



## **Investigation of Cs-137 radioactive pollution from fall-out in the southern part of the Caspian sea**

Rezaei M.\*<sup>1</sup>

1- Caspian Sea Ecology Research Center (CSERC), Iranian Fisheries Science Research Institute (IFSRI), Agricultural Research, Education and Extension Organization (AREEO), Sari, P.O. Box 961, Iran

\*Corresponding autor's Email: maryam\_rezaei\_83@yahoo.com

### **Abstract**

one of the most dangerous pollution of environment is radioactive materials ,with high half-life, which threaten living beings with emitting ionizing radiations to the environment. Cs-137 is one of the fission fragments in nuclear reactors with half life of almost 30 years, can expose to danger environmental beings till 10 half- lives. After Chernobyl accident a high concentration of radioactive pollutants especially Cs-137 was diffused in different areas. Since Iran is very close to accident area, it is necessary to study the contamination in its environment. This research covers a typical sample of sediments at depths of less than 10 meters of the south coasts of the Caspian Sea from 11 stations of regions Ramsar to Tazeabad. The measurement of activity of Cs-137 was carried out by using of Gama spectrometry. The results show that the highest and the lowest radioactivity of Cs-137 belong to Ramsar (147.04 Bq/Kg) and Tazeabad (44.35 Bq/Kg), respectively.

**Keywords:** Cs-137, half-life, Gama spectrometry, Activity, Caspian Sea.