Intisari

Tulang lele merupakan limbah perikanan yang dapat dimanfaatkan sebagai sumber kalsium untuk memenuhi tingkat konsumsi kalsium penduduk yang masih rendah dengan metode fortifikasi dan substitusi. Penelitian bertujuan untuk mengetahui pemanfaatan limbah tulang ikan lele sebagai sumber kalsium, pengaruh fortifikasi tepung tulang ikan terhadap mutu kimia, fisik dan tingkat penerimaan konsumen mie kering serta kontribusi mie kering yang difortifikasi tepung tulang lele terhadap angka kecukupan kalsium. Perlakuan yang digunakan adalah penambahan tepung tulang lele sebanyak 0%, 2%, 4%, 6%, 8% dan 10% pada mie kering. Parameter yang diuji yaitu pengujian kimia (kadar air, abu, protein, lemak, karbohidrat, kalsium dan fosfor); fisik (kelentingan, *cooking loss* dan daya serap air); serta pengujian sensori. Fortifikasi tepung tulang lele pada mie kering memiliki kadar air 8,62-11,77%; abu 1,12-7,89%; protein 8,34-10,6%; lemak 0,41-1,22%; karbohidrat 70,52-74,48%; kalsium 0,05-2,65%db; dan fosfor 0,13-1,58%db. Fortifikasi tepung tulang lele tidak berpengaruh nyata terhadap mutu fisik mie kering lele, dengan nilai kelentingan 123,86-129,47%; *cooking loss* 6,15-6,87% dan daya serap air 246,67-280%. Mie kering yang paling disukai konsumen adalah dengan perlakuan fortifikasi tepung tulang lele 2% (p2) yang juga merupakan perlakuan yang paling efisien. Kontribusi terhadap AKG kalsium sebesar 4,2% hingga 231,7% jauh berbeda dibandingkan dengan beberapa mie komersial.

Kata kunci: fortifikasi, konsentrasi, tepung tulang lele, kalsium, mie kering, mutu

Abstract

Catfish bone is one of waste in fish industry that can be used for calcium source to complete calcium deficiency with fortification and substitution. This study aimed to find out the utilization of catfish bone as a calcium source, the effect of fortification catfish bone flour to chemical properties, physical properties, and consumer acceptability of dried noodles, the contribution of noodles which fortified with catfish bone flour to support calcium needs. The treatment was addition of catfish bone flour in 0%, 2%, 4%, 6%, 8%, and 10% concentrations to the noodles. The chemical properties (moisture, ash, protein, total fat, carbohydrate, calcium and phosphor) content, physical properties (elasticity, cooking loss, and water absorption), and sensory properties were analyzed. The result of chemical analysis were the average of moisture content 8,62-11,77%; ash 1,12-7,89%; protein 8,34-10,6%; total fat 0,41-1,22%; carbohydrate 70,52-74,48%; calcium 0,05-2,65%db; and phosphor 0,13-1,58% which significantly different among the treatment. Fortification of catfish bone flour was not significantly different to physical properties of noodles which the values were elasticities 123,86-129,47%; *cooking loss* 6,15-6,87% and water absorption 246,67-280%. Dried noodles with the highest acceptability is dried noodles with 2% catfish bone flour (p2) which is the most efficient treatment. Contribution of dried noodles with catfish bone flour to Recommended Dietary Allowance (%RDA) of calcium is 4,2% to 231,7% approximately that is significantly different with some commercial noodles.

Keywords: fortification, concentration, catfish bone flour, calcium, dried noodles, quality