

Comparison of Symbiotic Algae Densities in Coral Reef *Porites compressa* in the Nay Band Bay

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Abstract

Coral reefs function in a symbiotic relationship with dinoflagellates (zooxanthellae). Continuous release of anthropogenic pollutants, mainly into the aquatic environments, and the resulting global climate change threatens coral health by endangering this symbiotic relationship. The object of this study is to measure the zooxanthellae density in *Porites compressa* to estimate health of coral reefs in the Northern part of Nay Band Bay in the vicinity of the South Pars Petrochemical facilities and southern part of Nay Band Bay farther away from these industrials. Corals in the north of Nay Band Bay showed more signs of degradation. The highest mean zooxanthellae density was 3607849 ± 229894 N/cm² in south of Nay Band Bay in February. Mean zooxanthellae density was significantly ($p < 0.05$) higher in the south of Nay Band Bay in February than other months, indicating healthier corals at this region.

Keywords: *Coral reef, Zooxanthellae, Porites compressa, Anthropogenic pollutant.*
