

**GIKAPROLAIS ENTERAL FORMULA BASED ON SOYA FLOUR AND
SKIM MILK AS HIGH ENERGY AND PROTEIN DIET FOR PATIENTS
WITH CANCER IN RSUD PROF. DR. MARGONO SOEKARJO
PURWOKERTO**

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ABSTRACT

Background : Cancer patients are at a high risk of developing malnutrition due to hypercatabolism and inadequate oral intake. The innovation of a high energy and protein enteral formula based on soy flour and skim milk was chosen as an alternative to expensive commercial enteral formulas. Soy contains BCAAs and isoflavones that can enhance appetite and prevent the spread of cancer cells.

Objective : To analyze nutrient content, cost, physical characteristic, viscosity, and osmolarity of Gikaprolais enteral formula.

Method : The formula is made from soy flour, skim milk, sugar, corn oil, cornstarch, and full cream milk. This is a comparative descriptive study that compares the results of the Gikaprolais enteral formula and the commercial formula. The nutritional content is measured using the nutrition fact on the product and TKPI, the protein digestibility is calculated theoretically, the product cost is calculated based on the total food cost, the physical characteristic test is carried out by 10 panelists using a form, and the viscosity and osmolarity are calculated by a simple flow test.

Result : One serving of FERS Gikprolais contains 334.5 kcal energy, 19 g protein (21%), 9.8 g fat (25%), 47.9 g carbohydrates (54%), and 1.12 kcal/ml energy density. Gikaprolais has a yellowish white color, a neutral aroma typical of soy milk, the taste is a little too sweet, the thickness is suitable, but there are still coarse grains. The food cost of FERS Gikaprolais is IDR 6338/serving, protein digestibility is 90.71%, 1.07 cP viscosity, and 416 mOsm/L osmolarity.

Conclusion : FERS Gikaprolais has nutritional content, physical characteristics, viscosity, and osmolarity that are similar to FEK and meet the requirements of the TETP enteral formula.

Keyword : Cancer, enteral formula, soy flour, skim milk

**PENGEMBANGAN ALTERNATIF FORMULA ENTERAL RS
"GIKAPROLAIS" (TINGGI KALORI DAN PROTEIN DARI TEPUNG
KEDELAI DAN SKIM) SEBAGAI DIET TETP PADA PASIEN KANKER
DI RSUD PROF. Dr. MARGONO SOEKARJO**

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ABSTRAK

Latar Belakang : Pasien kanker berisiko mengalami malnutrisi karena mengalami hipermetabolisme dan asupan oral tidak adekuat. Pengembangan formula enteral tinggi energi tinggi protein berbasis tepung kedelai dan susu skim dipilih sebagai alternatif pemberian formula enteral komersial yang mahal. Kedelai mengandung BCAA dan isoflavon yang dapat meningkatkan nafsu makan dan menghambat penyebaran sel kanker.

Tujuan : Menganalisis kandungan gizi, biaya, sifat fisik, viskositas, dan osmolaritas formula enteral Gikaprolais

Metode : Formula terbuat dari tepung kedelai, susu skim, gula, minyak jagung, tepung maizena, dan susu *fullcream*. Penelitian ini merupakan penelitian deskriptif komparatif dengan membandingkan hasil formula enteral Gikaprolais dan formula komersial. Kandungan gizi diukur menggunakan label gizi pada produk dan TKPI, mutu cerna protein dihitung secara teoritis, biaya produk dihitung berdasarkan total biaya bahan baku, uji sifat fisik dilakukan oleh 10 orang panelis menggunakan formulir, serta viskositas dan osmolaritas dihitung menggunakan uji alir sederhana.

Hasil : Kandungan gizi FERS Gikprolais dalam satu saji yaitu energi sebesar 334,5 kkal, 19 g protein (21%), 9,8 g lemak (25%), 47,9 g karbohidrat (54%), dan densitas kalori sebesar 1,12 kkal/ml. Gikaprolais memiliki warna putih kekuningan, aroma netral khas susu kedelai, rasa agak terlalu manis, kekentalan sesuai, namun masih terdapat butiran kasar. FERS Gikaprolais memiliki *foodcost* Rp.6338/saji, mutu cerna teoritis 90,71%, viskositas sebesar 1,07 cP, dan osmolaritas sebesar 416 mOsm/L.

Kesimpulan : FERS Gikaprolais memiliki kandungan gizi, sifat fisik, viskositas, dan osmolaritas yang serupa dengan FEK dan sudah memenuhi syarat formula enteral TETP.

Kata Kunci : Kanker, formula enteral, tepung kedelai, susu skim