**Johor Strait as a hotspot for trace elements contamination in Peninsular Malaysia.**


## Abstract

Present study was conducted to evaluate current status of trace elements contamination in the surface sediments of the Johor Strait. Iron (2.54 ± 1.24%) was found as the highest occurring element, followed by those of zinc (210.45 ± 115.4 μg/g), copper (57.84 ± 45.54 μg/g), chromium (55.50 ± 31.24 μg/g), lead (52.52 ± 28.41 μg/g), vanadium (47.76 ± 25.76 μg/g), arsenic (27.30 ± 17.11 μg/g), nickel (18.31 ± 11.77 μg/g), cobalt (5.13 ± 3.12 μg/g), uranium (4.72 ± 2.52 μg/g), and cadmium (0.30 ± 0.30 μg/g), respectively. Bioavailability of cobalt, nickel, copper, zinc, arsenic and cadmium were higher than 50% of total concentration. Vanadium, copper, zinc, arsenic and cadmium were found significantly different between the eastern and western part of the strait ($p < 0.05$). Combining with other factors, Johor Strait is suitable as a hotspot for trace elements contamination related studies.



**Keyword:** Johor Strait; Sediments; Trace elements; Bioavailability; Hotspot.