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VS

Your Dependable Liquid Handling Partner

EzMate Automated Pipetting System

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Automated Pipetting System

EzMate™ 401 / 601

Your Dependable PCR / qPCR Setup Partner

EzMate™ 401 / 601 is an automated, high-precision pipetting system specifically designed for low-volume PCR / qPCR sample preparation. Lab technicians understand the many challenges associated with setting up PCR and qPCR reactions. Small volumes of reagents need to be dispensed accurately and consistently for acceptable PCR results, and the manual liquid handling process is tedious and time consuming, with many chances for mistakes.

The EzMate™ 401 / 601 was designed as a simple instrument to replace the manual process of PCR / qPCR sample prep. Accuracy, precision and consistency are guaranteed, and reagents will not be wasted on mistakes. Unlike complex, multi-purpose robotic systems, our instrument was designed for the researcher without prior robotics experience. Intuitive set up and programming will have your lab saving time and money almost immediately. Choosing EzMate™ 401 / 601 is a choice of "Working Smart".

Easy and Convenient to Use

- PC Software : EzStarter™ can be mastered in one hour. No trained technician is required.
- Built-in PCR / qPCR setup protocols can be quickly modified and transferred via USB memory stick.
- 1 and 8-channel, 50µl or 200µl, Automated Pipetting Modules (APMs) can be exchanged without tools.
- 4 or 6 standard microtiter plate / tip rack areas and 2 reagent areas.
- Wide variety of adapters for different types of labware.
- Import pipetting commands via .csv / .txt format files.
- Other Applications : Sequencing setup, HLA typing, SNP detection, DNA normalization

Easy to Service

- The Automated Pipetting Module (APM) is simple to remove and can be mailed-in for service and calibration.
- PC software is upgradable via the internet.
- The entire system is compact and light-weighted.

Easy to Afford

- The most affordable Automated Pipetting System available.
- EzTip™ robotic tips are compatible with Beckman's® Biomek® 3000 system.
- The passive cooling CoolBlock™ adapters keep sensitive reagents / samples at 7°C for more than 60 minutes.
- Save reagent costs by reducing human errors and using more dense plates.

Accurate and Precise

- Each Automated Pipetting Module (APM) is calibrated following ISO-8655 standards.
- Excellent results for qPCR standard curve and replicates (Figure 1).
- Better Precision of pipetting results than manual pipetting (Figure 2).

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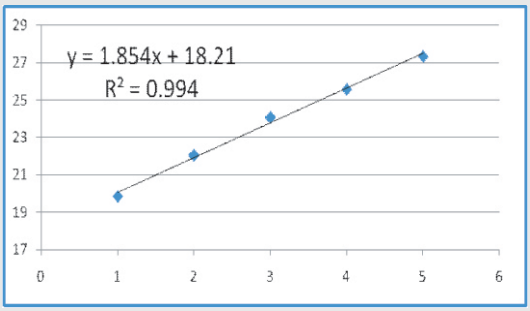
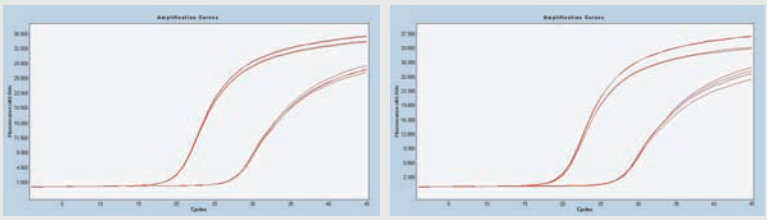


Figure 1. Excellent Serial Dilution Results
7ml NIH3T3 Cell cDNA sample is diluted in 21ml water at 1:4 ratio for 4 times. Roche® LightCycler® 480 real-time PCR thermal cycler and Finnzyme DyNAmo® Flash SYBR® Green qPCR kit (F-415L) were used.



EzMate™401
C_T std dev 0.135

Manual Pipetting
C_T std dev 0.145

Figure 2. Better Precision Results than Manual Pipetting
Target: Human GAPDH (top curve) was amplified in replicates of 18µl (master-mix) and 2µl (cDNA) were pipetting into 20µl reaction volume. Roche® LightCycler® 480 real-time PCR thermal cycler and Invitrogen™ Platinum® Taq DNA Ploymerase were used.

1. Functional Safety Housing
- Safety door detection for emergency stop
- Light-weighted Acrylic material

2. Automated Pipetting Module (APM)
- Easy to exchange
- 1/8 channel, 50ml / 200ml models
- Automatic channel and volume identification

3. Disposable Used Tip Tray
- Capacity > 400 tips

4. 2x Reagent Areas
- For 1.5ml or 2ml micro-centrifuge tubes, 8ml reagent bottle, 15ml or 80ml reagent reservoirs and 8-strip PCR tubes
- CoolBlock™ available for 1.5ml, 2ml micro-centrifuge tubes, 8ml reagent bottle

5. 4 / 6-position SBS Worktable
- 1 designated tip rack area
- 2 designated SBS format labware areas
- 1 (3 for 601 systems) Common areas for both labwares and tip racks.
- CoolBlock™ available for 96 / 384-well PCR plates and 20 well adapter for 1.5ml or 2ml micro-centrifuge tubes

6. Compact Design
- Small footprint
- Extremely light-weighted

7. 15.6" Notebook Computer with EzStarter™ Software
- PCR / qPCR-oriented software
- Pre-run simulation
- Operating System: Windows® XP / 7 / 8 (32 /64 bit)

Performance of Automated Pipetting Module (APM)

1 / 8 Channel-Volume: 50µl

	1µl	50µl
Accuracy (Rel.)	± 7%	± 1%
Precision (Rel. CV)	≤ 7.5%	≤ 0.4%

1 / 8 Channel-Volume: 200µl

	10µl	200µl
Accuracy (Rel.)	± 3%	± 0.8%
Precision (Rel. CV)	≤ 1%	≤ 0.15%

Note: According to ISO-8655 standards (Gravimetic method), APM is calibrated in temperature (21~25°C, ± 0.5°C) and humidity (60~90%) controlled environment. Twice~distilled water, robotic tips and microbalance were used.

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EzMate™ 401s / 601s

For High-contamination and Temperature-sensitive Applications

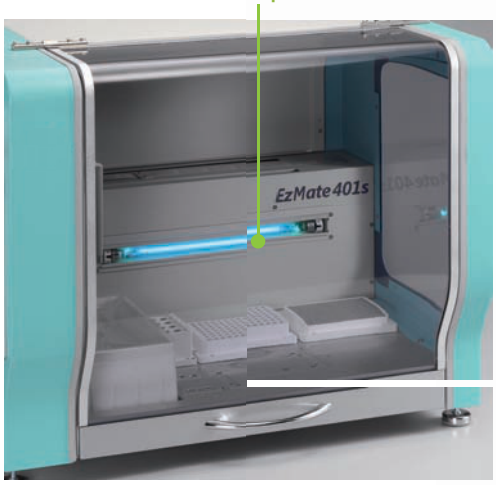
The all new EzMate™ 401s and 601s use the same platform and software of EzMate™ 401 / 601, but have more advanced features added, such as UV lamp, HEPA filters and Active Cooling / Heating modules (ACHM). For high-contamination clinical labs and RNA experiments, the UV lamp and HEPA filter provide a clean working environment. For temperature-sensitive samples and reagents, the Active Cooling / Heating module (ACHM) prevent them from degrading.

Exceptional Safety

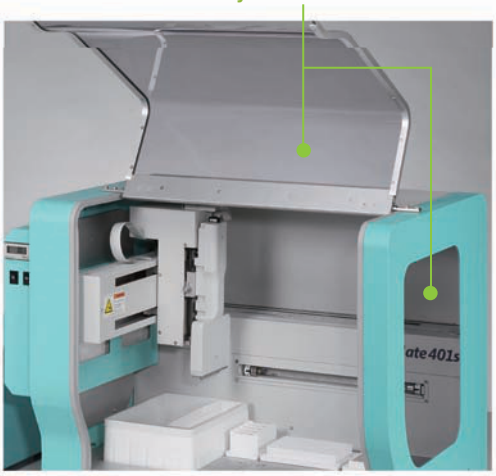
The advanced design of the EzMate™ 401s / 601s delivers improved process safety, giving you peace of mind.

The standard UV and HEPA modules ensure effective worktable decontamination and provide positive clean air pressure throughout PCR setup. The UV safety shield provides protection to human eyes from UV light.

UV Lamp



UV Safety Shield



HEPA Filters

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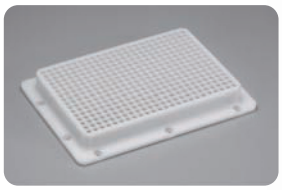
To heat or to cool, it's up to you!

With optional Active Cooling / Heating Module (ACHM), you can keep your precious samples and reagents cool and fresh during the experiment setup. You can also heat up your experiment mixture to speed up the reaction. Interchangeable cooling / heating adapter allows you to adopt different types of labware.

The Active Cooling / Heating Module (ACHM) includes the Active Cooling / Heating Control Box, which provides the user an interface, a power supply, and the Active Cooling / Heating Adapters.

Active Cooling / Heating Module (ACHM)

Active Cooling / Heating Positions: R1 / A / C Areas



384-well PCR plate Active Cooling / Heating Adapter

96-well PCR plate Active Cooling / Heating Adapter

R1 Active Cooling / Heating Adapter

R2 Active Cooling / Heating Adapter

ACHM Control Box

Technical Specification

UV Lamp	
Irradiation period per run	15 min
Irradiation capacity	> 40 mW/cm2
Wavelength	254 nm (UV-C)
HEPA System	
Filter	3M® Air-Mate™ HEPA Filter x 2
Volume flow	> 200 L/min
Active Cooling / Heating Module (ACHM)	
Setting Range	4 ~ 70°C
Max. Heating Rate	5°C/min at RT=22°C
Max. Cooling Rate	2°C/min at RT=22°C
Available Position	R1 / A / C Areas

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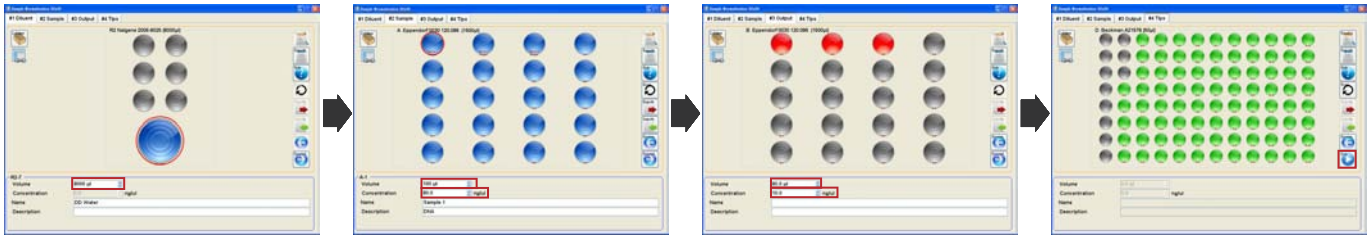
EzApp™ DNA/RNA Normalization

Having trouble with sample concentration normalization prior to reverse transcription? Want to make sure that all the samples are loaded equally to reduce internal error? EzApp™ DNA/RNA Normalization is here for you. No more tedious calculation. No more pipetting error. All you need to do is providing the original concentration of your DNA/RNA samples, the final concentration, and the volume you need, and EzApp™ will do the rest for you.

Sample Normalization Procedure

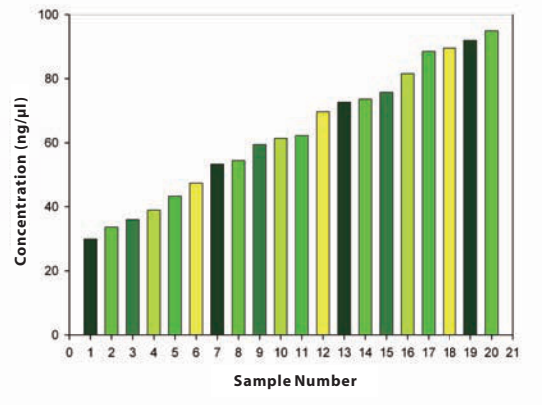


Step 1. Diluent setup | Step 2. Sample setup | Step 3. Output setup | Step 4. Tips setup, and "Run"

DNA Normalization Data

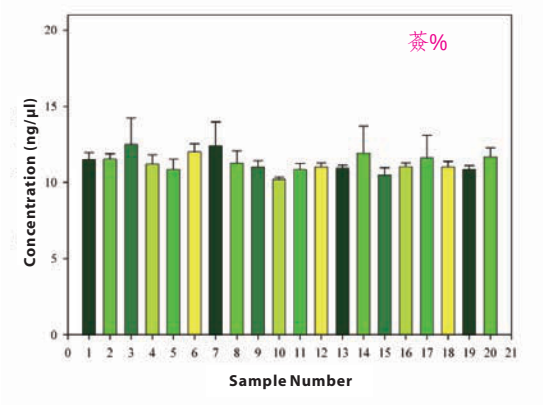
20 Different Arabidopsis DNA Samples Normalization Data

20 original DNA samples with different concentrations



DNA Normalization by EzApp™

20 normalized DNA samples



More EzApps are Coming Soon!

We can provide custom-made EzApp™ upon request.

PCR and qPCR Preparation | Serial Dilution | Sample Normalization | MasterMix Preparion | Gene Expression | SNP | HLA Typing | Virus Content Test

Automated Pipetting System

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Product Specification

	401	601	401s	601s
Worktable Capacity				
SBS Format Area	2 ~ 3	2 ~ 5	2 ~ 3	2 ~ 5
Tip Rack Area	1 ~ 2	1 ~ 4	1 ~ 2	1 ~ 4
Reagent Area	2	2	2	2
Function				
Liquid (Sample/Reagent) Trans fer (LT)	v	v	v	v
Multiple Dispense (MD)	v	v	v	v
Serial Dilution (SD)	v	v	v	v
Hold (Pause)	v	v	v	v
Mixing (MIX)	v	v	v	v
Loop	v	v	v	v
UV / HEPA	N/A	N/A	v	v
Active Cooling / Heating Module (ACHM)	N/A	N/A	Optional, Up to 3 a reas	Optional, Up to 3 a reas
Automated Pipetting Module	Interchangeable 1 /8-channel, Maximumvolume 50µl/200µl			
Connection	RS-232, USB 3.0 / 2.0 .			
Power Supply	100~240V, 50/60 Hz, 100W			
Size (W x D x H)	590 x 450 x 470 mm	740 x 450 x 470 mm	660 x 450 x 490 mm	810 x 450 x 490 mm
Weight (N.W.)	25 Kg	29 Kg	31 Kg	35 Kg
ACHM Control Box Size (W x D x H)	N/A	N/A	240 x 300 x 230 mm	240 x 300 x 230 mm
ACHM Control Box Weight (N.W.)	N/A	N/A	2 Kg	2 Kg

Application Note Highlights

- Avoid Tedious Pipetting and Offer Reliability during Antigen Transfer by using EzMate™ 401
- Analyze Copy Number of Mitochondrial DNA by qPCR with the EzMate™ 401
- Clinical Laboratory adopting EzMate™ 401 in Hepatitis B Virus (HBV) Real-time PCR Test
- Tremendous Reagent and Labor Saving
  Saves 40% cost for Real-time PCR setup in high throughput SNP analysis using EzMate™ 401 system and 384-well PCR microplate
- Bone Marrow Registry SBT HLA Typing with EzMate™ 401 Automated Pipetting System
- A Timer Saver in Bone Marrow Transplantation
- Detection of HPV Genotyping by TS-PCR and Biochip with EzMate™ 401
- Improved PCR Uniformity and Sensitivity by Using EzMate™ 401
- Evaluate the Performance of Real-time PCR Instruments by Using EzMate™ 401 Automated Pipetting System
- Plant Leafs Genomic DNA Extraction for Genomic Mapping using EzMate™ 401

Automated Pipetting System

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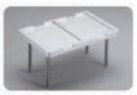
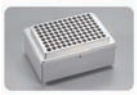
Ordering Information

Catalog No.	Description
EzMate™ 401	
AREZ401-10000	4-position Automated Pipetting System, 15.6" Notebook Computer and EzStarter™ control software
EzMate™ 601	
AREZ601-10000	6-position Automated Pipetting System, 15.6" Notebook Computer and EzStarter™ control software
EzMate™ 401s	
EZ4SU00-100000	4-position Automated Pipetting System with UV / HEPA, 15.6" Notebook Computer and EzStarter™ control software
EZ4SUA0-100000	4-position Automated Pipetting System with UV / HEPA and 2-position Active Cooling / Heating module, 15.6" Notebook Computer and EzStarter™ control software
EZ4SUAC-100000	4-position Automated Pipetting System with UV / HEPA and 3-position Active Cooling / Heating module, 15.6" Notebook Computer and EzStarter™ control software
EzMate™ 601s	
EZ6SU00-100000	6-position Automated Pipetting System with UV / HEPA, 15.6" Notebook Computer and EzStarter™ control software
EZ6SUA0-100000	6-position Automated Pipetting System with UV / HEPA and 2-position Active Cooling / Heating module, 15.6" Notebook Computer and EzStarter™ control software
EZ6SUAC-100000	6-position Automated Pipetting System with UV / HEPA and 3-position Active Cooling / Heating module, 15.6" Notebook Computer and EzStarter™ control software
Interchangeable Automated Pipetting Module	
275-ezar01-01	1-channel, 50ml Pipetting Module (New Bracket)
275-ezar02-01	8-channel, 50ml Pipetting Module (New Bracket)
275-ezar03-01	1-channel, 200ml Pipetting Module (New Bracket)
275-ezar04-01	8-channel, 200ml Pipetting Module (New Bracket)
275-ezar04-11	8-channel, 200ml Pipetting Module for Axygen FX-250-R tips (New Bracket)
Robotic Tips	
T00-ezar00-00	EzTip™ 50µl, non-sterile, 96 tips/rack; 10 racks/pack
T00-ezar01-00	EzTip™ 200µl, non-sterile, 96 tips/rack; 10 racks/pack
T00-ezar02-00	EzTip™ 50µl, sterile, 96 tips/rack; 10 racks/pack
T00-ezar03-00	EzTip™ 200µl, sterile, 96 tips/rack; 10 racks/pack
Accessories	
275-ezar21-00	96 tips rack adapter
275-ezar22-00	Elevated 96-well PCR plate adapter
275-ezar23-00	Elevated 384-well PCR plate adapter
275-ezar24-00	Deep well plate adapter
275-ezar26-00	4 x 2 1.5ml tubes adapter
275-ezar27-00	3 x 2 2ml storage tubes & 1 x 5ml bottle adapter
275-ezar30-00	CoolBlock™ 96 adapter for 96-well PCR plates
275-ezar31-00	CoolBlock™ 384 adapter for 384-well PCR plates
275-ezar34-00	CoolBlock™ R10 adapter for 4 x 2 1.5ml tubes
275-ezar35-00	CoolBlock™ R20 adapter for 3 x 2 2ml storage tubes and 1 x 5ml bottle
275-ezar37-00	CoolBlock™ 20 adapter for 1.5 / 2ml tubes
275-ezar40-00	20-well 1.5ml tubes adapter
275-ezar47-00	80ml reservoir adapter
275-ezar49-00	Disposable 80ml reservoir x 20 pcs
275-ezar51-00	Disposable used tip tray x 10 sets
275-ezar66-00	HLA typing adapter for 60/72-well
275-ezar67-00	HLA typing adapter for 96-well
275-ezar68-00	0.5ml tube adapter for 20-well adapter
275-ezar72-00	3 x 15ml reservoirs adapter
275-ezar73-00	Disposable 15ml reservoir x 9 pcs
275-ezar74-00	3 x 8-strip tubes adapter
275-ezar75-00	96-well conical bottom adapter
275-ezar76-00	Elevated ELISA / cell culture adapter
275-ezar78-00	Illumina 48-well plate adapter
275-ezar79-00	R1 Active Cooling / Heating Adapter
275-ezar80-00	R2 Active Cooling / Heating Adapter
275-ezar81-00	96-well PCR plate Active Cooling / Heating Adapter
275-ezar82-00	384-well PCR plate Active Cooling / Heating Adapter

Accessories

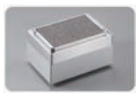

1-channel APM

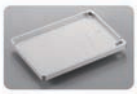

HLA typing adapter for 60 / 72-well

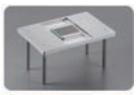

CoolBlock™ 96


8-channel APM


HLA typing adapter for 96-well


CoolBlock™ 384


96 tips rack adapter


Illumina 48-well plate adapter


CoolBlock™ 20


Elevated 96-well PCR plate adapter


4 x 2 1.5ml tubes adapter


CoolBlock™ R10

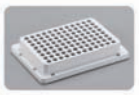

96-well conical bottom adapter

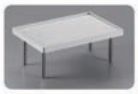

3 x 2 2ml storage tubes and 1 x 5ml bottle adapter


CoolBlock™ R20

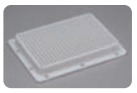

Elevated 384-well PCR plate adapter

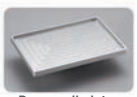

3 x 8-strip tubes adapter


96-well PCR plate Active Cooling / Heating Adapter


Elevated ELISA / cell culture plate adapter


80ml reservoir adapter

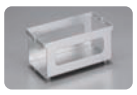

384-well PCR plate Active Cooling / Heating Adapter


Deep well plate adapter


Disposable 80ml reservoir


R1 Active Cooling / Heating Adapter


20-well 1.5ml tubes adapter


3 x 15ml reservoirs adapter


R2 Active Cooling / Heating Adapter


0.5ml tube adapter for 20-well adapter


Disposable 15ml reservoir


Disposable used tip tray set

Note: Specifications are subjected to change without notice.

CE IVD

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ISO 13485