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

Optional BD FACSVia™ research software**

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.

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 x 10^6 cells per µL.

The optional BD FACSVia™ Loader accessory streamlines sample processing with reliable and easy-to-use automation.

BD

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 devices
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 FACSVia research software**
Support for user-defined assays

**For Research Use Only. Not for use in diagnostic or therapeutic procedures.

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°C–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 FACSVia 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)

Class 1 Laser Product.
For In Vitro Diagnostic Use.
For use in the USA only.
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