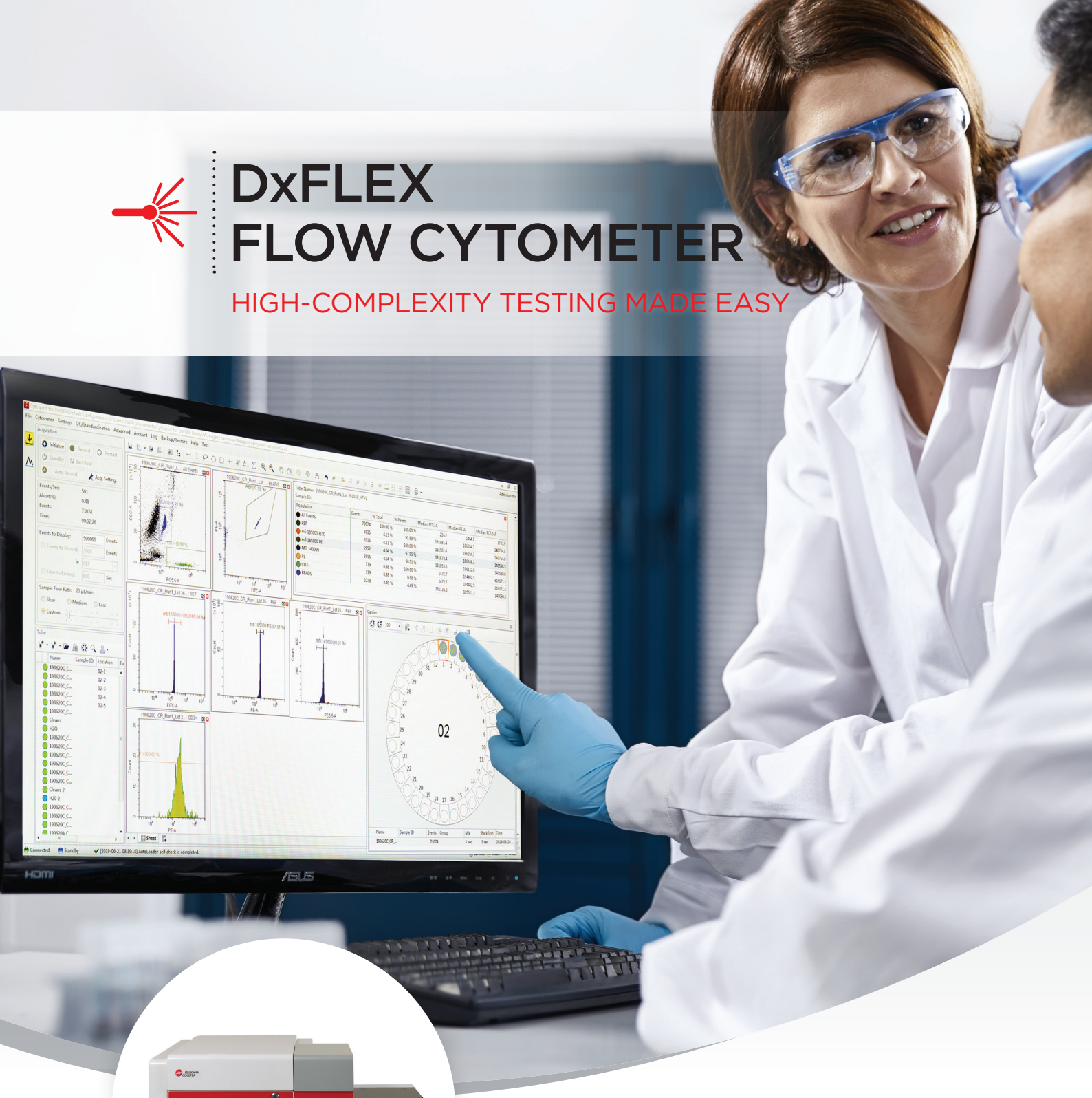
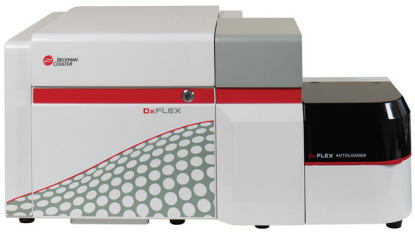
DxFLEX FLOW CYTOMETER

HIGH-COMPLEXITY TESTING MADE EASY





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BECKMAN COULTER
Life Sciences

PRODUCTIVITY TOOLS FOR THE CLINIAL WORKFLOW

Startup

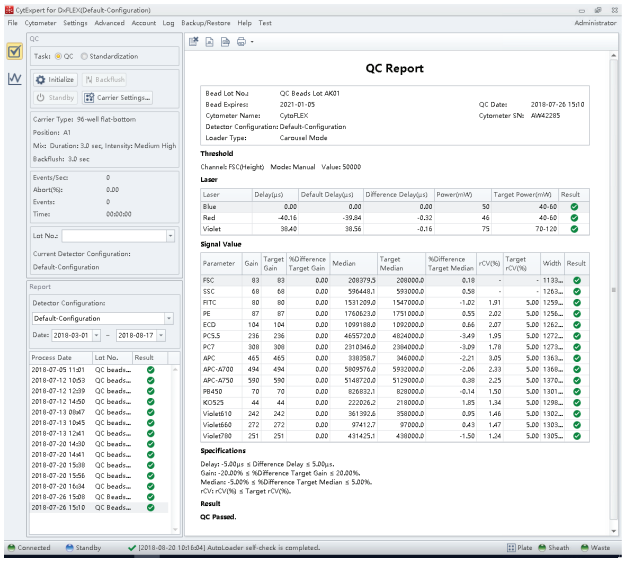
- Running the Daily Set Up procedure primes and cleans the system and warms up the lasers
- Operator is notified when the fluidic system is stable and the instrument is ready

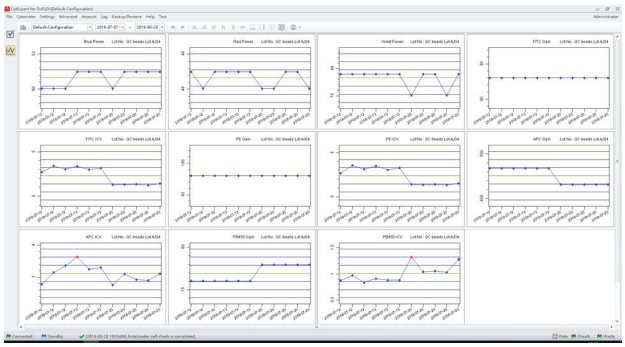
Instrument QC

- Use Levey-Jennings charts to monitor performance indicators for several instruments
- Daily QC procedure assesses laser power, laser delay, rCV of all fluorescent channels
- Use the Standardization procedure to monitor Median Fluorescent Intensity (MFI) and track gain changes

Acquisition

- Automated sampling* for walk away processing, tube carousel and 96-well plates supported
- Display up to 500,000 events on the plots during acquisition to help identify small populations
- Compensation automatically adjusts based upon instrument settings
- Compensation Library stores values for single color controls, which can be applied to future analyses





Prepare the standardization sample

Enter the standardization experiment

Select target values

Acquire data

Import standardization settings into associated experiments

Standardization Method. The workflow includes tools to incorporate assay controls used to monitor results and maintain assay stability.

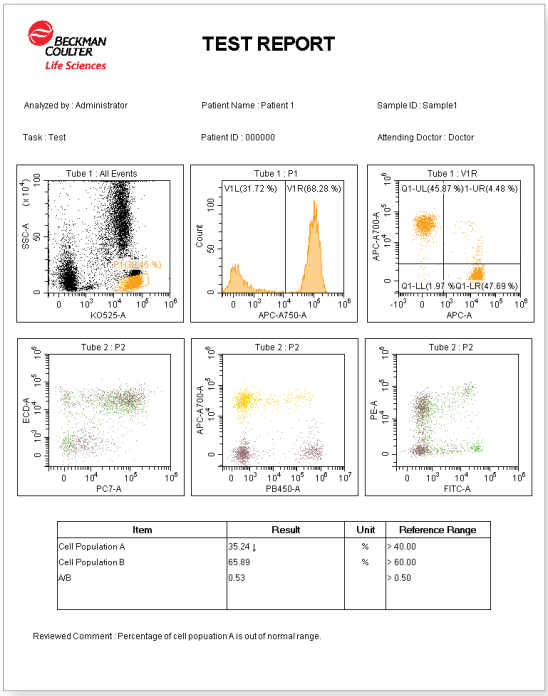
* with optional autoloader

Analysis

- Gates on acquisition sheets are linked to report sheets
- Store up to 25 million events per file with 13 colors, more events can be saved when using less channels
- Plots on the reports are linked to the acquisition page so that changes are reflected on the report
- Free CytExpert for DxFLEX software can be installed on any computer and used to analyze exported data

Reporting

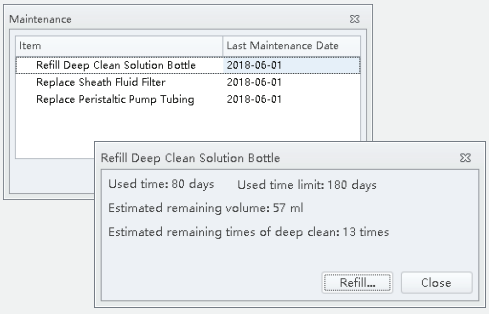
- User Accounts provide controlled access and tracks user activities
- Reference Ranges can be saved in the report, with out of range results flagged for easy identification
- Panel Experiment used to report multi-tube acquisitions per sample
- Automatic export function saves data in a user defined location
- Reports can be exported as PDF, CSV, graphics file



Shutdown

Maintenance

- Preventive Maintenance (PM) can be performed by operators
- Interface reminds operators when PM is due
- Cleaning Solution use is calculated, operators are notified to replenish



TRUST

YOUR RESULTS

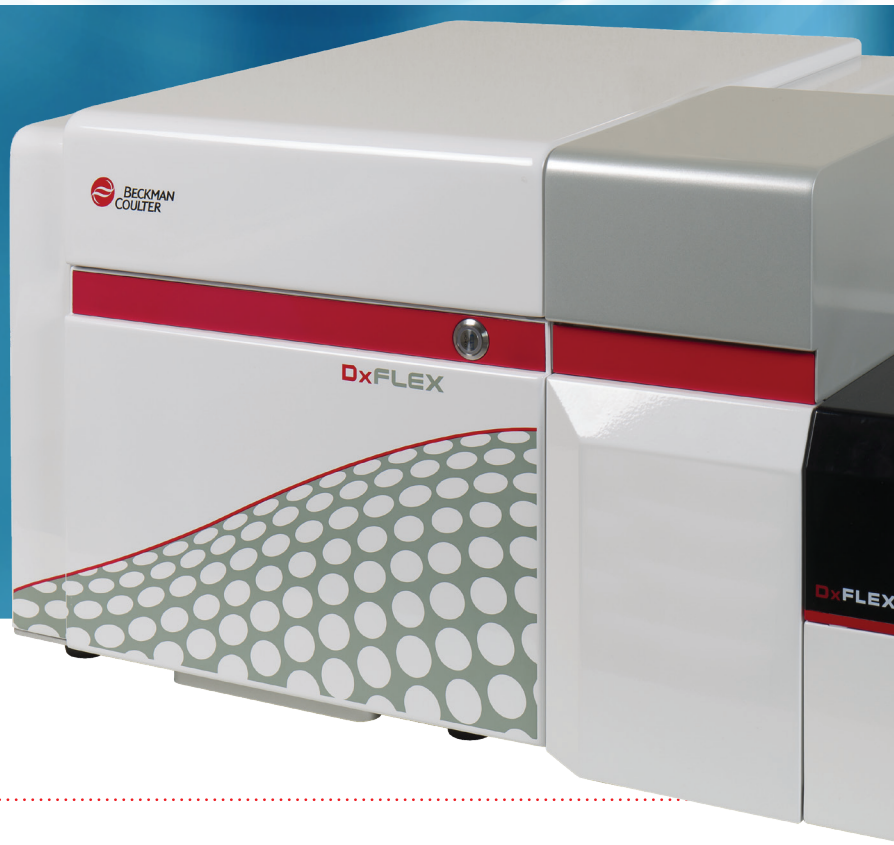
- Find dim populations using APD technology
- Up to 13 colors CE-IVD to get the most out of your specimen
- Tools to facilitate data analysis
- Improved resolution and linearity

DESIGNED FOR

EFFICIENCY

- Easy to learn software interface
- Dynamic compensation library for easy compensation setup
- Compact system to free up bench space

DxFLEX is a new clinical flow cytometry platform from Beckman Coulter. With advanced sensitivity and intuitive software, DxFLEX makes flow cytometry routine for both novice and expert flow cytometry users and promotes standardization.



Be Efficient, Be Compliant

DxFLEX FLOW CYTOMETER & SAMPLE AUTOLOADER

The DxFLEX Flow Cytometer is designed for clinical applications. It offers performance, compact design, and streamlined installation and operation. System settings, data acquisition, and result exporting functions are integrated into the CytExpert for DxFLEX software workflow. Four configurations are available with up to 3 lasers and 13 detectors. Users can upgrade their configuration at a later date to activate additional channels including more lasers or optical filters.

		FITC	PE	ECD	PC5.5	PC7	APC	APC-A700	APC-A750	PB450	KO525	Violet610	Violet660	Violet780	
		Blue Laser Channels 488 nm Laser					Red Laser Channels 638 nm Laser			Violet Laser Channels 405nm Laser					Autoloader PN C02846
PN	Detectors	525/40 BP	585/42 BP	610/20 BP	690/50 BP	780/60 BP	660/10 BP	712/25 BP	780/60 BP	450/45 BP	525/40 BP	610/20 BP	660/10 BP	780/60 BP	
C47506	5	●	●	●	●	●									●
C47507	6	●	●		●	●	●		●						●
C47508	9	●	●		●	●	●		●	●	●	●			●
C47509	13	●	●	●	●	●	●	●	●	●	●	●	●	●	●
C47510	5	●	●	●	●	●									
C47511	6	●	●		●	●	●		●						
C47512	9	●	●		●	●	●		●	●	●	●			
C47513	13	●	●	●	●	●	●	●	●	●	●	●	●	●	

Optional Sample Autoloader Module

An optional autoloader module can be added to the DxFLEX flow cytometer to decrease hands on time during acquisition. The module accepts a standard 32-tube carousel, or with an additional optional adapter can support sample loading from 96-well plates*. When using the carousel, an integrated barcode reader can be used for extra verification of sample identity.

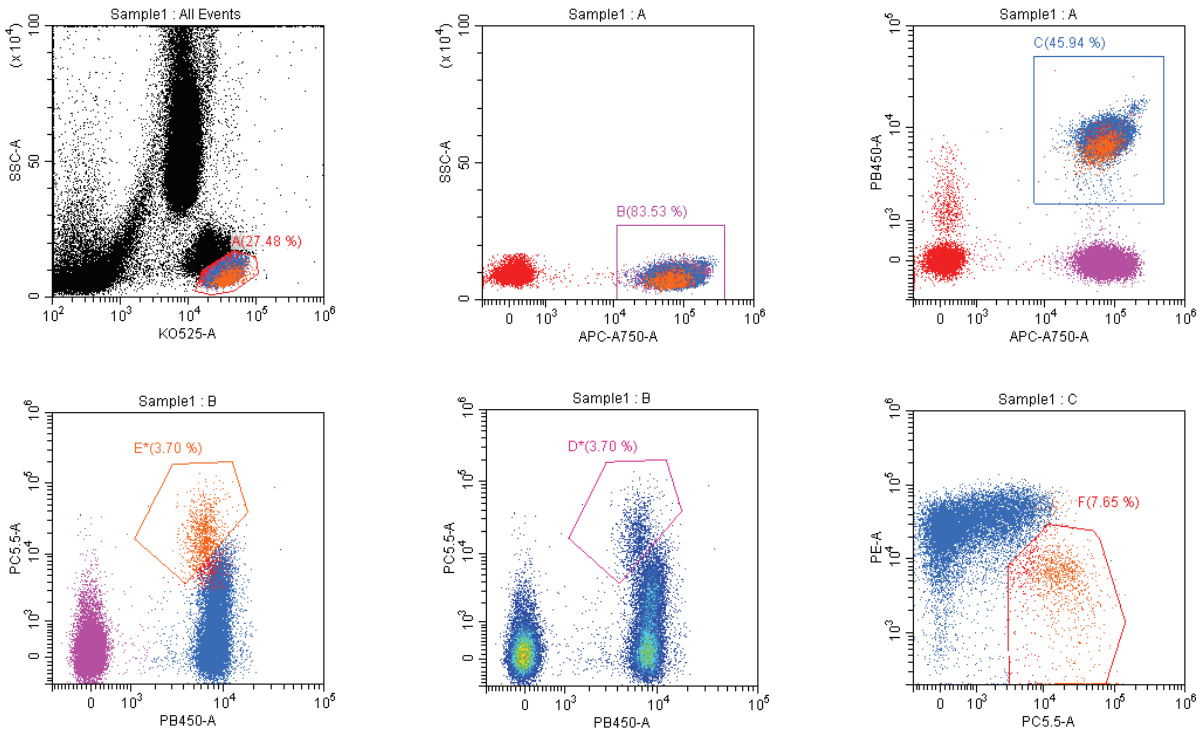
Application and system reagents

Reagent	Order No.
DxFLEX Sheath Fluid	B73613
FlowClean Cleaning Agent	A64669
Contrad 70 Cleaning Solution	81911
DxFLEX Daily QC Fluorospheres	C39283
DuraClone B27 Reagent Kit	B36862

* plate adapter: RUO only

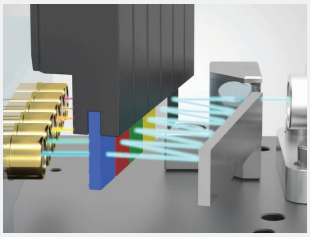
PERFORMANCE YOU CAN SEE

A unique assembly of technologies are used to minimize light loss and therefore maximize sensitivity. A new approach to light management underpins every decision in the design. The result is an instrument with resolving power to separate dim and bright populations. The separation facilitates setting gates and calculating statistics.

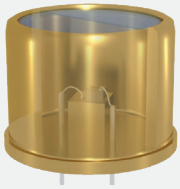


Resolution and Dynamic Range. Sample plots demonstrating gating of dim from bright populations.

Innovation contributes to the sensitivity and resolving power



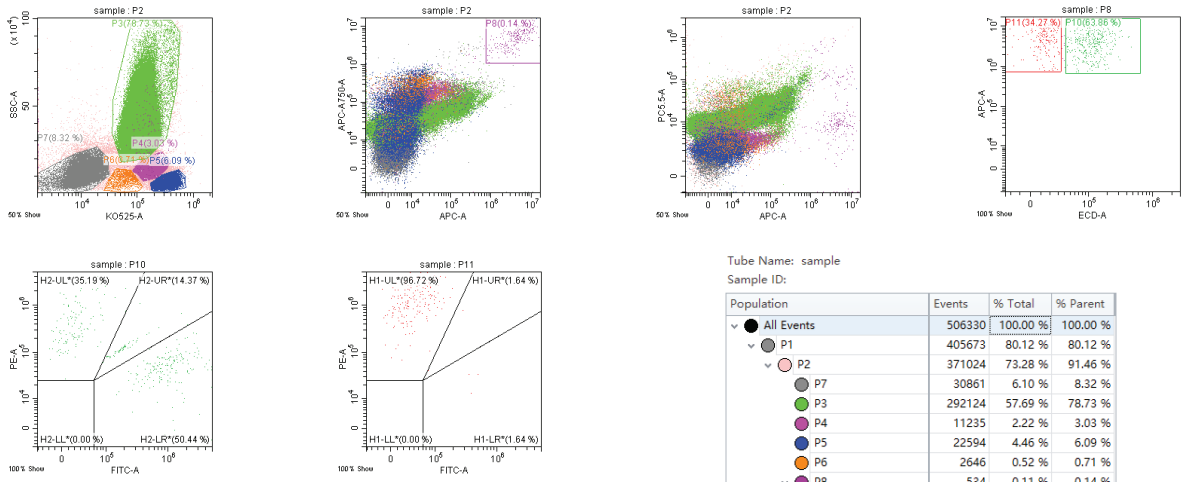
Wavelength Division Multiplexer (WDM). Light is managed through the Wavelength Division Multiplexer which uses bandpass filters to deconstruct the light and efficiently deliver to the detectors.



Avalanche Photodiode. The DxFLEX flow cytometer uses Avalanche Photodiode detectors instead of PMTs. The low electronic noise contributes to the resolution capabilities of the instrument.

SAMPLE DATA

The DxFLEX flow cytometer is flexible enough to accommodate a variety of assays. Instruments with as few as four and as many as 13 fluorescent detectors are available, with the ability to upgrade as the needs grow. Instrument performance provides the capabilities to resolve populations facilitating complex gating analyses.



Tube Name: sample
Sample ID:
rare event%: 0.05

Population	Events	% Total	% Parent
P10	341	0.07 %	63.86 %
P11	183	0.04 %	34.27 %
P3	292124	57.69 %	78.73 %
P4	11235	2.22 %	3.03 %
P5	22594	4.46 %	6.09 %
P6	2646	0.52 %	0.71 %
P8	534	0.11 %	0.14 %

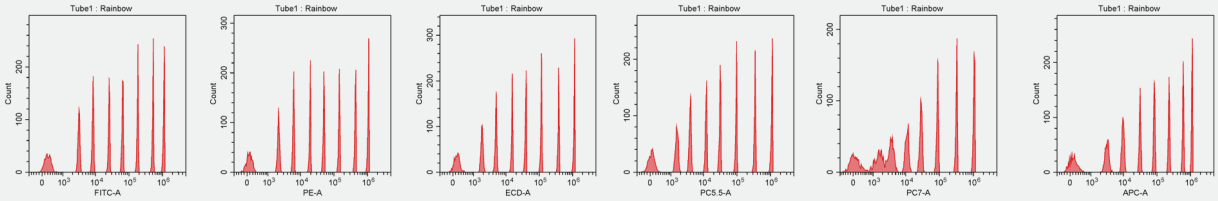
Tube Name: sample
Sample ID:

Population	Events	% Total	% Parent
All Events	506330	100.00 %	100.00 %
P1	405673	80.12 %	80.12 %
P2	371024	73.28 %	91.46 %
P7	30861	6.10 %	8.32 %
P3	292124	57.69 %	78.73 %
P4	11235	2.22 %	3.03 %
P5	22594	4.46 %	6.09 %
P6	2646	0.52 %	0.71 %
P8	534	0.11 %	0.14 %
P10	341	0.07 %	63.86 %
H2-UR	49	0.01 %	14.37 %
H2-UL	120	0.02 %	35.19 %
H2-LL	0	0.00 %	0.00 %
H2-LR	172	0.03 %	50.44 %
P11	183	0.04 %	34.27 %
H1-UR	3	0.00 %	1.64 %
H1-UL	177	0.03 %	96.72 %
H1-LL	0	0.00 %	0.00 %
H1-LR	3	0.00 %	1.64 %
H3-UR	53	0.01 %	9.93 %
H3-UL	303	0.06 %	56.74 %
H3-LL	0	0.00 %	0.00 %

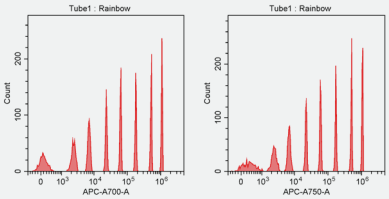
Large File Sizes Accommodate Rare Event Analysis. More than 25 million events can be saved in one file with all channels. Use multiple gates and create combo gates to correctly define the target population for complex data analysis.

Resolution and Sensitivity. SPHERO™ Rainbow 8-peak calibration particles in each detection channel.

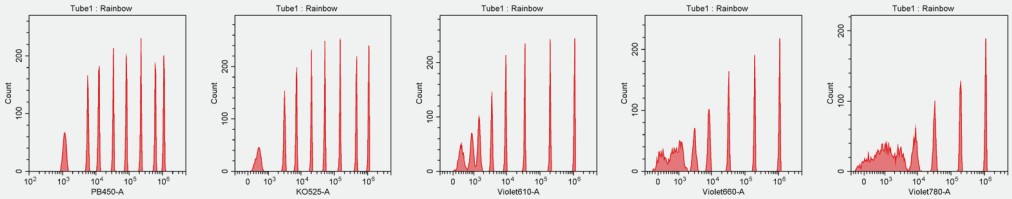
BLUE CHANNELS



RED CHANNELS



VIOLET CHANNELS



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For over 80 years Beckman Coulter has driven innovation.

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DxFLEX is an IVD instrument that is available only in countries where the regulatory approval is obtained from the local regulatory agencies. Please check with your local sales representatives before placing your orders.

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