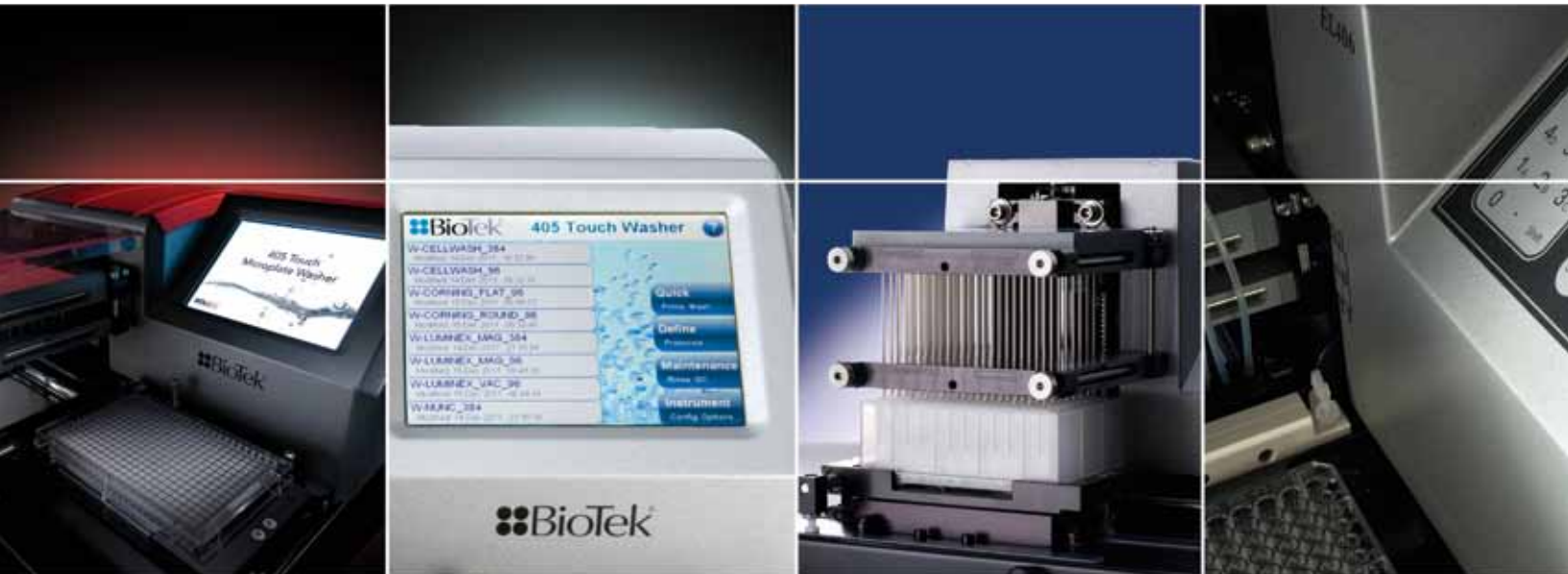


# Microplate Washers





For nearly 30 years, BioTek has manufactured industry-leading microplate washers to make quick work of routine plate washing for basic applications. We expand microplate washer utility by designing innovative features and functions not found in other systems. As new and more efficient scientific assays methods are created, BioTek keeps pace, providing application flexibility and utility with uncompromising performance for every lab's requirements.

## When is a microplate washer much more than just a microplate washer?

When it's the 405™ Touch Microplate Washer, from BioTek. The 405 Touch takes the industry-leading performance of the ELx405™ washer and expands its capabilities by adding a crisp, clean, easy-to-use, easy-to-view touch screen interface. The array of exclusive features is designed to accommodate a variety of washing applications from basic ELISA and cell-based assays to biomagnetic separation and vacuum filtration assays.

With some systems, onboard software means "light" software – not so with the 405 Touch, which uses BioTek's Liquid Handling Control™ (LHC™) Software for the ultimate in programmability. From the most basic wash protocols to the most complex applications programming, the 405 Touch puts everything at your fingertips.

## Full Plate Washers



### 405™ Touch Microplate Washer (405 TS Models)

BioTek's latest family of high-performance microplate washers is led by the 405 Touch series. Top features of the 405 Touch include:

- ▶ 96- and 384-well washing using the patented Dual Action™ manifold
  - Use with gloved hands
  - Low power consumption
  - Can be used with pointing devices
- ▶ USB flash ports
  - Convenient file transfer and storage
  - Run LHC Software protocols directly
- ▶ Onboard software allows quick selection and execution of pre-programmed protocols
- ▶ Built-in Ultrasonic Advantage™ for automatic manifold cleaning and clog prevention (patent pending)
- ▶ Context sensitive help system complete with recommendations, diagrams and images is only a key press away
- ▶ Instructional videos walk users through instrument setup and basic use



### 405™ LS Microplate Washer

For installations within an automated system, or when PC control of the washer is preferred, there are several 405 LS models that offer equally excellent performance and features with a more simplified user interface. The 405 LS offers outstanding value in microplate washers with features like:

- ▶ 96- and 384-well microplate compatibility
- ▶ Fast 384-well washing with the 405 HT LS model
- ▶ Optimized dispensing for cell washing applications
- ▶ Vacuum filtration and biomagnetic separation capability
- ▶ BioStack™ Microplate Stacker and third party automation compatibility

With either the touch screen or simplified user interface, the 405 washers offer unsurpassed features and options to meet a wide variety of application and throughput requirements.



### ELx405™ Select Deep Well Microplate Washer

The world's first deep well microplate washer aspirates and dispenses into 96- and 384-well standard and deep well microplates ≤50 mm in height.

### EL406™ Microplate Washer Dispenser

Many microplate washers include a "dispense only" function for rapid reagent dispensing. The inherent drawbacks to microplate washer dispensing include high prime volumes and generally inferior performance compared to dedicated dispensers. Over several years, we fielded requests from customers for a microplate washer that combined the greatest features of the historical product line, and a dispensing system that rivals standalone dispenser performance. BioTek heeded the requests and developed the EL406 Combination Microplate Washer Dispenser – two instruments in one. The application benefits of the combined peri-pump and syringe dispensers on a 96- & 384-well microplate washer are virtually unlimited. The EL406 contains all the washing attributes of the 405 LS, plus up to 3 integrated reagent dispensers. Features of this multi-tasking instrument include:

- ▶ 1 to 3 reagent dispensers, incorporating both peristaltic and syringe pump technologies
- ▶ Dispense volumes as low as 1 µL
- ▶ 96-, 384-, and 1536-well plate compatibility
- ▶ Small footprint for benchtop or automated system
- ▶ Liquid Handling Control (LHC) Software available, or onboard programming for stand-alone use

## Combination Microplate Washer Dispensers



## Microplate Strip Washers

### ELx50™ Microplate Strip Washer

When hand washing microplates is no longer efficient, but throughput is low or the budget is tight, look to the ELx50 to provide full plate washing capability in a compact, efficient, and robust package. As a strip method washer, the ELx50 can be easily programmed to wash a single strip, multiple strips or an entire plate. Several models of the ELx50 expand its applicability to your laboratory's requirements: Choose from an 8-, 12-, or 16-channel wash manifold, vacuum filtration or magnetic bead processing capability and multiple buffer switching options. Features of the ELx50 washers include:

- ▶ 96- and 384-well microplate wash capability
- ▶ Easy-to-use, complete onboard programming
- ▶ Programmable fluid flow rates for gentle, moderate or vigorous washing
- ▶ Integrated waste pump
- ▶ Liquid Level Alert for both dispense and waste levels



## Increased Throughput

### BioStack™ Microplate Stacker

Choose between 10-, 30-, or 50-plate stacks to best suit your throughput requirements. Low volume, half-height plates are also compatible, with up to 75-plates stored in the 50-plate stack. BioStack is compatible with ANSI standard 96- and 384-well plates. 1536- and low-volume 384-well plates may also be stacked, providing higher throughput in a walk-away system. Additional features include a rotational gripper and optional barcode reader.







## Applications



BioTek's complete line of microplate washers, microplate strip washers and combination washer dispensers is designed to provide a comprehensive set of instrumentation options to meet the diverse assay needs of many different types of laboratories. From the clinical lab to academic research to drug discovery, there is certain to be a BioTek microplate washer system that fills the void in the simple or complex processes. Our Scientific Applications group has been able to demonstrate the outstanding performance of BioTek's washers with many publications in our library of Application Notes, including:

### Typical Applications:

**ELISA**

**Label-free cell-based assays**

**Magnetic and polystyrene bead assays**

**Filtration-to-waste processes**

**High content screening**

**Protein arrays**

- ▶ Automated ELISA with the EL406 Combination Washer Dispenser
- ▶ Multiplexing Magnetic Bead-Based Human Cytokine Assays – Automated Magnetic Bead Washing Using the ELx405
- ▶ Luminex xMAP Assays: Using BioTek's ELx50 Filter Microplate Washer to Perform the Wash Processes Required
- ▶ Efficacy of Using a Combination Microplate Washer Dispenser for Vacuum-Based DNA Sequencing Reaction Clean-Up
- ▶ Differential Cancer Biomarker

These are just a few of the publications that can be found in the Tech Resources section of [www.biotek.com](http://www.biotek.com). Our Applications Scientists will continue to add to this library, discovering new and innovative ways to automate assays using our versatile microplate washers.

## Which BioTek microplate washer is right for your laboratory?

	EL406™	405™ Touch	405 LS	ELx405™ Select Deep Well	ELx50™
<b>Features</b>					
ELISA	•	•	•	•	•
Magnetic bead assays	•	•	•	•	•
Polystyrene bead assays	•	•	•		•
Filtration-to-waste processes	•	•	•		•
Cell-based assays	•	•	•	•	•
Touch screen user interface		•			
USB ports for protocol transfer		•			
Built-in ultrasonic cleaner	•	•	•	•	
LHC™ Software compatible	•	•	•	•	
<b>General Specifications</b>					
Processing speed - 3 aspirate/ dispense cycles, 96-well plate, 300 µL/well	≤30 sec	≤30 sec	≤30 sec	≤30 sec	≤130 sec
Dispense precision	≤3% CV	≤3% CV	≤3% CV	≤3% CV	≤3% CV
Residual volume - solid bottom plate	≤2 µL	≤2 µL	≤2 µL	≤2 µL	≤2 µL
Microplate types	96, 384, 1536	96, 384	96, 384	96, 384	96, 384
Low profile and standard height	•	•	•	•	•
Solid and filter bottom	•	•	•		•
Deep well				•	
Automatic buffer switching	Up to 4	Up to 4	Up to 4	Up to 4	Up to 3
Volume range	3 - 3000 µL	25 - 3000 µL	25 - 3000 µL	50 - 3000 µL	25 - 3000 µL
Fluid and waste detection	•	•	•	•	•
Overflow protection	•	•	•	•	
Microplate shaking	•	•	•	•	•
Pre-programmed maintenance	•	•	•	•	•
BioStack™ & 3rd party automation compatible	•	•	•	•	

Complete specifications may be found and compared at [www.biotek.com](http://www.biotek.com)

Dual-Action™ manifold equipped models are protected by U.S. Patent No. 5,951,781.

Ultrasonic Advantage™ equipped models are protected by European Patent No. EP 2 093 572 B1.

Other Patent(s) Pending.



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