



# BD FACS Lyse Wash Assistant and Larger Tank Option

## Technical Specifications

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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 FACSTM 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  $\leq 2.5$  on five replicates of BD Simultest™ CD3/CD4

#### Instrument to Instrument

Pooled SD  $\leq 2.5$

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  $\leq 60$  minutes

Actual observed: 40 tubes in 44 minutes

#### Duo-Lyse

40 tubes  $\leq 69$  minutes

Actual observed: 40 tubes in 65 minutes

#### Tri-Lyse

40 tubes  $\leq 69$  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

BD™ FACSClean solution, 5 L

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

BD Pharm Lyse™ lysing buffer (10x NH<sub>4</sub>Cl)

## Installation Requirements

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### 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

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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