عنوان مقاله:

Comparative evaluation of metabolic enzymes activities in different tissues of striped catfish, Pangasianodon hypophthalmus (Sauvage, ۱۸۷۸) fingerlings reared at ambient and higher temperature

محل انتشار:

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خلاصه مقاله:

A ۶۰-days feeding trial was conducted to study the effect of higher temperature (۳۲°C) in comparison to ambient temperature (۲۴.۵°C) on different metabolic enzyme namely, aspartate aminotransferase (AST), alanine aminotransferase (ALT), adenosine triphosphatase (ATPase), acid phosphatase (ACP) & alkaline phosphatase (ALP) activities in different tissues of Pangasianodon hypophthalmus. AST activity significantly ($p<۰.۰۵$) increases in liver tissue as temperature increases, however, temperature do not significantly affect the AST activity in case of the muscle ($p>۰.۰۵$). The ALT activity increases significantly ($p<۰.۰۵$) in liver and muscle tissue as temperature increases. ATPase activity (at ۳۷°C) in gill do not differ significantly ($p>۰.۰۵$) whereas ATPase activity in liver tissue decreases significantly ($p<۰.۰۵$) as temperature increases. ACP activity does not vary significantly at different temperature whereas, ALP activity increases significantly ($p<۰.۰۵$) as temperature increases in liver and intestine tissues. The present study clearly shows that there is a temperature dependent change in the activity of the different metabolic enzymes in different tissues studied in comparison to the control at ambient temperature fed with different energy level diet. The finding of present study suggests that the metabolic responses are variable at different temperature and different energy level which can affect the growth performances of this new candidate species for aquaculture.

کلمات کلیدی:

Aspartate aminotransferase (AST), Alanine aminotransferase (ALT), Adenosine triphosphatase (ATPase), Acid phosphatase (ACP), Alkaline phosphatase (ALP), Pangasianodon hypophthalmus, Fingerling