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

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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.

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

The 50 TS is Luminex xMAP® approved.
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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.