Dako

CyAn™ ADP | Analyzer

DAKO 1966-2006 · 40 YEARS OF TECHNOLOGY AND TRUST · QUALITY

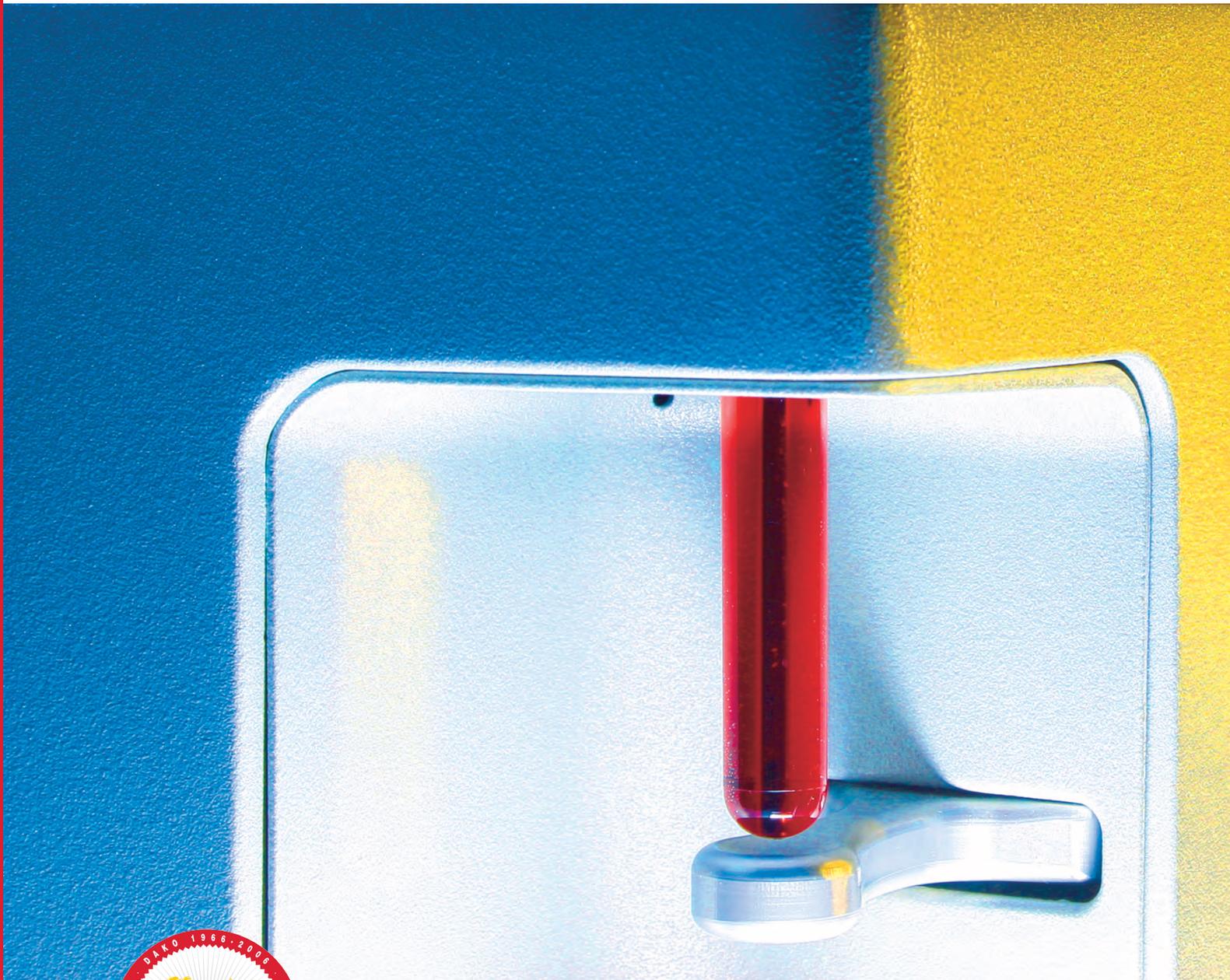**40** YEARS

Experience the **Power of the CyAn ADP**… and its optimal performance

The Power of **Detection**

The Power of **Speed**

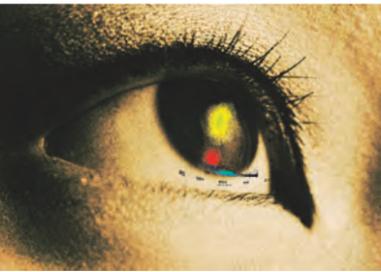The Power of **Ease**

The Power of **Size**

The Power of **Choosing Us**

The CyAn ADP Analyzer is the next step in Advanced Digital Processing with enhanced detection for flow cytometry. The CyAn ADP has state-of-the-art optics, electronics, and fluidics offering automated compensation with the highest acquisition rates, easy to use walk-up operation on the smallest instrument footprint in its class. Dako offers two models to accommodate a diverse range of applications, with up to 11 standard parameters and 9 colors.

Dako offers you an extensive standard range of high-quality monoclonal and polyclonal antibodies conjugated to FITC, RPE, RPE-Cy5, APC, Pacific Blue and Cascade Yellow.
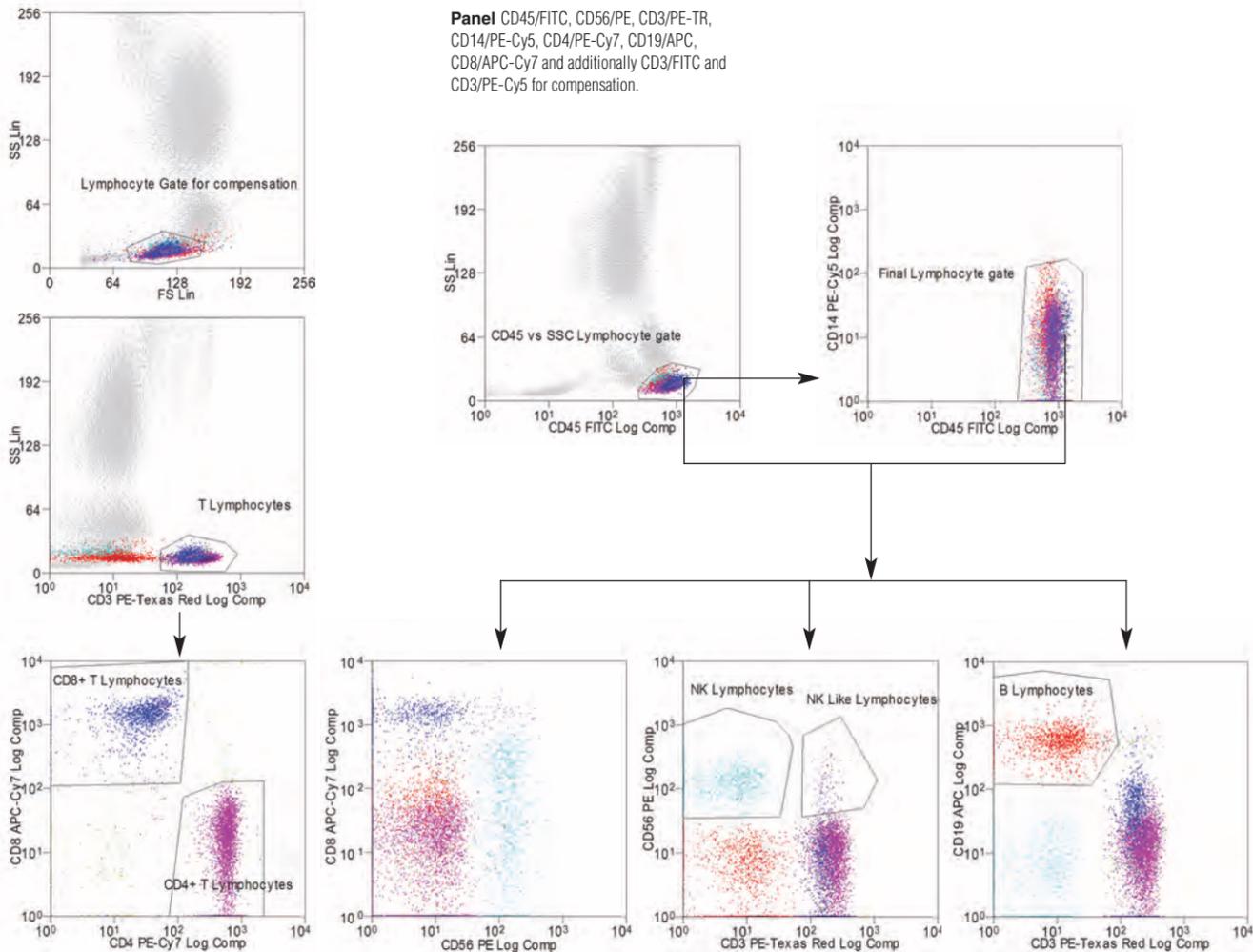
State-of-the-art optics provide enhanced performance for all applications including dim cell populations. High sensitivity and greater resolution for each parameter give you accurate results whether you are running a three color application or taking advantage of the nine colors available.

> Peak performance in all channels

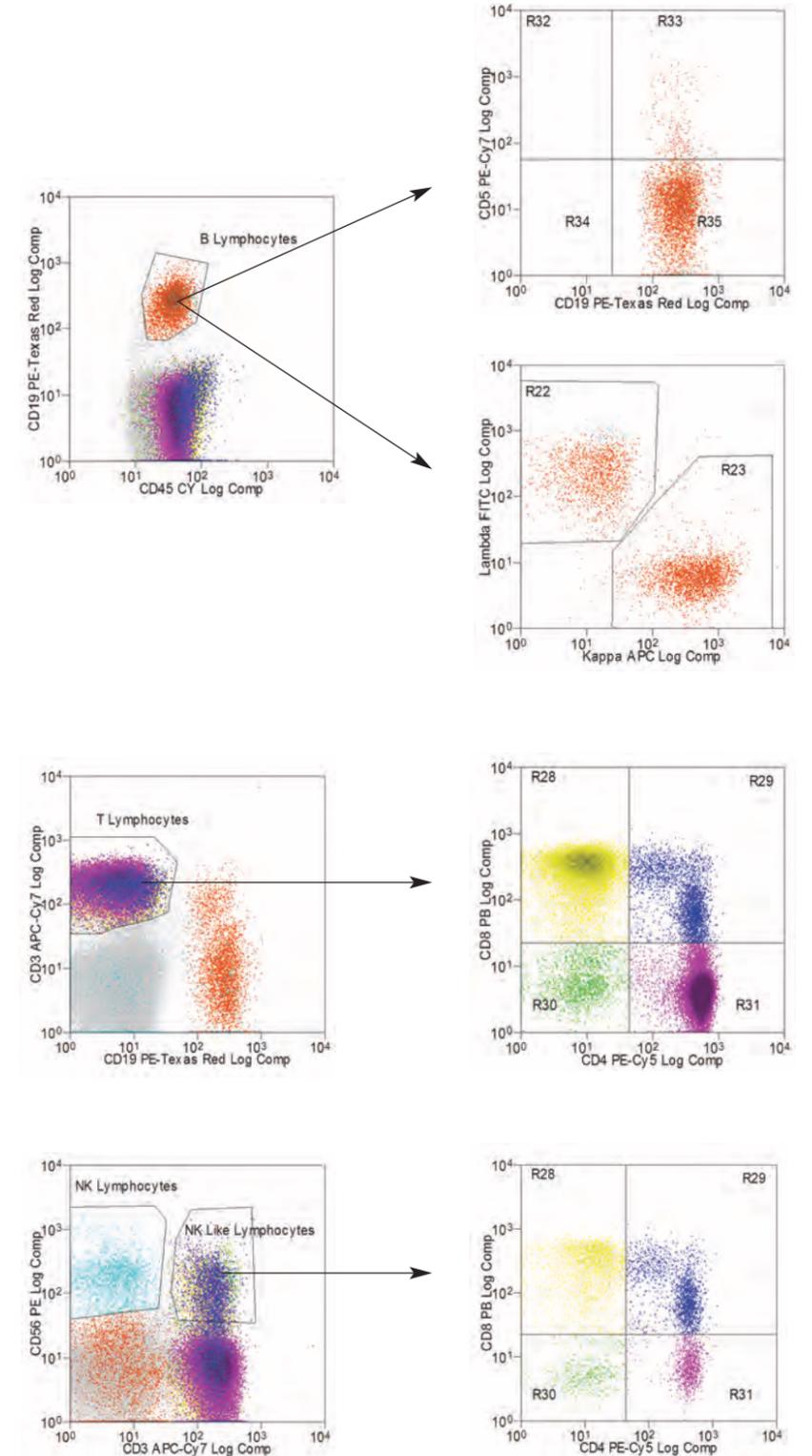> High sensitivity and greater resolution

> Detect dimmest populations

High-speed 9-color no-lyse analysis of human peripheral blood at a sample flow rate of 150 µL/min

Panel Lambda/FITC, CD56/PE, CD19/PE-TR, CD4/PE-Cy5, CD5/PE-Cy7, CD8/PB, CD45/CY, Kappa/APC and CD3/APC-Cy7.

Procedure 100 µL EDTA blood was washed twice in 20 mL PBS. 5 µL of 9-color mix was added to 50 µL of the washed cells. After 15 minutes incubation at room temperature in the dark, 500 µL PBS was added and the sample acquired on CyAn ADP at 150 µL/min.

7-color analysis of lysed and washed human peripheral blood

Panel CD45/FITC, CD56/PE, CD3/PE-TR, CD14/PE-Cy5, CD4/PE-Cy7, CD19/APC, CD8/APC-Cy7 and additionally CD3/FITC and CD3/PE-Cy5 for compensation.

Parallel processing of digital signals, a technology first patented by Dako, keeps you on the cutting edge with unmatched acquisition rates of up to 70,000 events per second.

> Ideal for rare event applications

> Save time

> Increase productivity

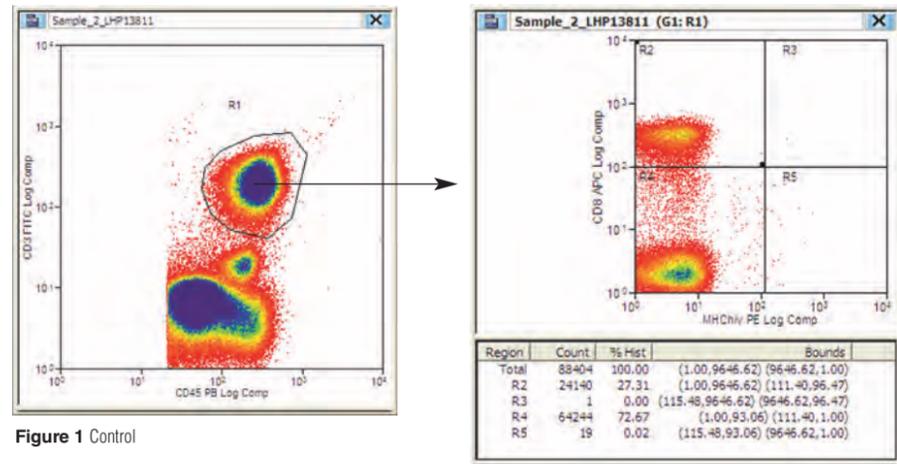## High-speed screening for CMV-antigen-specific T-cells in unlysed human blood
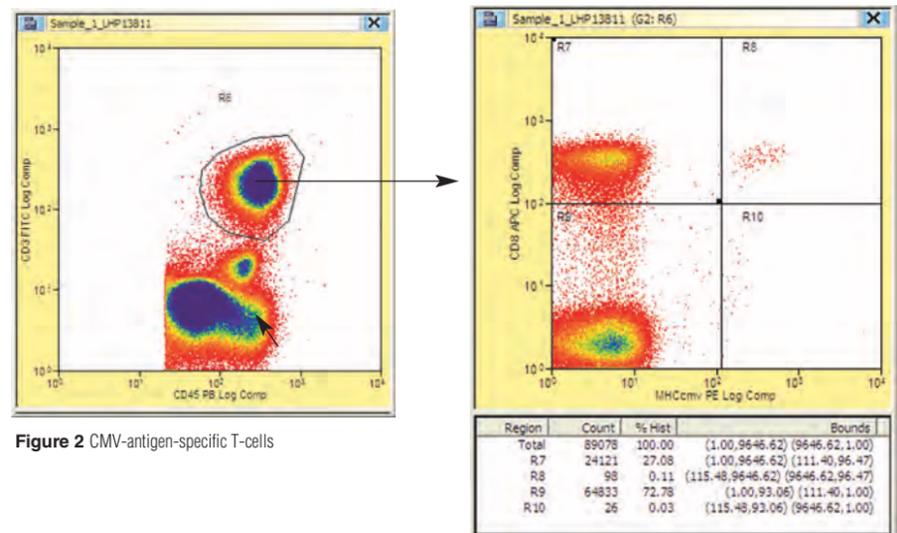

**Figure 1** Control

Figure 2 CMV-antigen-specific T-cells

4-color reagent CD45/PB, CD3/FITC, CD8/APC, MHC Dextramer/PE. MHC Dextramer: HLA class 1 Allele A* 0201 loaded with HIV RT peptide ILKEPVHGV as control (Figure 1) or HCMVpp65 peptide NLVPMVATV (Figure 2).

Procedure 6 µL of reagent was incubated with 100 µL EDTA treated blood for 15 minutes at room temperature. Subsequently the sample was diluted with 1 mL PBS and acquired on CyAn ADP at 150 µL/min.
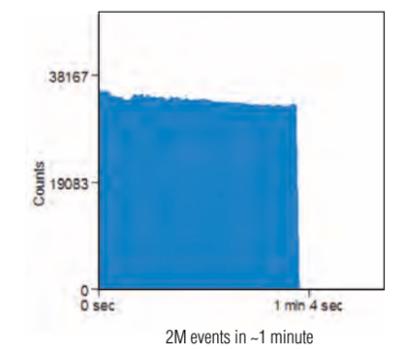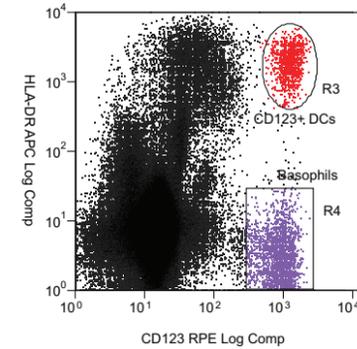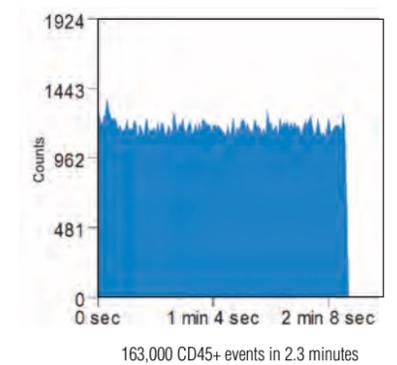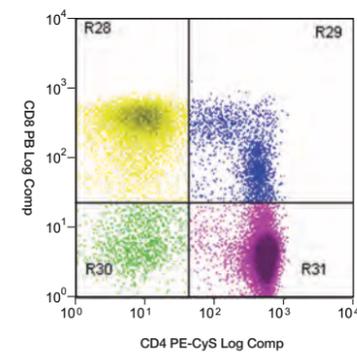
Bacterial viability

2M events in ~1 minute

Yeast viability

2M events in ~1 minute
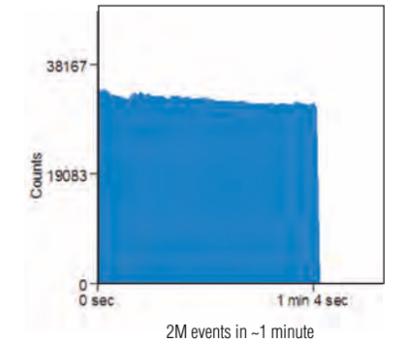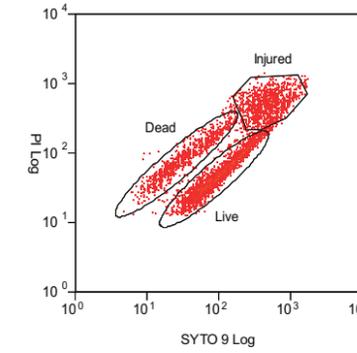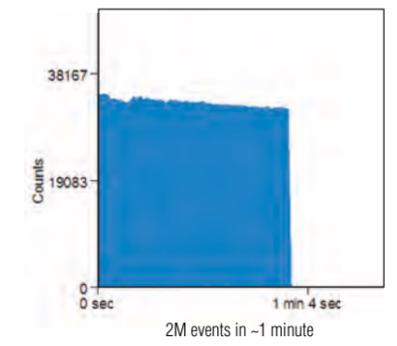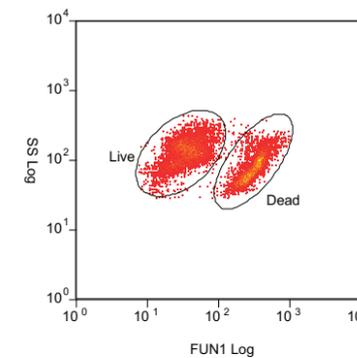
Dendritic cells: rare event analysis

2M events in ~1 minute

9-color immunophenotyping at 150 µL/min



163,000 CD45+ events in 2.3 minutes

Summit software v4.3 interface puts advanced analysis at your fingertips. Flexible management tools allow you to define samples, workspaces, and monitor instrument status in parallel.

> All processes on one screen

> Utilize an intuitive software

> Walk-up operation

Summit Software v4.3

Summit software new version 4.3 is designed for your laboratory needs, with more power, advanced analysis tools, flexibility and greater ease of use.

> Conveniently monitor and control instrument status

> Define combinations of samples and workspaces that fit your workflow

> Easily adjust compensation with auto-compensation feature

> Define and use your individual protocols, compensation settings and workspaces for your experiments

> Configure your acquisition batch, protocol panels, reagents and tubes
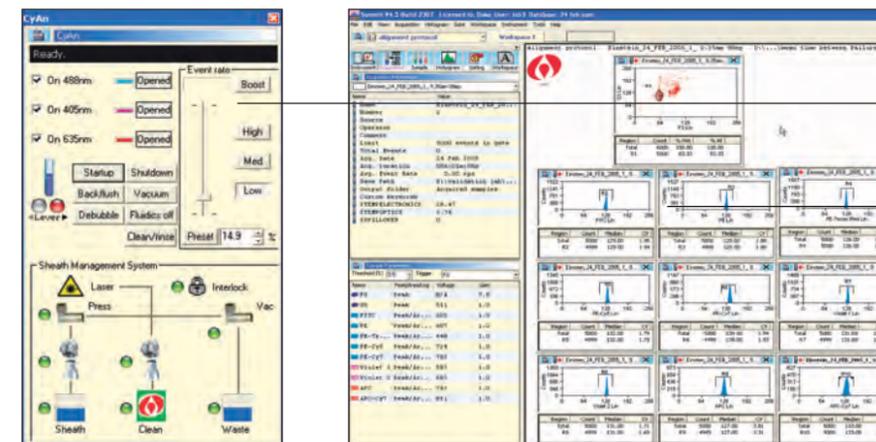
Control fluidics in detail

Create and group results in work spaces as needed
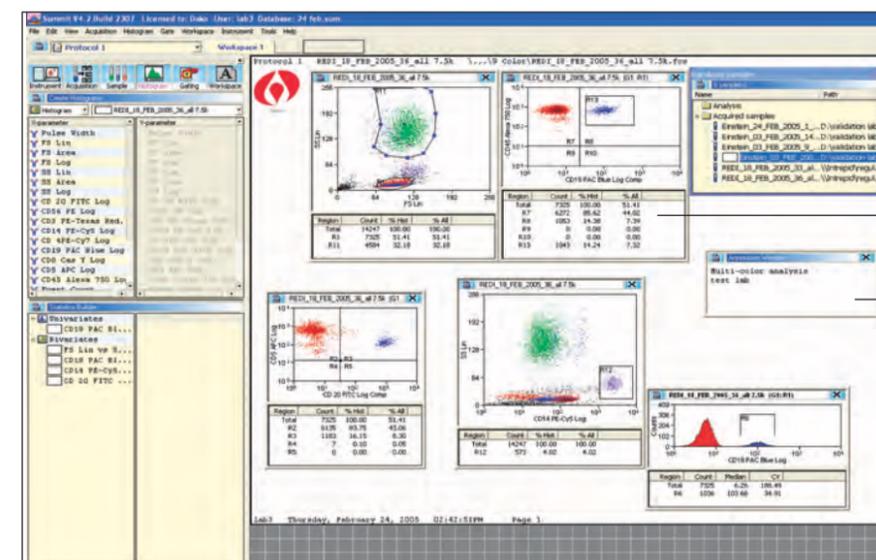
Select extended statistics

Write additional information or add files

Experience the **Power of Ease**… and the peace of mind it gives you

Auto-Compensate function in Summit Software v4.3 makes compensation easy in 2 steps

The compensation matrix is calculated from single stained controls by the auto-compensate function in Summit software v4.3.

Step 1
Simply select the files with data from single controls, select a gate if necessary and click OK.
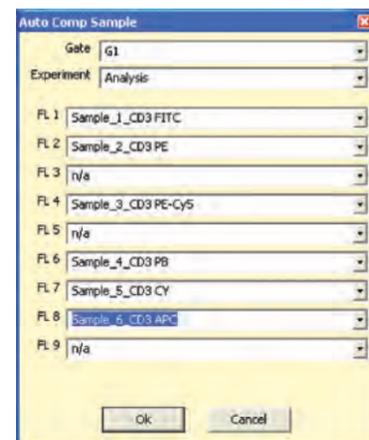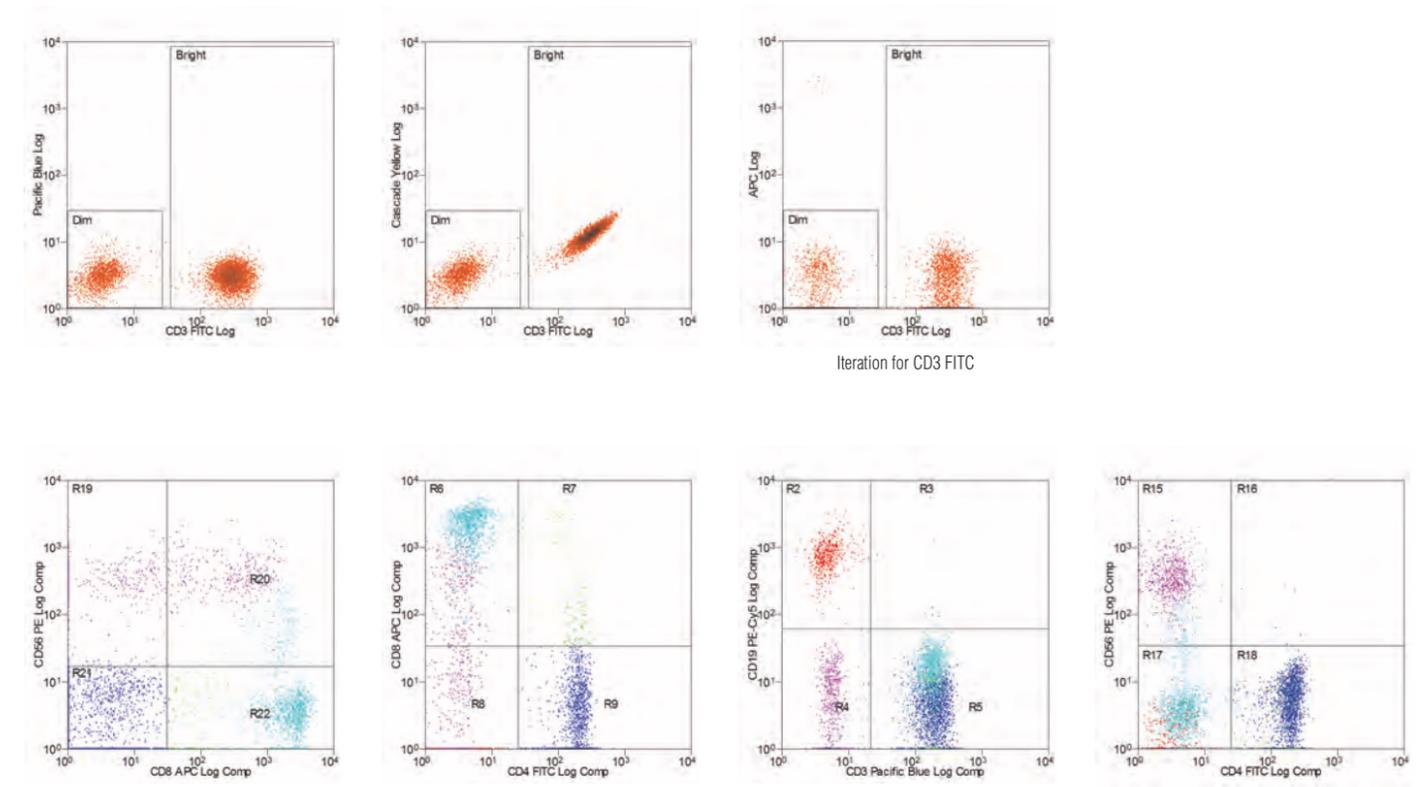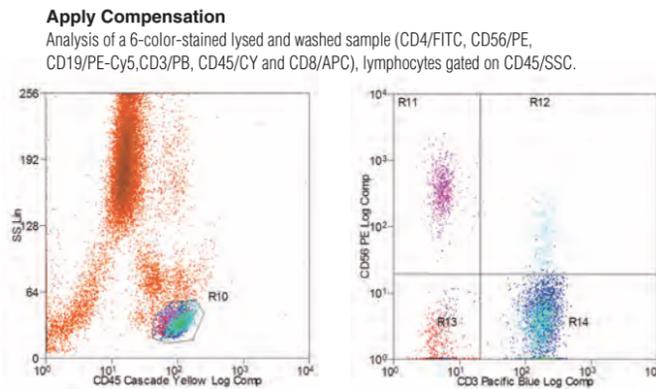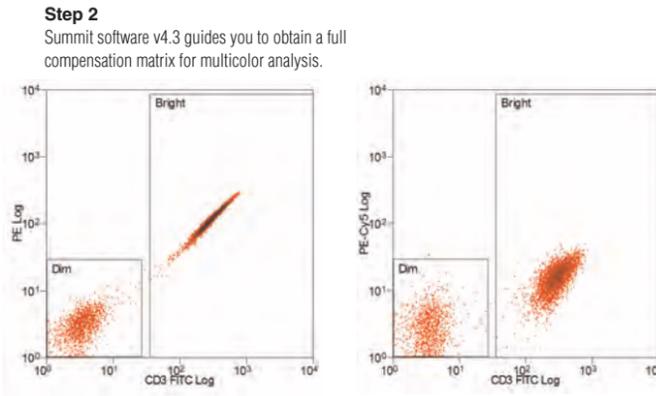

Example
10 µL of 6-color mix (CD4/FITC, CD56/PE, CD19/PE-Cy5, CD3/PB, CD45/CY and CD8/APC) was added to 100 µL EDTA peripheral blood and allowed to incubate for 20 minutes at room temperature in the dark. The blood was lysed with EasyLyse™ and washed in PBS before the data was acquired by a CyAn ADP.

Step 2
Summit software v4.3 guides you to obtain a full compensation matrix for multicolor analysis.

Iteration for CD3 FITC

Apply Compensation
Analysis of a 6-color-stained lysed and washed sample (CD4/FITC, CD56/PE, CD19/PE-Cy5,CD3/PB, CD45/CY and CD8/APC), lymphocytes gated on CD45/SSC.

Utilize the Fast Acquisition / Analysis capability of CyAn ADP with Summit Software v4.3

Acquire and analyze up to 10 million events

PBMCs were stained with a 7 color mix of titrated antibodies/ tetramers (CD62L/FITC, CMV specific tetramer B7 pp65 (417-426)/PE; the specificity of the stain was confirmed by HLA mismatch control tetramer B8 IE-1(88-96)/PE; CD4/PerCP, CD19/PB, CD3/CY, CD45RA/APC, CD8/APC-Alexa750), incubated for 20 minutes on ice in the dark, then washed with PBS 2.5 times. The dim tet stain was specific for the patient material applied. PI was added prior to acquisition with a CyAn ADP.

10M events, 8 colors, 37 parameters, 25K eps

Acquired in 6.8 minutes, saved in 1.6 minutes, loaded in 25 seconds, gated in 1.8 minutes
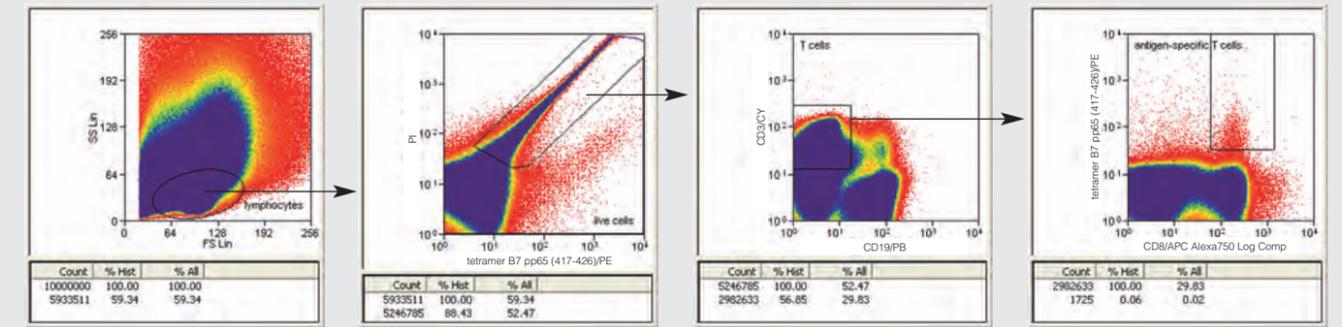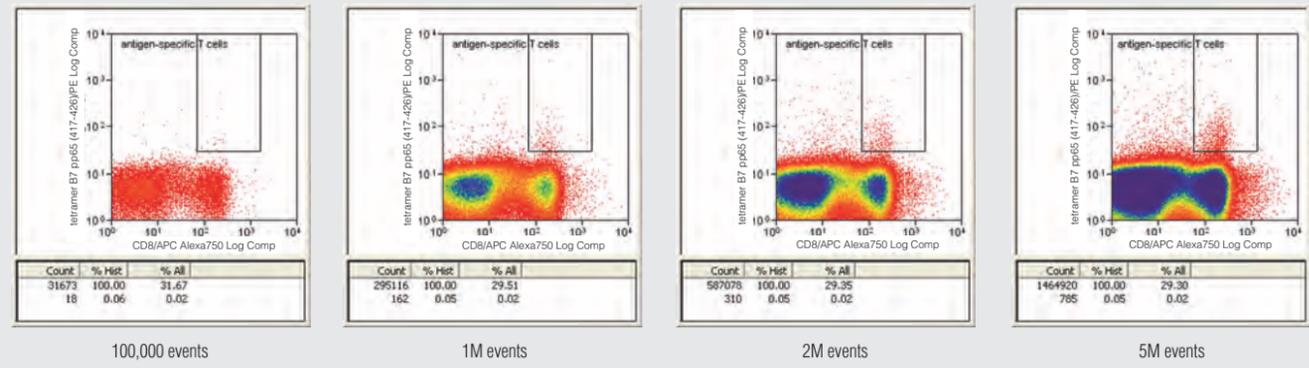
100,000 events   1M events   2M events   5M events

Effectiveness, efficiency and comfort are the most important goals when setting up a new laboratory or adding instrumentation. Many variables need to be considered, such as lighting, traffic flow, accessibility, hands-on time and adequate work space.

The CyAn ADP is compact, fits anywhere, is easy to use and leaves more space on the workbench, giving you the flexibility to set up your laboratory according to your needs and daily priorities.

> Compact footprint
> Increase effectiveness, efficiency and comfort
> Free table space

The CyAn ADP footprint
versus other instruments.
30 cm w x 45 cm d x 40 cm h
9 colors

182 cm w x 91 cm d x 61 cm h

90 cm w x 74 cm d x 61 cm h

91 cm w x 62 cm d x 67 cm h

90 cm w x 61 cm d x 64 cm h

Experience the **Power of Choosing Us**… and a committed long-term partnership

Dako is the partner you are looking for. A friendly global team of dedicated specialists backed by decades of expertise in flow cytometry instrumentation and reagents provides you with modular and flexible solutions for your scientific needs.

> Dedicated service

> Professional training

> Experienced application specialists
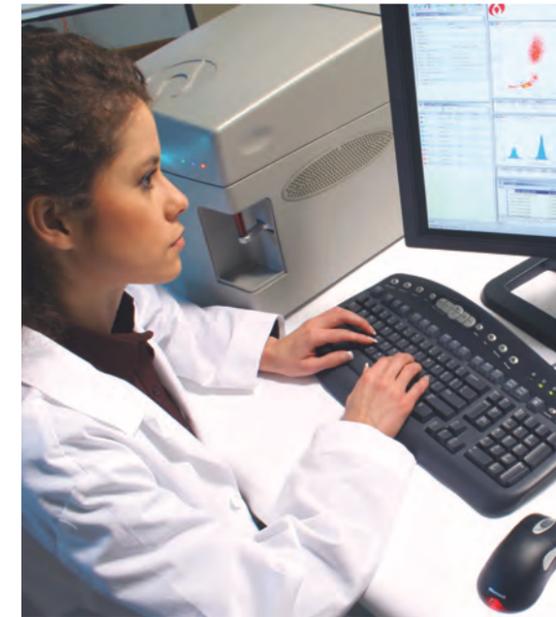
CyAn ADP Models

CyAn ADP LX 7 Color

CY 200

CyAn ADP LX 7 Color has 9 parameters (FSC, SCC, FL1-FL7) and is equipped with 488 nm and 635 nm solid-state lasers. This model is ideal for up to 7-color analysis using a combination of FITC, PE, PE-Texas Red, PE-Cy5 or PER-CP, PE-Cy7, APC and APC-Cy7 or other fluorochromes. Some key applications include CD34 enumeration, signal transduction, antigen-specific T-cell detection and multicolor immunophenotyping.

CyAn ADP LX 9 Color

CY 201

CyAn ADP LX 9 Color has 11 parameters (FSC, SCC, FL1-FL9) and is equipped with 488 nm, 635 nm, and 405 nm solid-state lasers. This model is ideal for up to 9-color analysis using a combination of FITC, PE, PE-Texas Red, PE-Cy5 or PER-CP, PE-Cy7, APC, APC-Cy7, fluorescent proteins, Pacific Blue and Cascade Yellow or other fluorochromes. Some key applications include stem cell/SP analysis, CD34 enumeration, signal transduction, antigen-specific T-cell detection, multicolor immunophenotyping and GFP-YFP FRET analysis.

Code	CyAn ADP Models	Lasers	Parameters	Colors	488 nm	635 nm	405 nm
CY200 30	CyAn ADP LX 7 Color, 9 Parameters, 110 V						
CY200 31	CyAn ADP LX 7 Color, 9 Parameters, 220 V	2	9	7	5	2	–
CY200 33	CyAn ADP LX 7 Color, 9 Parameters, 90 V						
CY201 30	CyAn ADP LX 9 Color, 11 Parameters, 110 V						
CY201 31	CyAn ADP LX 9 Color, 11 Parameters, 220 V	3	11	9	5	2	2
CY201 33	CyAn ADP LX 9 Color, 11 Parameters, 90 V						

CyAn ADP Data Sheet

Excitation lines	2 or 3
Lasers	488 nm, 635 nm, 405 nm
Optical parameters	FSC, SSC and 7 or 9 fluorescence channels
Maximal processing speed	Up to 70,000 events per second
Sample flow rate	Up to 150 µL/min (2.5 µL/sec)
Quartz cuvette	Fused silica with 250 µm square sectioned internal channel
Compensation	9 x 9 matrix, auto compensation
Signal resolution	4096 channels on all parameters
Sensitivity	MESF FITC < 100, MESF PE < 50
Beam geometry	Elliptical/spherical
Sheath Management System	Controls sheath, waste, and cleaning fluids Software, hardware and smart-sensor controls with RUN/PAUSE modes Continuous adjustable flow rate
Instrument footprint	30 cm wide x 45 cm deep x 40 cm high 11.8 inch wide x 17.7 inch deep x 15.7 inch high
Instrument weight	< 40 kg (88.2 lbs)
Noise level	< 70 dB
Software	Summit Software version 4.3 Microsoft® Office Professional Edition 2003
Operating system	Microsoft® Windows® XP Professional

For research use only.
Not to be used in diagnostic procedures.

Dako