

**Thesis Title**                      Biological Analysis of Water Quality Using Phytoplankton and Coliform-bacteria in Ang Kaew Reservoir, Chiang Mai University 1996-1997

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**Abstract**

The biological analysis of water quality using phytoplanktons and coliform-bacteria was carried out in Ang Kaew Reservoir, Chiang Mai University during April 1996 - March 1997. It was found that the quality of water in the reservoir as classified according to the standard surface water quality to be in the second category and it was mesotrophic in relation to the amount of nutrient. However there were some variations at certain periods. The phytoplanktons found at the lower water quality period were *Coelastum reticulatum*, *Aulacoseira granulata*, *Phacus meson*, *Phacus. pleuronectus* and *Peridinium inconspicuum*. They were indication of medium to low quality of water. When the quality of water improved, these phytoplanktons decreased and *Dinobyon divergens* appeared. The coliform bacteria was found between 23-1,100 MPN/100 ml indicating the water quality to be in the second category or lower. In the summer and rainy seasons the water quality was lower than that in the winter due to the contamination from the inflows. There was also a vertical stratification in temperature and dissolved oxygen.