



Assessing Pb,Zn,Cd contamination in stream sediments of south east Tehran (Iran)

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31 sediment samples collected from south east of Tehran around cement plant (Bibi shahrbanoo mountain) were analyzed by ICP for Pb, Zn, Cd. The samples were also investigated for mineralogy using X-ray analysis. The clay mineral assemblage encountered in the analyzed samples is composed of vermiculite, dickite, montmorillonite and kaolinite. The non-clay minerals of the mud-sized fraction are composed mainly of quartz and calcite and dolomite as major minerals with albite, hematite, muscovite as minor minerals. The measured metals correlated positively with the determined physiochemical factors such as pH, clay content, organic matter content, and carbonate content. According to the index of geoaccumulation, the sediments of the study area are considered to be strongly to very strongly polluted with respect to Pb, strongly polluted with respect to Zn, and moderately to strongly polluted with respect to Cd. The calculation of enrichment factors shows that the source of Pb and Zn is from anthropogenic activities such as cement plant and vehicle exhausts and Cd from natural source.