

Bacteriological study of the marine water in the coastal of the North Sulawesi Province, Indonesia

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Abstrak

The main objective of this research was to study the marine bacteriology of the coast of North Sulawesi. The study was accomplished by calculating the abundance of coliform, heterotrophic, and pathogenic bacteria, and analyzing the coexistence relationship between bacteria and phytoplanktons. This research, which included the sampling and laboratory works, has been carried out on 25 – 28 October, 2000. The results suggested that the abundance of each bacteria was as follows: coliform bacteria range between 227-5940 cfu/100 ml with averages 1814.1 cfu/100 ml, found in all stations; heterotrophic bacteria range between $(1-82) \times 10^3$ cfu/ml with averages 12.1×10^3 cfu/ml, it was high density and has association with phytoplankton *Trichodesmium thiebautii*. It was also found 6 species of pathogen bacteria e.g. *Aeromonas*, *Citrobacter*, *Proteus*, *Pseudomonas*, *Yersinia* and *Shigella*. The presence of coliform and pathogen bacteria was indicator of low quality of the seawater in the sampling area. Based on bacteriological study, the North Sulawesi Coastal is not suitable for aquaculture and need treatment and controlled for further coastal exploitation.