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### **G03. Potential production and loss rates of picocyanobacteria in tropical coastal waters**

In this study, monthly samplings were conducted at Port Klang and Port Dickson over a two-year period to measure potential production rate and loss rates of picocyanobacteria using the Landry Hassett dilution technique. Twelve sets of two-factorial experiment were also carried out to further investigate the effect of light and nutrient on picocyanobacteria production rate. Significantly lower abundance was measured at Port Klang ( $2.80 \pm .172 \times 10^4$  cell ml<sup>-1</sup>) compared to Port Dickson ( $13.2 \pm 4.68 \times 10^4$  cell ml<sup>-1</sup>) (Student's *t*-test:  $t = 9.80$ ,  $df = 40$ ,  $p < 0.001$ ). Potential production and loss rates observed at Port Klang ( $3.77 - 70.4$  and  $1.88 - 75.60 \times 10^2$  cell ml<sup>-1</sup> h<sup>-1</sup>) were also much lower than Port Dickson ( $2.32 - 15.90$  and  $1.06 - 18.4 \times 10^3$  cell ml<sup>-1</sup> h<sup>-1</sup>) (Student's *t*-test:  $t = 9.63$ ,  $df = 37$ ,  $p < 0.001$ ;  $t = 7.49$ ,  $df = 43$ ,  $p < 0.001$ ). In the two-factorial experiment, only nutrient ( $F = 7.00$ ,  $p < 0.05$ ) showed a significant effect on production rate. However, the interaction between light and nutrient also have a significant effect on production rate ( $F = 5.80$ ,  $p > 0.05$ ). These results suggest that in tropical coastal waters, nutrient played a more important role in affecting the picocyanobacteria production rate compared to light.