



Automatically Differentiate Cyanobacteria from Green Algae

The FlowCam® Cyano automatically differentiates cyanobacteria from other algae and particles in aquatic samples. Using a patent-pending combination of excitation wavelength, phycocyanin fluorescence measurement and image recognition software, the system automates a process previously accomplished through manual microscopy.

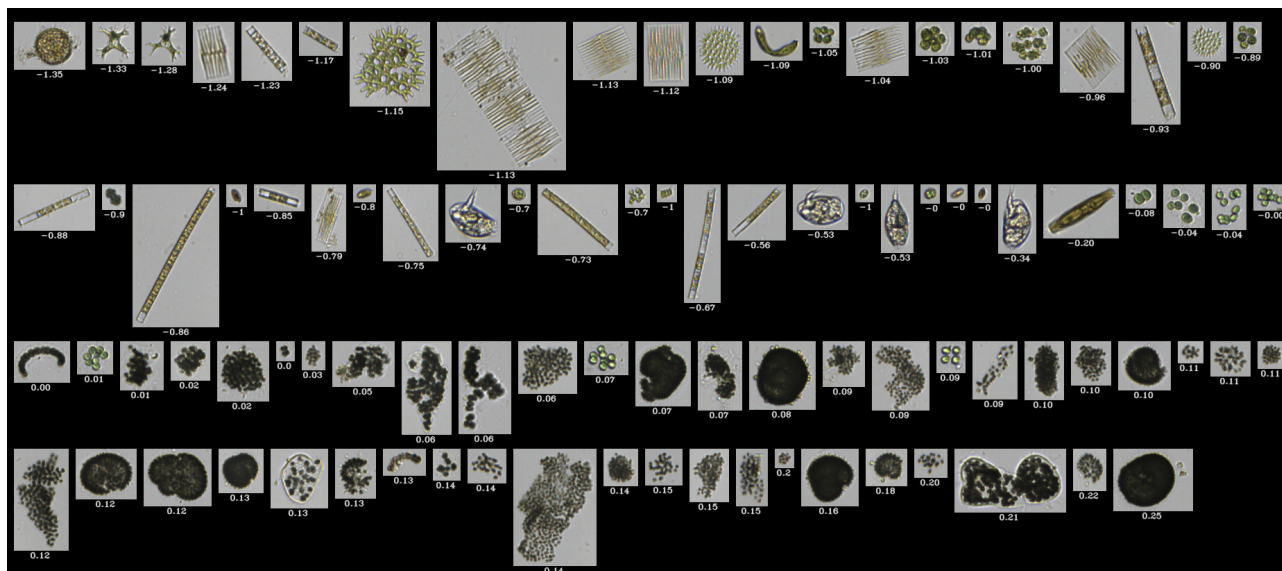
After differentiating the cyanobacteria from other algae in the sample, Visual Spreadsheet and Classifier Advanced software further characterizes the specific types of algae through 40+ morphological parameters. The system's features include:

- 2 fluorescence channels: 633 nm laser- Ch 1: 700nm \pm 10nm (Chlorophyll) / Ch 2: 650nm \pm 10nm (Phycocyanin) to differentiate green and blue-green algae
- Further classification of algae taxa using over 40 morphological parameters
- Automated self-rinse and self-cleaning cycles reduce cross contamination and increase life of flow cells



FlowCam® Cyano Applications

- Detection and identification of Cyanobacteria in freshwater and marine environments
- Calculation of Cyanobacteria concentration, cell counts, and biovolume
- Semi-Automated classification of Cyanobacteria taxa
- Management of water treatment operations



Freshwater sample at 10X – Data 'sorted' on ratio of fluorescence value ratio of Chlorophyll-to-Phycocyanin to identify Cyanobacteria.

FlowCam Cyano Case Study

A sample containing low levels of cyanobacteria and other algae was collected from a lake in the early spring and evaluated using FlowCam Cyano. By filtering on the ratio of the two fluorescence signals collected for each particle, the FlowCam Cyano distinguishes the cyanobacteria from other algae as shown at right and below.

Advanced Classifier software further organizes the Cyanobacteria by taxa so that researchers and environmental monitoring agencies can better protect

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