LIQUID HANDLING

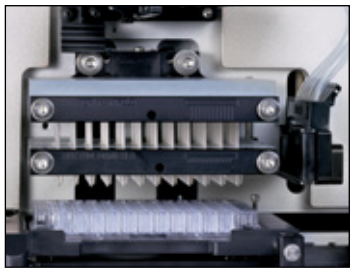
EL406™ Washer Dispenser

Efficiency and productivity are increased with BioTek's new EL406™ Microplate Washer Dispenser. This automation friendly, multifunctional instrument uniquely combines the industry standard ELx405™ Washer with both peristaltic and syringe driven reagent pumping systems; all from the industry leader in microplate washing. The wash module incorporates BioTek's patented Dual-Action™ manifold design along with optimized flow rates for cell-based applications. The EL406 also features BioTek's built-in patented Ultrasonic Advantage™ for unattended wash manifold maintenance and up to four wash buffers or reagents for complex routines. The peristaltic pump utilizes a unique design to provide accurate and precise volumes from 500 nL to 3 mL. A range of autoclavable cassette sizes is designed to deliver full incremental volumes for best performance. With two automatically switching syringe drive dispensers, a total of five reagents can be dispensed without operator intervention. Available accessory modules for biomagnetic separation and vacuum filtration make the EL406 well suited for automating the full plate wash steps of magnetic or polystyrene bead assays, such as those developed on the Luminex xMAP® technology platform. Automate an entire process for up to 50 standard height microplates by adding a BioStack™. Now you can simply press a button and walk away.

Features:

- Fast microplate washing and dispensing
- Up to three reagent dispensers
- 96-, 384-, and 1536-well microplates
- Magnetic and polystyrene bead assays
- ELISAs and cell-based assays
- Filtration-to-waste processes
- Automates long and tedious assay liquid handling processes
- Smaller benchtop or robotic system footprint compared to separate washer and three dispensers
- Choice of software control from instrument keypad or Liquid Handling Control™ PC software
- Built-in ultrasonic cleaner
- Automated switching of up to four wash buffers or reagents
- BioSpa™ 8 Automated Incubator compatible for assay automation
- BioStack™ compatible - to automate processes for up to 50 plates

BioTek®
www.biotek.com



For 96- and 384-well washing, BioTek's patented Dual-Action™ 96- and 192-tube manifolds provide independent control of aspirate and dispense functions for precise control of all washing parameters.

Configurations:

96-well Washer with 1, 2 or 3 Reagent Dispensers
384-well Washer with 1 or 3 Reagent Dispensers
96-/384-well Washer with 1 or 3 Reagent Dispensers
1536-well Washer with 2 or 3 Reagent Dispensers
384-/1536-well Washer with 3 Reagent Dispensers
96-/384-/1536-well Washer with 3 Reagent Dispensers

Additional configurations available. See website for complete listing.

Optional Accessories:

- Magnet Adapter Kit
- Magnets – choice of 96- or 384-well formats and immobilization patterns
- Vacuum Filtration Module
- Cassettes for peristaltic pump dispenser
- Automatic Reagent Switching for 2 syringe pump dispensers
- Waste System – many options available
- Product Qualification Package
- BioStack™ Microplate Stacker
- BioSpa™ 8 Automated Incubator
- Liquid Handling Control™ PC Software

**High flow vacuum pump recommended for 384- or 1536-well washing with buffers not containing surfactant.*

EL406 interfaces to the new BioSpa 8 Automated Incubator for live cell assay workflows.

THE POWER INSIDE Luminex | xMAP TECHNOLOGY Because you want to know more

The EL406 is Luminex xMAP® approved.
EL406 patents include US 5,951,783.
xMAP® is a registered trademark of Luminex Corporation.

BioTek®

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Specifications:

General

Assays:	Magnetic bead, polystyrene bead *(optional)* • Multiplex assays • Bead-based ELISA ELISA Cell-based assays *(configuration dependent)* Filtration-to-waste processes *(optional)*
Separation:	Biomagnetic separation, vacuum filtration *(optional)*
Microplate types:	96, 384 and 1536 wells *(configuration dependent)* Low profile and standard height Solid and filter bottom *(optional)* Filter pore sizes 0.45 µm to 1.2 µm
Magnet:	High strength 96- and 384-well designs Flat • Flat-bottom well – beads pulled to band across well bottom • Round-bottom well – beads pulled to button at well bottom Ring – beads pulled to 4-zone ring at well bottom
Software:	Liquid Handling Control™, for PC protocol programming and execution *(optional)*
Automation:	BioStack and 3rd party automation compatible BioSpa™ 8 Automated Incubator compatible

Washing

Washing speed:	Solid bottom plates: 1 asp./disp. cycle: 300 µL/well, 96 wells, 96-tube manifold: 13 seconds 100 µL/well, 384 wells, 192-tube manifold: 17 seconds 10 µL/well, 1536 wells, two 32-tube manifolds: 36 seconds Filter bottom plates: Varible, based on wash parameters
Volume range:	3 – 3,000 µL/well *(configuration dependent)*

Dispense accuracy	Dispense precision	Residual volume – solid bottom plates
±3% typical	≤3% CV *(configuration dependent)*	≤2 µL/well

Dispensing – Peristaltic Pump

Dispensing speed*:	10 µL/well, 96 wells, 8-tip cassette: 3 seconds 5 µL/well, 384 wells, 8-tip cassette: 6 seconds 1 µL/well, 1536 wells, 8-tip cassette: 20 seconds 500 nL/well, 1536 wells, 8-tip cassette: 17 seconds 500 nL/well, 384 wells, 8-tip cassette: 6 seconds
Volume range:	500 nL – 3,000 µL/well

Cassette size	Recommended volume range	Dispense accuracy	Dispense precision	Minimum prime volume
1 µL	500 nL – 50 µL	±5.0% at 1 µL	≤5.0% CV at 1 µL ≤10.0% CV	1.20 mL
5 µL	5 µL – 2,500 µL	±2.0% at 5 µL	≤2.5% CV at 5 µL	4.23 mL
10 µL	10 µL – 3,000 µL	±2.0% ≥10 µL	≤2.0% CV ≥10 µL	7.36 mL

Dispensing – Syringe Pump

Dispensing speed:	10 µL /well, 96 wells, 1 x 16 or 1 x 8 tubes: 9 seconds 5 µL /well, 384 wells, 1 x 16 tubes: 11 seconds 3 µL /well 1536 wells, 2 x 32 tubes: 14 seconds
Volume range:	3 – 3,000 µL/well *(configuration dependent)* Minimum prime volume: 12 mL

Dispense accuracy	Dispense precision
±1 µL at 5 µL	≤5% CV at 5 µL
±1 µL at 20 µL	≤2.5% CV at 20 µL
±1% at 100 µL	≤1% CV at 100 µL

Physical Characteristics

Power:	100 – 240 Volts AC. 50/60 Hz
Dimensions:	16.5" W x 18" D x 12.5" H (42 x 46 x 32 cm)
Weight:	32 lbs (14.5 kg)

Regulatory

For *In Vitro* Diagnostic use. CE and TUV marked, RoHS compliant.

*Via keypad, using optional parameters.

Performance values represent the average observed factory test values.
**Specifications subject to change.*