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FlowCAM



Fluid Imaging Technologies produces instrumentation for monitoring particles present in fluids.







Fluid Imaging's FlowCAM is a powerful new continuous imaging flow cytometer ideal for monitoring of coastal waters, closed reactor systems, fluid borne particulate contamination, phytoplankton, ballast water, water quality and aquaculture. A FlowCAM can monitor and image cells and other particles in fluids.

Marine applications include discrete sample or continuous in-situ analysis of phytoplankton and zooplankton. Different models may be used in-situ, on floats, or on the laboratory bench. Other instrumentation is easily integrated with the FlowCAM.

Ease of Operation

Complete continuous or discrete sample processing is obtained by simply drawing a sample into the instrument. The FlowCAM will count, image and analyze each particle in the sample as it passes through the instrument. The FlowCAM saves an image of each counted particle as well as conventional flow cytometry data on each particle. This includes but is not limited to chlorophyll and phycoerythrin fluorescence and light scatter.

Compared with conventional techniques, the FlowCAM offers:

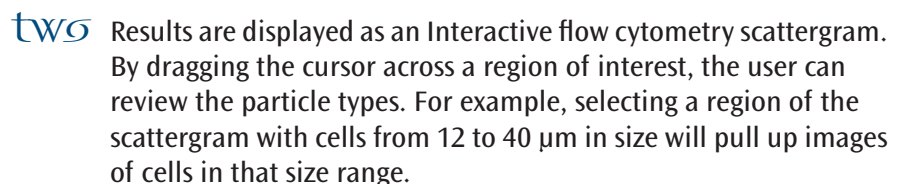
-  Images of every particle analyzed
-  Little operator fatigue
-  Continuous monitoring for days
-  Image processing for automatic cell ID



In as little as 1 minute, you can have a detailed analysis of the sample with no need for settling or preserving the sample.

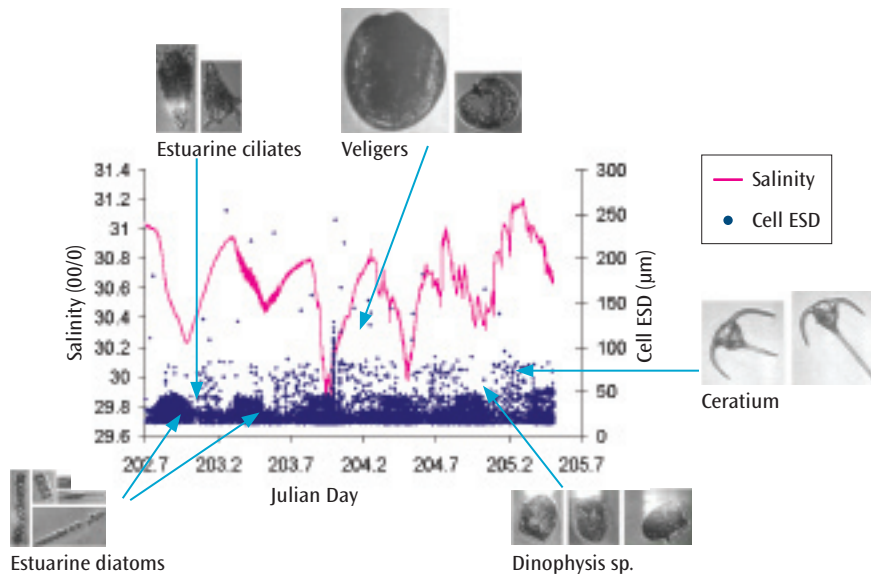


1. The sample is drawn into the instrument.
2. Particles are detected in the optical section.
3. The CPU/image processor images and analyzes each particle.
4. Results are displayed on the monitor.



three Finally, the data on each particle is stored in a spreadsheet file. Each row represents data on one particle. This data may be analyzed easily with normal spreadsheet functions.

Applications



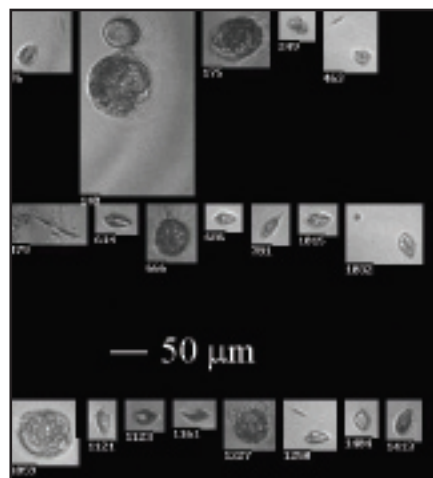
The back of a dock mounted FlowCAM, with its red housing.

At Site Environmental Monitoring-Float deployment

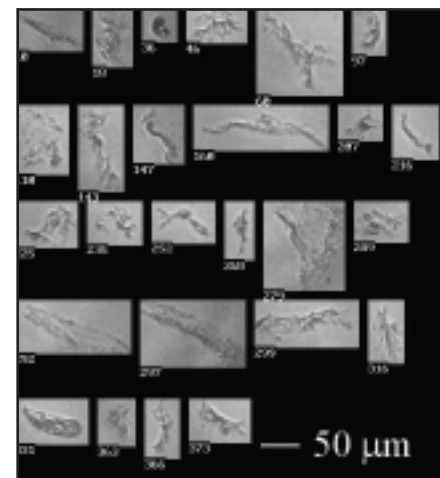
The FlowCAM can be configured as a standalone unit on a float with a weatherproof housing and cabling for continuous monitoring. Continuous monitoring results can show the tidal or daily changes of phytoplankton or other particles in the water along with the other water property changes such as salinity or temperature.



Aboard the USS Cape May, during a ballast water experiment.



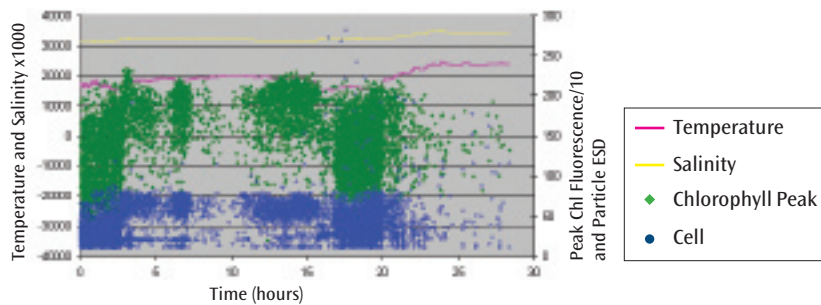
Untreated water sample



Treated water sample

Ballast Water Monitoring

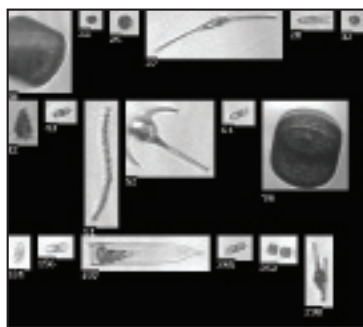
The FlowCAM may be installed on a freight vessel to evaluate the effectiveness of ballast water treatment. The FlowCAM allows for quick and easy visual and analytical comparison of untreated water to treated water.



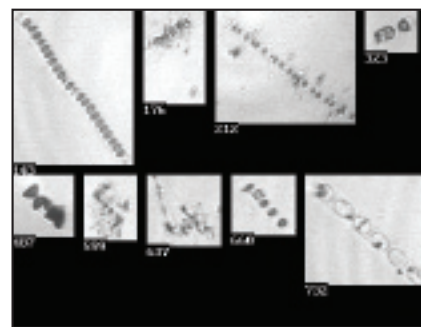
Aboard the R/V Cape Hatteras, in the Gulf of Maine

Shipboard Monitoring

The Benchtop FlowCAM may be used at sea to monitor particulates and plankton from discrete samples or from the ship's sea chest. Sea chest monitoring permits analysis of plankton dynamics over transects.



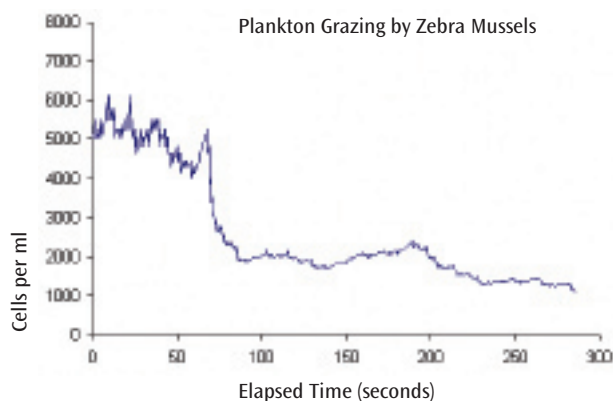
Surface water, showing healthy organisms



Water from 100 feet below the surface, showing dying cells.

In-Situ Monitoring-submersible

The submersible FlowCAM may be used to profile the water column and provide rapid comparison of plankton community structure at different depths. These FlowCAM images show the healthy organisms at the surface and the diatoms from a previous bloom near the ocean floor.



Lab Analysis-benchtop

The benchtop FlowCAM may also be used in the laboratory to rapidly and easily monitor water treatment, cell cultures, particles in liquids and grazing experiments. Discrete samples or continuous processes may be monitored. The graphical user interface, cell images and automatic spreadsheet generation allow for rapid and intuitive analysis of particle properties.

Specs



Submersible FlowCAM System

- Analyzes particles from 5 to 1000 μm
- Images every analyzed particle
- Processes up to 10 ml per minute
- Measures individual particle fluorescence and/or scatter
- Particle counting based on auto sampling or fluorescence/scatter
- Easy to clean and maintain
- 10baseT interface for local area network
- All data stored in spreadsheet format for easy management
- Easy to use interactive scattergram for data/image review
- All images stored in internet browser-compatible formats
- 12V operation
- Submersible to 100 feet
- Dimensions: 14" diameter by 24" long cylinder

Notes: All configurations gather and store time of passing data, particle size data and particle images. Data is stored in spreadsheet compatible format. All configurations provide review of data and images with an interactive scattergram. All configurations provide Internet browser compatible data and images, and are provided with a pre-installed web server for local or remote access.

50% deposit required when order is placed.

Upgrades Any instrument may be upgraded after purchase, subject to a visitation fee based on location