 3, Banyuraden, Gamping, Sleman, Yogyakarta 55293 0274-617679

Email: [rahmaayusyafitri04@gmail.com](mailto:rahmaayusyafitri04@gmail.com)

## **ABSTRACT**

**Background:** Based on Riskesdas, there has been an increase in the prevalence of Diabetes Mellitus from 6.9% (2013) to 8.5% (2018). Nutrition is one of the factors that prevent DM complications. There are two types of formulas, namely commercial and non-commercial. Commercial formulas are relatively expensive and few use local food ingredients in hospitals. Yellow pumpkin is a food that is rich in nutrients. So non-commercial formulas can be made yourself using pumpkin. **Objective:** To develop a pumpkin-based enteral formula for DM patients at RSUD Prof. Dr Margono Soekarjo Purwokerto. **Method:** This type of research uses Research and Development (R&D). The research was conducted at the Nutrition Installation at Prof. RSUD. Dr. Margono Soekarjo Purwokerto, September 13 2023. The formulation is made from 50 gr of yellow pumpkin. There were 10 authors in this study. Ingredients include white tofu, pumpkin, rice flour, honey, skim milk, FCM milk, water, and a knife, cutting board, bowl, blender, food spoon, measuring cup, pan, digital scale, plastic cup, NGT tube, filter, star fruit glass. For data collection using primary data. Descriptive analysis, data presentation using tables, instruments using hedonic tests to see the level of liking. **Results:** An enteral formulation was developed with a nutritional value of 210.7 kcal of energy, 12.5 gr of protein, 4.1 gr of fat, 32.6 gr of carbohydrates, 3.1 gr of fiber. Viscosity 1.4 cP and Osmolarity 315 mOsm/L. Glycemic index 51.1 Ig. The price of food costs per day is IDR 29,070. Most of the researchers liked the color, aroma, taste and viscosity. So the non-commercial formula is suitable to be implemented as an alternative ingredient with nutritional content that meets the DM diet principles and is relatively cheap. **Conclusion:** Non-commercial formula has nutritional content according to needs, low glycemic index, viscosity and osmolarity meet standards, low cost and the researchers like the organoleptic test.

Keywords: Enteral Formula, Diabetes Mellitus, Yellow Pumpkin, Low Glycemic Index, Food Cost

# FORMULASI ENTERAL BERBASIS LABU KUNING TERHADAP KADAR INDEKS GLIKEMIK RENDAH PADA PASIEN DIABETES MELITUS DI RSUD PROF. DR. MARGONO SOEKARJO PURWOKERTO

Rahma Ayu Syafitri<sup>1</sup>, Tjarono Sari<sup>2</sup>, Tri Siswati<sup>3</sup>

Pendidikan Profesi Dietisien, Jurusan Gizi, Poltekkes Kemenkes Yogyakarta  
Jl. Tata Bumi 3, Banyuraden, Gamping, Sleman, Yogyakarta 55293 0274-617679  
Email: [rahmaayusyafitri04@gmail.com](mailto:rahmaayusyafitri04@gmail.com)

## ABSTRAK

**Latar belakang:** Berdasarkan Riskesdas, terjadi peningkatan prevalensi Diabetes Melitus 6,9% (2013) menjadi 8,5% (2018). Gizi merupakan salah satu faktor yang mencegah komplikasi DM. Terdapat dua macam formula yaitu komersial dan non komersial. Formula komersial dengan harga relatif mahal dan masih sedikit yang memanfaatkan bahan pangan lokal di rumah sakit. Labu kuning merupakan bahan pangan yang kaya akan zat gizi. Sehingga formula non komersial dapat dibuat sendiri dengan bahan labu kuning. **Tujuan:** Untuk mengembangkan formula enteral berbasis labu kuning pada pasien DM di RSUD Prof. Dr Margono Soekarjo Purwokerto. **Metode:** Jenis penelitian ini menggunakan *Research and Development* (R&D). Penelitian dilakukan di Instalasi Gizi RSUD Prof. Dr. Margono Soekarjo Purwokerto, tanggal 13 September 2023. Formulasi terbuat dari labu kuning sebanyak 50 gr. Penulis pada penelitian ini berjumlah 10 orang. Bahan meliputi tahu putih, labu kuning, tepung beras, madu, susu skim, susu FCM, air, dan alat pisau, telenan, mangkuk, blender, sendok makanan, gelas ukur, panci, timbangan digital, cup plastik, selang NGT, saringan, gelas belimbing. Untuk pengumpulan data menggunakan data primer. Analisis secara deskriptif, penyajian data menggunakan tabel, instrument menggunakan uji hedonic untuk melihat tingkat kesukaan. **Hasil:** Formulasi enteral dikembangkan dengan kandungan nilai gizi energi 210,7 kkal, protein 12,5 gr, lemak 4,1 gr, karbohidrat 32,6 gr, serat 3,1 gr. Viskositas 1,4 cP dan Osmolaritas 315 mOsm/L. Indeks glikemik 51,1 Ig. Harga foodcost perhari Rp29.070. Penulis sebagian besar menyukai warna, aroma, rasa dan kekentalan. Sehingga formula non komersial layak diimplementasikan sebagai bahan alternatif pengganti dengan kandungan gizi yang sudah memenuhi prinsip diet DM dan harga relatif murah. **Kesimpulan:** Formula non komersial memiliki kandungan gizi sesuai dengan kebutuhan, indeks glikemik rendah, viskositas dan osmolaritas memenuhi standart, biaya murah serta uji organoleptik penulis menyukai.

Kata kunci: Formula Enteral, Diabetes Melitus, Labu Kuning, Indeks Glikemik Rendah, Food Cost