

## ABSTRACT

**Siti Mukrimah. B1710195.** Physicochemical and Sensory Characteristics of Instant Baby Porridge Based on Organic Soybean Flour (*Glycine max* L. Merrill) and Carrot Flour (*Daucus carota*) with Apple Flavor. Under the guidance of Noli Novidahlia and Distya Riski Hapsari.

One of the efforts that can be done to reduce malnutrition is to improve the baby's diet by providing adequate complementary foods (MP-ASI). Instant porridge made from organic soybean flour and carrot flour is an alternative food product to complement breast milk. This study aims to make instant baby porridge with the effect of the ratio of organic soybean flour and carrot flour to produce the best baby porridge based on energy content factors, physicochemical test results (solubility, water absorption, bulk density, moisture content, ash content, protein content, fat, carbohydrates, fiber), sensory testing (sensory and hedonic quality) tested on a line and rating scale. Next will be testing the levels of beta-carotene and minerals (Na and Zn) for the selected instant baby porridge. This study was structured using a one-factor Completely Randomized Design (CRD). The factor used is the ratio of organic soybean flour and carrot flour with three treatment levels, namely 80%:20%, 60%:40%, and 40%:60%. The test results of instant porridge MP-ASI was chosen because the panelists preferred the treatment with a comparison of 80g of organic soybean flour and 20g of carrot flour, the results of physicochemical tests, sensory quality tests, hedonic tests and tests for beta-carotene and mineral levels (Na and Zn) were obtained. The results of the physicochemical test include 55.00% solubility, 0.74% water absorption, 0.78% bulk density, 8.50% water content, 3.78% ash content, 25.50% protein content, 19.48% fat, carbohydrates 42.87%, fiber 6.43%. Sensory quality test results include color 4.12, aroma 3.64, taste 3.99, texture 4.31, and overall 3.87. The hedonic test results include color 3.80, aroma 3.83, taste 3.87, texture 3.63, and overall 3.96. As well as the test results for beta-carotene levels of 107,2 mcg/g, mineral Na 102.770 mg, and mineral Zn 3.000 mcg.

**Keywords:** carrot flour, complementary food for breast milk, organic soybean flour

## ABSTRACT

**Siti Mukrimah. B1710195.** Karakteristik Fisikokimia dan Sensori Bubur Bayi Instan Berbahan Dasar Tepung Kedelai Organik (*Glycine max* L. Merill) dan Tepung Wortel (*Daucus carota*) dengan Flavor Apel. Dibawah bimbingan Noli Novidahlia dan Distya Riski Hapsari.

Salah satu upaya yang dapat dilakukan untuk mengurangi gizi buruk adalah dengan memperbaiki pola makan bayi dengan memberikan MP-ASI (makanan pendamping ASI) yang cukup. Bubur instan berbahan dasar tepung kedelai organik dan tepung wortel merupakan salah satu alternatif produk pangan pendamping ASI. Penelitian ini bertujuan membuat bubur bayi instan dengan pengaruh perbandingan tepung kedelai organik dan tepung wortel untuk menghasilkan bubur bayi terbaik berdasarkan faktor kandungan energi, hasil pengujian fisikokimia (kelarutan, daya serap air, *bulk densitas*, kadar air, kadar abu, kadar protein, lemak, karbohidrat, serat), pengujian sensori (mutu sensori dan hedonik) yang diuji dalam skala garis dan rating. Selanjutnya akan dilakukan pengujian kadar betakaroten dan mineral (Na dan Zn) untuk bubur bayi instan yang terpilih. Penelitian ini disusun menggunakan Rancangan Acak Lengkap (RAL) satu faktor. Faktor yang digunakan merupakan perbandingan tepung kacang kedelai organik dan tepung wortel dengan tiga taraf perlakuan yaitu 80%:20%, 60%:40%, dan 40%:60%. Hasil Uji bubur instan MP-ASI formulasi yang terpilih karena disukai panelis dengan perlakuan dengan perbandingan 80g tepung kedelai organik dan tepung wortel 20g didapatkan hasil uji fisikokimia, uji mutu sensori, uji hedonik serta uji kadar betakaroten dan mineral (Na dan Zn). Hasil uji fisikokimia meliputi kelarutan 55,00%, daya serap air 0,74%, *bulk densitas* 0,78%, kadar air 8,50%, kadar abu 3,78% kadar protein 25,50%, lemak 19,48%, karbohidrat 42,87%, serat 6,43%. Hasil uji mutu sensori meliputi warna 4,12, aroma 3,64, rasa 3,99, tekstur 4,31, dan overall 3,87. Hasil uji hedonik meliputi warna 3,80, aroma 3,83, rasa 3,87, tekstur 3,63, dan overall 3,96. Serta hasil uji kadar betakaroten 107,2 mcg/g, mineral Na 102.770 mg, dan mineral Zn 3.000mcg.

**Kata kunci** : tepung wortel, makanan pendamping ASI, tepung kedelai organik