

Pipetting System - EzMate

Description

EzMate automated pipetting system series is ideal for routine low volume pipetting, and helps eliminate tedious pipetting and human error, which enables more precise and standardized results to improve productivity.

With highly-customized adapters and application-oriented software, EzMate can satisfy the various needs of assays, including PCR/qPCR set up, sample normalization, NGS preparation, and reagent kit manufacturing methods.



Pipetting System EzMate 601

Specifications

Simple Operation

- Easy-to-use system setup software without need of additional technical support
- Built-in automatic PCR/qPCR set-up protocols that support USB data transfer

Accuracy and Precision

- Each automated pipetting module (APM) is calibrated using ISO-8655 standards

High Flexibility and Capacity

- Single, 4- and 8-channel, 50µl or 200µl automated pipetting modules (APMs)
- Six interchangeable standard micro-plate / tip rack adapters and two inter-changeable reagent vessel adapters
- Active cooling and heating module (ACHM) options for sensitive samples/reagents
- UV lamp and HEPA filter meet the need of high-contamination assays
- Customized adapters support various types of labware

Exceptional Safety

- UV lamp and HEPA filter meet the need of high-contamination assays

Temperature-Sensitive Sample Protection

- Active cooling and heating module (ACHM) options for sensitive samples / reagents

Open Labware

- Customized adapters support various types of labware.
- Fully compatible with a variety of consumables on the market



EzMate 601s (UV/HEPA) with optional cooling / heating module ACHM)

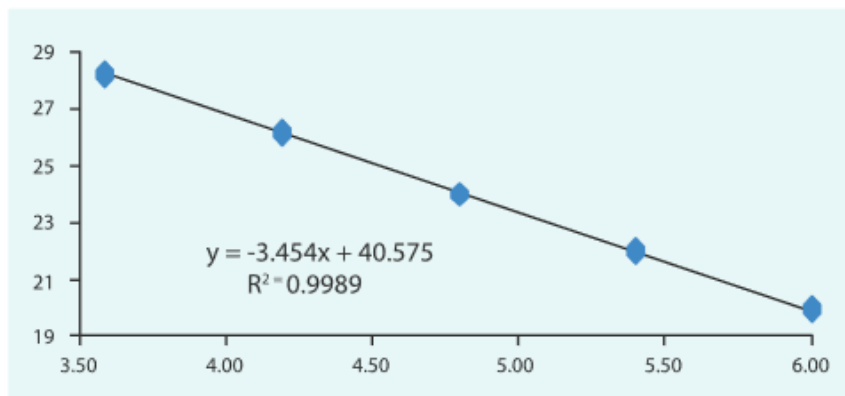


EzMate 401 interior with UV

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Accuracy and Precision

Excellent serial dilution results for qPCR standard curve and replicates

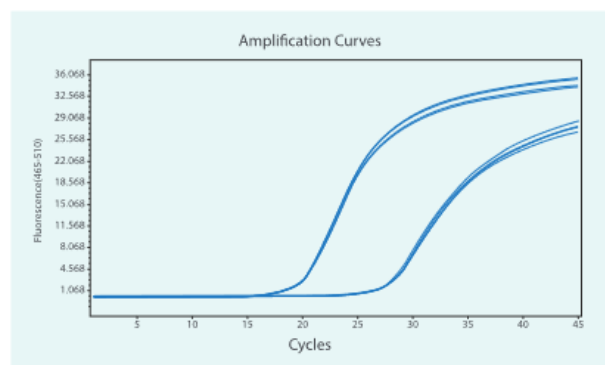


PCR efficiency = 94.77%

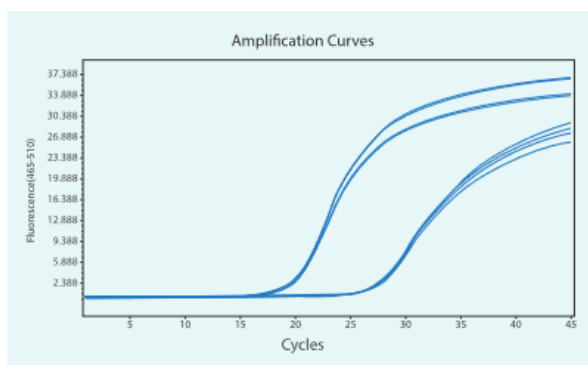
A 10 µl synthetic DNA sample is diluted in 30 µl water at an 1:4 ratio. (Roche Light Cycler® 480 Real-Time thermal cycler and Finnzyme DyNAmo™ Flash SYBR® Green qPCR Kit (F-415L) were used.

Better Precision than Manual Pipetting

Target: Human GAPDH (top curve) was amplified in replicates of 4.18 µl (master-mix) and 2 µl (cDNA) were pipetted into a 20 µl reaction volume. (Roche Light Cycler® 480 Real-Time thermal cycler and Invitrogen™ Platinum Taq DNA Polymerase were used.)



EzMate 401 : Ct std dev = 0.135



Manual pipetting : Ct std dev = 0.145

Performance of Automated Pipetting Module (APM)

50 µl tip on single or 8-channel pipetting module

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

200 µl tip on single or 8-channel pipetting module

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

Note: According to ISO-8655 standards (Gravimetric method), APM is calibrated in a 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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Model	401 4-position	601 6-position	401s 4-position & UV / HEPA	601s 4-position & UV / HEPA
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
Automated pipetting module	Interchangeable 1 / 4 / 8 channel, max. volume 50 µl / 200 µl			
UV / HEPA	N/A	N/A	Yes	Yes
Active cooling / heating module (ACHM)	N/A	N/A	Option	Option
Function				
Liquid (Sample / Reagent Transfer (LT))	Yes	Yes	Yes	Yes
Multiple Dispense (MD)	Yes	Yes	Yes	Yes
Serial Dilution (SD)	Yes	Yes	Yes	Yes
Hold (pause)	Yes	Yes	Yes	Yes
Mixing (Mix)	Yes	Yes	Yes	Yes
Loop	Yes	Yes	Yes	Yes
General Technical Data				
Connection	RS-232, USB 3.0 / 2.0			
Power supply	100 – 240 V, 50/60 Hz, 100 W			
Dimensions (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