

# **Abstract**

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## **Radioactive Materials distribution in marine water and sediments over abu-qir bay and rashid coast**

The area of study extends from Abu-Qir bay to Rashid Estuary (positioned from 30° 03' 45" East, 31° 20' North to 30° 22' East, 31° 28' 39" North) containing large amounts of black-sands that are rich in Radioactivity, in addition to the existence of many industrial activities as Rakta Factory, Abu-Qir Fertilizers Company, Petrojet and an Electric Power Station. A considerable volume of industrial pollutants is discharged into the bay through El-Tabia pumping station, industrial wastes from Racta paper factory at El-Tarh. Also, draining water from cultivated areas of El-Behera district open into the bay, the El-Amia drain.. This area is considered as an important seafood resource, affecting fishermen by direct action moreover this area is also known as a resort. It is very important to characterize the radionuclide sources and its levels considering such areas before going to install any nuclear activity. The main objective of this work is basically to determine levels of radioactive isotopes that exist in Abu-Qir bay, as well as their distribution along the bay and to assess radioactivity level in the marine environment. In the present work, two types of samples, water and sediment, have been collected from the investigated area.