

The Effects of Lead Nitrate on the Photosynthesis Rates of *Elodea Canadensis*

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Abstract

Lead-based paint was banned in the United States in 1978; fifty-six years after the League of Nations outlawed the production of lead-based paint. Thirty-seven years later, lead continues to be found in the world's waterways (Toxipedia). In order to test the effects of lead on the aquatic life, a simulation was conducted using lead nitrate and *Elodea Canadensis* plants. Three separate containers holding the *Elodea Canadensis* plants were placed in a light box and monitored for a sixteen hour period. Succeeding the first trial, which ran to measure the baseline photosynthesis rates of the *Elodea Canadensis* plants, 20 ml of lead nitrate was added to the containers after each four hour period, while the photosynthesis rates were being monitored and modeled by oxygen probes. The data showed decreasing oxygen levels as the concentration of lead nitrate increased. Thus, it was concluded that the rates of photosynthesis of *Elodea Canadensis* decrease as the amount of lead nitrate in the water increases.