

Some Man-Made and Natural Radionuclide profiles in the Bottom Sediments of the Caspian Sea.

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Abstract

The bottom sediments collected in different parts of the Caspian Sea are analyzed for some natural and man-made radionuclides. The vertical profiles of radionuclides vary significantly for samples collected in different parts of the Caspian Sea. The ^{210}Pb age-dating was performed for several sediment core samples together with determination of Plutonium isotope ratios that gave the indication of the origin of the radionuclides.

Bottom sediments are scavengers for some Uranium and Thorium chain radionuclides, man-made radionuclides and other pollutants. Historical deposition records could be build up using the radionuclide activities in the bottom sediments. The current knowledge of natural and artificial radionuclides in the vertical profiles of bottom sediments collected in different parts of the Caspian Sea is presented in this review. The atmospheric nuclear tests in 1945-1963 and accident at the Chernobyl NPP (1986) are the main sources of man-made radionuclide contamination of the Caspian Sea. The possibility of some impact by the contemporary nuclear activities of European Countries is possible as well. The sediment cores were collected in the Anzali region.

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