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### Influence of maturity variations on proximate chemical compositions and fatty acid profiles of *Oreochromis mosambicus* Peter (Tilapia)

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The influence of maturity variations on the proximate chemical composition and the fatty acids profile of *Oreochromis mosambicus* (Tilapia) were studied. The maturity was grouped into six stages by weight (g): length (cm) relations. The per cent of ash and moisture contents were determined as mentioned in the Official methods of Analyses of the Association of Official Analytical chemists' (AOAC, 1984), whereas the oils were extracted according to the procedure of Folch *et al.*, (1957). The fatty acid methyl esters (FAME) were prepared and the fatty acid profile was analyzed as mentioned in the Official methods of the American Oil Chemists' Society (Ce1b-89), (AOCS, 1992).

Table: 1 The proximate chemical composition (Mean  $\pm$  SD, n = 4, wet weight basis)

	1	2	3	4	5	6
A	78.68 $\pm$ 0.43	79.18 $\pm$ 0.29	82.01 $\pm$ 0.68	81.98 $\pm$ 2.46	79.60 $\pm$ 1.76	80.12 $\pm$ 0.70
B	2.94 $\pm$ 0.10	1.25 $\pm$ 0.03	0.62 $\pm$ 0.02	1.85 $\pm$ 0.05	1.63 $\pm$ 0.11	0.75 $\pm$ 0.05
C	0.88 $\pm$ 0.03	0.82 $\pm$ 0.04	1.15 $\pm$ 0.09	1.32 $\pm$ 0.07	1.04 $\pm$ 0.06	1.22 $\pm$ 0.09

■ Maturity stages      A - Moisture content      B - Lipid content      C - Ash content

The proximate compositions vary as shown in Table 1. The per cent of total Omega-6 fatty acid (FA) content of Stage-1 (5.92), Stage-2 (5.89) and Stage-3 (5.14) significantly varies ( $p \leq 0.05$ ) from Stage-6 (10.44). The Stages 1, 2 and 3 were almost same in their Omega-6 FA content. Stage-6 contains the per cent of maximum Omega-6 FA (10.44). The per cent of ash and lipid contents were influenced by maturity variation. Except omega-6 and the ratio between omega-3 and omega-6, other fatty acids were not influenced as hypothesized. The study shows a variation of omega-6 FA in Stages 1 to 6, with minimal variation between Stages 1 to 3. The highest level of omega-6 FA was seen in Stage-6. A further study with the known age of fish is warranted.

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