



# The BD Accuri C6 Flow Cytometer<sup>®</sup>

A powerful system with a simple design.

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騰達行企業股份有限公司  
UNIMED HEALTHCARE INC.

# Accuri's Mission



Proliferate the power of flow cytometry to every lab that works with cells, beads, or particles worldwide.

# Accuri is Enabling Discovery

Survey's top four reasons for choosing a flow cytometer match Accuri's key features

1. Ease of Use – 1 hour vs. 2-5 days to learn
2. Size – 1/6 the size of market leaders
3. Cost – 1/2 the cost of market leaders
4. Dyes (colors) - Accuri's specs meets the requirements of 92% of users



Percentage of Respondents Using Each FC Dye- **80% 4 colors or less**

1 <sup>st</sup> FITC	38%
2 <sup>nd</sup> PE	27%
3 <sup>rd</sup> PI	26%

4 <sup>th</sup> GFP	20%
5 <sup>th</sup> Alexa 488	16%
6 <sup>th</sup> Cy5	15%

7 <sup>th</sup> PerCP	14%
8 <sup>th</sup> APC	13%

All dyes above can be run on the standard C6.

Source: 8/2008 Biocompare Survey of Flow Cytometry Users

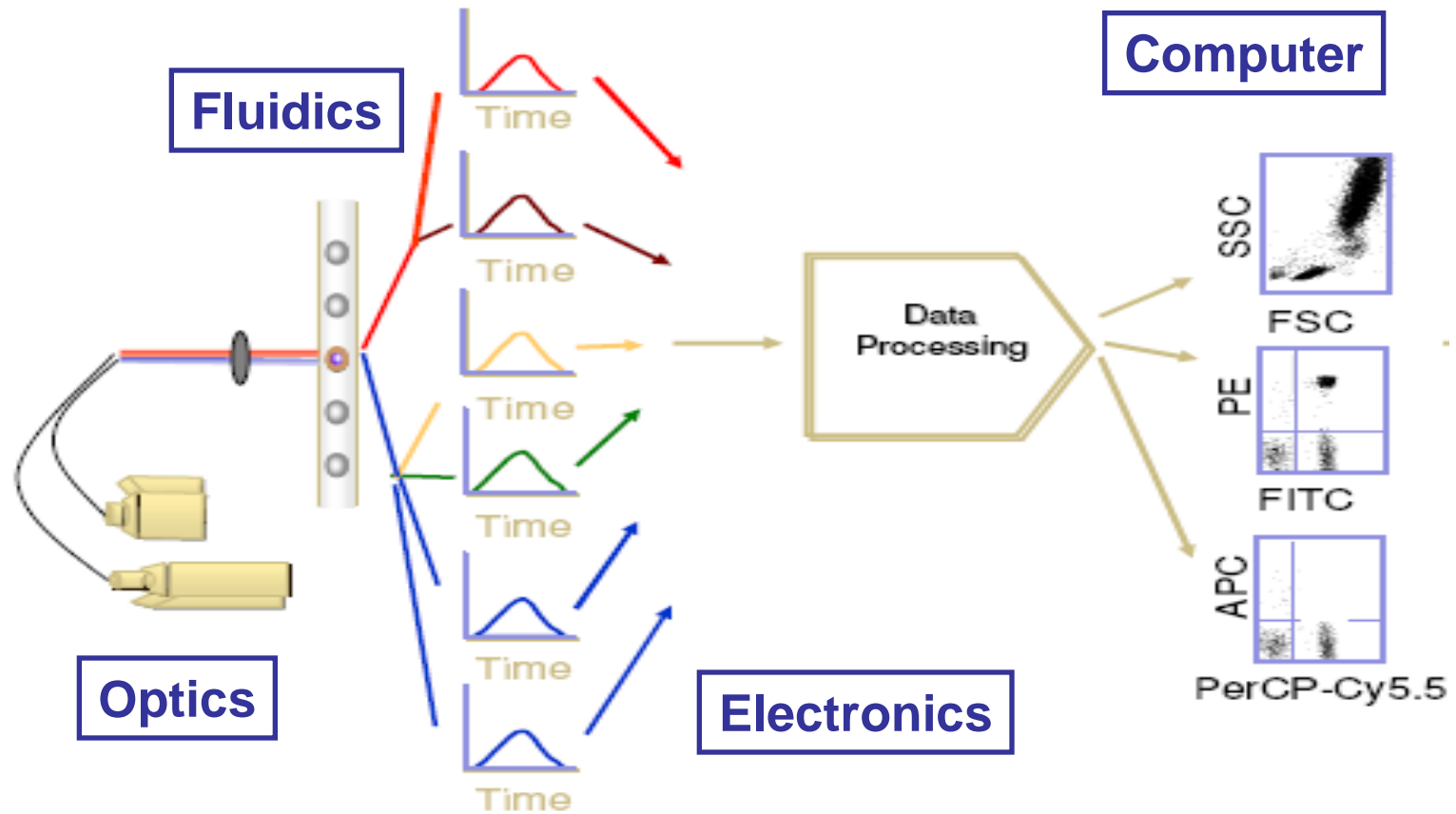
# The C6 Flow Cytometer

Innovations in all the major components of a flow cytometer

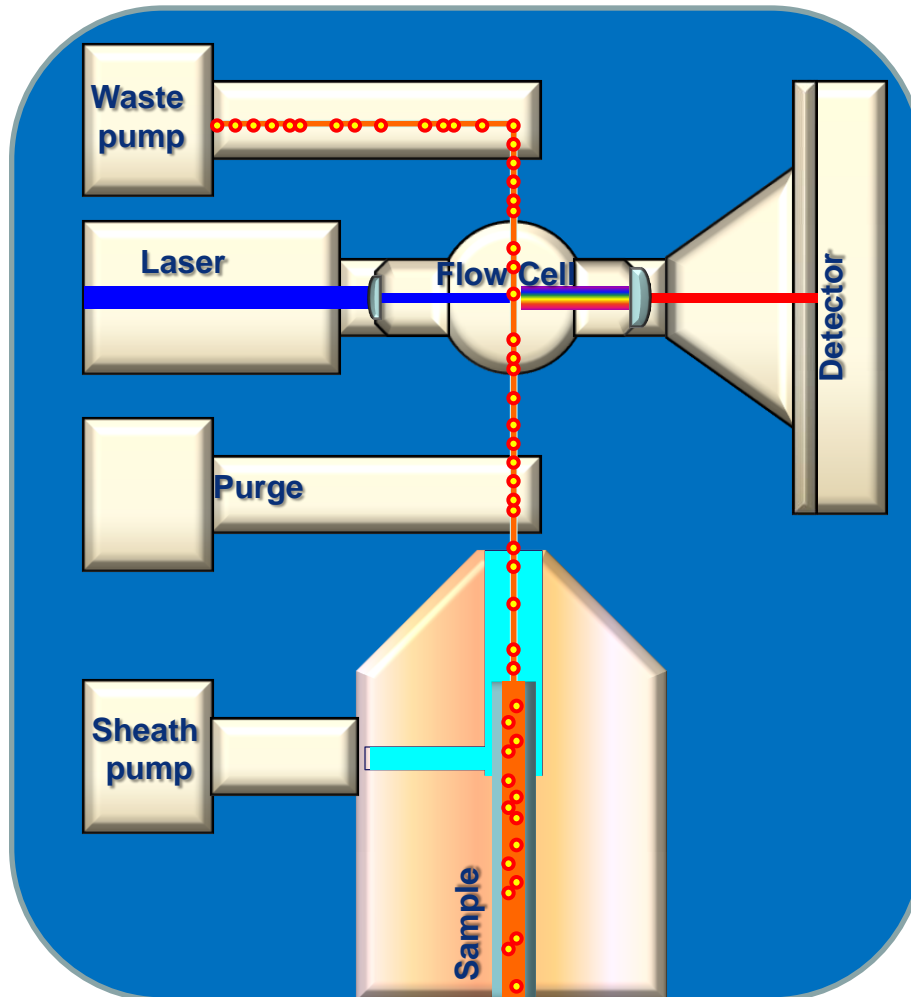
- Fluidics
- Optics
- Electronics
- Software



# Principle of Flow Cytometry



# Accuri Innovation - Fluidics

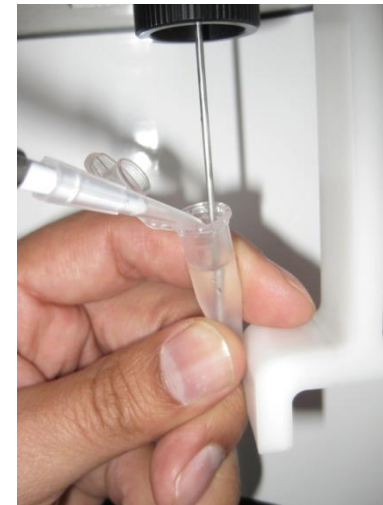


- Two **peristaltic pumps** operating: push-pull system
- Patented pulse dampeners
- **Volume measurement for absolute counts**
- Minimum sample volume: **50  $\mu$ L**
- Use **ddH<sub>2</sub>O** for sheath fluid.



# Unique Fluidics System Simplifies Sample Handling

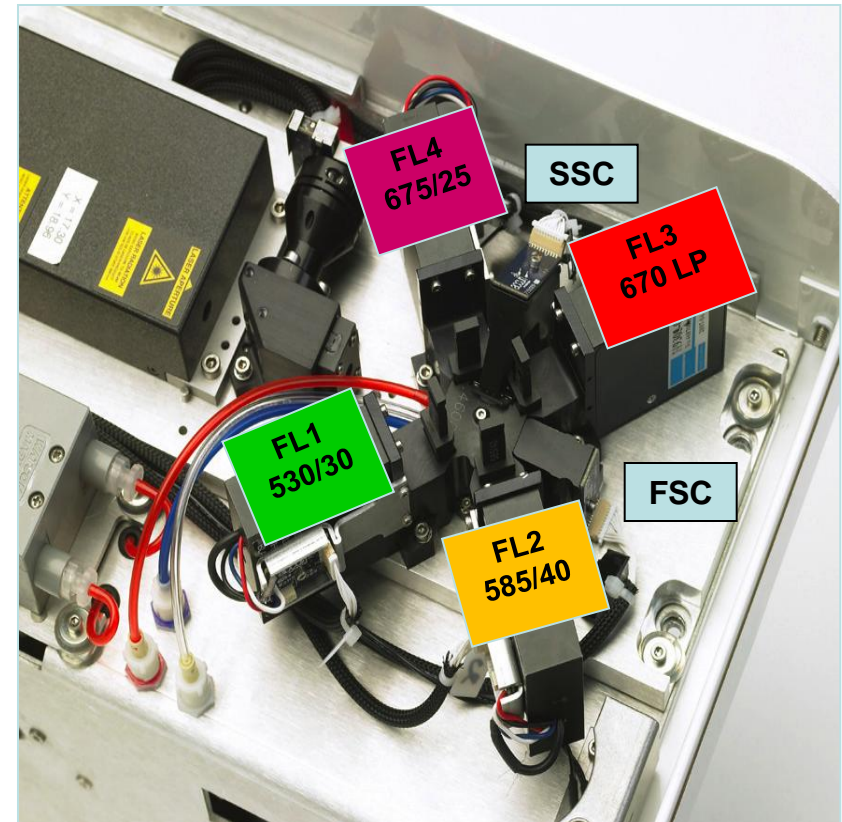
- Many types of sample tubes may be used
- No need to transfer samples
- Save time and materials
- Add reagents or cells during a run



# Accuri Innovation – Optics

## Pre-optimized and locked-down optics

- 488 nm solid state laser  
640 nm diode laser
- Locked-down optics results in a very stable system that is easy to transport without alignment issues

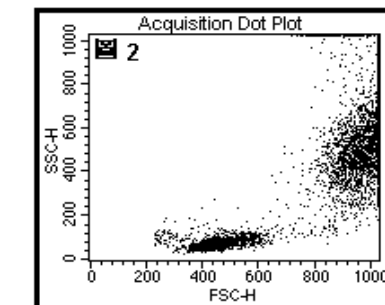
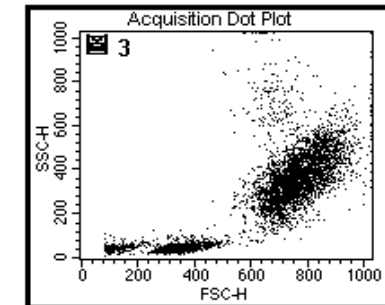
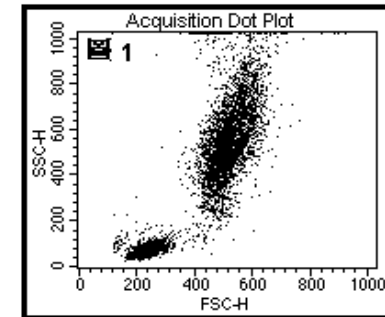
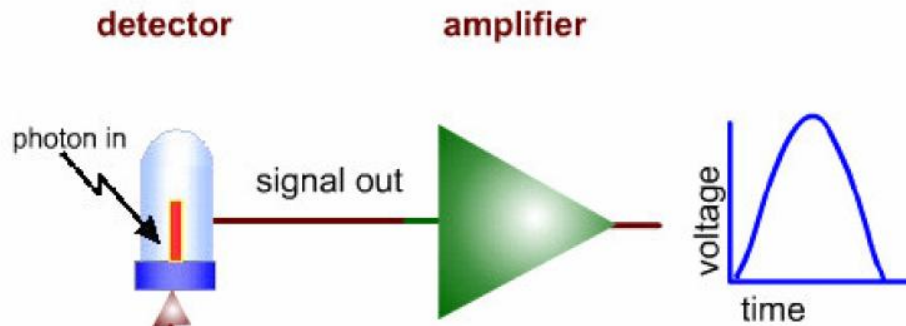




# BD Accuri C6 Configuration

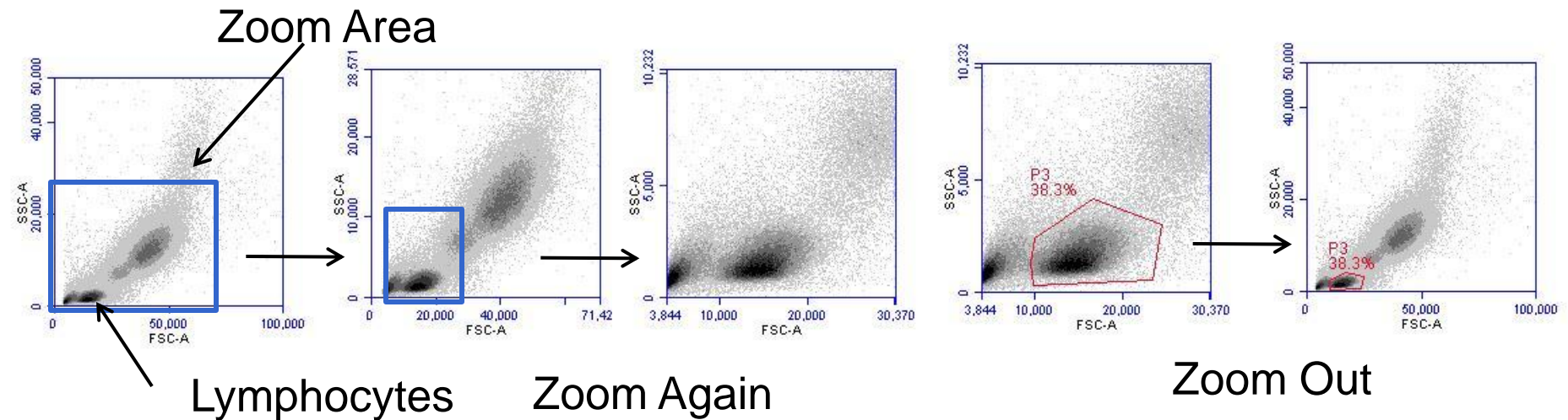
<u>Detector</u>	<u>Laser</u>	<u>Filter</u>	<u>Fluorochrome</u>
FL1	488	530/30	FITC, GFP
FL2	488	585/40	PE, PI
FL3	488	670LP	PerCP
FL4	640	675/25	APC

# Pre-optimized VS Change Voltage



# Pre-Optimized Light Scatter Detectors

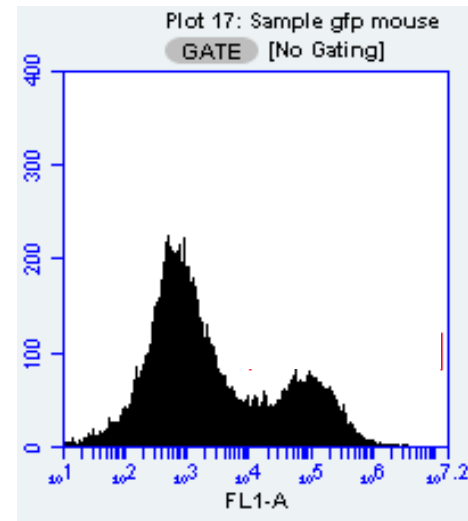
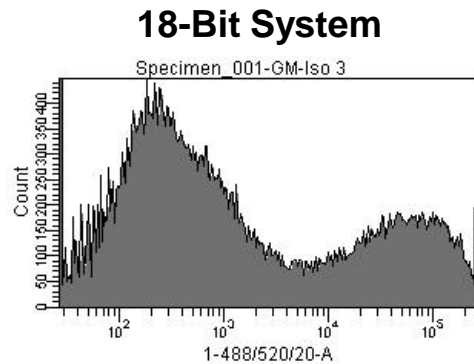
## Adjust Your View with Zoom



# Accuri Innovation – Electronics with Broad Dynamic Range

- 24-bit digital signal processing( $2^{24}=16.7 \times 10^6$  linear channels)  
 $16.7 \times 10^6$  linear channels =  $\sim 10^{7.2}$  logs of dynamic ranges

**24-bit Accuri C6**



**More than 6 decades of signal on a single scale**  
**All your data, available at any time**

# Accuri Innovation – Intuitive Software

Sample Grid

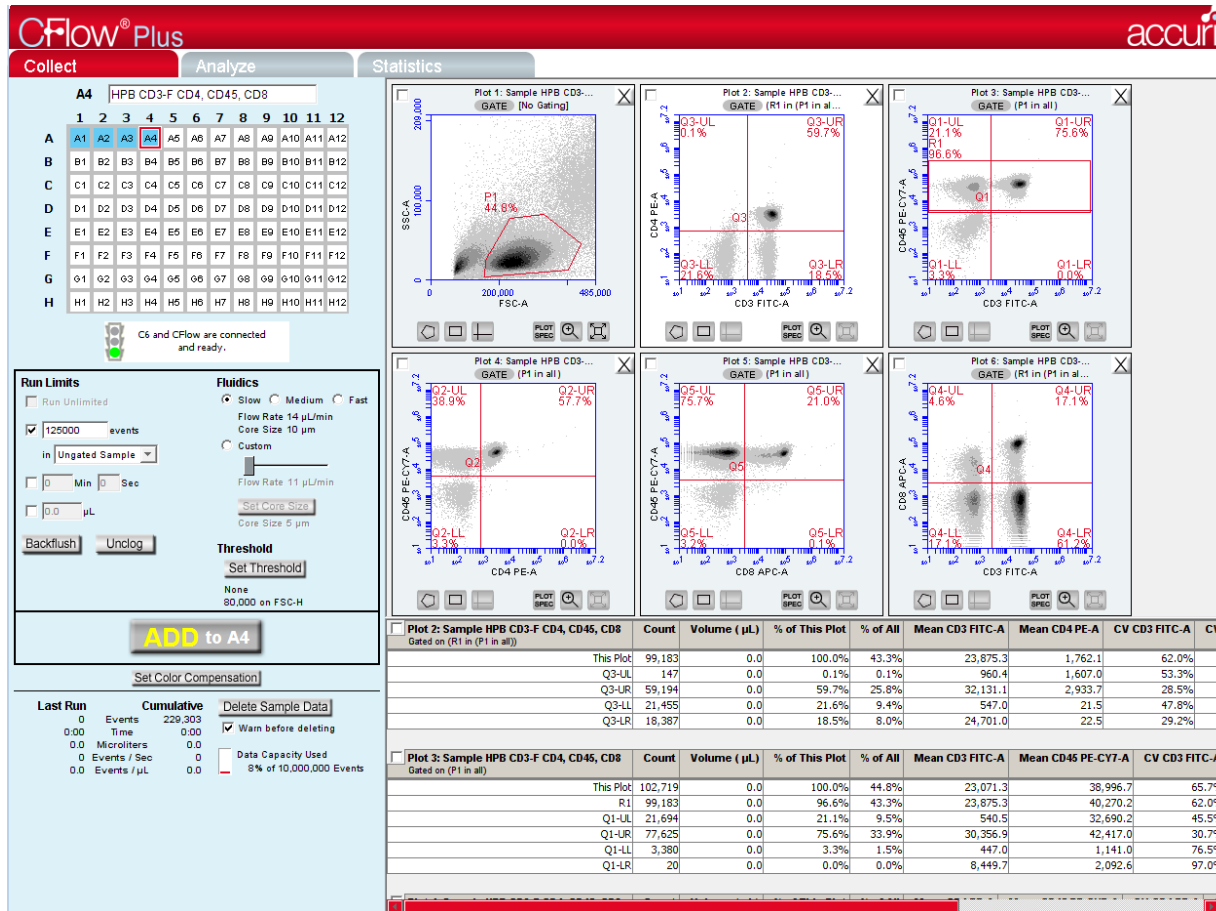
Cytometer Status

Fluidics Controls

Run Criteria

Threshold and Compensation

Real Time Updates



Analysis and Gating Tools

Regions

Quads

Markers

Histograms

Dot plots

Density plots

Plot Statistics

# BD Accuri™ RUO Special Order Systems

## Preconfigured Systems

Suggested Applications	Sample Fluorochromes	Laser 1 (nm) /Detectors	Laser 2 (nm) /Detectors	Cat. No.
<b>Preconfigured Special Order BD Accuri C6 Research Systems</b>				
Fluorescent proteins/ gene expression	GFP and variants YFP and variants mCherry mPlum mOrange dTomato DsRed	488/2	552/2	656035
		488/3	552/1	656036
		488/1	552/3	656037
		488/2	514/2	656041
		488/3	514/1	656042
DNA/cell cycle	DAPI Hoechst PI	488/2	375/2	656038
		488/3	375/1	656039
		375/2	—	656040



# Filters Available for C6

## Standard Filter Set

- BP 530/30 now 533/30
- BP 585/40
- LP 670
- BP 675/25

User changeable  
optical filters



## Also Available

- BP 510/15 (improves GFP)
- BP 540/30 (use with 510BP to separate YFP and GFP)
- BP 565/20 (OFP)
- BP 610/20 (improves mCherry , PI and PE separation)
- BP 780/60 (allows APC-Cy7 detection)
- Attenuation Filters for all 4 standard filters
  - 1% transmission
  - 10% transmission

# Automated Flow Cytometry. Now It's Easy.

## CSampler<sup>®</sup>



- Add-on automation for the C6 Flow Cytometer
- Processes 96-well and 48-well plates
- 24-position rack for 12 x 75 mm tubes
- Easy-to-use software

# Applications

## Life Science

- Immunophenotyping
- Cellular processes: viability, apoptosis, membrane potential changes, ROS, ion fluxes
- Cell counting
- Protein expression and activation
- DNA content/ploidy/cell cycling
- Cytokine detection – intracellular and excreted
- Multiplexed protein quantitation (BD CBA beads)

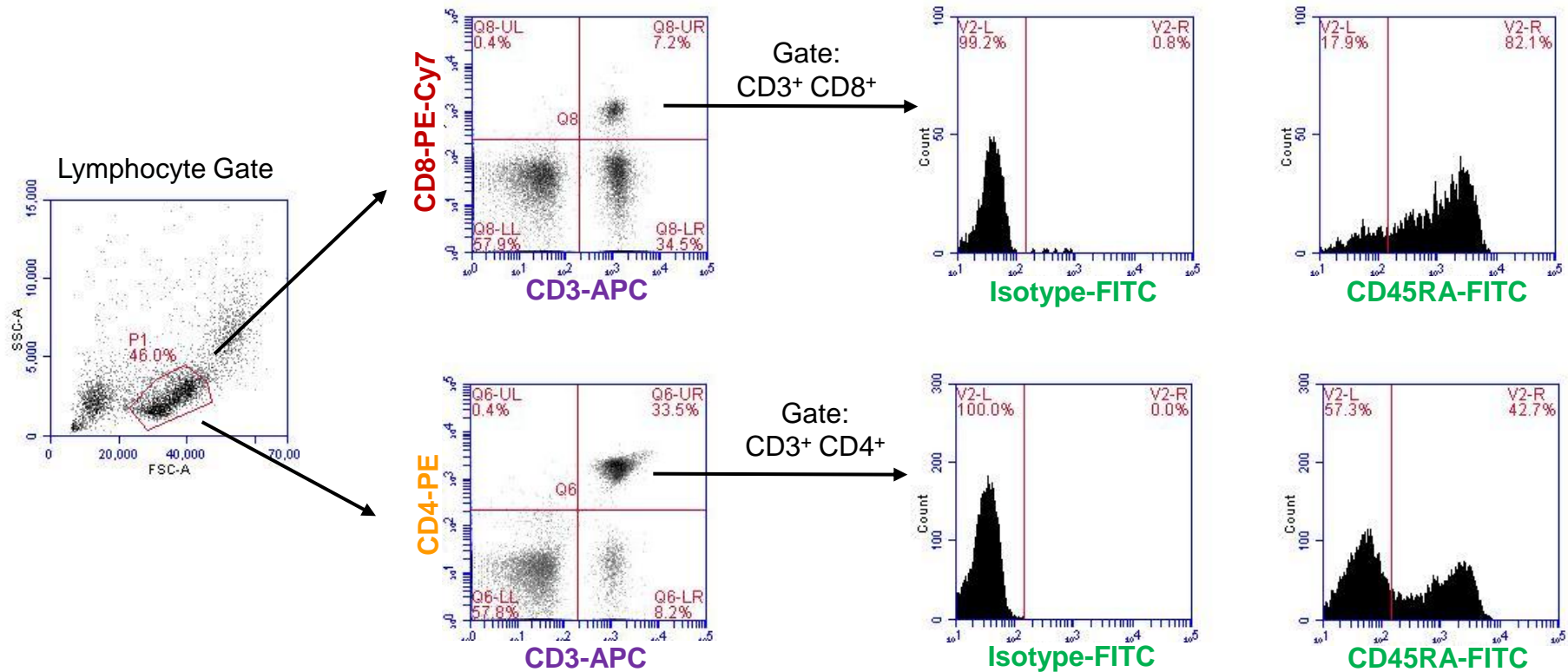
## Clinical Research

- Disease diagnosis/ treatment monitoring
- Cord and blood product quality

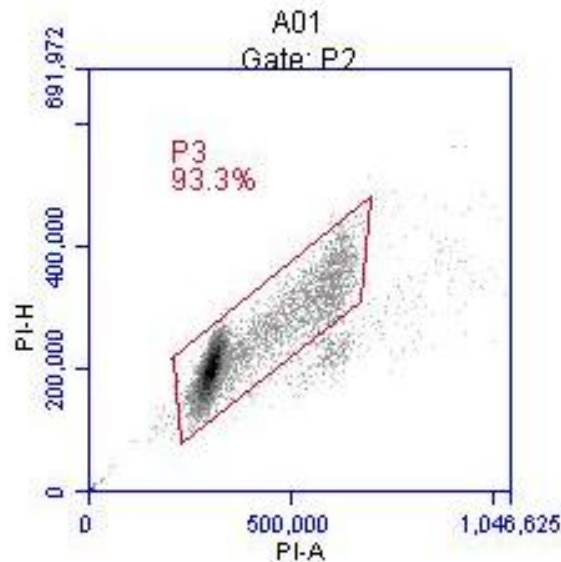
## Industry

- Bacteria, yeast detection, viability, quantitation
- Algae/ phytoplankton analysis

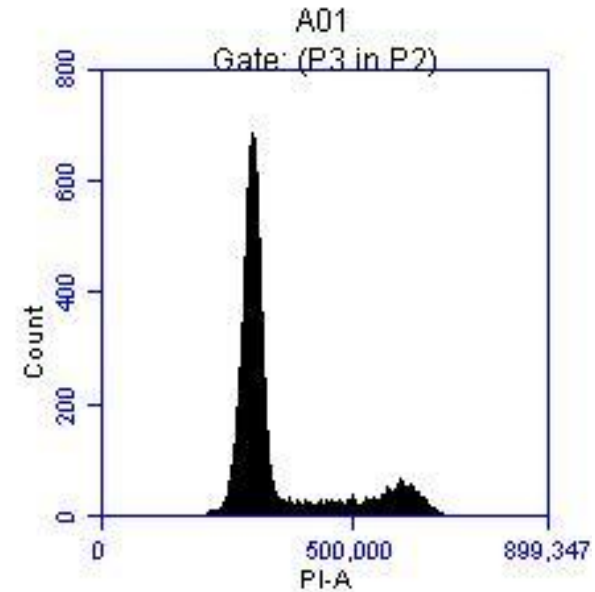
# Human PBMC : T cell Phenotyping



# DNA Detection and Cell Cycle Analysis



**Doublet  
Discrimination**



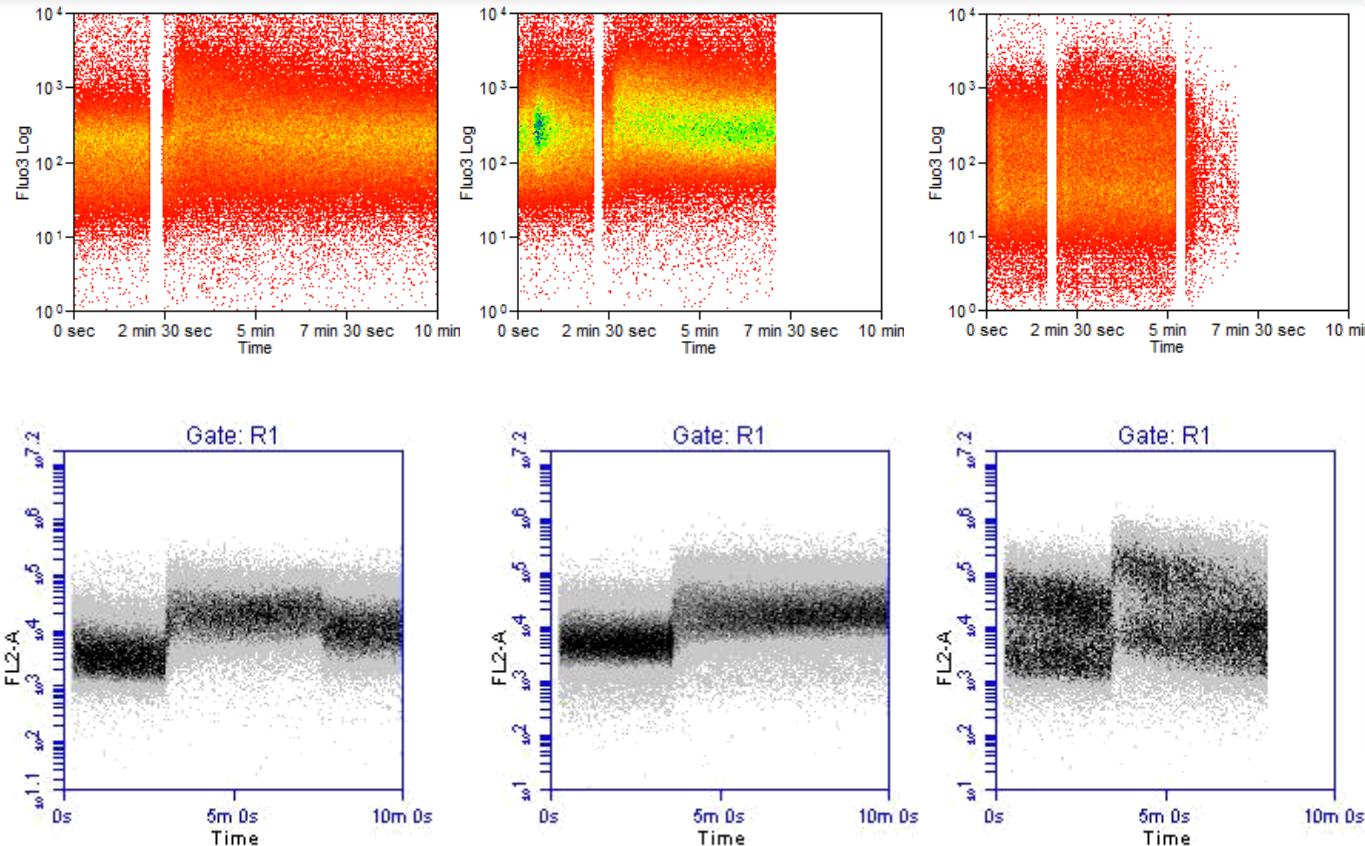
## Data File Format:

- FCS 3.0 compliant

## Compatible with:

- FCS Express: CFlow File Importer
- Winlist™ and Modfit LT™

# Calcium Flux Measurement with Fluo-4



Sample tubes on the C6 do not require pressurization. Agonists can be added during sample acquisition, ensuring that one is able to visualize the entire kinetic activity.



# Summary of the BD Accuri C6 Flow Cytometer

## **S**imple

- No voltage or gain settings
- Any sample tube
- Easy to maintain

## **M**ultiplex

- 2 laser 4 parameters
- Changeable filter
- Elective laser sources

## **A**ccurate

- Absolute cell counting

## **R**eceptible price

## **T**ime-saving

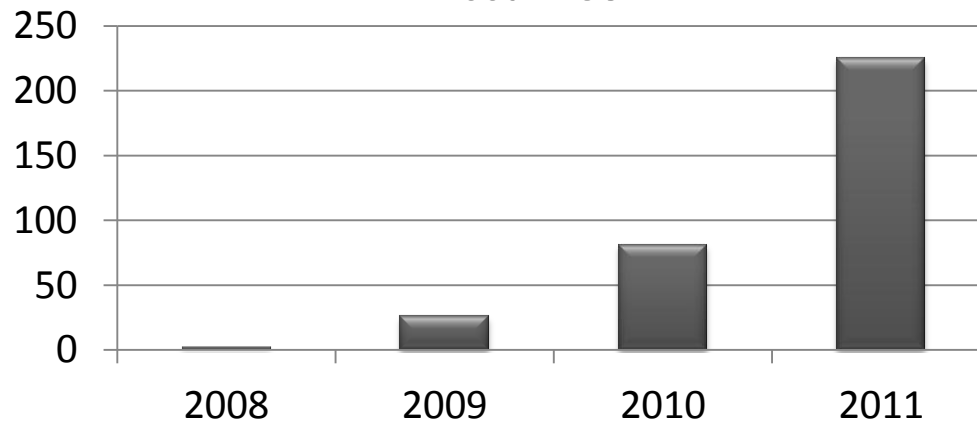
- Fast, simple set-up
- Less sample and time used for instrument setup



# Market Acceptance

## Publication of Accuri C6

"Accuri C6"



2008	2009	2010	2011
2	26	81	248

\* Data search from Google scholar



- Over 1000 C6's sold worldwide
- High customer satisfaction yielding repeat & referral orders

# Thanks for Your Attention

