

MAGPIX[®]



System Specifications

Accuracy and Precision

- Sample uptake volume $\pm 5\%$
- Classification of microspheres $> 80\%$
- Misclassification of microspheres $\leq 2\%$
- Distinguishes 1 to 50 unique xMAP[®] microspheres in a single sample
- Temperature control $\pm 1^\circ\text{C}$ of target
- Sample carryover $\leq 4\%$
- Soluble background fluorescence emissions at $590\text{ nm} \pm 24\text{ nm}$ automatically subtracted from fluorescence intensity values

Sensitivity

- Detect ≤ 700 fluorochromes phycoerythrin (PE) per xMAP microsphere

Optics

- Reporter channel, LED excitation: $511\text{ nm} \pm 27\text{ nm}$
- Minimum reporter channel dynamic range: 3 decades of detection
 - Typical Dynamic Range: ≥ 3.5 decades of detection
- Reporter / Classification detector: CCD
- Reporter / Classification A/D resolution 16 bits
- Focus Lens: 5x magnification

Fluidics

- 96 well plate capability with additional off plate reagent area
- Piercing probe capability
- Auto adjusting probe capability
- Sample uptake volume $20\mu\text{L} - 200\mu\text{L}$.
- Internal / removable drive bottle and waste bottle
- Disposable Drive bottle volume: 650mL (8 plates)
- Waste bottle volume: 850mL

Electronics:

- USB 2.0 communications
- Input voltage range: 100 – 120 or 200 – 240 VAC and 50 – 60Hz

Setup

- Installation ≤ 2 hours
- System calibration < 10 minutes

Capacity

- Analyze multiple 96-well plates per batch
- Analyze multiple assay templates per plate
- Automatic sampling from a 96-well plate. The following microtiter plates are compatible with the MAGPIX plate holder: flat bottom, conical, round, filter bottom, [overall height no more than 0.75" (19mm)], any color
- Drive and waste bottles hold enough volume to run up to eight 96-well plates between refills
- Detect and distinguish surface reporter fluorescence emissions at $590\text{ nm} \pm 24\text{ nm}$ on the surface of 1-50 unique xMAP microsphere sets in a single sample

General

- Physical dimensions: 16.5cm (6.5 inches) W x 60cm (23.5 inches) D x 43cm (17 inches) H. Additional space required for the monitor/PC stand, keyboard, mouse and barcode scanner does not exceed 64.8cm (25.5 inches) W x 61cm (24 inches)
- Weight: up to 18kg (40lbs)
- Operating Environment:
 - Temperature: $15^\circ\text{C} - 35^\circ\text{C}$ ($59^\circ\text{F} - 95^\circ\text{F}$)
 - Humidity: 20% - 80%RH, non-condensing

General (continued)

- Altitude: up to 2400m (7874 ft) above mean sea level
- Temperature control: Maintains samples at a constant temperature from 35 °C - 60 °C (95°F - 131 °F)
 - Warm up time: 15 minutes
- Plate throughput time: ≤ 60 minutes

Monitor Specifications

- Screen resolution and number of colors: SXGA 1280 x 1024 with 32-bit color
- Screen size: 43cm (17")

PC Specifications

- Processor: 2.8 GHz Intel® Core 2 or higher
- Main memory: 4 G RAM or higher
- Hard disk drive: 80 GB or higher (160 GB recommended)

- Communication/Ports: four USB version 2.0 compatible high speed ports
- DVD-RW drive
- Operating system: English USA Microsoft® Windows® XP Professional, SP3 or English USA Windows® 7, 32-bit (not 64-bit)
- All Luminex instrumentation is CE and Safety Agency marked (MET and/or UL and/or TUV and/or NEMKO) to electrical/safety device standards. For details on approvals and standards compliance please contact Luminex.

Order Information

- Contact your Luminex Sales Representative

For technical support, call: 877-785-2323 (U.S. and Canada) or +1 512-381-4397 (International)

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LIQUID HANDLING

50™ TS Washer

BioTek's 50 TS Microplate Washer is a compact microplate washing system with functionality that is unsurpassed in its class. The color touchscreen provides a visual interface with menu-driven programming that makes creating protocols fast and intuitive. Its performance for conventional ELISA plate washing is excellent, but the 50 TS offers much more. Its modularity makes it ideal for cell-based assay washing, biomagnetic separation and vacuum filtration processes.

The 50 TS is an affordable choice for automating the wash steps of a variety of applications in clinical and research laboratories. Used in conjunction with the 800 TS Absorbance Reader or other detection system, the 50 TS offers a welcome upgrade from manual processing - bringing convenience and consistently high quality results to your laboratory's plate washing workflows.

Touchscreen User Interface:



Programming and operating the 50 TS is intuitive and easy with the touchscreen and menu-driven software.

Features:

- From the #1 microplate washer brand, BioTek, known for performance, reliability and support
- Application versatility: ELISA, cell-based assays and bead-based assays
- Color touchscreen makes programming quick and easy
- Easy touch operation for washing full or partial plates
- Reliable and safe: liquid level sensing
- Automated switching of up to 3 buffers for even greater automation
- Automated, built-in maintenance routines for continued reliable operation

Typical Applications:

- ELISA
- Cell-based assays
- Biomagnetic particle separation assays
- Filtration-to-waste protocols



Magnetic Bead Washing and Vacuum Filtration:



Wash filter-bottom plates and magnetic bead assays with available modules.

Configurations:

Configuration	Part #	96-well only	96-/384-well	Buffer Switching	Biomagnetic Separation	Vacuum Filtration
50™ TS	50TS8	•				
	50TS8V	•		•		
	50TS8M	•			•	
	50TS8MV	•		•	•	
	50TS8F	•				•
	50TS8MF	•			•	•
	50TS12	•				
	50TS12V	•		•		
	50TS16			•		
	50TS16V			•	•	

Optional Accessories:

- 4-, 8-, 8s-, 2 x 8- and 12-well manifolds
- 96-well magnets - choice of immobilization patterns
- Product Qualification Package



BioTek's 50™ TS Washer is ideal for pairing with 800 TS for routine workflows.



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Specifications:

General

Microplate types: 24-, 96-, 384-well plates and microwell strips
Shaking: Programmable in minutes and seconds up to 30 minutes
5 intensities from 15-19 Hz
Soak time: Programmable in minutes and seconds up to 30 minutes
Separation methods: Biomagnetic separation ("M" configurations)
Vacuum filtration ("F" configurations)
User interface: 4.3" color LCD touchscreen
Onboard software:

- Up to 75 user-programmable protocols
- Quick menu
- Create or edit custom protocols
- Run protocols created onboard or downloaded from LHC™ Software

 Software: Liquid Handling Control™ (LHC™), for PC wash protocol programming and execution (optional)

Washing

Manifold types:
 96-well washing:
 8-well (1x8) manifold, 2x8-well manifold, 12-well (1x12) manifold
 8-well short tube (1x8) manifold
96-/384-well washing: Dual-Action™ 16-well manifold
24-well washing: 4-well manifold
 Volume range: 25-3,000 µL well
 Fluid delivery: One positive displacement syringe drive
 Wash cycles: 1-10
 Buffer/reagent selection: Automated switching for up to 3 buffers ("V" configurations)
 Wash speed:

Plate	Manifold	Speed
96 well	2x8 well	<80s for 12 strips (3 cycles, 300 µL/well, no soak)
96 well	12 well	<90s for 8 strips (3 cycles, 300 µL/well, no soak)
96 well	8 and 8s well	<130s for 12 strips (3 cycles, 300 µL/well, no soak)
384 well	8, 16 well	<260s for 24 strips (3 cycles, 100 µL/well, no soak)
24 well	4 well	<60s for 24 wells (1 cycle, 1120 µL/well, no soak)

Dispense Precision:

	Manifold	Performance
96-well	8 and 8s well	≤3.0% CV when measured over six 300 µL-per-well dispenses of deionized water with 0.1% Tween 20.
96-well	12 well	≤3.0% CV when measured over four 300 µL-per-well dispenses of deionized water with 0.1% Tween 20.
384-well	8,16 well	≤4.0% CV when measured over six 100 µL-per-well dispenses of deionized water with 0.1% Tween 20.
96-well	2x8 well	≤4.0% CV when measured over six 300 µL-per-well dispenses (whole plate) of deionized water with 0.1% Tween 20.
24-well	4 well	≤4.0% CV when measured over six 1120 µL-per-well dispenses of deionized water with 0.1% Tween 20.

Residual Volume:

	Manifold	Performance
96-well	8 and 8s well	≤2.0 µL/ well after 3-cycle wash, 300 µL/well dispensed
96-well	12 well	≤2.0 µL/ well after 3-cycle wash, 300 µL/well dispensed
384-well	8,16 well	≤4.0 µL/ well after 1-cycle wash, 100 µL/ well dispensed
96-well	2x8 well	≤4.0 µL/ well after 3-cycle wash, 300 µL/well dispense
24-well	4 well	≤50 µL/ well after 1120 µL is dispensed per well
96-well	Vacuum filtration	Average increased weight of the plate is <1.2 grams after dispensing 300 µL of DI water per well

Physical Characteristics

Connectivity: 1 USB port for computer control
 Power: External 24VDC power supply compatible with 100-240VAC @ 50-60 Hz. Power consumption: 40 Watts
 Dimensions: 15"W x 15"D x 8"H (35.6 x 40.6 x 16.5 cm)
 Weight: 22 lbs (9.8 kg)

Regulatory

CE and TUV marked. Models for *In Vitro* Diagnostic use are available.

Preliminary performance values represent the average observed factory test values. Specifications subject to change.