

Levels of protein metabolites in *Cyprinus carpio* (L) on sublethal exposure to synthetic detergent linear alkylbenzene sulfonate (LAS)

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SUMMARY : Synthetic detergents deposited in the aquatic environment may accumulate in the food chain and cause ecological damage and even threat to human health. Linear alkylbenzene sulfonate (LAS), an anionic surfactant is now-a-days widely spread in many aquatic environments, where it has a significant potential. During this research sublethal effects of LAS on the levels of total proteins, urea, amino acids and protease activity in various tissues of freshwater fish, *Cyprinus carpio* Linnaeus were studied. The levels of total proteins and urea decreased initially at 24 h in relation to control and up to day 15. After day 15, these levels increased gradually through day 20 and reached nearer to control at day 30. The increase in the levels of total proteins and urea was more in liver followed by muscle and gill. The levels of both free amino acids and protease activity followed a reverse trend to that of both total proteins and urea. It was evident that there was drastic protein utilization through proteolytic activity in all the tissues for releasing extra energy to cope up with the energy crisis developed during the toxic stress of synthetic detergent (LAS). These changes support the ability acquired by the fish exposed to LAS toxicity stress which might have achieved by activating the detoxification process.

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