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**EFFECTS OF PH AND WATER TURBULENCE ON THE GROWTH OF HARMFUL ALGAE  
PYRODINIUM BAHAMENSE VAR. COMPRESSUM**

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**Abstract**

*Pyrodinium*, a red tide causing dinoflagellates are often related to toxicity cases particularly paralytic shellfish poisoning (PSP). Study on the effects of specific parameter on the growth of *Pyrodinium* is essential to determine the potential factors responsible for their occurrences. The effects of pH and turbulence on the growth of *Pyrodinium bahamense* var. *compressum* was conducted in laboratory under controlled conditions. *P. bahamense* was cultured in nine different pH levels under two conditions; with and without water turbulence. The experiments were conducted under constant light intensity  $100 \mu\text{molm}^{-2}\text{s}^{-1}$  at  $25^\circ\text{C}$  with photoperiod of 12 h light: 12 h dark cycle. Cells were incubated for two weeks and samplings were done for growth determination every day at interval. This study shows that *P. bahamense* attained the highest cell density ( $616 \text{ cells mL}^{-1}$ ) when grown at pH 8.5 without water motion. However, in the presence of slow water turbulence or water motion, the cell density is relatively low ( $128 \text{ cells mL}^{-1}$ ) at pH 8.5. These different outcomes might be due to the growth inhibitory effect of water motion to *P. bahamense*. Cell densities of *P. bahamense* were also found significantly lower at acidic conditions ( $< 7.0$ ) and at higher pH ( $> 9.0$ ).