

FlowCam® 8000

Flow Imaging Microscopy for Protein Therapeutics



FlowCam® is an imaging particle analysis system that uses flow microscopy to image and analyze subvisible particles with diameters ranging from 1µm to 100µm. Simultaneously determine particle shape, type, and size distribution of all detectable particles in your solution.

Advantages of the FlowCam 8000:

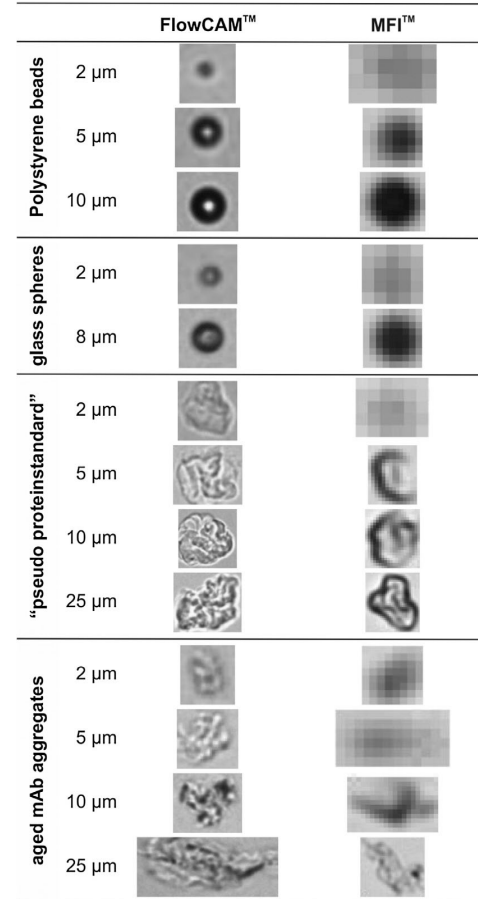
- Minimum sample volume = 100µl
- Advanced thresholding capabilities enable accurate analysis of translucent particles
- Auto-rinse and -clean cycles prevents cross-contamination
- Typical analysis rate = 250µl/min
- Compatible with FlowCam Automated Liquid Handling system (ALH)

Applications

- Characterization of subvisible particles in protein therapeutics
- Microencapsulation formulation and quality control
- Characterization of dry active pharmaceutical ingredients (API's), fillers, and excipients
- Characterization of dry and rehydrated lyophilized particulates

Industry-leading Image Quality

Better image quality yields more accurate measurements



Reprinted from European Journal of Pharmaceutical Sciences 53 (2014) 95–108, Werk, Tobias, Volkin, David B., Mahler, Hanns-Christian, *Effect of solution properties on the counting and sizing of subvisible particle standards as measured by light obscuration and digital imaging methods*, with permission from Elsevier.



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Particle Size Range	1 μm to 100 μm
Magnification & Flow Cells	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 options: 300 μm and 600 μm FOV
Measured Parameters	<p>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</p> <p>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</p> <p>Fluorescence Detection & Measurements: Channel 1 Area, Channel 1 Peak, Channel 1 Width, Channel 1 Area, Channel 1 Peak, Channel 1 Width, Channel 2/Channel 1 Ratio</p> <p>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</p>
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
Optional Fluorescence Emission & Detection	Excitation Options (488 nm, 532 nm, 633 nm) with 2-Channel Fluorescence Detection: <ul style="list-style-type: none"> - 488 nm laser- Ch 1: 650nm long pass / Ch 2: 525nm \pm 15nm - 532 nm laser- Ch 1: 650 long pass / Ch 2: 575nm \pm 30nm - 633 nm laser- Ch 1: 700nm \pm 10nm / Ch 2: 650nm \pm 10nm
VisualSpreadsheet [®] Software	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.

Request a Free Sample Analysis

Send us your sample and we will provide:

- A Web-based interactive presentation of the results.
- Histograms and scattergrams showing the size and distribution of particles.
- A Microsoft Excel spreadsheet with all the measurement data, including count, length, width, and ESD.
- Digital images of the cells and particles in your sample.

Call +1 207-289-3200 or visit our website for information on how to submit a sample.

