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Agilent BioTek 50 TS Washer

Product description

The Agilent BioTek 50 TS 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 Agilent BioTek 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.

Figure 1. Programming and operating the Agilent BioTek 50 TS washer is intuitive and easy with the touchscreen and menu-driven software.
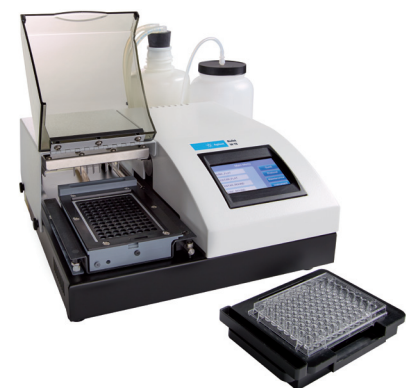
Features

– 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 three buffers for even greater automation

– Automated, built-in maintenance routines for continued reliable operation

Figure 2. Wash filter-bottom plates and magnetic bead assays with available modules.

Typical applications

– ELISA

– Cell-based assays

– Biomagnetic particle separation assays

– Filtration-to-waste protocols

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

Figure 3. The Agilent BioTek 50 TS washer is ideal for pairing with the Agilent BioTek 800 TS absorbance reader for routine workflows.

Technical details

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 to 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 Liquid Handling Control (LHC) software
Software	Liquid Handling Control (LHC) for PC wash protocol programming and execution (optional)

Washing	

Manifold Types	– 96-well washing:
	  – 8-well (1 x 8) manifold, 2 x 8-well manifold, 12-well (1 x 12) manifold
	  – 8-well short tube (1 x 8) 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	2 x 8 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		
Plate	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	2 x 8 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		
Plate	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	2 x 8 well	≤ 4.0 µL/ well after 3-cycle wash, 300 µL/well dispensed
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 deionized water/well

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

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