



# BD Accuri® C6 Flow Cytometer

## Technical Specifications

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The BD Accuri® C6 flow cytometer is easy to use, simple to maintain, and affordable.

Small and portable, the Accuri C6 measures 11 x 14.75 x 16.5 in. (27.9 x 37.5 x 41.9 cm) (H x W x D) and weighs just 30 pounds (13.6 kg). It is small enough to easily fit on a benchtop, and can be placed in a laminar flow hood.

The system is equipped with a blue laser and a red laser, two scatter detectors, and four fluorescence detectors with interference filters optimized for the detection of FITC, PE, PerCP-Cy™5.5, and APC. A compact optical design, fixed alignment, and pre-optimized detector settings make the system easier to use.

A unique low-pressure pumping system drives the fluidics. A sheath-focused core enables event rates of up to 10,000 events per second and a sample concentration over  $5 \times 10^6$  cells per mL. The optional BD CSampler® accessory streamlines sample processing with reliable and easy-to-use automation.

BD CFlow® software has an intuitive user interface designed with the researcher in mind. The tabbed interface provides quick access to the collection, analysis, and statistics functions. Analysis can be performed on the BD Accuri C6 or can be exported into third-party programs such as FCS Express.

## Optics

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### Laser Excitation

488 nm (rated at 20,000-h life)

640 nm (rated at 20,000-h life)

### Laser Profile

10 x 75  $\mu\text{m}$

### Light Scatter Detection

Forward ( $0^\circ$ ,  $\pm 13^\circ$ )

Side ( $90^\circ$ ,  $\pm 13^\circ$ )

### Emission Detection

4 colors, user-changeable optical filters

Standard set installed:

- FL1 533/30 nm (eg, FITC/GFP)
- FL2 585/40 nm (eg, PE/PI)
- FL3  $> 670$  nm (eg, PerCP, PerCP-Cy5.5, PE-Cy<sup>TM</sup>7)
- FL4 675/25 nm (eg, APC)

### Optical Alignment

Fixed alignment

## Fluidics

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### Flow Cell

200  $\mu\text{m}$  ID quartz capillary

### Minimum Detectable Particle Size

0.5  $\mu\text{m}$

### Minimum Sample Volume

50  $\mu\text{L}$  (in 1.5-mL microcentrifuge tube)

### Pre-Set Flow Rates and Core Sizes

Slow : 14  $\mu\text{L}/\text{min}$ , 10- $\mu\text{m}$  core

Medium: 35  $\mu\text{L}/\text{min}$ , 16- $\mu\text{m}$  core

Fast: 66  $\mu\text{L}/\text{min}$ , 22- $\mu\text{m}$  core

### Custom Sample Flow Rates

10–100  $\mu\text{L}/\text{min}$

### Custom Core Diameter

5–40  $\mu\text{m}$

### Recommended Sheath Fluid

0.2- $\mu\text{m}$  filtered DI water

### Maximum Events Per Sample

1 million events per well

## Performance

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### Fluorescence Sensitivity, MESF\*

FITC  $< 150$ ; PE  $< 100$

### Scatter Resolution

Resolves human peripheral blood lymphocytes, monocytes, and granulocytes

### Fluorescence Linearity

$2 \pm 0.05\%$  for chicken erythrocyte nuclei (CEN)

### Fluorescence Precision

$< 3\%$  CV for CEN

### Data Acquisition Rate

10,000 events/second, maximum

## Data Management

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### Workstation

Dell™ OptiPlex™ 790

Small form chassis

6 USB 2.0 Ports

1 External SATA RMSD Bay

Intel® HD Graphics 2000

180-W Energy Star efficient  
internal power supply

### Memory and Processor

4 GB RAM (Non-ECC, 1,333 MHz  
DDR3 RAM, 2x2 GB)

Core™ i3 2100 3.1-GHz processor

### Hard Drive and Data Storage Options

250-GB SATA hard drive, 8-MB data  
burst cache

8x DVD reader

### Monitor

Dell Ultra Sharp LCD flat panel 19"

4 USB 2.0 ports (for peripheral devices)

### Peripheral Devices

Dell USB Entry Keyboard

Dell USB Optical Mouse

### Networking

Ethernet LAN 10/100/1000

### Operating System

Windows® 7 Professional  
(English, factory installed)

### BD CFlow Software Minimum Requirements

2 GB RAM

5 GB of free hard disk space

Minimum screen resolution 1280x1024

Windows® XP or later

## Installation Requirements

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### Power Requirements

100–240 VAC, 50/60 Hz

### Typical Power Consumption

154 VA

### Heat Output

240 BTU/hour maximum output

### Operating Ranges

15–30°C; <80% relative humidity

### Instrument Size (H x W x D)

11 x 14.75 x 16.5 in.  
(27.9 x 37.5 x 41.9 cm)

### Footprint with Fluid Bottles (H x W x D)

11 x 21.5 x 16.5 in.  
(27.9 x 54.6 x 41.9 cm)

### Weight

30 lb (13.6 kg)

### Fluid Bottle Capacity

2 L sheath fluid

2 L waste

250 mL cleaner

250 mL decontamination fluid

### Signal Processing

24-bit datapath

### Computer Interface

USB 2.0

### Warranty

1 year

## Options

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### BD CSampler

#### Power Requirements

No additional power necessary

#### Software Requirements

BD CFlow sampler software

#### Compatible Plate Types

Standard 96-well (flat, round, and  
v-bottom) plates

Deep-well 96-well plates

48-well plates

12 x 75-mm tubes can also be  
accommodated using the supplied  
24-tube rack.

Plates manufactured to the guidelines  
published by the American National  
Standards Institute, submitted by the  
Society for Biomolecular Screening,  
should be compatible with the  
BD CSampler.

#### Space Requirements

Minimum bench depth 28 in. (71 cm)

Minimum width (C6 with CSampler)

19.5 in. (49.5 cm)

#### Processing Time

<90 minutes for 96-well plate, utilizing  
30-second acquisition time per well

#### Weight

7 lb (3.2 kg)

#### Minimum Sample Volume

Does not exceed 50 µL for 96-well plates

#### Wash Cycle

Up to 3 wash cycles per well

#### Agitate Cycle

Up to 3 agitate cycles per well

Single agitate cycle will maintain fixed  
lymphocytes from human peripheral  
blood in suspension (+10% of expected  
value) while processing a 96-well, round-  
well plate, 30-second data acquisition  
per well.

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