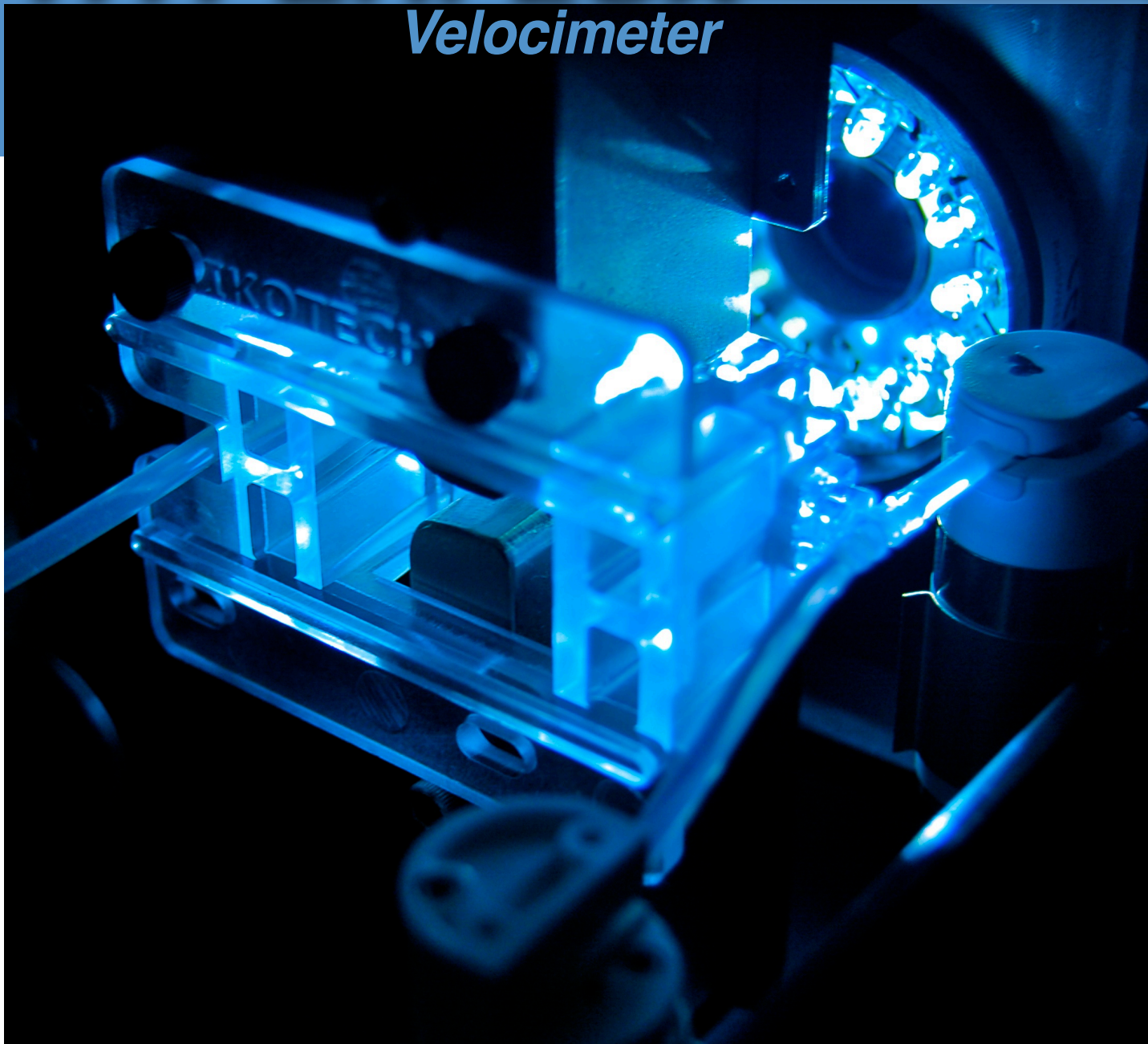


TM

HYPERFLUX

Velocimeter

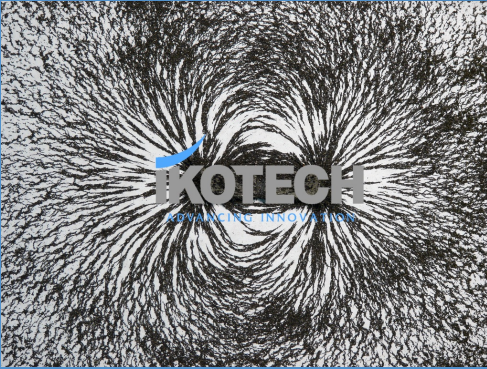


HIGH DEFINITION MAGNETIC PARTICLE TRACKING VELOCIMETER

IKOTECH
ADVANCING INNOVATION

The HyperFlux™ Is an innovative combination of software and hardware for analyzing magnetically labeled or unlabeled cells in a magnetic field. Like a fluorescent analyzer, it measures the presence of labeled cells. Unlike a flow analyzer it uses the continuous property of magnetophoretic mobility as the parameter, and calculates and measures 20 distinct parameters such as size and

intensity of your cells. It can characterize sedimentation of unlabeled cells, and gives you a highly statistically accurate cell count in seconds. The HyperFlux™ enables quantitative multi-parameter sorting with magnetic labeling on the Ikotech Quadrasep QMS™ at rates in excess of 1×10^7 Cells per second, with no clogging!



MAGNETIC EMPOWERMENT

All Magnetic Cell sorting systems are not equal. With most, if you under-label, you lose cells, if you over-label, you waste expensive reagent. With the IKOTECH HyperFlux™ you can analyze your sample in a matter of minutes to quantify the labeled and unlabeled fractions. And no longer are you hamstrung to the drip, drip, drip of your existing magnetic cell

sorter. Paired with the IKOTECH Quadrasep™ Sorter, the HyperFlux™ Analyzer tunes your sort for maximum throughput. Because its an analyzer, it can identify multiple populations in your sample, measuring and calculating 20 different parameters, allowing you to do multi-parameter quantitative sorting in the magnetic domain at throughput FACS can't touch!

SPECIFICATIONS

- 13x16x12 inch bench-top instrument footprint
- List-mode data collection at event and attribute level
- List-mode data reported in pixels or microns
- Internal selection gates:
 - ▶ Particle size
 - ▶ Track Linearity
 - ▶ Track length
 - ▶ Intensity
- List-mode track event attributes include:
 - ▶ Track ID
 - ▶ Set Number reference
 - ▶ Length in frames
 - ▶ Length in pixels
 - ▶ Horizontal travel
 - ▶ Vertical travel
 - ▶ Standard deviation of inter-frame travel
 - ▶ Standard deviation & Average Particle size
 - ▶ Standard deviation & Average Compactness of particle
 - ▶ Standard deviation & Average Elongation of particle
 - ▶ Standard deviation & Average Roughness of particle
 - ▶ Linearity estimation
 - ▶ Starting/Ending positions
 - ▶ Magnetophoretic mobility of individual track
- List-mode point event attributes include:
 - ▶ Point ID
 - ▶ Track ID
 - ▶ Set Number reference
 - ▶ Frame Number reference
 - ▶ Centroid position
 - ▶ Area
 - ▶ Standard deviation & Average Intensity
 - ▶ Length & Breadth
 - ▶ Compactness
 - ▶ Elongation
 - ▶ Roughness
 - ▶ Bounding box coordinates
- Built-in Data Visualization/Reporting
 - ▶ Per frame particle size histogram with gating
 - ▶ Per frame fluid density measurement Average, Median, & Standard Deviation calculations per frame
 - ▶ Interactive 2D & 3D plotting of list-mode data with GnuPlot interface
- ▶ Export of plots to svg, pdf, jpg, gif, png, eps for easy publication
- ▶ Data export to FCS 3.x for processing in your favorite Flow software
- ▶ Data export to CSV (Excel)
- Imaging
 - ▶ Resolution of 1600x1200 pixels using Sony 1/1.8" ICX274 image sensor
 - ▶ Options for pixel resolutions from 8.8µm to 730nm
 - ▶ Magnification options for 0.5x, 0.75x, 1x, 2x, 4x, and 6x
 - ▶ Frame rates of 30fps @Max resolution
- Particle Tracking
 - ▶ Accurately measures magnetophoretic mobility over a 6 decade logarithmic window
 - ▶ Options for identifying & tracking of particles ranging in size from 300nm to 1600µm
 - ▶ up to 10,000 event tracks/sec (aka Cell mobility measurements)
 - ▶ 30,000 measured particle attributes/sec
 - ▶ 170,000 calculated particle attributes/sec
 - ▶ 30 fluid density measurements/sec
 - ▶ Data processing rate (std config): 133 fps or 256 MBps
- Flow Cell
 - ▶ Sterile & closed system
 - ▶ Swappable options include:
 - ▶ 300 x 3000µm for imaging & tracking tissue from 300nm to 200µm
 - ▶ 3000 x 3000µm for imaging & tracking tissue from 200 to 500µm
 - ▶ 5000 x 5000µm for imaging & tracking tissue > 500µm
 - ▶ Custom sizes available for nonstandard applications
 - ▶ Optimal cell concentration for analysis: 9x10⁵ cells/mL
- Fluidics
 - ▶ Vacuum-based system for highest safety
 - ▶ Automated flow for continuous analysis
 - ▶ Packeted sample flow rates from 1µL to 6mL per minute
 - ▶ Minimum sample volume for analysis: 1mL@2x10⁵ cells/mL
- Software Package
 - ▶ Linux-based operating system
 - ▶ IKOVision software suite
 - ▶ Acquire high definition data
 - ▶ Filter, Analyze, Measure, and Visualize cell mobility
 - ▶ In-context data scrubbing

*Specifications are subject to change without notice.



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