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ABSTRACT BOOK

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## CONCENTRATIONS OF VITAMIN E AND SULPHYDRYL GROUP IN SOME TISSUES OF FRESHWATER CRAYFISH SPECIES

Kovačević TB<sup>1</sup>, Milošević SM<sup>2</sup>, Pavlović SZ<sup>1</sup>, Borković SS<sup>1</sup>, Radojičić RM<sup>3</sup>, Žikić RV<sup>4</sup>, Saičić ZS<sup>1</sup>

<sup>1</sup>*Institute for Biological Research "Siniša Stanković", Department of Physiology, Belgrade,*

<sup>2</sup>*Faculty of Sciences, Institute of Biology, University of Priština-Kosovska Mitrovica,*

<sup>3</sup>*Faculty of Biology, University of Belgrade,* <sup>4</sup>*Faculty of Sciences, Institute of Biology, University of Kragujevac, Serbia and Montenegro*

The freshwater crayfishes can be useful organisms in the biomonitoring of environmental conditions. In our experiments we studied vitamin E (Vit E) and sulphhydryl group (-SH) concentrations in hepatopancreas, gills and abdominal muscle of three crayfish species: Noble crayfish (*Astacus astacus*) from South Morava river, Stone crayfish (*Austropotamobius torrentium*) from Krajkovačka river and Spinycheek crayfish (*Orconectes limosus*) from Danube river. All species were collected in summer season (August). The specimens were collected by deep nets and supernatants for analysis were prepared according to the standard methods. Vit E concentration was assayed by standard method using bathophenanthroline as reagent, while -SH groups concentration was measured by standard spectrophotometric method using dithionitrobenzoic acid (DTNB). The obtained results show significantly lower concentration of vit E in hepatopancreas of *Orconectes limosus* in respect to *Astacus astacus* ( $p < 0.05$ ). At the same time, significantly decreased concentration of vit E was detected in gills of *Orconectes limosus* comparing to *Astacus astacus* and *Austropotamobius torrentium* ( $p < 0.005$ ). Concentration of -SH groups was significantly increased in hepatopancreas of Noble crayfish in comparison to Stone crayfish ( $p < 0.05$ ) and Spinycheek crayfish ( $p < 0.005$ ). In conclusion, the concentrations of the investigated antioxidant compounds (vit E and -SH groups) in the selected tissues of freshwater crayfishes are good markers for biomonitoring of environmental conditions. Differences in the investigated nonenzymatic oxidative stress parameters in tissues reflect different metabolic and antioxidative activities, which can be the consequence of species or tissue specificity, as well as the consequence of different environmental conditions.