



# BD FACSVia™ System

## Technical specifications

### Easy to use, simple to maintain

**BD FACSVia™ clinical software** contains assay-specific templates providing clinical menus that include:

- BD Leucocount™ kit, designed for counting residual white blood cells (rWBCs) in leucoreduced blood products
- BD™ Plasma Count kit, intended for in vitro diagnostic use to identify and enumerate residual white blood cells (rWBCs), red blood cells (rRBCs), and platelets (rPLTs) in fresh human plasma
- BD Multitest™ CD3/CD8/CD45/CD4 with or without BD Trucount™ tubes, BD Multitest™ CD3/CD16+CD56/CD45/CD19 with or without BD Trucount tubes, and BD Multitest™ IMK Kit with or without BD Trucount tubes are for use on the BD FACSVia system for immunophenotyping human peripheral whole blood
- BD Tritest™ CD4/CD8/CD3 with BD Trucount tubes and BD Tritest™ CD3/CD4/CD45 with or without BD Trucount tubes are for use on the BD FACSVia system for immunophenotyping human peripheral whole blood
- BD™ HLA-B27 system is a qualitative two-color direct immunofluorescence method for use with the BD FACSVia system for the rapid detection of HLA-B27 antigen expression in erythrocyte-lysed whole blood (LWB)

**The BD FACSVia™ flow cytometer** is small and lightweight, and can easily fit on any benchtop in the clinical laboratory, making the most of limited space.

The system is equipped with a blue laser, a red laser, two light scatter detectors, and four fluorescence detectors. A compact optical design, fixed alignment, pre-optimized detector settings, and automated adjustment of fluorescence spillover (color compensation) work together to simplify workflow.

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  $\mu\text{L}$ . The optional BD FACSVia™ Loader accessory streamlines sample processing with reliable and easy-to-use automation.

The optional BD FACSVia™ research software has an intuitive user interface designed with flexibility in mind for user defined protocols. The tabbed interface provides quick access to the collection, analysis, and statistics functions. Analysis can be performed on the BD FACSVia itself or exported, if required.



## Optics

### Laser excitation

488 nm, 640 nm

### Laser profile

9 µm x 94 µm blue laser beam size

11 µm x 104 µm red laser beam size

### Light scatter detection

Forward (photodiode with 488/10 BP)

Side (photodiode with 488/10 BP)

### Emission detection

Standard set optical filters installed:

- FL1 533/30 nm
- FL2 585/40 nm
- FL3 >670 nm
- FL4 675/25 nm

### Optical alignment

Fixed alignment

## Performance

### Fluorescence sensitivity, MESF\*

FITC <150; PE <100

### Scatter resolution

Resolves human peripheral blood lymphocytes, monocytes, and granulocytes

### Fluorescence linearity

2 ±0.05% for chicken erythrocyte nuclei (CEN)

### Fluorescence precision

<3% CV for CEN

### Data acquisition rate

Up to 10,000 events/second

### Signal processing

24-bit data path

\*MESF values determined using Thermo Scientific Cyto-Cal™ Multifluor Plus Violet Intensity Calibrator.

## Fluidics

### Flow cell

200-µm ID quartz capillary

Minimum detectable particle size 0.5 µm

### Minimum acquisition sample volume

Standard 12 x 75-mm tubes: 50 µL

BD Trucount™ tubes: 150 µL

Loader with standard 12 x 75-mm tubes: 100 µL

### Recommended sheath fluid

0.2-µm filtered DI water with BD™ Sheath Additive

### Maximum events per sample

1 million

## Data management

### Workstation specifications (minimum required)

3.4 GHz, 8 GB RAM

### Hard drive and data storage

- 256-GB SATA 1st Solid State Drive
- 16X DVD-ROM SATA 1st ODD

### Operating system

Microsoft® Windows® 7 Professional 64-bit OS

DVD + Driver DVD

### Peripheral services

2 USB ports

HP USB Keyboard US

HP USB Optical Mouse

### Recommended monitor

LCD flat panel, 23 in.

### Data management options

BD FACSLink™ software

BD Assurity Linc™ software

### Networking

Ethernet LAN 10/100/1,000

### BD FACSVia clinical software

User name, password access

Single-tube QC with BD™ CS&T beads

QC Module with Levey-Jennings plots

Laboratory and physician reports (.pdf)

Pre-set templates for:

- BD Leucocount
- BD Plasma Count
- BD Tritest and Multitest
- BD HLA-B27

### BD FACSVia research software\*\*

Support for user defined assays

## Installation requirements

### 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 BD™ Detergent Solution Concentrate

250 mL BD™ FACSClean solution

### Noise under normal operating conditions

<60 dBA

## Options

### BD FACS™ Universal Loader

#### Power requirements

No additional power necessary

#### Tube compatibility

##### (BD FACSVia clinical software)

BD Trucount tubes and 12 x 75-mm tubes accommodated using the supplied 24-tube rack

##### With BD FACSVia™ research software

Standard 96-well (flat, round, and v-bottom) plates in addition to tube types

#### Space requirements

Minimum bench depth 28 in. (71 cm)

Minimum width (with Loader) 19.5 in. (49.5 cm)

#### Weight

7 lb (3.2 kg)

### Barcode reader with stand

Hand-held barcode reader (ISBT 128 supported)

#### Minimum requirements

4 GB RAM

5 GB of free hard disk space

#### Minimum screen resolution

1,280 x 1,024 pixels

#### Operating system

Microsoft Windows 7 Professional 64-bit

Class 1 Laser Product.  
For In Vitro Diagnostic Use. CE-IVD. Not available in the USA.  
Trademarks are the property of their respective owners.  
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