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Microplastic contamination in *Saccostrea cucullata*: a baseline study along the rocky shore in southwest area of Peninsular Malaysia off Strait of Malacca

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Abstract *Saccostrea cucullata*, also known as rock oysters, are chosen as the targeted organisms on rocky shores to demonstrate the pathway of microplastic into sessile organisms as the concentration in biota can reveal adverse biological effects and provide information on ecological health of marine waters. Eight rocky shores along the Strait of Malacca were selected. *S. cucullata*'s soft tissues were digested and isolated particles were then examined under a stereo microscope for physical identification and ATR-FTIR characterisation for polymer identification. Out of all particles found, 58.5% had been identified as polymers. The microplastic abundance was between 0.0302 to 0.3586 microplastic items/wet weight and 0.1053 to 0.6000 microplastic items/individual of *S. cucullata* with typical filament-shaped, black colour, and ranging in size from 107.85 μm to 14,614.43 μm . The information gathered served as the starting point for further research into microplastic contamination of the marine environment and its inhabitants.


Keywords


Author Keywords: microplastic contamination; marine pollution; microplastic pollution; Saccostrea cucullata; rock oyster; Johor; Melaka; Negeri Sembilan; FTIR analysis; health risk analysis


Keywords Plus: 1ST EVALUATION; MUSSELS; INGESTION; METALS; FISH; FTIR; BIOACCUMULATION; ABUNDANCE; ELEMENTS; SKUDAI


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