

## Isolation and Structural Characterization of a Novel Glycoside Pigment from *Euglena sanguinea*

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*Euglena sanguinea* is a ubiquitous algal species found in many shallow, eutrophic freshwater systems. Originally considered benign, *Euglena sanguinea* blooms have now recently been observed to result in fish kills. The isolation and structural characterization of a toxic alkaloid, euglenophycin, has precipitated the need for a rapid method of assessing harmful *Euglena* blooms. One possible method to accomplish this assessment is analysis of differentially expressed pigments between toxic and benign algae. Here we report the extraction of a novel pigment from cultured *Euglena* cell mass that is expressed at high levels in toxic algae. The pigment was purified through chromatographic methods and analyzed using gradient elution and photo-diode array detection. Nuclear magnetic resonance spectra (<sup>1</sup>H, <sup>13</sup>C, APT, COSY, HSQC, and HMBC) and mass spectra are currently being analyzed for the completion of the chemical structure. Data to date corresponds to no known pigment providing evidence that this is a novel compound. A completed structure will provide a biomarker for the rapid identification of toxic *Euglena*.

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