

Fatty acid and amino acid composition of three local Malaysian Channa spp. fish

ABSTRACT

The objective of this current study was to analyze the biochemical compositions of three Malaysian Channa spp. fish. The proximate analysis revealed that the protein content of Channa lucius, Channa micropeltes and Channa striatus was 19.9%, 22.1%, 23.0% (% of dry weight), respectively. The total lipid content was generally high, ranging from 5.7% to 11.9% and crude ash ranged from 1.0% to 1.8%. The major amino acids were glutamic acid, aspartic acid and lysine, ranging from 9.7% to 21.7%, and the most abundant fatty acid in Channa spp. was C16:0, ranging from 25.6% to 30.4%. The other major fatty acids detected were C22:6, C18:1 and C18:0. The level of arachidonic acid (C20:4) was unusually high in C. striatus (19.02%). The levels of DHA in these fish would also explain the use of Channa spp., especially C. striatus, which has been used for centuries for reducing pain, inflammation and promote wound healing in Malaysia.

Keyword: Fatty acids, Amino acids, Channa spp., Malaysian fish