



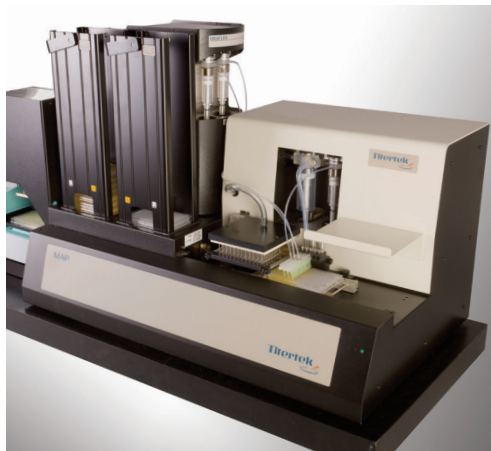
## MAP Series Microplate Assay Processors

Simple Solutions for  
Complex Processing Needs

**Titertek**

# MAP Series Microplate Assay Processors by Titertek

Simple Solutions for Complex Processing Needs



*The Titertek MAP series modular benchtop workstations provide reliable walk-away automation and serve as an excellent tool to automate tedious and routine microplate process.*

## **Features:**

- **Chemically resistant liquid path**
- **Powerful proprietary syringe drive, suitable for high throughput**
- **Accuracy and precision independent from reagent viscosity**
- **Up to 2 washing buffers**
- **Built in stacker with up to 180 plate stacking capacity**
- **0.5  $\mu$ l – 2200  $\mu$ l dispensing volume**
- **100 plates per hour processing speed (3 x 300  $\mu$ l washes followed by 50  $\mu$ l reagent dispense in 96-well plate)**
- **96 and 384-well plates processing**

Titertek's MAP series microplate assay processors are designed to serve as a modular workstation suitable for the processing of a diverse collection of assays. MAP assay processors feature high processing speeds, excellent accuracy and powerful, walk-away functionality.

## **Versatile**

MAP assay processors provide reliable start-to-finish automation of many liquid handling processes in 96-well and 384-well formats. The processors serve as the ideal tool for the processing of key applications in clinical diagnostics, genomics, proteomics, high throughput screening and bulk reagent distribution. These applications include, but are not limited to the following:

- ELISA assays
- Cell-based assays
- Drug screening assays
- Neonatal screening assays
- Microbead-based assays
- Microneutralization assays
- PCR-based assays
- Organic solvent dispensing
- Plate coating

## **Flexible**

The highly intuitive, easy-to-use software allows the user to create a sequence of commands and store the resulting program for future use. The software utilizes the following commands:

- Prime
- Wash
- Dispense
- Incubate
- Read

The plate processing can be followed by a preset clean-up procedure when required. To improve workstation flexibility, the following parameters are selectable:

- Dispense speed
- Dispense manifold movement speed and positioning
- Aspiration speed
- Aspiration head movement speed and positioning
- Soak time
- Plate delay for exact plate-to-plate processing time
- Plate column processing

Complete PC control allows unattended plate processing.

## Accurate

Titertek's rugged, high precision syringe drive assemblies assure excellent accuracy and precision. Interchangeable syringe sizes increase volume range and system flexibility.

The 50 mL syringe is used in conjunction with the 96 tip quadrant wash/aspirate head for unsurpassed speed in washing, aspirating and dispensing. 96-well plates are washed in one step and 384-well plates are washed in four quadrant steps. The 4-syringe mount on a single syringe drive delivers highly accurate dispensing of volumes as low as 0.5  $\mu$ l.



The positive displacement syringe design provides non-viscosity dependent dispensing. The use of inert materials, such as Teflon®, Kel-F® and glass ensures high chemical resistance of the liquid path.

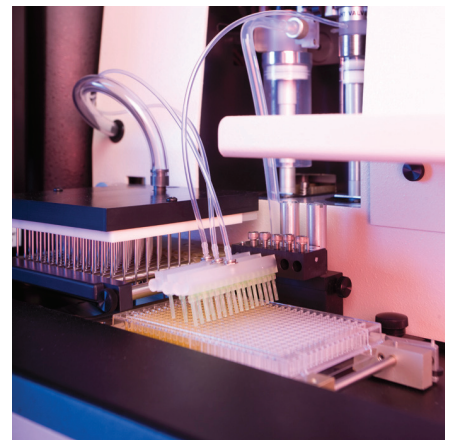
## Functional

MAP assay processors can be furnished with up to two Z-arms for functions that require lifting and lowering the manifold. They can also be used to wash/aspirate head and provide precise manifold positioning inside the well. Z-arms are necessary for the following functions:

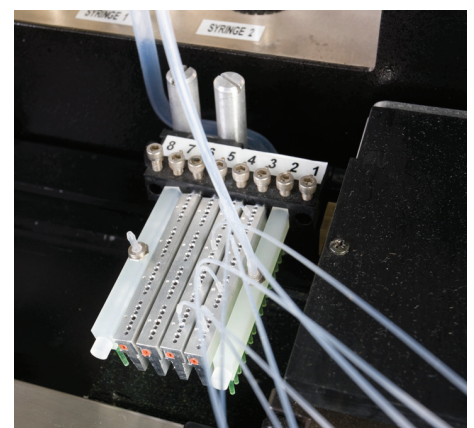
- plate-to-plate transfer
- serial dilutions
- washing functions

MAP also supports the following functions:

- Multiple reagent dispensing with up to 32 dedicated lines
- Up to 8 different dispensing reagents per each 10 ml syringe
- Up to 2 wash buffers per each 50 ml syringe
- Up to 32 syringes per MAP station
- Agar dispensing to a wide range of plates
- Filter plate washing and processing
- Plate de-lidding
- Easy plate reader integration
- Easy integration with robotic systems



*A linear carriage system with integrated stacker ensures fast and accurate microplate transfer during assay processing.*



*32 different reagents can be dispensed in 32 different wells simultaneously in one microplate.*

# MAP Series Microplate Assay Processors by Titertek

Simple Solutions for Complex Processing Needs



## Lifetime Service and Support

Our experienced, customer-oriented technical team looks forward to assisting you with installation, training and inquiries.

Titertek Instruments offers worldwide support and service. Our goal is to ensure that your lab automation system will function reliably through its entire lifespan.

## Technical Specifications

	MAP-C2		MAP-D	
<b>Weight</b>	80 lbs./ 36 kg		120 lbs./ 54 kg	
<b>Dimensions (W x D x H)</b>				
MAP with 60 plate magazines	33" x 19.5 x 39.15"/83 cm x 50 cm x 99 cm		33"x 27"x 40"/ 84 cm x 69 cm x 102 cm	
<b>Power Requirements</b>	100-120 VAC, 50/60 Hz nominal 200-240 VAC, 50/60 Hz nominal			
<b>Power Consumption</b>				
MAP Vacuum System	180 VA maximum 1500 VA maximum - 480 VA typical		240 VA maximum 1500 VA maximum - 480 VA typical	
<b>Fuses</b>				
	Slow-blow 1.5 amp for 120 V Slow-blow 0.75 amp for 240 V		Slow-blow 2 amp for 115 V Slow-blow 1 amp for 230 V	
<b>Environmental</b>				
Operating Temperature Range	41° F to +104° F / + 5° C to + 40° C			
Relative Humidity	10 - 85% (non-condensing)			
<b>Instrument Interface</b>	RS232			
<b>Throughput</b> - (plates per hour using Stacker)	96 Well Plates	384 Well Plates	96 Well Plates	384 Well Plates
96 Head Wash (3x - 300 µl or 70 µl)	150	92	105	74
Dispense - Single Manifold (100 µl or 30 µl)	190	100	130	83
Dispense - 4-in-1 using 2 syringes (100 µl or 50 µl)	150	69	116	85
Wash/Dispense (Wash 3x then dispense 30 µl)	107	60	92	50
	<b>Dispensing Accuracy, all MAP assay processors</b>			
	<b>96 Well Plates</b>		<b>384 Well Plates</b>	
Manifold with 10 ml Syringe 96-Well Manifold 4-in-1 Syringes (1 ml)	Better than 1% @ 25 µl Better than 2% across the plate (100 µl) Better than 1% @ 5 µl		Better than 1% @ 25 µl Better than 2% across the plate (100 µl) Better than 1% @ 5 µl	
	<b>Dispensing Precision, all MAP assay processors</b>			
	<b>96-Well Plates</b>		<b>384 Well Plates</b>	
Manifold with 10 ml Syringe 96-Well Manifold 4-in-1 Syringes (1 ml)	CV < 2.5% at 100 µl, 5% at 25 µl CV < 5.0% at 100 µl CV < 0.5% at 50 µl, 3% at 5 µl		CV < 3.5% at 50 µl, 5% at 25 µl CV < 5.0% at 100 µl CV < 1.0% at 25 µl, 3% at 5 µl	

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