For sediment and soil samples, they were digested in a closed poly-tetrafluoroethylene system with an acid mixture of HNO3 (5 mL)-HF (1 mL)-HClO4 (1 mL) at 180 ?C for 10 h (Huang et al. 2015).The total concentrations of Cd, Cu, Ni, Pb, Cr, Zn, Fe, and Al in the digestion solutions were then analyzed by an inductively coupled plasma-atomic emission spectroscopy (ICPAES; IRIS Intrepid II XSP, Thermo Electron, USA).Because the source discrimination power of Pb stable isotopes is mainly due to 206Pb, 207Pb, and 208Pb (Sangster et al. 2000), they were measured for sediment, soil, and anthropogenic source samples by an inductively coupled plasma-mass spectrometry (ICP-MS; Agilent 7500, Agilent Technologies, USA).The relative standard deviations for duplicate samples were generally lower than ..1%