SOME ASPECTS OF NUTRITIONAL COMPOSITIONS OF FRESHWATER CATFISHES GENUS *Hemibagrus* (BLEEKER)

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SOME ASPECTS OF NUTRITIONAL COMPOSITION OF FRESHWATER CATFISHES GENUS *Hemibagrus* (BLEEKER)

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LIST OF ABBREVIATIONS

ANOVA	-	one-way analysis of variance
AOAC	-	Association of Official Analytical Chemists
M	-	mol
MBU	-	Makmal Biology Umum
NaOH	-	Natrium Hydrochloric Acid
SPSS	-	Statistical Package for Social Science
spp.	-	Species

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ABSTRACT

Genus *Hemibagrus* or freshwater catfish is the most important food fishes and locally known as "Baung". The objectives of this study were to analyze the proximate compositions of Malaysian bagrid catfishes of the genus *Hemibagrus* and to compare the differences of nutritional value among the catfishes. The proximate compositions of *Hemibagrus* spp. were determined using standard method of analysis. The moisture content of the *Hemibagrus bleekeri, Hemibagrus gracilis* and *Hemibagrus wyckii* fillets ranged from 78.2 to 81.5% of fresh weight. There was no significant difference among the species in term of water content in the flesh. The proximate analysis revealed that the protein content of *Hemibagrus bleekeri, Hemibagrus gracilis,* and *Hemibagrus wyckii* was 16.2, 15.7, and 16.6% of dry weight, respectively. For the protein analysis, there was a significant difference among the *Clarias batrachus–Hemibagrus bleekeri*, *Clarias batrachus–Hemibagrus wyckii* and also between *Hemibagrus gracilis–Hemibagrus wyckii*. The total lipid content was generally high, ranging from 6.8 to 7.5% and crude ash ranged from 5.1 to 5.7%. The significant difference of ash analysis was shown among the *Clarias batrachus* and *Hemibagrus* spp, while the significant difference in lipid analysis was shown in *Hemibagrus bleekeri–Hemibagrus wyckii* and *Hemibagrus gracilis–Hemibagrus wyckii. Hemibagrus gracilis* showed the highest value of moisture (81.49%), while *Hemibagrus wyckii* showed the best value of ash (5.72%), protein (16.51%) and lipid (7.45%). The chemical indices indicated good quality of protein, which is suitable for new food products. *Hemibagrus wyckii* was suggested as the best species for Malaysian aquaculture.

KOMPOSISI PROKSIMAT DALAM IKAN AIR TAWAR GENUS *Hemibagrus* (BLEEKER)

ABSTRAK

Genus *Hemibagrus* atau ikan air tawar adalah merupakan sumber ikan yang penting dan dikenali dengan nama tempatan sebagai baung. Objektif kajian ini adalah untuk menganalisa komposisi proksimat di dalam spesies ikan baung daripada genus *Hemibagrus* di Malaysia dan untuk membandingkan perbezaan nilai nutrisi di antara ikan baung. Komposisi proksimat dianalisa dengan menggunakan kaedah terpiawai. Kandungan lembapan dalam filet *Hemibagrus bleekeri, Hemibagrus gracilis dan Hemibagrus wyckii* adalah dalam lingkungan 78.2 kepada 81.5% berat basah. Tiada perbezaan nyata antara spesies berkaitan dengan kandungan lembapan. Analisis menunjukkan kandungan protein dalam *Hemibagrus bleekeri, Hemibagrus gracilis* dan *Hemibagrus wyckii* adalah masing-masing 16.2, 15.7 dan 16.6% dalam berat kering. Dalam analisis protein, perbezaan nyata adalah antara *Clarias batrachus–Hemibagrus bleekeri*, *Clarias batrachus–Hemibagrus wyckii* dan juga antara *Hemibagrus gracilis–Hemibagrus wyckii*. Kandungan lemak adalah tinggi, julat daripada 6.8% kepada 7.5% dan abu adalah julat daripada 5.1 kepada 5.7%. Perbezaan nyata dalam analisis abu ditunjukkan antara *Clarias batrachus* dan *Hemibagrus* spp., manakala perbezaan nyata dalam lemak analisis ditunjukkan antara *Hemibagrus bleekeri–Hemibagrus wyckii* dan *Hemibagrus gracilis–Hemibagrus wyckii*. Sampel mempunyai kadar penyerapan air yang tinggi. Indeks kimia menunjukkan sampel mempunyai kualiti protein yang tinggi, dan boleh menjadi sumber produk yang baru. *Hemibagrus wyckii* adalah spesies yang dicadangkan untuk dibiakkan secara akuakultur di Malaysia.