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ABSTRACT BOOK

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ACTIVITIES OF ANTIOXIDANT DEFENSE ENZYME IN SOME TISSUES OF SPINYCHEEK CRAYFISH (ORCONECTES LIMOSUS RAFINESQUE) FROM SERBIAN PART OF DANUBE RIVER

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In our experiment we studied the antioxidant enzyme activities (superoxide dismutase-SOD, catalase-CAT, glutathione peroxidase-GSH-Px, glutathione reductase-GR, and glutathione-S-transferase-GST) in hepatopancreas, gills and abdominal muscle of spinycheek crayfish (Orconectes limosus) from the Serbian part of Danube River. The speciments were collected with deep nets and tissue samples were prepared for analisys by standard methods. All enzyme activities were measured spectrophotometrically and expressed as specific (U/mg proteins) and total (U/g net mass). The results show strong tissue specifity of investigated enzymes. Specific and total SOD activity in hepatopancreas was lower than in gills and muscle. At the same time, total SOD activity in gills was significantly lower in respect to muscle. The specific and total activity of CAT was significantly higher in hepatopancreas than in gills and muscle, as well as in gills in respect to the muscle. Same trend was obtained for specific and total activity of GSH-Px. In gills of spinycheek crayfish, specific activity of GR was significantly higher than in hepatopancreas and muscle, as well as in gills in respect to the muscle. Total GR activity was also significantly higher in gills comparing to hepatopancreas and muscle. The specific and total activity of GST was significantly increased in hepatopancreas than in gills and muscle. At the same time, the activity of GST was higher in gills than in muscle. The obtained results show a strong tissue specifity of antioxidant defense enzymes in investigated tissues of spinycheek crayfish which is accompanied with its different metabolic activity.