

P9. METAL ANALYSIS OF NATURAL AND LABORATORY CONDITIONS AND DETERMINATION OF SOME ANTIOXIDANT ENZYME LEVELS OF *ASTACUS LEPTODACTYLUS*

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Çomar Stream is located in the province of Çorum and is an important wetland that provide drinking water. There is not any study on the impact of heavy metal contamination on stream. This work investigated the distribution of application of Cu, As, Cd, Cr, Al, Hg, Pb, Zn, Ni, Mn and Fe in the sediment and water of Çomar Stream and assessed heavy metal toxicity risk with the application of different sets of Sediment Quality Guideline (SQG) indices (contamination factor (C_f^i), contamination degree (Cd), Modified degree of contamination (mCd), enrichment factor (EF), geoaccumulation index (Igeo), pollution load index (PLI), potential ecological risk index (PERI) (E_r^i), potential toxicity response index (RI), effect range median values (m-ERM-Q), probable effect level (m-PEL-Q)). This method of evaluation is observed as a result of Mn metal up to create ecological risks; 45.26% Ni ratio in the metal sediment has been found to comprise a major portion toxicity. In addition, sediment samples in the strong negative correlation Cr-Fe ($r = -.857$) is between, in water samples has been determined that there is no correlation.

Crayfish (*Astacus leptodactylus*) brought from Çomar Stream were exposed to different concentrations of cadmium (5.33; 33.3; 208 ve 1300 µg/L) during 7 days in the laboratory. As a result, GST and GR activities significantly increased with increasing cadmium concentration ($p < 0.05$); LPO level were not observed any differences ($p > 0.05$).

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