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ESTIMATION OF CONTAMINATION WITH VANADIUM AND ARSENIC IN COASTAL SEDIMENTS OF BANDAR ABBAS (PERSIAN GULF, IRAN) ON THE BASIS OF GEOCHEMICAL-ENVIRONMENTAL FACTORS

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Abstract

In the present research, the intensity of contamination with heavy elements Vanadium (V) and Arsenic (As) in the coastal sediments of Bandar Abbas is gauged and rated using the method of Atomic Absorption Spectroscopy. All processes of sampling and assimilation of sediments are performed according to the guideline of the Manual of Oceanographic Observations and Pollutant Analyses Methods (MOOPAM) Standard issued by the Regional Organization for the Protection of the Marine Environment (RAPMI).The Mean concentrations of V and As in the sediments are of 102.42 ± 15.21 and 2.57 ± 0.09 µg/g dry weight of sediment, respectively. Statistical analysis showed that the mean concentrations of V and As existing in the channel sediments are meaningfully different with each other, with a confidence coefficient of $P<0.05$. On the basis of the Muller Geochemical Factor and Geoaccumulation Factor, such contamination is classified within The Zero Contamination Class, and on the basis of the standard of contamination factor, such a matter is classified within the low contamination level. Through statistical tests and calculations and considering the coefficient of correlation between V and As, it is distinguished that their source in coastal sediments of Persian Gulf should be similar.

Key words: Bandar Abbas, coastal sediments, geochemical factors, heavy elements, Persian Gulf

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