

**PENGEMBANGAN FORMULA ENTERAL RENDAH INDEKS GLIKEMIK  
BERBASIS TEPUNG KEDELAI DAN WORTEL  
(SOYCARR DIAB) UNTUK PASIEN DENGAN DIABETES MELITUS  
DI RSUD PROF. Dr. MARGONO SOEKARJO PURWOKERTO**

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**ABSTRAK**

**Latar Belakang :** Kadar glukosa darah yang tinggi pada penderita diabetes melitus dapat dikendalikan dengan konsumsi makanan rendah indeks glikemik, tinggi protein dan antioksidan. Pemberian makanan secara enteral diberikan apabila makanan melalui oral tidak adekuat. Formula enteral rumah sakit berbasis tepung kedelai dan wortel diharapkan bisa memenuhi kebutuhan penderita diabetes melitus.

**Tujuan :** Mendapatkan standar resep, mengetahui kandungan gizi, indeks glikemik, sifat fisik, sifat organoleptik dan *food cost* dari hasil modifikasi formula enteral diabetes melitus

**Metode :** Jenis penelitian yaitu *Research and Development (R&D)* dengan desain deskriptif-komparatif yaitu perbandingan kandungan gizi, indeks glikemik, sifat fisik, sifat organoleptik dan *food cost* antara hasil modifikasi formula enteral rumah sakit SoyCarr Diab dengan formula enteral komersial Nutren diab dan di analisis secara deskriptif. Uji hedonik dilakukan dengan mengambil 10 orang panelis agak terlatih yaitu Ahli Gizi RSUD Prof Dr. Margono Soekarjo Purwokerto.

**Hasil :** Hasil penelitian menunjukkan formula enteral rumah sakit SoyCarr Diab yaitu kandungan gizi sudah sesuai dengan kebutuhan pasien DM 1700 kkal yaitu energi 108,10%, protein 109,64 %, lemak 100,60 % , karbohidrat 95,84 % , indeks glikemik tergolong rendah yaitu 48,01 IG (<55 IG), pengukuran sifat fisik meliputi densitas yaitu 1,01 kkal/ml dimana sudah memenuhi syarat (1-2 kkal/ml), viskositas yaitu 0,008 Poise dimana belum memenuhi standar (0,07 Poise - 0,135 Poise), osmolaritas 180 mOsmol sudah sesuai dengan standar (<400 mOsmol), sifat organoleptik sebagian besar menyukai pada aspek warna, aroma, kekentalan dan rasa, *food cost* Rp.39.608,- lebih murah di bandingkan formula enteral komersial Nutren Diab Rp.185.951,- per hari.

**Kesimpulan :** Didapatkan modifikasi formula enteral rumah sakit SoyCarr Diab berbahan dasar tepung kedelai dan wortel dimana dapat diberikan kepada pasien dan diterima dengan baik oleh pasien diabetes melitus.

**Kata Kunci :** Formula Enteral, Diabetes Melitus, Tepung Kedelai, Wortel

**DEVELOPMENT OF A LOW GLYCEMIC INDEX ENTERAL FORMULA  
BASED ON SOYA AND CARROT FLOUR (SOYCARR DIAB) FOR  
PATIENTS WITH DIABETES MELLITUS AT THE  
PROF. DR. MARGONO SOEKARJO GENERAL HOSPITAL**

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**ABSTRACT**

**Background:** Diabetes mellitus patients can lower their blood glucose levels by eating meals high in protein and antioxidants and low on the glycemic index. If oral feeding is insufficient, enteral feeding is administered. Patients with diabetes mellitus should be able to get the enteral formula they require in a hospital, thanks to its soy flour and carrot base. Diabetes mellitus patients can lower their blood glucose levels by eating meals high in protein and antioxidants and low on the glycemic index. If oral feeding is insufficient, enteral feeding is administered. Patients with diabetes mellitus should be able to get the enteral formula they require in a hospital, thanks to its soy flour and carrot base.

**Objective:** Obtaining standard recipes, calculate nutritional content, glycemic index, physical qualities, organoleptic features, and food costs using modified enteral formulas for diabetic mellitus.

**Method:** The research is descriptive-comparative in type, with a comparison of nutritional content, glycemic index, physical properties, organoleptic properties, and food costs between the results of the modification of the SoyCarr Diab hospital enteral formula and the Nutren Diab commercial enteral formula. The hedonic test was carried out with ten somewhat trained panelists, including RSUD Prof. Dr. Margono Soekarjo Purwokerto nutritionist.

**Results:** The results of the study show that the SoyCarr Diab hospital enteral formula is nutritional content that is in accordance with the needs of DM patients 1700 kcal, namely energy of 108.10%, protein of 109.64%, fat of 100.60%, carbohydrates of 95.84%, glycemic index is classified as low, namely 48.01 IG (<55 IG), physical property measurements include density, 1.01 kcal/ml, which meets the requirements (1-2 kcal/ml); viscosity 0.008 Poise, which does not meet the standard (0.07 Poise - 0.135 Poise); osmolarity 180 mOsmol is in accordance with the standard (<400 mOsmol); organoleptic properties mostly favor the aspects of color, aroma, viscosity and taste, food cost Rp. 39,608,00 cheaper compared to the commercial enteral formula Nutren Diab Rp. 185,951,00 per day.

**Conclusion:** It was discovered that a modified SoyCarr Diab hospital enteral formula including soy flour and carrots could be given to patients and was well tolerated by diabetes mellitus patients.

**Keywords:** Enteral Formula, Diabetes Mellitus, Soybean Flour, Carrots