

# The Influence of Ecologically Relevant Triclosan Concentrations on the Reproductive Success of *Daphnia magna*

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The purpose of our experiment was to test the effect of Minnesota triclosan concentrations on the reproductive rate of *Daphnia magna*. We hypothesized that in *D. magna* samples exposed to greater concentrations of triclosan, there would be a greater observable difference on the reproductive rate. Our null hypothesis stated that the differing concentrations of triclosan would have no effect on the reproductive success of *D. magna* and their reproductive rate would remain the same as the control. To conduct this experiment, we ran five trials of each concentration of triclosan: 410 ng/L, 180 ng/L, 18 ng/L, and the control of pure spring water. We introduced 10 *D. magna* into each trial and observed the recorded the changes in population for 21 days. Our data showed that the difference in reproduction rates between the control and the 410 ng/L concentration was statistically significant. We can fully reject our null hypothesis and conclude that, at the highest concentration of 410 ng/L, triclosan did have a detrimental effect on the reproductive systems of *D. magna*. There was conclusive evidence to prove our alternate hypothesis correct, that the triclosan had an effect on the *D. magna* at the 410 ng/L level. However, there is not statistical evidence to prove that the 18 ng/L and the 180 ng/L concentrations had an effect on the *D. magna*.