

3936077 PHET/M : MAJOR : ENVIRONMENTAL TECHNOLOGY  
: M.SC. (ENVIRONMENTAL TECHNOLOGY)  
KEY WORDS : DISPERSANT / TOXICITY / GREEN ALGAE

THANAKRIT WANGDUMRONGWONG : TOXICITY OF FUEL OIL C AND  
DISPERSANT ON GROWTH OF *Chlorella* spp. THESIS ADVISORS : PORANEE  
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(ENV.&WATER RESOURCES ENG.), KRISANA TEANKAPRASITH, M.S. (ENV.  
HEALTH), VAJIRA SINGHAKAJEN, M.A. (DEMOGRAPHY). 163 P., ISBN 974-662-896-8

The purpose of this study was to analyze the toxicity of fuel oil C and dispersant and 5 different levels of dispersant concentration (5, 10, 15, 20 and 25%) on growth of *Chlorella* spp. within 96 hours. The initial algal density was about 500,000 cells/ml. The effect of dispersant concentration levels on growth of phytoplankton by 50 percent ( $EC_{50}$ ) was determined by using Sedgewick Rafter (S-R) Counting Cell under a microscope with a magnification of 100 with Probit Analysis Program. The study was both a laboratory experiment and batch study.

The findings of this study show that although the growth rate or the approximate density of *Chlorella* spp. decreased at 12 and 24 hours, the growth rate regenerated within 96 hours. By Probit Analysis Program, it was calculated that the  $EC_{50}$  results at 6, 12, 24, 48, 72 and 96 hours were  $1.05 \times 10^{-2}$ , 3.48,  $1.29 \times 10^{-6}$ ,  $4.68 \times 10^{-20}$ ,  $2.82 \times 10^{-17}$  and  $1.02 \times 10^9$  respectively. The study of toxicity on growth of *Chlorella* spp. showed an interaction between dispersant concentration levels and time. Time had more effect on the growth of *Chlorella* spp. than dispersant concentration levels with significant differences ( $p < 0.001$ ).