

RESEARCH IN DETERMINING THE RELATIONSHIP BETWEEN THE CONTENT OF SOME HEAVY METALS IN THE *Corbicula* sp. AND SEDIMENTS OF CAU RIVER BASIN FLOWING THROUGH THAI NGUYEN PROVINCE

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Summary

A study on the assessment of Cu, Pb, Cd, Zn and Cr pollutions in sediment and *Corbicula* sp. was carried out by using samples collected at 11 sites along Cau river at the Thai Nguyen section. The analysis results of sedimental samples showed the Cd content of 1.105 - 6.541 mg/kg (the lowest content), Cu content of 36.296 - 72.101 mg/kg, Pb content of 61.420 – 137.297 mg/kg, Cr content of 90.326 – 120.046 mg/kg and Zn content of 235.928 – 365.777 mg/kg (the highest content). In comparing with US standards (US EPA), the concentrations of most heavy metals are in the range of TEC and PEC. On the other hand, the concentration of Cr in dry *Corbicula* sp. ranged 5.76 – 7.407 mg/kg; followed by Cd (6.861 -9.353 mg/kg), Pb (10.713 -26.592 mg/kg), Cu (10.713 -27.664 mg/kg) and Zn (56.771 -84.555 mg/kg). Analysis of the relationship between the Cu, Pb, Zn contents in the sediments and those in *Corbicula* sp. showed positive correlations (Cu: $r = 0.423$; $p < 0.01$; Pb: $r = 0.592$, $p < 0.05$, Zn $r = 0.27$, $p < 0.05$). Thus, the results of the present study initially confirmed a possibility of using *Corbicula* sp. as an indicator organism to monitor heavy metal (Cu, Pb, Zn) pollutions in sediments in Cau river.

Keywords: Heavy metals, *Corbicula* sp., sediments, Cau river, Thai Nguyen province.