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Paleothermometric Inferences Using Elemental Mapping: An Appraisal of Ostracoda Species from Shallow Core Sediment of Bay of Bengal, India

Mohammed Noohu Nazeer[1, 4]*, S.S. Salaj[2], S. M. Hussain[1], S.G. Dhanil Dev[3], D.S. Suresh Babu[2] and N. Mohammed Nishath[1]

[1]*Department of Geology, University of Madras, Chennai- 600 025 (TN), India*
[2]*SEM-EDS Laboratory, National Centre for Earth Science Studies, Thiruvananthapuram- 695 011, (KL), India*
[3]*Department of Geology, Kariavattom Campus, Thiruvananthapuram-695 581, (KL), India*
[4]*Department of Marine Geology and Geophysics, CUSAT, Ernakulam- 682 016 (KL), India*
(*Corresponding author, Email: geonoohu@gmail.com)

Abstract

Elemental mapping of Ostracoda valves to infer the paleothermometric fluctuations from off-Visakhapatnam, Bay of Bengal is the focus of the present paper. Two Ostracoda species such as *Bairdoppilata (Bairdoppilata) alcyonicola* and *Actinocythereis scutigera* were dominant throughout the core. The weight percentages of Mg, Sr, Ba, Fe and Mn in ostracod carapaces were estimated and the ratio with respect to Ca was analyzed to decipher the paleoclimate and oxy-redox conditions. It is observed that trace element accumulation varies with respect to different ostracod species and shell position. Thus, the elemental mapping of the ostracod carapaces by the EDS techniques proved as a primary proxy to decipher the paleotemperature fluctuations in the study area.

Keywords: Paleothermometry, Elemental Mapping, Ostracoda, Visakhapatnam, Bay of Bengal

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