

Vertical Distribution of Lead (Pb) in Sediment Cores Taken From Köyceğiz Lake (TURKEY)Feyyaz KESKİN¹, Ahmet DEMİRRAK²,¹*Mugla Sıtkı Kocman University, Research and Application Centre For Research Laboratories, 48000 Mugla, Turkey*²*Mugla Sıtkı Kocman University, Department of Chemistry, 48000 Mugla, Turkey*
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Aim of the study: Lead is one of the more toxic metals for aquatic life. Natural resources of lead are rock erosion, atmospheric input from volcanic eruptions and dust derived from soil. Besides natural resources, lead inputs to the aquatic environment from antropogenic activities. Sediment is an important material used for determination of metal pollution in aquatic environments due to their chemical-physical properties, such as particle size, organic matter, pH and process including adsorption/desorption. The Köyceğiz-Dalyan region was announced as a specially protected area by the Council of Ministry on 12.08.1988 because it has a special and important ecosystem. However, this region is rapidly polluted due to extensive tourism and agricultural activities. The aims of this study are to determine vertical distribution of lead pollution in sediment cores taken from Köyceğiz Lake.

Material and Methods: In present study, five stations were selected in Köyceğiz Lake. Sediment core samples were taken by Uwitec Corer in February 2017. The upper 20 cm of each core was sliced into 2 cm sections using core cutter. Physicochemical parameters were examined in sediment core. Concentrations of Pb were measured by Atomic Absorption Spectrophotometer (AAS)

Results: Determination of lead distribution in core sediments can provide information about the current and background levels of contamination and may provide historical evidence of the antropogenic effect in the aquatic environment. Lead concentration was determined between 15,43-25,22 µg/g. The finding of the study revealed that Pb concentration was found the highest at the station where domestic wastewater is discharged.

Keywords: Lead pollution, Köyceğiz Lake, Sediment Cores, wastewater.