

Investigation of the microbial quality of Caspian Sea water in order to determine the location of pen culture deployment (Mazandaran-Goharbaran) Zahra Yaghoubzadeh^{1*}, Reza Safari²

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Abstract

In this study (April 2013- March 2014), microbial indicators including total count of bacteria, total coliform, fecal coliform and fecal streptococcus in seawater were investigated. Samplings were carried out monthly at 6 stations (4 to 5 meters deep and 2 station 10 meters deep) in Goharbaran area. The results were showed that the average of total bacteria in different months were fluctuated from $12.29 \times 10^4 \pm 94.73 \times 10^4$ CFU / 100ml in November 2013 to $1300 \pm 17.70 \times 10^2$ CFU / 100ml in April 2014. The Mean of total coliform were recorded from $1.8 \times 10^2 \pm 1.48$ CFU / 100ml in October to 16 ± 16 2013 CFU / 100ml in April 2014. The mean of fecal coliform was recorded from 40 ± 33 CFU / 100ml in October 2013 to 5.5 ± 4.7 CFU / 100ml in April 2014 and mean fecal streptococci was found from 11.1 ± 8.8 CFU / 100 ml in October 2013 to 1.8 ± 1.7 CFU / 100 ml in April 2014. According to the results, the count of fecal coliforms in this study was lower than the standard (pen culture) in sea water. Therefore, it seems that the evaluated areas were suitable for fish pen culture.

Keywords: pollution indicator, pen culture, Caspian Sea, Mazandaran Goharbaran Area