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Isolation and identification of fungal and bacterial specimens from the sand and seawater of the red sea coastline of Saudi Arabia

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Several studies have shown that some microbes and fungi contaminate sea water. We conducted this study to investigate and identify bacterial and fungal species in Red Sea near Jeddah, Saudi Arabia. Water and sand samples were collected in March 2012 via sterile screw cap bottles and isolated using nutrient agar, Sabouraud agar, Glucose-Czapek and Petroleum oil-Czapek agars. Bacterial sensitivity testing was done for bacterial isolates. There were a total of 18 fungal genera isolated on Glucose-Czapek agar, including the genus *Aspergillus* and *Penicillium*. On petroleum oil-Czapek agar, there were a total of six fungal genera that were isolated including *Aspergillus* and *Penicillium*. Bacterial isolates included *Pseudomonas fluorescens*, *Pseudomonas putida*, *Pseudomonas stutzeri*, *Pasteurella multocida* and *Serratia species*. Antibiotic susceptibility tests on bacterial species showed sensitivity to most antibiotics. There is a need to inform the public of the potential dangers of infection from contaminated sea water and sand. It is best to maintain good hygienic practices by immediately bathing in potable water after swimming or diving in the sea, which is a possible source of transmission route for fungi and bacteria.

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