

Cyanide Detection in Water by Photosynthetic Tissue-Based Biosensors

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This highlight is on the detection of low levels of cyanide in water by in situ microalgal tissue-based biosensors. Directly-drawn Clinch River water samples have been analyzed with progressive concentrations (2 mM, 5 mM and 10 mM) of potassium cyanide (KCN). The Clinch is the primary source of drinking water for the City of Oak Ridge, Tennessee. Dose-response experiments were also conducted with axenic laboratory cultures of the unicellular green alga *Chlamydomonas reinhardtii*. For these KCN dose-response relationships, the photochemical yields were plotted as a function of time as well as concentration. This DARPA funded project is led by Eli Greenbaum of CSD with technical assistance by Miguel Rodriguez, Jr. of LSD.

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Effect of 2 mM KCN (Clinch River vs. 0.14 μg chlorophyll/mL *Chlamydomonas*) - Experiments Performed in Triplicates

