



TANBEAD



Switch 8

Multi-Functional Purification System

WWW.TANBEAD.COM
Taiwan Advanced Nanotech Inc.

I New Maelstrom Switch 8, an automated nucleic acid extraction system with changeable gearboxes that process small to large volumes.

Feature & Specification:



Process Time

- Up to 16 samples in a single run
- From 25-60 mins



Flexible

- Changeable gearbox, 1-16 throughput
- Support from 50 µl -9 ml volumes



Performance

- Comparable to other models
- Spin speed: 500-3000 RPM
- Magnet Force: 4: 4700 gauss, 8/16 3900 gauss



Safety

- 100~240Vac, 2.3~1.1A, 50/60Hz
- UV sterilization with door sensor
- Heating range: 25 ~130°C



Intuitive Interface

- Pre-installed protocols with 100 programs storage
- 7" touch screen with error proof design



Convenient

- Able to fit in with a Bio-Safety Cabinet
- Compatible with all Maelstrom series kits



Portable

- Instrument dimension and weight 524(W)x265(D)x412(H)mm / 16.5KG



Certification

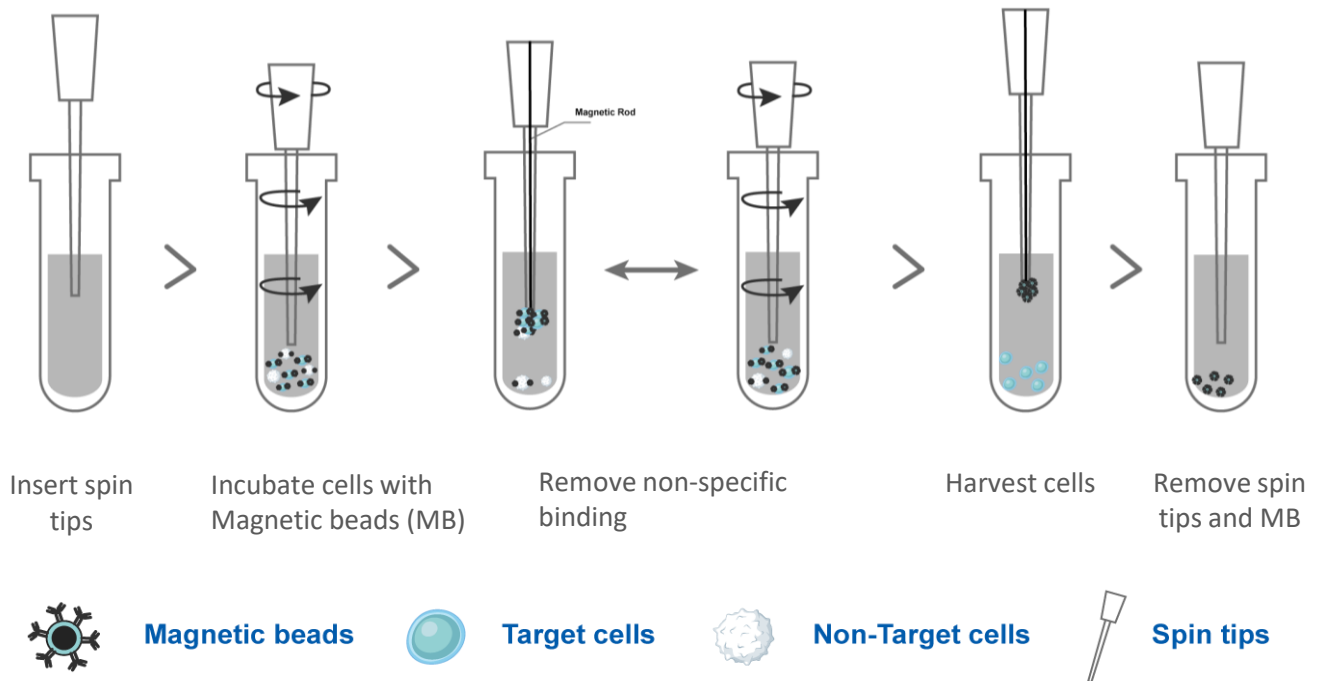
- ISO 13485: 2016
- CE-IVDR
- TFDA



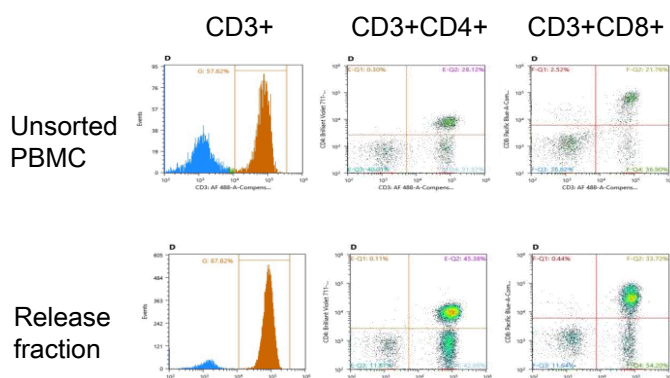
Item	Maelstrom Switch8
Dimensions	524(W) x 265(D) x 412(H) mm
Power Rating	AC 100~240V, 50/60Hz, 2.3~1.1A
Weight	≈16.5kg
Max Throughput	Switchable 4/8/16 tests (4/8 are standard equipment)
Process Volume	4: 0.1-9 mL 8/16: 0.05-1.2 mL
Magnet Force	4: 3,900 Gauss 8/16: 4,700 Gauss
Spin Speed	4: 500-2,500 RPM 8/16: 500-3,000 RPM

Multiple biomolecules purification flowchart

- Cell Isolation



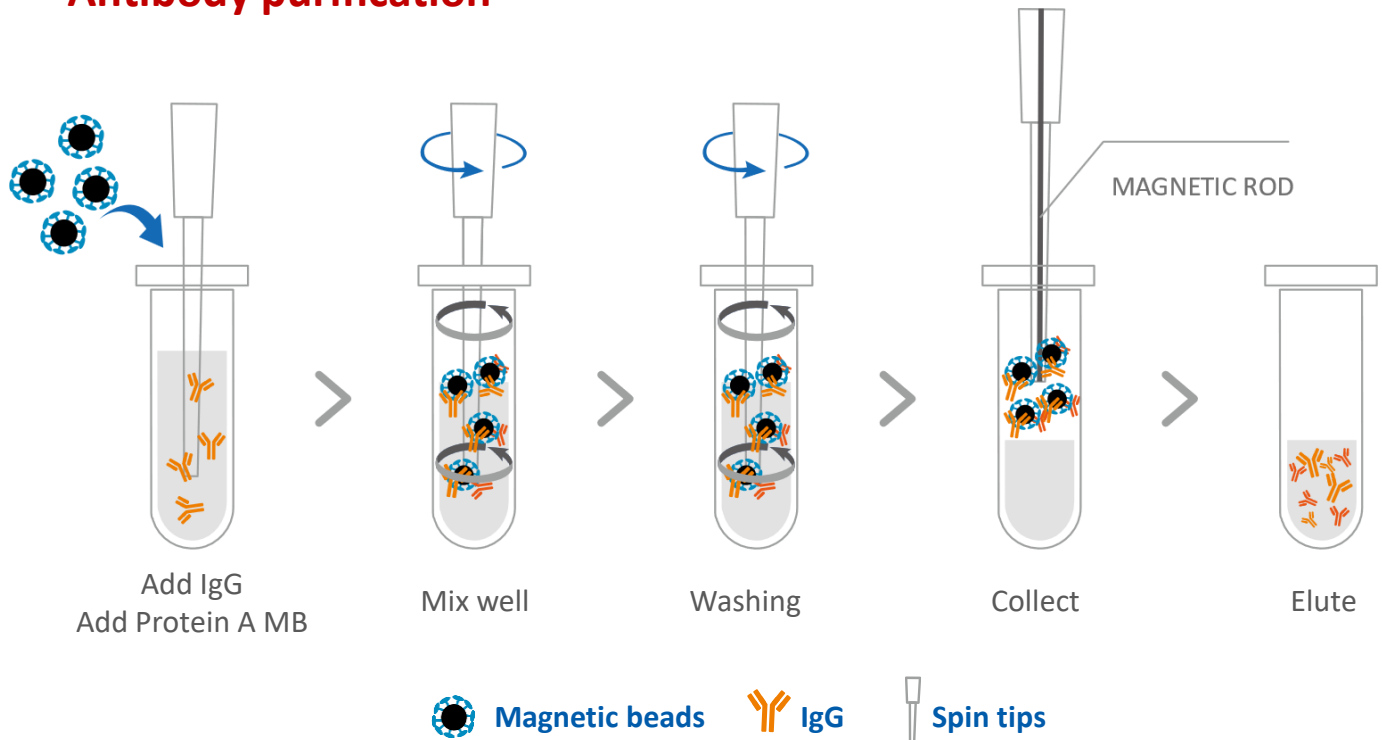
Instrument	Maelstrom Switch 8
Beads	TANPURE Human CD3 Isolation Beads
Input	2x10 ⁶ PBMCs
Turnaround time	30 minutes
Preliminary result	Enriched cell purity: 87.82% (CD3+ cell/ eluted cell) Viability: Culture with RPMI+10% FBS Day 0: 5.0x10⁴ cells (Viability: 94.4%) Day 3: 5.9x10⁴ cells (Viability: 97.1%)



Cell types	Gated CD3 ⁺ cells	CD3 ⁺ CD4 ⁺	CD3 ⁺ CD8 ⁺
Unsorted PBMC	57.82%	28.12%	21.76%
Release fraction	87.82%	45.38%	33.72%

Multiple biomolecules purification flowchart

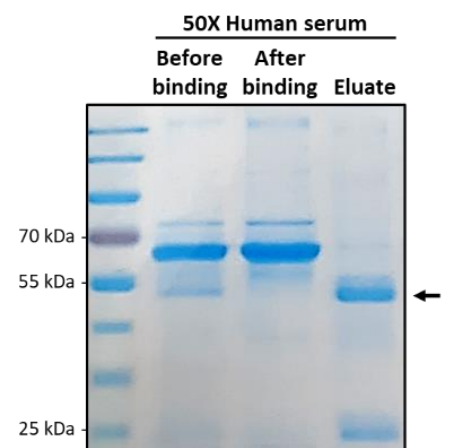
- Antibody purification



Method	Manual antibody purification	Automated antibody purification
Instrument	Magnetic rack	Maelstrom Switch 8
Beads	TANPURE Protein A MB (Cat. 304001)	
Concentration	10 mg/ml	
Use per test	50 μ l (0.5 mg)	

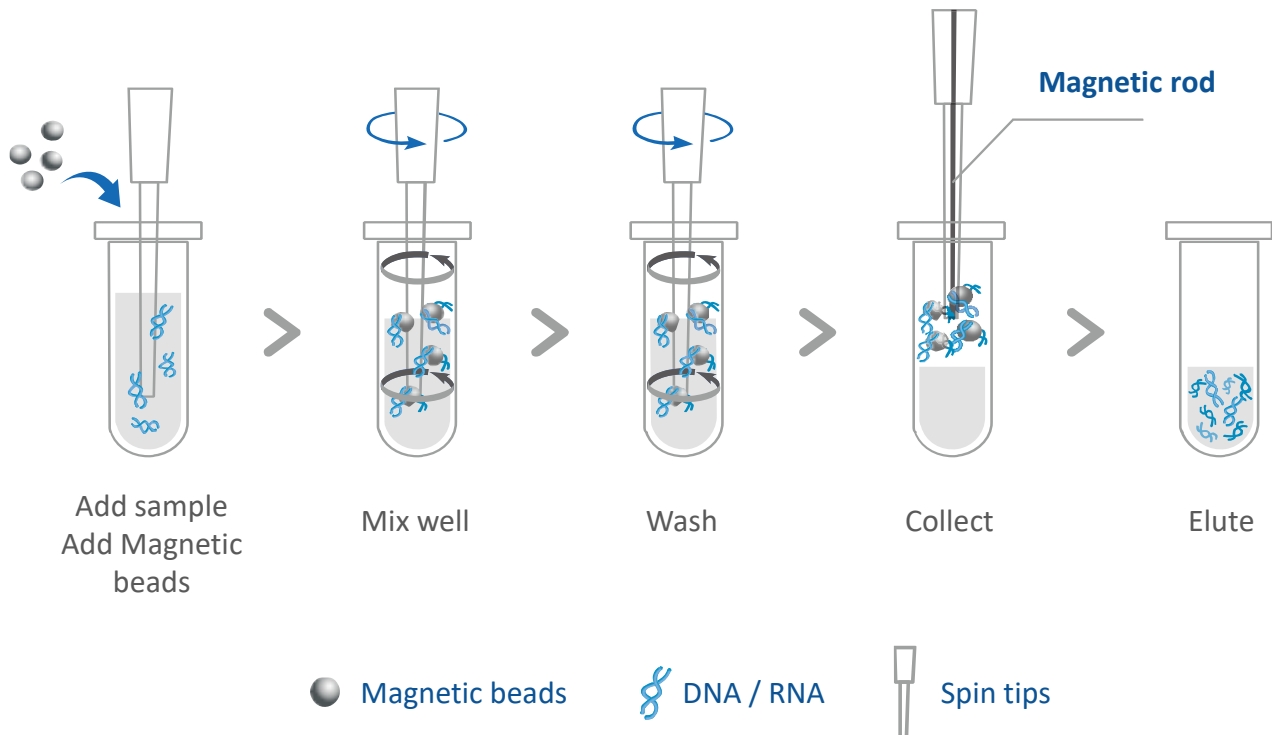
Input Hu Serum => 50x dilution Rb IgG => 60 μ g

Binding Capacity (mg of bead)	Manual antibody purification (Nanodrop)	Automated antibody purification (Nanodrop)
	1. Human Serum Ig (50X) : $102.7 \pm 2.4 \mu\text{g/mg}$ of bead 2. Rabbit IgG: $89 \pm 3.4 \mu\text{g/mg}$ of bead	1. Human Serum Ig (50X) : $111.3 \pm 4.76 \mu\text{g/mg}$ of bead 2. Rabbit IgG: $93.7 \pm 4.16 \mu\text{g/mg}$ of bead

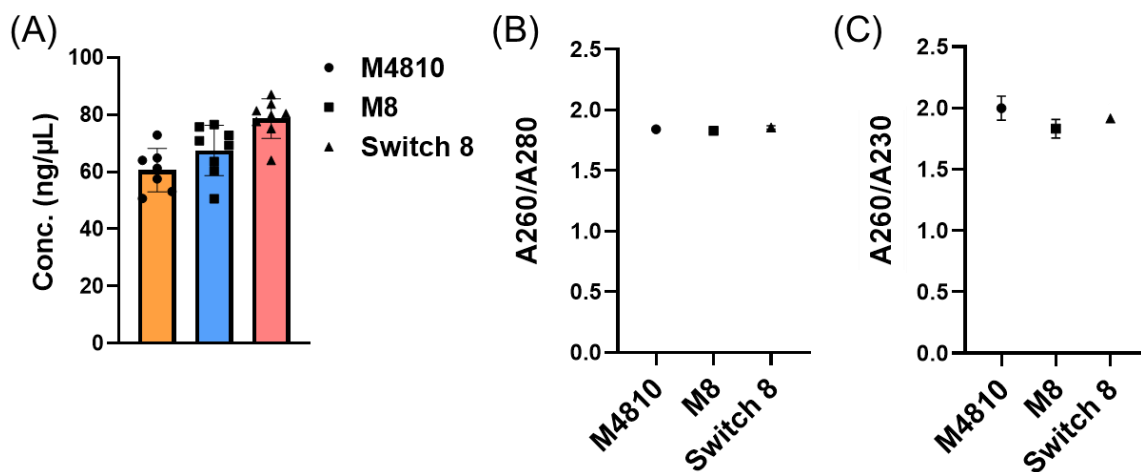


Multiple biomolecules purification flowchart

- Nucleic acid extraction



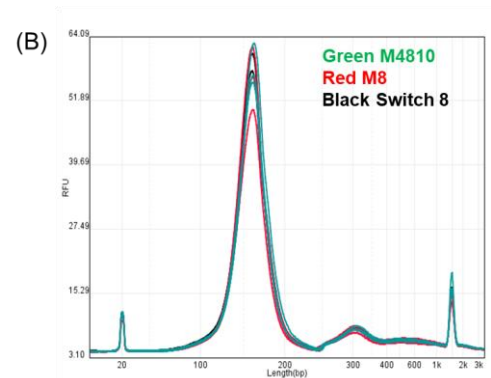
Blood DNA extraction, 61E





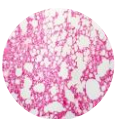
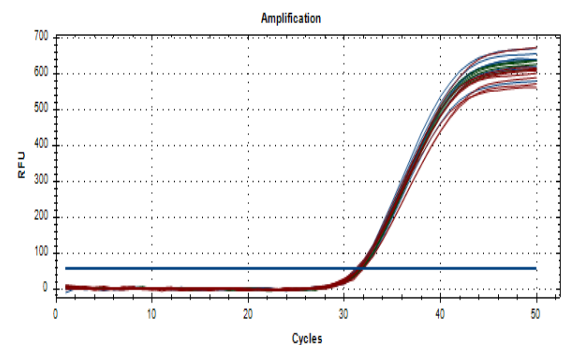
cfDNA extraction, 61C

Machine		Mean $\pm$ SD
M4810	Yield (ng)	17.38 $\pm$ 1.75
	CV%	10.1%
M8	Yield (ng)	16.11 $\pm$ 4.69
	CV%	29.1%
Switch 8	Yield (ng)	17.45 $\pm$ 0.52
	CV%	3.0%

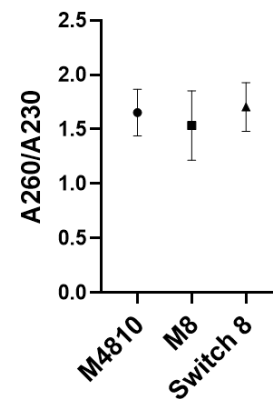
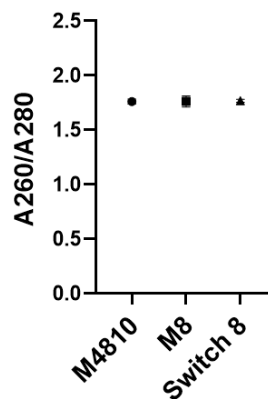
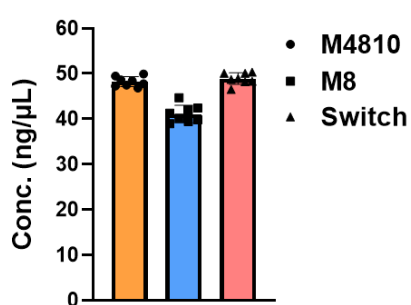


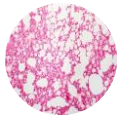
DNA virus diagnosis, 665

Machine	Sample	Ct, Mean $\pm$ SD
M4810	HPV DNA	31.68 $\pm$ 0.13
M8		31.55 $\pm$ 0.22
Switch 8		31.54 $\pm$ 0.29

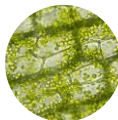
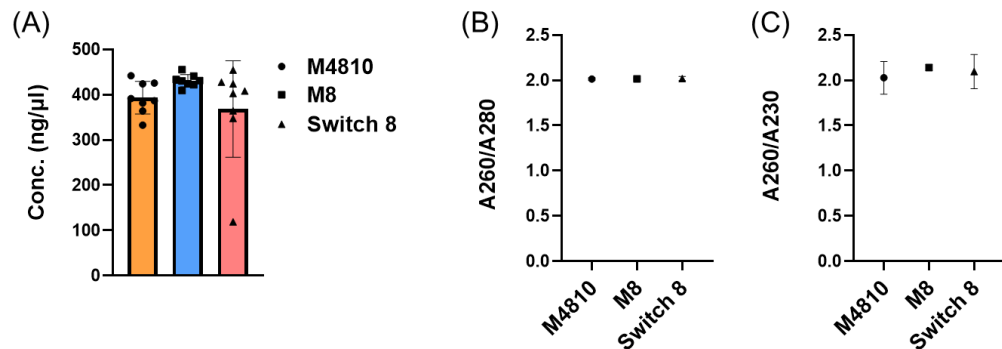


Tissue DNA Extraction, 6T2

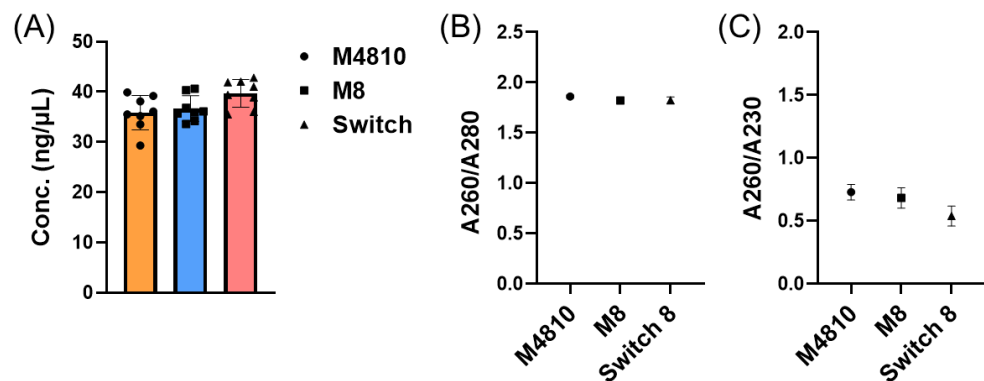




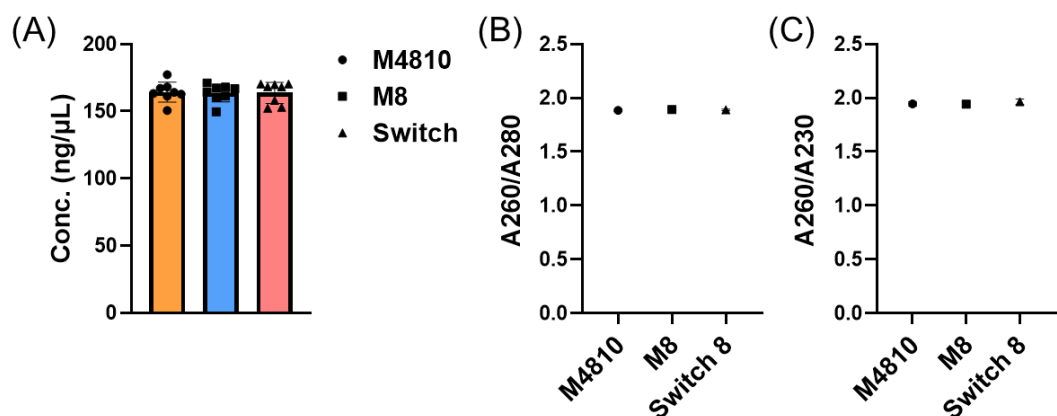
Tissue RNA Extraction, 6K2



Plant DNA Extraction, 6GM

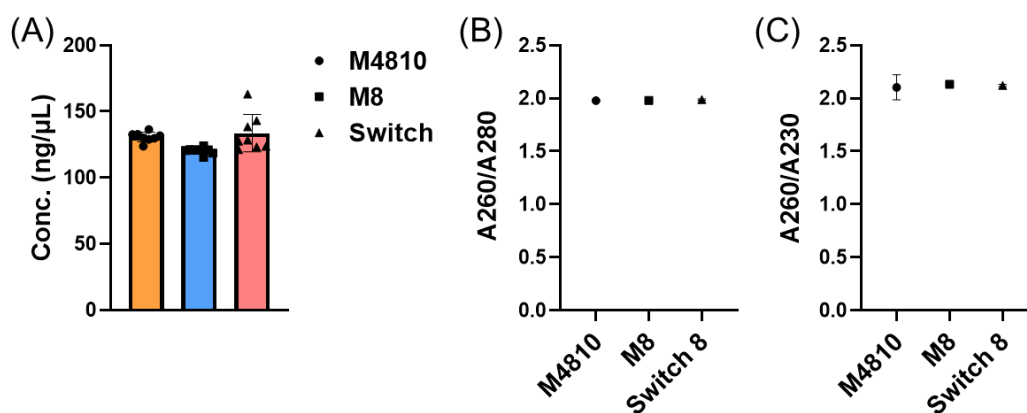


Tissue DNA Extraction, 61P

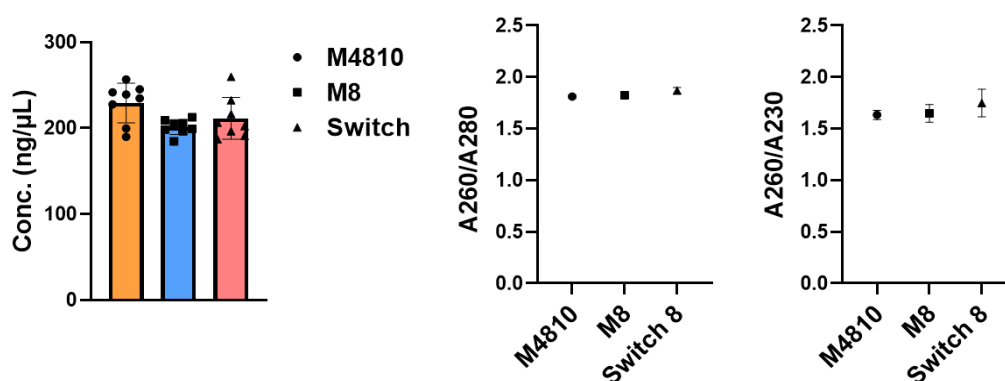




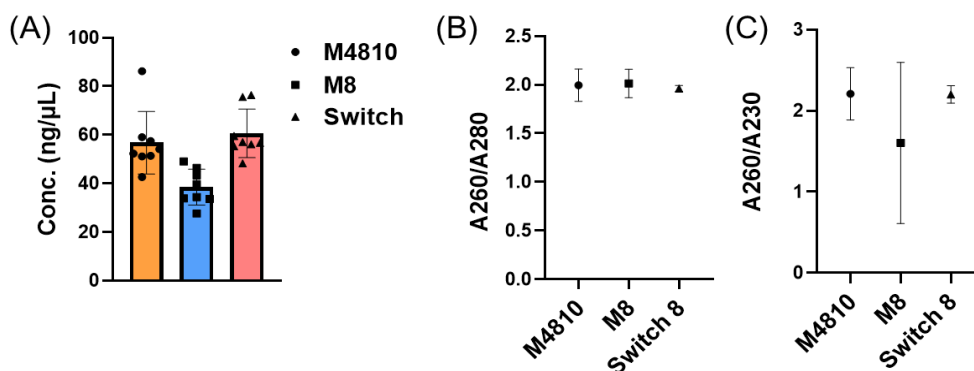
Tissue RNA Extraction, 62P



Plasmid DNA Extraction, 6PE

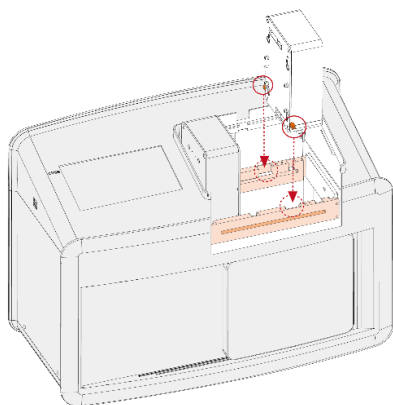


Bacterial DNA Extraction, 61G



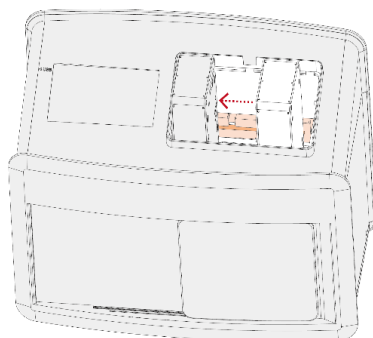
How to switch different throughput gearbox

Sample throughput gearbox switch is easy and fast. It has error proof design with positioning post and detective sensor showing home screen accordingly.



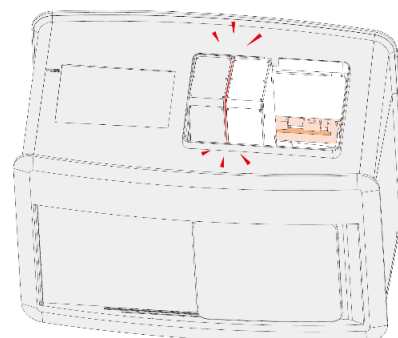
Step 1

Locate the gearbox under guide rail



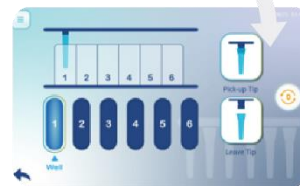
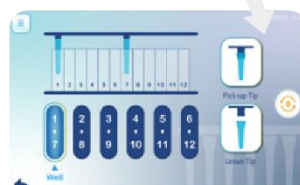
Step 2

Push the gearbox to left



Step 3

Attach the gearbox firmly



Flexible

- Changeable gearbox, 1-16 throughput
- Support from 50 μ l -10 ml volumes

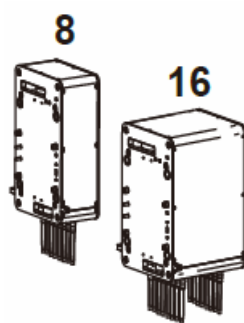
I Reagent Kits

- Cell Isolation & Protein Purification

Product type	Product name	Ordering number
Cell isolation kit	Human CD3 Magnetic Beads	304016 (4ml)
	Human CD4 Magnetic Beads	Coming soon
	Human CD8 Magnetic Beads	Coming soon
	Human CD25 Magnetic Beads	Coming soon
	Human CD56 Magnetic Beads	Coming soon
	Streptavidin Magnetic Beads	Coming soon
Protein purification kit	Protein A Magnetic Beads	304001 (1ml) 304002 (2ml) 304003 (4ml)
	Protein G Magnetic Beads	304004 (1ml) 304005 (2ml) 304006 (4ml)
	Protein A/G Magnetic Beads	304007 (1ml) 304008 (2ml) 304009 (4ml)
	Protein L Magnetic Beads	Coming soon

Reagent Kits

- Nucleic Acid Extraction



Sample Type	8/16 Tests / Run (Sample Input: up to 0.3 ml)	4 Tests / Run (Sample Input: 1-6 ml)
 Blood	M61EA46 M61ES46	L91E045 (RUO)
 cfDNA	M61CA46 M61CS46	L91C045
 Plasmid	M6PEA46 M6PES46	
 Plant	M613A46-SE M613S46-SE	
 Tissue	M6T2A46 / M6K2A46 M6T2S46 / M6K2S46	
 Virus	M665A46 M665S46	
 FFPE	M61PA46 / M61PS46 M62PA46 / M62PS46	
 Stool	M6SCA46 M6SCS46	
 Food Feed	M6GMA46 M6GMS46	
 Environment	M6EMA46 M6EMS46	
 Bacteria	M61GA46 M61GS46	
 Forensic	M6TFA46 M6TFS46	



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