

Surface Sediment Analysis On Heavy Metals In Coastal Area Of Ums – Tuaran, Sabah

Abstract

Heavy metal concentrations (Cd, Cr, Cu, Pb and Zn) were investigated in surface sediments from Universiti Malaysia Sabah (UMS) - Tuaran coastal area, Sabah. Samples were collected using Ponar grab sampler in ten different stations at the site area. The heavy metals were analyzed using Inductively Coupled Plasma – Optical Emission Spectrometer (ICP-OES) after the surface sediments were digested with aqua regia (HNO₃: HCl) solution. The overall mean and range of heavy metal concentrations in the surface sediments were: Cd (0.55, 0.27 - 1.06 mg/kg), Cr (4.93, 1.97 - 10.30 mg/kg), Cu (7.40, 0 – 18.57 mg/kg), Pb (3.88, 0 – 14.4 mg/kg) and Zn (31.84, 11.60 - 67.1 mg/kg) respectively. Overall, the heavy metal concentrations in surface sediments were not exceeded the Interim Sediment Quality Guidelines (ISQG) limit except for Cd which a bit higher than 0.7 mg kg⁻¹ indicating considered slightly pollute.