

## FORMULA ENTERAL KANKER TINGGI ENERGI TINGGI PROTEIN BERBAHAN DASAR TEMPE KEDELAI DAN LABU KUNING (FORTELAB)

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### ABSTRAK

**Latar Belakang.** Pasien kanker berisiko tinggi mengalami malnutrisi akibat hipermetabolisme dan asupan oral tidak adekuat. Salah satu upaya untuk memenuhi kebutuhan zat gizi dengan pemberian formula enteral. Modifikasi formula enteral berbahan pangan lokal yaitu tempe kedelai dan labu kuning diharapkan dapat menjadi salah satu bentuk dukungan gizi pendamping terapi yang aman, efektif, dan bernutrisi tinggi.

**Tujuan.** Menganalisis rancangan produk, kandungan gizi, sifat fisik, tingkat kesukaan, dan biaya dari formula enteral FORTELAB.

**Metode.** Penelitian ini merupakan penelitian *Research and Development (R&D)*. Desain penelitian yaitu deskriptif-komparatif dengan membandingkan sifat fisik, kandungan gizi, dan biaya antara FORTELAB dan FEK. Tingkat kesukaan dilakukan oleh 20 orang panelis dengan uji organoleptik. Penelitian dilakukan pada bulan Oktober - Desember 2025 di Laboratorium Teknologi Pangan Poltekkes Kemenkes Yogyakarta.

**Hasil.** Kandungan gizi FORTELAB per sajian yaitu energi sebesar 341,2 kkal dan 19,5 g protein. FORTELAB memiliki sifat fisik yaitu daya alir sebesar 11,6 ml/detik, viskositas 1,0 cP, dan osmolaritas 327 mOsm/L. FORTELAB berwarna putih kekuningan, beraroma khas susu dan tempe, rasa agak manis, tekstur sesuai dengan sedikit residu halus dan kekentalan sedang/pas. FORTELAB memiliki biaya per sajian sebesar Rp 8.935.

**Kesimpulan.** FORTELAB memiliki sifat fisik dan kandungan gizi yang serupa dengan FEK dan sudah memenuhi syarat formula enteral TETP, serta tingkat kesukaan tinggi dan biaya terjangkau.

**Kata Kunci.** Formula Enteral, TETP, Pasien Kanker, Tempe Kedelai, Labu Kuning.

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## **HIGH ENERGY HIGH PROTEIN ENTERAL CANCER FORMULA MADE FROM SOYBEAN TEMPE AND YELLOW PUMPKIN (FORTELAB)**

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### **ABSTRACT**

**Background.** Cancer patients are at high risk of malnutrition due to hypermetabolism and inadequate oral intake. One way to meet nutritional needs is through enteral formula administration. Modified enteral formulas made from local foods, such as soybean tempeh and pumpkin, are expected to provide safe, effective, and highly nutritious complementary nutritional support.

**Objective.** Analyze the product design, nutritional content, physical properties, preference level, and food cost of FORTELAB enteral formula.

**Methods.** This research was a Research and Development (R&D) study. The research design was descriptive-comparative, comparing the physical properties, nutritional content, and food cost of FORTELAB and FEK. The level of preference was determined by 20 panelists using organoleptic testing. The study was conducted from October to December 2025 at the Food Technology Laboratory of the Ministry of Health Polytechnic of Yogyakarta.

**Results.** FORTELAB's nutritional content per serving was 341,2 kcal of energy and 19,5 g of protein. FORTELAB had physical properties, namely a flow rate of 11.6 ml/second, a viscosity of 1.0 cP, and an osmolarity of 327 mOsm/L. FORTELAB was yellowish-white in color, had a distinctive aroma of milk and tempeh, a slightly sweet taste, a suitable texture with a slight fine residue, and a medium/right viscosity. FORTELAB had a food cost per serving of Rp 8,935.

**Conclusion.** FORTELAB had physical properties and nutritional content similar to FEK and had met the requirements of TETP enteral formula, as well as a high level of preference and affordable food cost.

**Keywords.** Enteral Formula, TETP, Cancer Patients, Soybean Tempe, Yellow Pumpkin

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