

High-speed cell sorter and submicron particle detector, 7/14

July 2014—MoFlo Astrios EQ, a six-way, jet-in-air sorter from Beckman Coulter Life Sciences, delivers patent-pending enhanced dual forward scatter (eFSC) technology for simultaneous sorting and detection of particles from 200 nm to 30 μ m in diameter.



The Intellisort II sorter eliminates the need for bead-based drop-delay routines, which alleviate the need to remove sterile samples during drop-delay recalculation due to nozzle blockages. Intellisort II's ability to maintain droplet breakoff for uninterrupted aseptic sorting helps preserve sort integrity.

In fully configured instruments, compensation requirements can be reduced by using up to seven spatially separated lasers across 32 parameters (out of a palette of 51 parameters) simultaneously. Six of seven laser choices can be configured as the primary laser used in eFSC detection.

Dual eFSC permits measurement of scatter characteristics across three orders of magnitude simultaneously. Choice of wavelength extends eFSC detection within 405–640 nm, allowing small and large particle detection.

Researchers can work with a great range of biological samples, analyzing and sorting cells from microsomes to macrophages and astrocytes to xenografts. Nonbiological applications include agarose gel droplets, gold nanoparticles, and environmental particulates. Single-cell applications include circulating tumor cells, drug discovery, rare event analysis, stem and neuronal cells, and ecological and physiological microbes.

A SterilGard Class II biological safety cabinet from Baker provides biological safety. An auto quality control function monitors sheath pressure, sample pressure, average event rate, start and end times, nozzle size, differential between measured parameters, and pass/fail thresholds. Summit 6.2.2 software can acquire and store more than one billion events across multiple parameters while sorting.

Astrios EQ accommodates currently available plate and slide-based sorting options, including standard and custom formats.

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