

Title: RESEARCH OF TOTAL AND THERMOTOLERANT COLIFORMS IN WATER APODI-MOSSORÓ RIVER IN MOSSORÓ-RN

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Abstract:

Artisanal fishing is a popular activity in Brazil and responsible for the formation of several colonies and cooperatives. The practice is responsible for providing income and food for the fishermen and their families. The Apodi-Mossoró river where artisanal fishing occurs in Potiguar West region shows signs of ecological problems such as pollution resulting the dumping of domestic and industrial waste water, reduction of riparian vegetation and sedimentation. According with the foregoing the present study aimed to quantify the number of total and fecal coliforms from the river in the stretch that crosses the city of Mossoró-RN. Were collected in sterile bottles, 6 samples of 100ml in 6 different points. The samples were placed in isothermal box and sent to the Veterinary Microbiology Laboratory (LAMIV) for performing the processing. The samples were processed according to the technique of multiple tubes, using five tubes for each three dilutions. According to the data obtained, it was verified that there was a significant difference between the number of total coliforms of the points P1, P4, P5 and P6, and the points P2 and P3. Point P1 averaged 7×10^2 MPN / 100ml, the point P4 an average of 6×10^2 MPN / 100ml, the point P5 an average of $9,5 \times 10^2$ NMP / 100ml and the point P6 an average of $2,4 \times 10^2$ NMP / 100ml, the other points presented the following average P2 $2,2 \times 10^3$ NMP / 100ml and P3 2×10^3 MPN / 100ml. For the fecal coliform points P1, P4, P5 and P6 showed significant differences compared to points P2 and P3. Point P1 showed an average of 4 MPN / 100ml, the point P4 an average of $2,6 \times 10^2$ MPN / 100ml, point P5 an average of $4,2 \times 10^2$ MPN / 100ml and point P6 an average of $6,5 \times 10^1$ MPN / 100ml, the other points presented the following average P2 7×10^2 MPN / 100ml and P3 1×10^3 MPN / 100ml. Based on the resolution of CONAMA 020/086, water samples should not be exceeded a limit of 1000 total coliforms per 100 milliliters, so, for total coliforms, only P1, P4, P5 and P6 are within the standard required by law. Based on the resolution of CONAMA 357/05, water samples should not be exceeded a limit of 200 fecal coliforms per 100 milliliters, so, for fecal coliforms, only P1 and P6 are within the standard required by law.

Keywords: river, water, coliforms