MICROCOULOMETRIC TITRATION METHOD FOR DIRECT DETERMINATION OF TOTAL CHLORINE POLLUTANTS IN BOTTOM SEDIMENTS

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The organic chlorine compounds are highly toxic and have a harmful effect on the organisms. The concentrations of the organic chlorine pollutants in waters and sediments have been measured as absorbable or extractable compounds by a microcoulometric titration method. In this work a microcoulometric titration method for determination of total organic chlorine pollutants in bottom sediments was validated using direct combustion into the microcoulometric system. The preparation step and the removal procedure for the inorganic chlorine compounds were also optimized in the process of verifying of the method for analysis of bottom sediments from natural and anthropogenic sources. Reduced analysis time with respect to other methods used is realised providing good mean recovery (97.5 %) and relative uncertainty of the reproducibility (6.0 %). The method is used to specify the levels of organochlorine pollutants in bottom sediments from natural and anthropogenic sources.

References