

Nutritional value, bacterial count and sensory attribute of little tuna (*Euthynnus affinis*) floss incorporated with banana blossom

ABSTRACT

The study aimed to evaluate the addition of banana blossom (12.5, 25, 37.5, and 50% w/w) on nutritional quality, histamine content, bacterial count, and sensory characteristic in the fish floss prepared from little tuna (*Euthynnus affinis*). The crude protein content, essential amino acids, lipid, and polyunsaturated fatty acids (PUFA) steadily decreased ($p < 0.05$), while the crude fibre, carbohydrate, and ash components of the tuna floss, increased significantly ($p < 0.05$) with increasing levels of banana blossom. The contents of protein, fat, ash, fibre, carbohydrate, and moisture ranged 28.13 – 30.27%, 14.79 – 18.02%, 4.45 – 5.68%, 2.6 – 3.5%, 27.81 – 31.01, and 16.45 – 17.39%, respectively, and most of them met the Indonesian National Standard. For essential and non-essential amino acids, the level varied about 102.82 mg.g⁻¹ to 206.76 mg.g⁻¹ and 79.71 mg.g⁻¹ to 138.76 mg.g⁻¹, respectively in the treated tuna flosses. Moreover, ranging 13.72 – 16.29% of PUFA was found in all treated flosses. The most significant effect was found in the histamine levels of the tuna flosses, especially in the 50% added floss sample. Moreover, bacterial counts and heavy metals content were lower than the maximum limits regulated by the Indonesian National Standard. For sensory evaluation, the banana blossom-added samples significantly increased ($p > 0.05$) the acceptability score for all attributes assessed. Taken together, the tuna floss added with 37.5% of banana blossom may be potentially developed as a low-histamine tuna-based product with high fibre and EPA+DHA, as well as highly acceptable for consumers.