^{210}Po and ^{210}Pb in Tropical Estuary: it is affected by suspended solid?

Che Abd Rahim Mohamed

Marine Science Program
School of Environmental Science and Natural Resources
Faculty of Science and Technology
Universiti Kebangsaan Malaysia
43600 Bangi, Selangor
Malaysia

E-mail: carmohd@pkrisc.cc.ukm.my

ABSTRACT

Six sampling stations of suspended solid and seawater samples were collected from estuary to the sea at Kuala Selangor, Malaysia for determine concentration activity of ^{210}Po and ^{210}Pb. Distribution pattern and chemical behavior of both nuclides in dissolved and particulate phase were different. Then, most of them in water column were existence in the particulate phase. The fluctuation concentrations of ^{210}Po and ^{210}Pb were depends on the physical factors such as wave action, tidal cycles and bottom currents, and the degree of fresh water run-off occurring at study areas due to different sampling dates. The distribution coefficient, K_d, values of ^{210}Po and ^{210}Pb also varied from 2.0×10^3 L/g to 265.15×10^5 L/g, and 3.0×10^3 L/g to 558.16×10^5 L/g, respectively. High K_d values will suggest that a strong adsorption of ^{210}Po and ^{210}Pb onto the suspended particles were occurred at study sites.

Dr. Che Abd. Rahim Mohamed
[Associate Professor]
(Marine Geochemistry & Radiochemistry)

School of Environmental & Natural Resource Sciences
Faculty of Science & Technology
Universiti Kebangsaan Malaysia
43600 Bangi, Selangor,
MALAYSIA
Tel: +603-89213209; 013-3597635
Fax: +603-89253357