

FLUCTUATION OF PETROGENIC COMPOUNDS (TPH) RATE IN SOUTHERN PART OF CASPIAN SEA

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This research was conducted to evaluate the petrogenic compounds (TPH) in the sea's water in southern part of Caspian Sea during spring in 1999 and spring in 2000.

The main sources of pollution of the Caspian Sea can be divided into two major sources including land-based and offshore. Leakage of oil from offshore oil production, especially in Azarbyjan and Kazakhstan, is a major source of pollution in the Caspian Sea (Anon, 1998b). Also, this pollution was occurred by discharge of sewage and industrial wastewater of major rivers such as: Volga, Ural and Terek. So, Kaplan [1994] said that 132.3 thousand tons oil pollution was entered into the Caspian Sea.

The last study showed that the most pollution of oil in the Caspian Sea are Baku bay and islands of Azarbyjan coastal area. The amount of oil pollution in this area was varied 0.03-562 ppm [Kasimov, 1994]. So the environmental scientists said that oil concentrations over handed and more times higher than the maximum permissible concentration (MPC) allowed by the Russian Federation water standards [GEF/UNEP/world bank, 2000].

120 samples of water collected from 5 to 10 depths in 15 selected stations. Oil pollution factor (TPH) was determined using FT-IR instrument according to ASTM [1995], ROPME (1989) and Russian standard method [1992].

As a result, the min & max. TPH of water were 0.97 -2.23 mg/l. Based on the results statistical analysis (one-way ANOVA) indicated there was highly significant differences between seasons ($P < 0.001$), but no significant differences were found between the stations.

In a conclusion, this region was found to have very low oil pollutant comparing of Baku region in Azarbayjan and Black Sea, Therefore, the area of southern part of Caspian Sea has the lower pollution rate because of the little industrial sewage from coastal rivers and oil platforms.

Key word: Oil pollution, Caspian Sea, Iran