

ABSTRAK

Tulang ayam mengandung nilai gizi yang berpotensi untuk dijadikan sebagai sumber gizi alternatif dalam inovasi produk pangan. Untuk melengkapi gizi, daun kelor ditambahkan karena selain memiliki kandungan antioksidan, kelor juga mengandung kalsium dan fosfor. Penelitian ini bertujuan untuk menganalisis kandungan dari segi fisikokimia dan fungsional dari tepung tulang ayam dan daun kelor. Dari aspek fisik, hasil analisis warna dari tepung tulang ayam memiliki warna kuning-kejinggaan dengan nilai *hue* 76.03°. Dari aspek kimia, tepung tulang ayam mengandung 3,22±0,01% air bb, 43,77±0,00% abu bb, 33,79±0,01% protein bb, 11,85±0,16% lemak bb, 18.83±0.00% kalsium bb, dan 8,46±0,00% fosfor bb. Sementara dari sifat fungsionalnya, nilai WHC dan OHC berturut-turut 1,19 g air/g protein dan 1,44 mL/g OHC, serta memiliki 13,33% kapasitas buih, 58,33% stabilitas buih, dan 44,85% stabilitas pengemulsi. Hasil analisis warna menunjukkan bahwa tepung kelor memiliki warna kuning-kehijauan dengan nilai *hue* 29.40°. Dari aspek kimia, tepung kelor mengandung 8,82±0,11% air bb, 10,80±0,17% abu bb, 16,61±0,04% protein bb, 5,06±0,06% lemak bb, 2,54±0,00% kalsium bb, dan 0,16±0,00% fosfor bb. Sementara untuk sifat fungsionalnya, nilai WHC dan OHC berturut-turut 2,08 g air/g protein dan 3,01 mL/g protein, serta memiliki 2% kapasitas buih, 0% stabilitas buih, dan 0% stabilitas pengemulsi. Tepung tulang ayam adalah sumber kalsium dan fosfor yang baik dimana bisa dijadikan sumber gizi alternatif, kaya akan protein yang memberikan efek sifat fungsional yang baik. Tepung kelor memiliki kandungan kalsium dan fosfor yang sedikit, namun masih dapat diteliti kandungan antioksidan dan vitaminnya yang bisa dijadikan sebagai sumber gizi alternatif. Selain itu, tepung kelor memiliki sifat fungsional yang baik juga.

Kata kunci: tepung tulang ayam, tepung kelor, fisikokimia, fungsional, kalsium, fosfor.

ABSTRACT

Chicken bones contain nutritional value that has the potential to be used as an alternative source of nutrition in food product innovation. To complete the nutrition, Moringa leaves are added because in addition to having antioxidant content, Moringa also contains calcium and phosphorus. This study aims to analyze the physicochemical and functional content of chicken bone meal and Moringa leaves. From the physical aspect, the result of color analysis of chicken bone flour has a yellow orangish color with a hue value of 76.03°. From the chemical aspect, chicken bone flour contains 3.22±0.01% water wb, 43.77±0.00% ash wb, 33.79±0.01% protein wb, 11.85±0.16% fat wb, 18.83±0.00% calcium wb, and 8.46±0.00% phosphorus wb. Meanwhile, from the functional properties, the WHC and OHC values were 1.19 g water/g protein and 1.44 mL/g OHC, respectively, and had 13.33% foam capacity, 58.33% foam stability, and 44.85% emulsifier stability. The results of color analysis showed that Moringa flour has a yellow greenish color with a hue value of 29.40°. From the chemical aspect, Moringa flour contains 8.82±0.11% water wb, 10.80±0.17% ash wb, 16.61±0.04% protein wb, 5.06±0.06% fat wb, 2.54±0.00% calcium wb, and 0.16±0.00% phosphorus wb. As for the functional properties, the WHC and OHC values were 2.08 g water/g protein and 3.01 mL/g protein, respectively, and had 2% foaming capacity, 0% foam stability, and 0% emulsifier stability. Chicken bone flour is a good source of calcium and phosphorus which can be used as an alternative source of nutrition, rich in protein which has a good effect on functional properties. Moringa flour contains little calcium and phosphorus, but it is still possible to research its antioxidant and vitamin content that can be used as an alternative source of nutrition. In addition, Moringa flour has good functional properties as well.

Keywords: chicken bone meal, moringa flour, physicochemical, functional, calcium, phosphorus.