

# PlateWash Plus

## Automated Microplate Washer

The PlateWash™ Plus from PerkinElmer Life and Analytical Sciences is a stand-alone automated washer for 96- and 384-well microplates. The PlateWash Plus features user-definable parameters enabling customized wash protocols. Programmable parameters include variable dispense pressure, volume, speed, soak time and X-Y-Z positioning of the probe manifold. The PlateWash Plus is programmed using a membrane keypad on the front panel to control the on-board firmware. Users are able to quickly and easily define, edit and store wash protocols and plate types.

### Instrument Features

The PlateWash Plus is designed as an automated microplate washer with a 96 probe manifold and quadrant positioner for accessing 384-well plates. Depending on assay wash requirements, the dispense probe can either be a straight dispense or a side dispense.

- **Straight Dispense Probe:** Two fused probes, one aspirate probe and one dispense probe, provide washing capabilities for a variety of standard assays including ELISA-based applications.
- **Side Dispense Probe:** Specially designed for the gentle yet effective washing requirements of cell-based assays in addition to standard ELISA applications. Compatible with both adherent and non-adherent cell lines.
- **X-Y-Z Positioning:** Programmable X-Y-Z positioning of the 96 probe manifold to define dispense and aspirate heights in 0.1 mm increments.
- **Plate Types:** Compatible with SBS standard 96- and 384-well microplates. Ten different plate types can be stored and user-defined.
- **Wash Programs:** Up to 40 automated, customized wash programs can be stored. User definable parameters include variable dispense height, speed, pressure, volume and soak time.
- **Wash Functions:** Wash segments can be programmed to dispense, aspirate, simultaneously dispense and aspirate (overflow), soak, or loop for repetitive functions.
- **Software:** Onboard microprocessor with 2 line, 40 character LED display. Membrane keypad programming to easily define, edit and store wash programs and plate types.
- **Manual Operation:** Built in one-touch commands for optional manual operation of dispense, aspirate and overflow functions.
- **Easy Instrument Setup:** One touch commands for initialization of the washer.  
FILL - to fill and prime the system with liquid  
DRAIN - to empty manifold of system liquid  
PURGE - to remove air bubbles



Platwash Plus

- **Pressure:** Pressure detection sensor is located at the manifold site to eliminate variations in flow rate resulting in more reliable plate washing.
- **Other Safety Features:** Plate and reagent bottle sensors ensure reliable and safe plate washing.

### Technical Specifications

Dispense Volume:	10 µL-9990 µL
Dispense Speed:	User-defined Low, Medium, and High
Dispense Precision:	5% CV @ 60 µL with saline buffer solution
Dispense Probe Diameter:	0.015 in. I.D. - straight probe 0.011 in. I.D. - side probe
Dispense Pressure:	Variable, 1 psi-19.9 psi
Aspirate Time:	1-999 sec.
Aspirate Probe Diameter:	0.019 in. I.D.
Residual Volume:	5 µL - 96-well microplate 2 µL - 384-well microplate
Soak Time:	1-999 sec.
Wash Segments:	Up to 9 wash segments per program with a looping option for repetitive functions.

## High Capacity Options

For batch processing and unattended high capacity plate washing, the PlateWash Plus is easily integrated with the PerkinElmer PlateStak™ microplate handler. Each PlateStak is capable of feeding up to 50 standard microplates and is programmable from the PlateWash Plus on-board firmware.

## Integration Capabilities

The PlateWash Plus can be integrated with the PerkinElmer MultiPROBE II PLUS and other liquid handlers using a dual diving board PlateStak to move plates between the instruments. On-board RS-232 port allows external computer control and integration capabilities with many peripheral devices. An option integration kit is available with cables and software to provide a ready-to-use solution for MultiPROBE II PLUS based assays.

## Accessories

Additional bottle assemblies are available based on application and throughput needs.

### 4 Liter Bottle Assembly:

- (2) 4 L Vacuum/Overflow Waste Containers
- (1) 4 L Buffer Container
- (1) 3 Position 4 L Bottle Rack
- (1) Tubing Set

### 10 Liter Bottle Assembly:

- (2) 10 L Vacuum/Overflow Waste Containers
- (1) 10 L Buffer Container
- (1) Tubing Set

Individual components of the Bottle Assemblies can also be purchased.

## Physical Data

### Dimensions:

#### Base Unit

- Height: 12.6 in. (32.0 cm.)
- Width: 8.8 in. (22.4 cm.)
- Depth: 18.5 in. (47.0 cm.)



PlateWash Plus integrated with PerkinElmer PlateStak

### Bottle Rack Assemblies

	4 L Bottle Assembly	10 L Bottle Assembly
• Height:	16.0 in. (40.6 cm.)	18.0 in. (45.7 cm.)
• Width:	7.6 in. (19.3 cm.)	32.0 in. (81.3 cm.)
• Depth:	22.0 in. (55.9 cm.)	10.0 in. (25.4 cm.)

### Weight (approximate):

	Net Weight	Shipping Weight
• Base Unit:	40 lb. (18 kg.)	44 lb. (20 kg.)
• 4 L Bottle Assembly:	11 lb. (5 kg.)	15 lb. (7 kg.)
• 10 L Bottle Assembly:	18 lb. (8 kg.)	22 lb. (10 kg.)

### Electrical Requirements:

- 115 Volts AC 60 Hz
- 230 Volts AC 50/60 Hz

### Environmental Requirements:

- Operating Ambient Temperature: 50-95 °F (15-35 °C).
- Operating Relative Humidity: 60% to 95% at 85 °F (30 °C).

PerkinElmer Life and  
Analytical Sciences  
710 Bridgeport Avenue  
Shelton, CT 06484-4794 USA  
Phone: (800) 762-4000 or  
(+1) 203-925-4602  
www.perkinelmer.com



For a complete listing of our global offices, visit [www.perkinelmer.com/lasoffices](http://www.perkinelmer.com/lasoffices)

©2004 PerkinElmer, Inc. All rights reserved. PerkinElmer is a registered trademark of PerkinElmer, Inc. All trademarks depicted are the property of their respective holders or owners. PerkinElmer reserves the right to change this document at any time and disclaims liability for editorial, pictorial or typographical errors.

007064\_01 03/04 Printed in U.S.A.