



BD FACS Lyse Wash Assistant and Larger Tank Option

Technical Specifications

The BD FACS™ Lyse Wash Assistant is an automated sample preparation instrument capable of lysing, washing, mixing, and fixing samples that are then ready for analysis on a flow cytometer. The patented cell washer technology eliminates the need to transfer samples to a centrifuge. It removes RBCs, platelets, unbound antibody, and residual protein, while preserving the white cells.

The BD FACS Lyse Wash Assistant is a powerful tool for sample preparation. The software offers seven preprogrammed protocols (including a decontamination protocol), and the flexibility of creating up to ten custom protocols to meet your laboratory's specific needs. Redesigned components, including circuitry, cell washer, and air handling, optimize sample recovery and reliability.

Sample Loading

Carousel Rack Compatibility

BD FACST[™] Loader carousel racks labeled “Sample-Prep Ready”

Tube Compatibility

Uncapped 12 x 75-mm tubes

- BD Falcon[™] polystyrene test tubes
- BD Trucount[™] tubes
- K-resin tubes

Performance

Accuracy

Subset Percentages

3% absolute or 10% relative bias compared to manual preparation for all subset percentages

Precision

Results of Subset Percentages

80% upper confidence level at SD ≤ 2.5 on five replicates of BD Simultest[™] CD3/CD4

Instrument to Instrument

Pooled SD ≤ 2.5

Observed variance due to instrument was <1% on five samples prepared in triplicate on three instruments.

WBC Recovery

Dual-Lyse Protocol Minimum Acceptance Criteria

$\geq 75\%$

Observed Recovery on Ten Samples Prepared on Two Instruments

83–101% (average of 90%)

Throughput

Minimum output rate for 40 tubes

Lyse-Only

Actual observed: 40 tubes in 4 minutes

Lyse-Wash

40 tubes ≤ 60 minutes

Actual observed: 40 tubes in 44 minutes

Duo-Lyse

40 tubes ≤ 69 minutes

Actual observed: 40 tubes in 65 minutes

Tri-Lyse

40 tubes ≤ 69 minutes

Actual observed: 40 tubes in 65 minutes

Wash Only

40 tubes <30 minutes

Actual observed: 40 tubes in 28 minutes

Wash/Fix

40 tubes <30 minutes

Actual observed: 40 tubes in 28 minutes

Carryover and Capacity

Carryover

Intact Cell Carryover

Observed $\leq 0.005\%$ (50 PPM)

Soluble carryover

Observed $\leq 0.005\%$ (50 PPM)

Tank Capacities

Cell wash 1.0 L

Fix 0.3 L

Lyse 0.7 L

Spindle cleanse 1.0 L

Waste 1.8 L

Larger Tank Option Capacities

Cell wash 2.0 L

Spindle cleanse 2.0 L

Waste 10.0 L

Software

Pre-programmed Protocol Volumes

Approximate Cell Washer Flow Rate

800 mL/sec

Approximate Final Sample Volume for Wash Only

350 µL

Maximum Allowable Sample Tube Input Volumes

- Lyse-Wash, Duo-Lyse, and Tri-Lyse
Specimen and mAb should not exceed 165 µL.
- Wash Only and Wash/Fix
Specimen, mAb, and lyse should not exceed 1,065 µL.
- Any custom protocol with a wash step
Specimen, mAb, and lyse should not exceed 1,065 µL before each cell wash step.
- Lyse Only, and any custom protocol without a wash step
Specimen, Lyse, and mAb should not exceed 2.2 mL.

Custom Protocol Ranges

Wash-Step Variables

- Precipitation G Force: 50–500g
- Precipitation Time: 1–300 seconds
- Wash G Force: 50–500g
- Wash Volume: 0–48,000 µL

Dispense-Step Variables

- Reagent Selection
Lyse tank or fix tank
- Dispense Volume
100–900 µL
- Perform Mix
Yes or No
- Max. Mix Delay
1–480 seconds
- Defer [Mix] Until Before Next Pause
Yes or No

Incubation Step Variables

- Incubation time: 1–480 minutes
- Intermittent mix: 0–480 minutes

Accessories

Larger Tank Option

Minimum number of carousels processed before needing to service tanks: four full 40-tube carousels

AC Power Cord

USB

Bal Seal Replacement Kit

- Bal seals (2)
- Bal seal replacement tool
- Gripper

Documentation

- User's guide
- Quick reference guide
- Safety and limitations booklet
- Setup sheet

Four BD FACS Loader carousel racks labeled Sample-Prep Ready

USB Drive

Flash drive, 1 GB, USB 2.0 compliant

Included Files

- CstProt.dat (Custom Protocol backup storage file)
- LWA.out VxWorks (backup copy of Master Controller software binary file)

Reagents

Description

BD FACSTM lysing solution*, 100 mL

BDTM FACSClean solution, 5 L

BD PharmingenTM stain buffer (PBS + 2% BSA + 0.1% azide)

BD Pharm LyseTM lysing buffer (10x NH₄Cl)

Installation Requirements

Instrument Dimensions

Height, carousel door closed:
13.5 in. (34.3 cm)

Height, carousel door open:
21.5 in. (54.6 cm)

Depth: 20.0 in. (50.8 cm)

Width: 19.75 in. (50.2 cm)

Workspace Dimensions

Unit can operate under a shelf 18.0 in.
(45.7 cm) high, 12.0 in. (30.5 cm) deep

Instrument Weight

≤66 lb. (≤29.94 kg)

Power Requirements

100–240 VAC (50–60 Hz)

Power Consumption

≤125 W

Fuses (2)

3.15 A, 250 V, type T, 5 x 20 mm

Environment

Instrument Operating Temperature

15–30°C (59–86°F)

Storage Temperature

–25 to 40°C

Operating Relative Humidity

≤80% (noncondensing)

Noise Level

≤60 dBA (idle mode)

≤70 dBA (run mode)

Regulatory Status

For In Vitro Diagnostic Use. Conforms to relevant directives to bear the CE mark. Also conforms to the UL and CAN/CSA general requirements (61010.1).



Class I (1) laser product.

For In Vitro Diagnostic Use

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* BD FACSTM Lysing Solution: US Patent Nos. 4,654,312; 4,902,613; 5,098,849

