QUANTITATIVE REPORTING OF SULFATES IN SEAWATER

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ABSTRACT

Sulfates are naturally occurring compounds found in seawater, primarily in the form of dissolved sulfate ions (SO_4^{2-}). Sulfate is the second most abundant anion in seawater. The baseline sulfate concentrations reported for seawater around the globe, has been established primarily by a process of bioturbation which is the disturbance of sedimentary deposits by living organisms. The seawater sulfate concentration is a critical indicator of the redox condition in the atmosphere/ocean system. Sulfate contamination in the water environment has become increasingly prominent, as a consequence of industrialization and urbanization. Mobile sources such as vessels on the open ocean, complicate the analysis of pollutants such as sulfates, polyaromatic hydrocarbons, metal ions etc. in because they discharge into many different water bodies. In study samples were collected on a daily basis in port locations and analysed using a spectrometric method. The reaction between sulfate and the barium chloride reagent caused a suspension in the sample. Light absorbance of the suspension was directly related to concentrations in the mg/L (ppm) of sulfate in the seawater samples collected.