The effect of β-Estradiol on freshwater algae (*Pseudokirchneriella subcapitata*)

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Evidence of increased presence of estrogen in aquatic environments is being found in a wide variety of organisms. Estrogens are powerful endocrine disruptors with the ability to not only mimic endogenous hormones but also alter the overall hormonal metabolism in many of these organisms. The effect of β-Estradiol on some aquatic organism is documented, however very little is known about its effect on algae. Freshwater algae (*Pseudokirchneriella subcapitata*) were used in a growth inhibition test, examining the effects of β-Estradiol on algae growth. A series of 72 hour growth inhibition tests were performed using replicates of ten concentrations of β-Estradiol, a control and a positive control (NaCl). The population size of the algae was estimated by measuring absorbance. A single factor ANOVA analysis of the results indicated that there was no difference in effect of treatments on the algae. This suggests that accumulation of β-Estradiol is occurring within the algae and the potential for bioaccumulation within the algae natural aquatic ecosystem. Evidence of increased presence of estrogen in aquatic environments is being found in a wide variety of organisms. Estrogens are powerful endocrine disruptors with the ability to not only mimic endogenous hormones but also alter the overall hormonal metabolism in many of these organisms. The effect of β-Estradiol on some aquatic organism is documented, however very little is known about its effect on algae. Freshwater algae (*Pseudokirchneriella subcapitata*) were used in a growth inhibition test, examining the effects of β-Estradiol on algae growth. A series of 72 hour growth inhibition tests were performed using replicates of ten concentrations of β-Estradiol, a control and a positive control (NaCl). The population size of the algae was estimated by measuring absorbance. A single factor ANOVA analysis of the results indicated that there was no difference in effect of treatments on the algae. This suggests that accumulation of β-Estradiol is occurring within the algae and the potential for bioaccumulation within the algae natural aquatic ecosystem.