

Rebon Shrimp Powder Addition Influence to Nutritional Values, Organoleptic Properties and Acceptance of Supplementary Food by Children Aged 4-5 Years Old

Pengaruh Penambahan Bubuk Udang Rebon terhadap Nilai Gizi, Sifat Organoleptik, dan Daya Terima Makanan Tambahan Anak Usia 4-5 Tahun

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Abstract

Malnutrition and stunting prevalence in under-five children in Cirebon City are still high that reach 13.9% and 15.7%. *Rebon* shrimp (*Acetes erythraeus*) contains high protein and calcium. Influence of adding *rebon* shrimp in supplementary food (*lemu* porridge and steamed sponge) towards nutrition quality was investigated. This study aimed to determine effects of *rebon* shrimp powder on nutritional values, organoleptic properties and food acceptance. Laboratory test and Nutrisurvey software were used to measure nutritional value of *rebon* shrimp powder and nutrition of supplementary food. Organoleptic test used completely randomized design with four treatments (0%, 5%, 10%, 15% shrimp powder) and two repetitions. Respondents were 30 students of Nutrition Studies Program in Cirebon with 7 hedonic scale (organoleptic test) and 50 children aged 4-5 years in integrated health care (acceptance test). As the result, the level of ash, protein and calcium of *rebon* shrimp powder met the Indonesian National Standard. Energy, protein and calcium significantly increased (p value < 0.05). Nutrient content of steamed sponge per 100 gram with 5% *rebon* shrimp powder supplied 21.6% energy, 18.9% protein and 25.9% calcium on recommended dietary allowances. Preference level of color, flavor, taste, texture and overall were significantly different. *Lemu* porridge with 5% *rebon* shrimp powder was accepted by 80% of the children and the steamed sponge acceptance reached 88%.

Keywords: Children, malnutrition, *rebon* shrimp powder, supplementary food

Abstrak

Prevalensi gizi kurang dan *stunting* pada anak bawah lima tahun (balita) di Kota Cirebon masih cukup tinggi yaitu mencapai 13,9% dan 15,7%. Udang rebon (*Acetes erythraeus*) memiliki kandungan protein dan kalsium yang tinggi. Pengaruh penambahan udang rebon dalam makanan tambahan (bubur *lemu* dan bolu kukus) terhadap kualitas gizi diteliti. Penelitian ini bertujuan untuk mengetahui pengaruh bubuk udang rebon terhadap nilai gizi, sifat organoleptik dan daya terima. Uji laboratorium dan perangkat lunak Nutrisurvey digunakan untuk analisis nilai gizi bubuk udang rebon dan gizi makanan tambahan. Uji organoleptik menggunakan rancangan acak lengkap dengan empat perlakuan (bubuk udang rebon 0%, 5%, 10%, 15%) dilakukan dua kali pengulangan. Responden adalah 30 mahasiswa program studi gizi Cirebon, menggunakan 7 skala hedonik (uji organoleptik) dan 50 anak-anak usia 4-5 tahun di posyandu (uji daya terima). Hasilnya adalah kadar abu, protein dan kalsium bubuk udang rebon memenuhi Standar Nasional Indonesia. Energi, protein dan kalsium meningkat signifikan (nilai $p < 0,05$). Kandungan gizi per 100 gram bolu kukus dengan bubuk udang rebon 5% memenuhi angka kecukupan gizi energi 21,6%, protein 18,9% dan kalsium 25,9%. Tingkat kesukaan pada warna, aroma, rasa, tekstur dan keseluruhan berbeda signifikan (nilai $p < 0,05$). Bubur *lemu* dengan bubuk udang rebon 5% dapat diterima oleh 80% balita dan bolu kukus mencapai 88%.

Kata kunci: Anak-anak, gizi kurang, bubuk udang rebon, makanan tambahan

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