**Abstract**

 The enzymes Acetylcholinesterase (AchE), Acetylcholine (Ach), Succinic dehydrogenase (SDH) and Lactatedehydrogenase (LDH) are used as biological markers in the present study. Enzymes are highly sensitive and used to evaluate the biological effects of suicidal plant extract *Cleistanthus collinus* in freshwater food fish *Channa striata*. A significant increase in the Ach, LDH and SDH activity in muscle, liver and gill were observed. The AchE activity significantly declined by -49.80% liver, -45.00% gills and -38.03% in liver.