

## Flow Imaging Microscopy for Subvisible Particle Analysis

### OVERVIEW

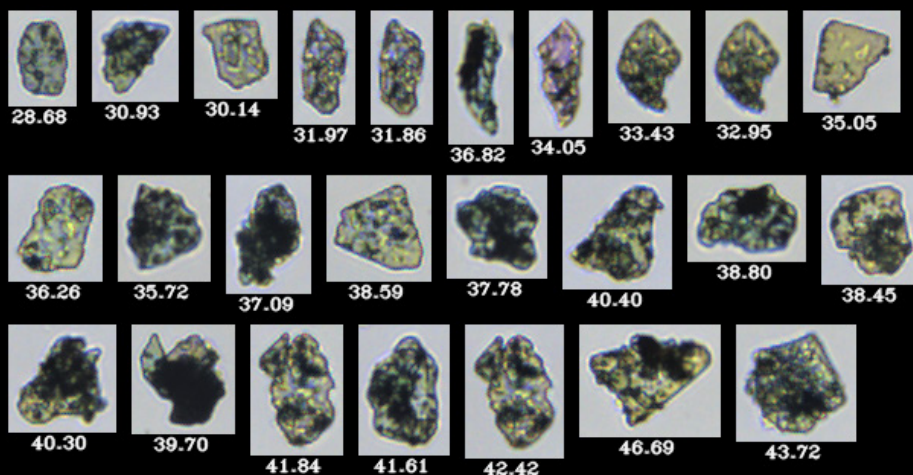
The FlowCam is an imaging particle analysis system that uses flow microscopy to image and analyze subvisible particles with diameters ranging from 2  $\mu\text{m}$  to 1 mm. Simultaneously determine particle shape, type, and size distribution of all detectable particles in your solution.

- Minimum sample volume = 100  $\mu\text{l}$
- Advanced thresholding capabilities enable accurate analysis of translucent particles
- Typical analysis rate = 250  $\mu\text{l}/\text{min}$
- Compatible with FlowCam Automated Liquid Handling system



### APPLICATIONS

Abrasives  
+  
Column Packing Material  
+  
Cosmetics and Fragrances  
+  
Food and Beverage  
+  
Microencapsulation  
+  
Oil and Gas  
+  
Pharmaceuticals  
+  
Printer Ink & Toner  
+  
Washwater



Eye shadow particles imaged by the FlowCam. Property shown: Diameter (ESD)

## Flow Imaging Microscopy for Subvisible Particle Analysis

FlowCam 8000	
Particle Size Range	2 µm to 1 mm
Magnification & FlowCells	20X (~200X magnification), flow cell depth option: 50 µm Field-of-View (FOV) 10X (~100X magnification), flow cell depth option: 100 µm FOV 4X (~40X magnification), flow cell depth option: 300 µm and 600 µm FOV 2X (~20X magnification), flow cell depth: 1 mm FOV
Sample Processing Capability	0.05 mL/minute at 20X and up to 3mL/minute at 4X
Measured Parameters	Basic Shape Parameters: Area, Aspect Ratio (width/length), Area Based Diameter (ABD), Equivalent Spherical Diameter (ESD), Length, Volume (ABD-based), Volume (ESD-based), Width, 3 Biovolume Measurements  Advanced Morphology Parameters: Area (Filled), Circle Fit, Circularity, Circularity (Hu), Compactness, Convex Perimeter, Convexity, Elongation, Fiber Curl, Fiber Straightness, Geodesic Aspect Ratio, Geodesic Length, Geodesic Thickness, Perimeter, Roughness, Symmetry  Fluorescence Detection & Measurements: Channel 1 Area, Channel 1 Peak, Channel 1 Width, Channel 2 Area, Channel 2 Peak, Channel 2 Width, Channel 2/Channel 1 Ratio  Gray Scale and Color Measurements: Average Blue, Average Green, Average Red, Edge Gradient, Intensity, Blue/Green Ratio, Red/Blue Ratio, Red/Green Ratio, Edge Gradient, Intensity, Sigma Intensity, Sum Intensity, Transparency
Camera	High resolution (1920x1200 pixels) CMOS. Monochrome and color available.
Frame Rate	Shutters up to 100 frames per second.
Fluidics	Micro-syringe pump with multiple sizes to optimize flow rates: 0.5 mL, 1 mL, 5 mL
Data Acquisition Method	FlowCam 8400 - fluorescence based laser triggering and auto imaging FlowCam 8100 - auto imaging
Fluorescence Emission & Detection	Excitation Options (488 nm, 532 nm, 633 nm) with 2-Channel Fluorescence Detection: - 488 nm laser - Ch 1: 650nm long pass / Ch 2: 525nm ± 15nm (FITC) - 532 nm laser - Ch 1: 650 long pass / Ch 2: 575nm ± 30nm (Phycoerythrine) - 633 nm laser- Ch 1: 700nm ± 10nm (Chlorophyll) / Ch 2: 650nm ± 10nm (Phycocyanin)
VisualSpreadsheet®	Interactive, image-based analytical software that generates 40+ particle measurements per cell. Filter, sort, and classify data based on user-defined criteria. Create libraries to automate classification for future sample analyses.

Will FlowCam solve your particle analysis needs?

Contact us for more information or to arrange for a demo or sample analysis.

