

## PERANCANGAN DAN PENGEMBANGAN PRODUK MAKANAN PENDAMPING AIR SUSU IBU (MP-ASI) BUBUK INSTAN DARI TEPUNG TEMPE DAN TEPUNG PISANG SUMBER ASAM LINOLEAT, VITAMIN B<sub>12</sub> DAN KALIUM

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### INTISARI

Bayi memerlukan makanan tambahan yang mendampingi ASI sebagai makanan utamanya setelah berusia 6 bulan. Tujuan penelitian (1)Identifikasi atribut mutu dan karakteristik MP-ASI bubuk instan sesuai dengan keinginan konsumen; (2)Mendapatkan rancangan formulasi MP-ASI bubuk instan dengan pengkayaan nutrisi asam linoleat, vitamin B<sub>12</sub> dan kalium yang bersumber dari tepung tempe dan tepung pisang; (3)Memperoleh kandungan utama gizi MP-ASI bubuk instan dengan pengkayaan nutrisi asam linoleat, vitamin B<sub>12</sub> dan kalium yang bersumber dari tepung tempe dan tepung pisang; (4)Menganalisis tingkat penerimaan bayi terhadap produk MP-ASI bubuk instan dengan pengkayaan nutrisi asam linoleat, vitamin B<sub>12</sub> dan kalium yang bersumber dari tepung tempe dan tepung pisang.

Fokus penelitian yaitu perancangan dan pengembangan produk MP-ASI bubuk instan dengan penambahan tepung tempe dan tepung pisang menggunakan metode *value engineering*. Tahapan awal penelitian mengidentifikasi faktor-faktor relevan yang mendukung, diantaranya penentuan atribut mutu produk yang bertujuan memberi gambaran terhadap karakteristik spesifik produk, mengidentifikasi keinginan dan kebutuhan konsumen terhadap produk, kemudian dirancang formulasi MP-ASI bubuk instan menjadi beberapa konsep produk. Tiap konsep produk diuji fisik, analisis kimia, mutu gizi dan uji mikrobiologi sesuai SNI MP-ASI bubuk instan. Kemudian diuji performansi, dihitung biaya produksi, ditentukan nilai (*value*) dari tiap konsep produk kemudian didapat produk terbaik yang kemudian diuji penerimaannya kepada bayi usia 6-12 bulan.

Urutan atribut mutu produk MP-ASI bubuk instan adalah nutrisi, *higine*, keamanan, bahan baku dan rasa. Konsep produk dengan *value* tertinggi adalah konsep produk F6 (14,61) dengan karakteristik dapat diseduh air hangat 2,13 ml/g, waktu larut 37 detik, densitas kamba 0,83 g/ml, kadar air 5,31 (% b/b), kadar abu 2,66%, kadar lemak 6,10%, kadar protein (n-total) 11,69%, karbohidrat (*by.different*) 74,23%, total energi per 100 gram bahan sebesar 398,63 kkal, daya cerna protein 78,56%, serat pangan tak larut 20,35% dan mengandung total bakteri sebanyak  $3,2 \times 10^3$  cpu/gram. Uji penerimaan terhadap bayi didapat 23% bayi menyukai produk MP-ASI bubuk instan.

**Kata kunci**— MP-ASI; perancangan dan pengembangan produk; *value engineering*.

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## **DESIGN AND PRODUCT DEVELOPMENT OF INSTAN POWDER ON WEANING FOOD COMPLEMENTARY FEEDING WITH TEMPE AND BANANA FLOUR ADDITION SOURCE OF LINOLEIC ACID, VITAMIN B12 AND POTASSIUM**

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### **ABSTRACT**

Babies need complementary food to accompany breast milk as the main food after 6 months. Purpose of study is (1) Identify attributes quality and characteristics of instant powder complementary feeding in accordance with wishes of consumers (2) Getting formulation of instant powder complementary feeding with nutrient enrichment of linoleic acid, vitamin B<sub>12</sub> and potassium derived from tempe flour and banana flour; (3) Getting main constituent of instant powder complementary feeding with enriched nutritional linoleic acid, vitamin B<sub>12</sub> and potassium derived from tempe flour and banana flour; (4) Analyze level of acceptance instant powder complementary feeding with nutrient enrichment of linoleic acid, vitamin B<sub>12</sub> and potassium derived from tempe flour and banana flour.

Study focused is design and development of instant powder complementary feeding with addition of tempeh flour and banana flour using value engineering method. Stages of research is identify factors that are relevant in favor, including determination of the quality attributes of a product that aims to give an overview of the specific characteristics of the product, identifying consumer wants and needs of the product, and then designed formulation of instant powder complementary feeding into several product concepts. Each concept product is tested of physical, chemical analysis, nutritional quality and microbiological tests according to standard SNI. Then tested the performance, calculated cost of production, determined the value of each concept product is then obtained products are then tested their revenues to infants aged 6-12 months.

The result is a sequence of product quality attributes of instant powder complementary feeding is nutrition, hygiene, security, raw materials and taste. Concept product with highest value is concepts F6 (14,61) with characteristics can be brewed with warm water of 2,13 ml / g, a soluble 37 seconds, kamba density 0,83 g / ml, water content 5,31 (% w / w), ash content of 2,66%, fat content 6,10%, protein content (n-total) 11,69%, carbohydrates (by.different) 74,23%, total energy per 100 grams 398,63 kkal, protein digestibility 78,56%, insoluble dietary fiber 20,35% and total of bacteria 3,2 x 10<sup>3</sup> cfu/gram. The acceptance test on the baby acquired 23% of babies like.

Key-word : complementary feeding; designing and floating product; value engineering.

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