

Experience High Speed Sorting

MoFlo XDP Cell Sorter

Blood Banking
Capillary Electrophoresis
Cell Analysis
Centrifugation
Genomics
Lab Automation
Lab Tools
Particle Characterization



Performance

Accelerate cell sorting research beyond past limitations with the first true 32-bit high-resolution 5-decade multi-channel digital system in the history of flow cytometry.

Applications

Increase productivity through rapid response capabilities to tackle the most demanding applications with ease.

Functionality

Highly configurable to meet demanding sorting application needs. Improved light detection and filters provide the sensitivity you need.

Reliability

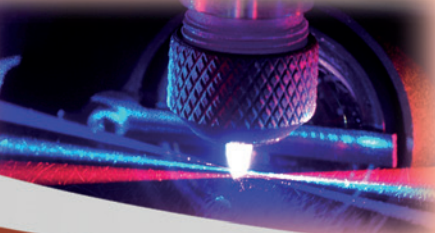
Stable fluidics are key to successful sorting. MoFlo XDP combines this historic reliability with cutting edge engineering and proven performance.

Results

Powerful and responsive, MoFlo XDP allows customized, accurate control of single cell deposition for advanced research possibilities.

Support

Across the globe, a network of technical experts is available to help with all your system support needs. Wherever you are, our world-class customer service and support is dedicated to making sure your sorter functions at peak efficiency throughout its lifetime.



MoFlo XDP Cell Sorter - Setting the Standard.



XDP Electronics

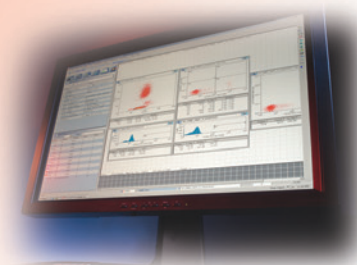
Maximize yield in all sort modes.

- ✓ Zero dead time
- ✓ >100,000 events per second
- ✓ Digital triggering on any parameter
- ✓ Digital pulse processing
- ✓ True dynamic range of 5 decades
- ✓ Unmatched linearity

SP Cells

Identification of side population cells (SP) based on the efflux of Hoechst 33342 and other rare cell populations can be studied using the MoFlo XDP. Excited by a UV laser, Hoechst 33342 blue and red fluorescence is captured and results in a small tail trailing off the main population. This side population of cells is quite rare and can easily be separated at high speeds on the MoFlo XDP thus decreasing the sorting time required.

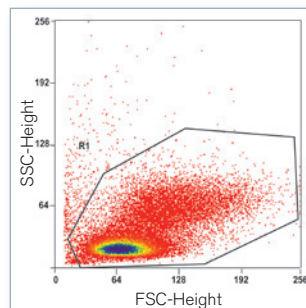
Data courtesy of Susan Majka, PhD., University of Colorado Health Science Center.



Summit Software Version 5.2

Determine regions with full parameter resolution.

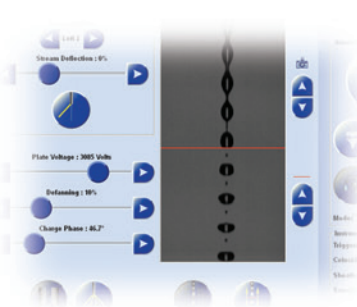
- ✓ Powerful data handling
- ✓ High viability and yield
- ✓ >1 billion event listmode files
- ✓ 18 x 18 Auto-compensation matrix
- ✓ Workspace concept
- ✓ Standard and custom plate sort capability



IntelliSort

Assure purity and yield.

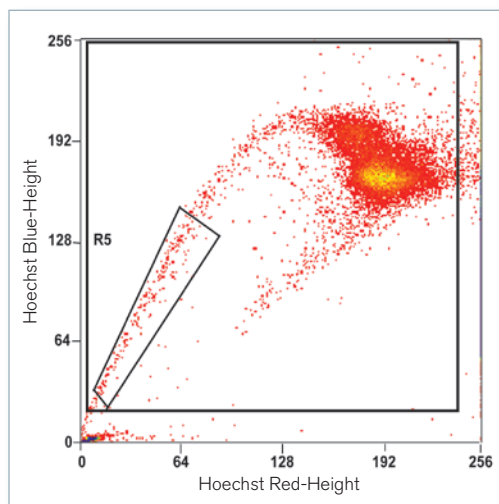
- ✓ Cruise control sorting
- ✓ Walk away operation
- ✓ Pressure and temperature monitoring
- ✓ Improved image quality



XDP Touch Screen Control Panel

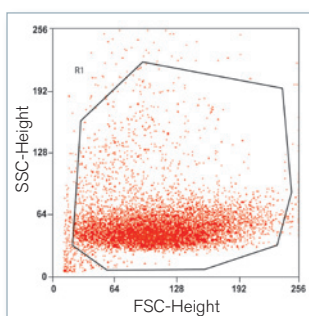
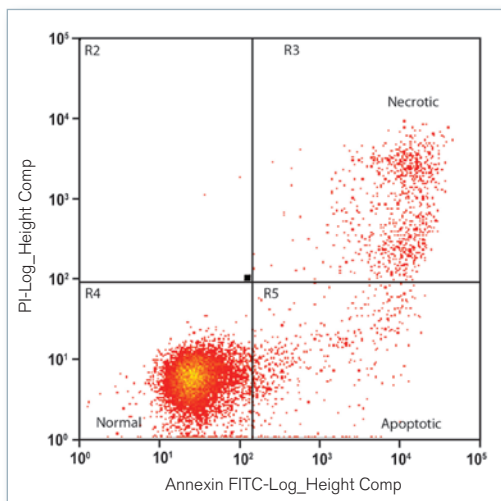
Access intuitive set up and sorting refinements.

- ✓ Individual stream deflection control
- ✓ Simple coarse and fine alignment
- ✓ Droplet control
- ✓ Stream configuration/control
- ✓ CyClone calibration
- ✓ Sort statistics



Apoptosis

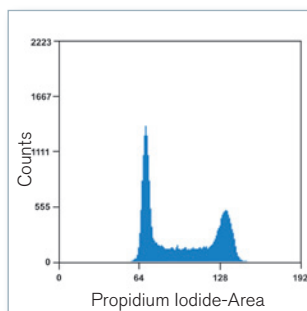
FITC conjugated Annexin V and propidium iodide (PI) can be used to identify cell membrane changes associated with apoptosis as membrane integrity degrades during this process. This staining combination was used to evaluate cells for apoptotic activity using the MoFlo XDP.



Cell Cycle

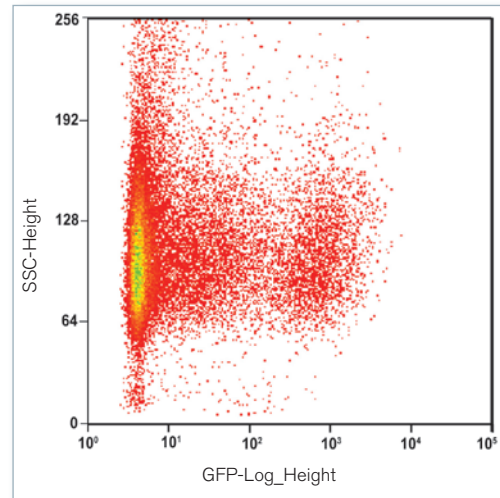
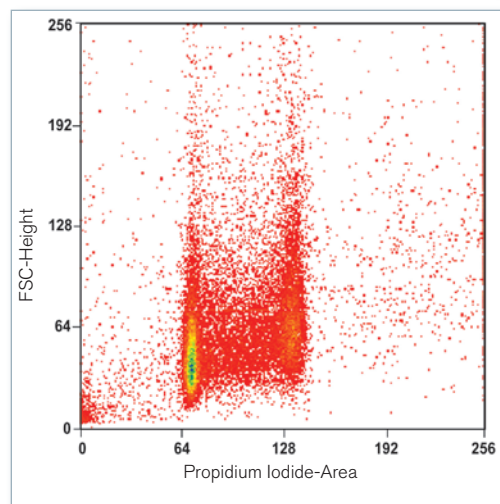
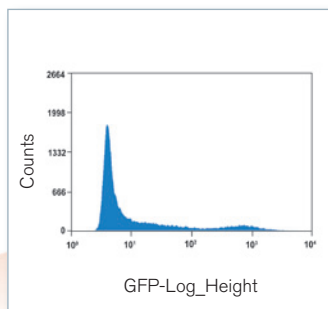
Propidium iodide (PI) can be used to identify DNA content of cells that have been permeabilized to accept the dye where it intercalates into the cellular DNA. Therefore the PI signal intensity is directly proportional to the amount of DNA in the cell. The majority of the cells in the histograms shown are in G0/G1 phase with 1x DNA content (left peak). Cells in G2/M phase appear in the peak to the right and contain 2x DNA. Cells falling between the peaks are in S phase and actively replicating the DNA.

Data courtesy of Lynne Bemis, PhD, University of Colorado Health Science Center.



GFP

Green Fluorescent Protein (GFP) is the most common fluorescent protein and is often used to study protein localization or protein-protein interaction. It is a naturally occurring bioluminescence complex found in the *Aequorea victoria* jellyfish. When isolated from the jellyfish and purified, GFP can be excited by a 488 nm laser line with an emission around 510 nm. The data collected on the MoFlo XDP shows GFP expression following transfection.



MoFlo XDP Specifications

Analysis Rate	100,000 eps
Sort Rate	70,000 eps
Sensitivity	< 150 MESF FITC, <100 MESF PE
Drop Drive Frequency	200 kHz
Optical Parameters	2 scatter and up to 18 fluorescence
Purity	> 99% at all speed
Yield	Poisson 'time of arrival' statistics for 32 parameter + compensation
Plate Deposition	6-1536 wells plus custom configurations
Sort Gates	Up to 32
Analysis Gates	Unlimited
Excitation Lines	Up to 3
Laser Options	Solid State: 488 nm, 200 mW OPSSL; 635 nm, 25 mW Diode; 405 nm, 25 mW Radius; 355 nm, 100 mW, 642 nm fiber coupled with BSO Water-cooled lasers: I90, Krypton series Laser Engine: Fiber delivered 405 nm, 50 mW; 488 nm, 200 mW; 532 nm, 150 mW; 561 nm, 200 mW; 592 nm, 200 mW; 640 nm, 60 mW Custom Lasers: Incorporate additional wavelengths to meet your needs.
Filter Options	Standard filters sets and Hoechst, DAPI, INDO, APC/APC- Cy7
Data Resolution	Up to 5 decades
Nozzle Sizes	8 ranging from 50 µm to 200 µm
Particle Resolution	< 0.2 µm to 25 µm
Compensation	18 x 18 intra-laser compensation
Available Signal	Log, height, area, width, log area for each parameter
System Pressure	4-100 PSI
Software	Summit Software version 5.2, Microsoft Office Professional Edition 2003
Operating System	Microsoft Windows XP Professional

For Research Use Only. Not to be used in diagnostic procedures.
Class I laser product.

Global Service and Support

- ✓ Application specialists
- ✓ Field service engineers
- ✓ Training programs
- ✓ Discussion board/user groups



Partner with Beckman Coulter

Experience exceptional flow cytometry performance.

- ✓ Industry leader
- ✓ Worldwide presence
- ✓ Innovative solutions
- ✓ Robust and proven platforms

Beckman Coulter, the stylized logo, Allegra and Microfuge, are registered trademarks of Beckman Coulter, Inc. MoFlo and CyClone are trademarks of Beckman Coulter, Inc. Microsoft and Windows are registered trademarks of Microsoft Corporation.

Australia, Gladesville (61) 2 9844 6000 Austria, Vienna (43) 1 291 01 241 Canada, Mississauga (1) 905 819 1234
China, Shanghai (86) 21 3865 1000 Croatia, Zagreb (38) 51 489 9003 Czech Republic, Prague (420) 272 01 73 32
Eastern Europe, Middle East, North Africa, South West Asia: Switzerland, Nyon (41) 22 365 3707 France, Villepinte (33) 1 49 90 90 00
Germany, Krefeld (49) 2151 33 35 Hong Kong (852) 2814 7431 India, Mumbai (91) 22 3080 5000 Italy, Cassina de' Pecchi, Milan (39) 02 953921
Japan, Tokyo (81) 3 5530 8500 Korea, Seoul (82) 2 404 2146 Latin America (1) (305) 380 4709 Malaysia, Kuala Lumpur (60) 3 5621 4793
Mexico, Mexico City (001) 52 55 9183 2800 Netherlands, Woerden (31) 348 462462 Poland, Warszawa (48) 22 366 0180 Puerto Rico (787) 747 3335
Singapore (65) 6339 3633 South Africa/Sub-Saharan Africa, Johannesburg (27) 11 564 3203 Spain, Madrid (34) 91 3836080
Sweden, Bromma (46) 8 564 85 900 Switzerland, Nyon (41) 0800 850 810 Taiwan, Taipei (886) 2 2730 2500 Turkey, Istanbul (90) 216 570 17 17
UK, High Wycombe (44) 01494 441181 USA, Brea, CA (1) 800 742 2345