

BD FACSDuet™ Sample Preparation System

The BD FACSDuet™ System is an automated sample preparation system designed to prepare human peripheral whole blood specimens for acquisition on the BD FACSLyric™ Flow Cytometer.

When the BD FACSDuet™ System is physically integrated with the BD FACSLyric™ Flow Cytometer via the BD FACSLyric™ Universal Loader, the system provides ready-to-acquire samples to the flow cytometer, delivering a complete walkaway sample-to-answer solution.

Bidirectional data integration from the BD FACSLyric™ Flow Cytometer to BD FACSDuet™ System is provided by BD FACSLink™ Software.

The BD FACSDuet™ System integrated with the BD FACSLyric™ Flow Cytometer is designed to provide complete traceability of specimens, reagents and samples across the system through extensive use of barcodes.



At the same time, the system:

- Supports a wide variety of blood collection tubes, both in size (seven different sizes) and from multiple manufacturers (BD Vacutainer®, Sarstedt, Greiner and Streck) for a total of 20 different tube types.
- Allows the use of multiple size reagent vials: up to 23 reagent vials/rack for a total of 46 reagent vials in two racks.
- Allows the use of reagent vials from a wide range of non-BD manufacturers (Beckman Coulter, BioLegend, Cytognos, Dako, Invitrogen and Life Technologies)

The system is designed for modular upgrades.



Technical Specifications

Instrument

Dimensions

Height: 83.8 cm (33.0 in.)

Width: 106.2 cm (41.8 in.)

Width (with touchscreen extended): 153.19 cm (60.3 in.)

Depth: 74.4 cm (29.3 in.)

Weight (with rack loaded, monitor and ready to use): 169 kg (372.6 lb) - does not include three 10-L fluid tanks

Power requirements

100–240 V / 6–2.5 A / 50–60 Hz

Power consumption

mean 420 W-peak consumption 600 W

Fuses

2 A (150 V)

Environment

Storage temperature

5–45 °C

Operating temperature

15 °C (59 °F) to 30 °C (86 °F)

Operating relative humidity

20% to 80% (non-condensing)

Operating barometric pressure

≥0.8 atm (approximately 2,000 meters)

Noise level

≤65 dBA, under normal operating conditions

Facility requirements

Please refer to the BD FACSDuet™ Site Preparation Guide for details

BD FACSDuet™ System table

Recommended when the BD FACSLytic™ Flow Cytometer and BD FACSDuet™ System are physically integrated Height: 86.35 cm (33.99 in.) Length: 200.0 cm (78.74 in.) Depth: 97.0 cm (38.19 in.)

User-definable ranges

Dispense volumes

Sample

5–400 µL (in increments of 1 µL)

Reagents

5–1000 µL (in increments of 1 µL)

BD FACS™ Lysing Solution

0–450 µL (in increments of 25 µL)

Incubation times

Reagent

0–1,000 minutes (in 1 minute increments)

Lyse

0–1,000 minutes (in 1 minute increments)

Maximum volume per tube: 2 mL

Maintenance protocol

Instrument priming, rinsing and cleaning procedures as well as probe alignment are preprogrammed

Sample loading

Primary tube racks

Up to four primary tube racks with tube adaptors

Up to 10 tubes/rack for a total of 40 primary tubes at any given time from multiple providers

Reagent vial compatibility

BD

Glass Amber Vial – 36.8 x 21.8 mm – 5.0 mL

Glass Amber Vial – 38.1 x 22.0 mm – 5.0 mL

Plastic Vial – 47.3 x 10.2 mm – 0.5 mL

Plastic Vial – 47.3 x 10.2 mm – 2.0 mL

Plastic Vial – 38.8 x 16.0 mm – 4.0 mL

Beckman Coulter

Glass Amber Vial – 37.6 x 20.4 mm – 5.0 mL

Glass Amber Vial – 42.5 x 13.5 mm – 1.0 mL

BioLegend

Plastic Vial – 47.3 x 10.2 mm – 0.5 mL

Cytognos

Glass Amber Vial – 38.9 x 18.2 mm – 4.0 mL

Plastic Vial – 46.6 x 10.16 mm – 0.5 mL

Dako

Glass Amber Vial – 47.0 x 18.2 mm – 6.0 mL

Invitrogen

Plastic Vial – 47.3 x 10.2 mm – 0.5 mL

Life Technologies

Glass Amber Vial – 43.8 x 21.8 mm – 6.0 mL

Plastic Vial – 47.3 x 10.2 mm – 0.5 mL

Primary specimen tube compatibility

BD Vacutainer®

13 x 75 mm – 2.0, 3.0 and 4.0 mL

13 x 100 mm – 6.0 and 7.0 mL

16 x 100 mm – 9.5 and 10.0 mL

Use BD Hemogard™ Closure or Conventional Cap

(standard rubber stoppers)

Greiner

13 x 75 mm – 2.0 and 3.0 mL*

13 x 100 mm – 6.0 and 7.0 mL*

16 x 100 mm – 9.0 and 10.0 mL

*Use Premium or Non-Ridged Pull Cap

Sarstedt S-Monovette™

8 x 66 mm – 1.2 mL

11 x 66 mm – 2.7 mL

13 x 65 mm – 2.6 and 3.4 mL

15 x 75 mm – 4.0 mL

13 x 90 mm – 4.9 mL

Streck Cyto-Chex™ BCT

13 x 75 mm – 5.0 mL

2 mL flat

Specimen tube adapter sizing chart

Compatible specimen tubes

D13 x L65	Sarstedt 2.6 and 3.4 mL
D8 x L66	Sarstedt 1.2 mL
D11 x L66	Sarstedt 2.7 mL
D13 x L75	BD Vacutainer® 2.0, 3.0 and 4.0 mL, Streck 5 mL and Greiner 2.0 and 3.0 mL
D15 x L75	Sarstedt 4.0 mL
D13 x L90	Sarstedt 4.9 mL
D13 x L100	BD Vacutainer® and Greiner 6.0 and 7.0 mL
D16 x L100	BD Vacutainer® 9.5 mL and 10 mL and Greiner 9.0 mL and 10 mL

Carrier compatibility

BD FACSLyric™ System 30 tube rack

BD FACSLyric™ System 40 tube rack

Use with 12 x 75 mm BD Trucount™ Tubes and 5 mL K-Resin™, polystyrene or polypropylene tubes

Fluidic

Dimensions 10 L tanks

Height: 38.1 cm (15 in.)

Width: 16.1 cm (6.3 in.)

Depth: 35.6 cm (14 in.)

Tank capacities

Saline tank: 10-L

DI water tank: 10-L

Waste tank: 10 L

Lyse tank: 1 L

Barcode reader

The following barcodes are supported

ISBT 128

Code 128

Code 39

Codabar

interleave 2 of 5 standard barcode

DataMatrix (reagent scanning only)

Computer

Operating System: Microsoft™

Windows™ 10

Processor: Intel™ BayTrail J1900

64-Bit EMB English

Touch screen

Data management options

BD FACSLink™ Hardware and Software for LIS connectivity

The BD FACSDuet™ Sample Preparation System and BD FACSLyric™ Flow Cytometer are Class 1 Laser Products.

The BD FACSDuet™ Sample Preparation System is for In Vitro Diagnostic Use. Sample preparation for user-defined protocols and cocktail functions are for Research Use Only. Not for use in diagnostic or therapeutic procedures.

The BD FACSLyric™ Flow Cytometer is for In Vitro Diagnostic Use with BD FACSuite™ Clinical Application for up to six colors. The BD FACSLyric™ Flow Cytometer is for Research Use Only with BD FACSuite™ Application for up to 12 colors. Not for use in diagnostic or therapeutic procedures.

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