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SURAPOL MEKWANIT : CHARACTERISTICS OF WATER AFFECTING THE
AMOUNT OF FECAL COLIFORM AND FECAL STREPTOCOCCI IN BANGPAKONG
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This research was conducted to determine the physical and chemical characteristics of water affecting the amount of fecal coliform and fecal streptococci in Bangpakong estuary. A sampling of water was carried out in 5 different sampling stations (at the distance of 0, 2.5, 5, 8 and 12 kms away from the estuary) for a period of 3 months (February-April, 2000). The water was collected weekly at 3 different depths of water (surface, middle and bottom) from each station for 10 weeks and analyzed in the laboratory.

Results indicated that the average amount of fecal coliform and fecal streptococci found in the river was 123.51 ± 111.14 and $783.97 \pm 1,015.26$ cfu/ml., respectively. The amount of fecal coliform tended to decline along the distance from the estuary whereas that of fecal streptococci was opposite. The average amount of fecal coliform appeared to increase upon the depth of water. No significant differences in the amount of fecal coliform were observed along the study distance ($P = 0.198$). Also, there were no significant differences in the average amount of fecal streptococci at the different depths of river ($P = 0.427$) and distances from estuary ($P = 0.527$).

This study indicated that the declined trend along the distance from estuary was observed with the current velocity, conductivity, total dissolved solids, suspended solids, salinity, impurities in terms of Biochemical Oxygen Demand (BOD). However, the water temperature, Nitrite-N₂, and Nitrate-N₂ tended to increase. In addition, the amount of ammonia-N₂ and phosphorus was relatively constant during the study. This study suggests that these water characteristics are likely to clearly affect the amount of both microorganisms if the study period is longer (throughout seasons).