



Taiwan  
Advanced  
Nanotech

# Maelstrom™ 4810

## REVOLUTIONIZING MAGNETIC BEAD HANDLING

Meet your demand for throughput



## Patented Maelstrom Spin Mixing Technology

TANBead Maelstrom product embodies this novel technology and delivers improved performance for applications in molecular diagnostics and life sciences. Maelstrom Series are FDA and CE approved, and the patents are granted in the Canada, China, EU, Korea, Japan, Taiwan, and USA.



### Fully Automated

- Simultaneous processing and purification of DNA, RNA samples
- Automation of complicated manual steps



### Patented Whirl Stirring Mixing Technology

- Processing volume up to 1,600µl
- Spin tips stir magnetic beads at speeds up to 3000 rpm
- Effective prevention of aerosol cross contamination



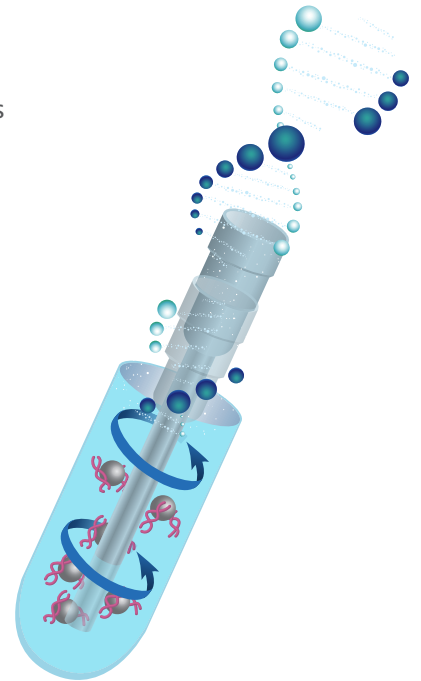
### Easy Operation

- Intuitive user interface and easy menu navigation
- User-specified parameter settings



### Time Saving

- >3,900 gauss magnetic rods efficiently collect magnetic beads
- High stirring efficiency with variable speeds for considerable time savings

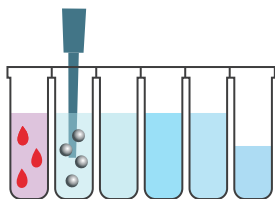


## Principle of Nucleic Acid Extraction

● Sample   ● Bead   ● DNA

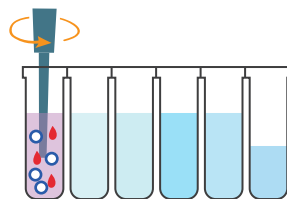
### Step 1

Activate beads



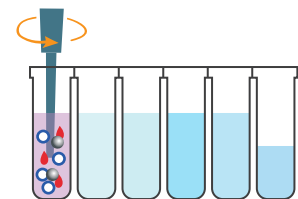
### Step 2

Mix sample with Lysis Buffer



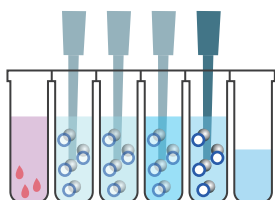
### Step 3

Mix sample with beads



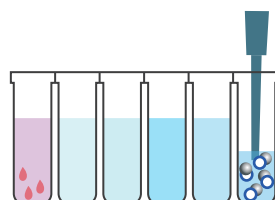
### Step 4

Wash bead-DNA from #2 ~ #5 well



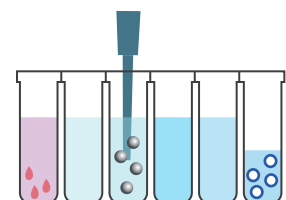
### Step 5

Elute DNA



### Step 6

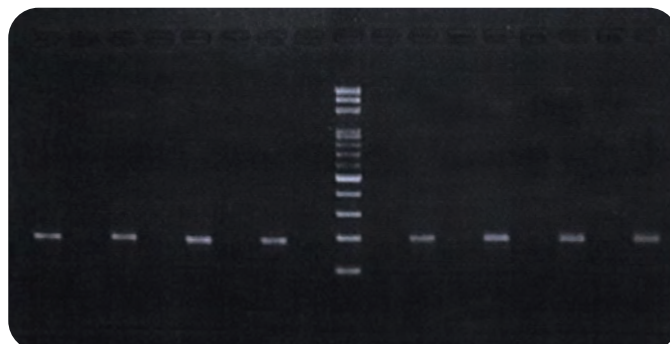
Release beads



## Performance

- ✓ The coefficient of variation of nucleic acid extraction concentration is less than 5%
- ✓ High consistency
- ✓ No Cross-contamination to neighbor well  
Experimental results ▶

1 2 3 4 5 6 7 8 M 9 10 11 12 13 14 15 16



## Specification

Model	Maelstrom™ 4810
Weight	Approx. 45 kg
Dimensions	58(L)x43(W)x47(H)cm
Power rating	AC 100-AC 240 V
Fuse	250V, 5A
Max. Throughput	48 samples per run
Process. volume	50 µl ~ 1,600 µl
Spin speed	up to 3,000 rpm
Heater	12 independent heating blocks
Magnetic rod	> 3900 gauss
Display	7-inch touchscreen
UV	UV-C type, 8 W
HEPA	E 10 class

## Patents

USA	US09616398B2
EU	EP2937136B1
Canada	CA2862946
Japan	JP6151735B2
Korea	KR101696517B1
China	CN104971638B
Taiwan	TW1526245B

## Reagent kits

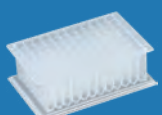
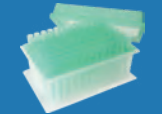
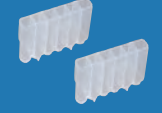
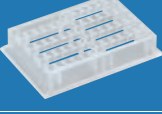

Scan QR code for  
more reagents ▶

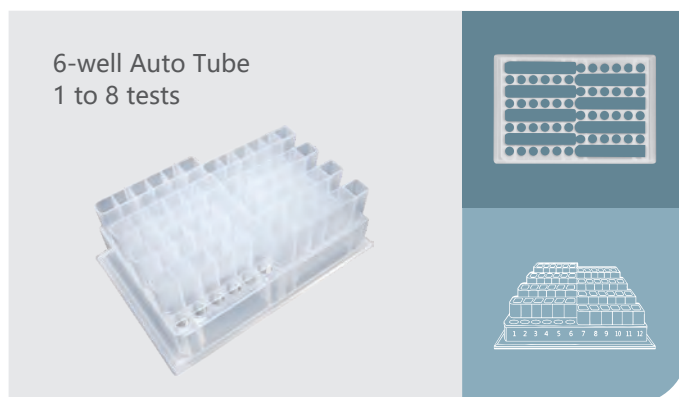
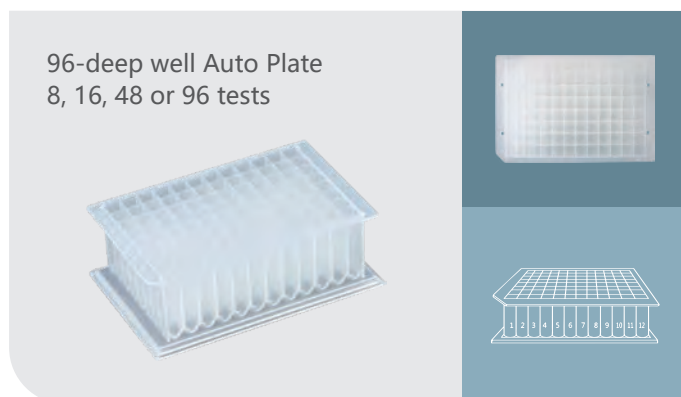
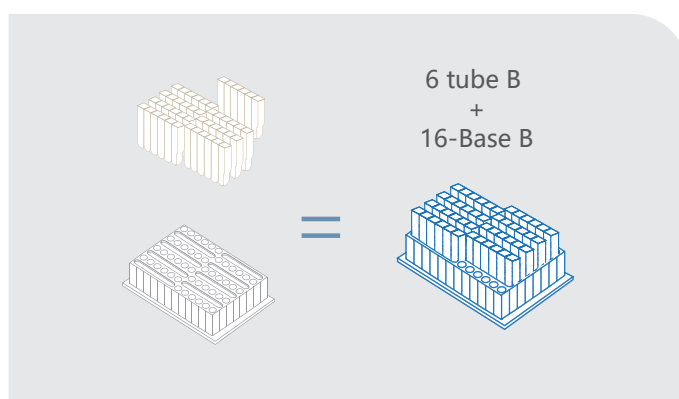
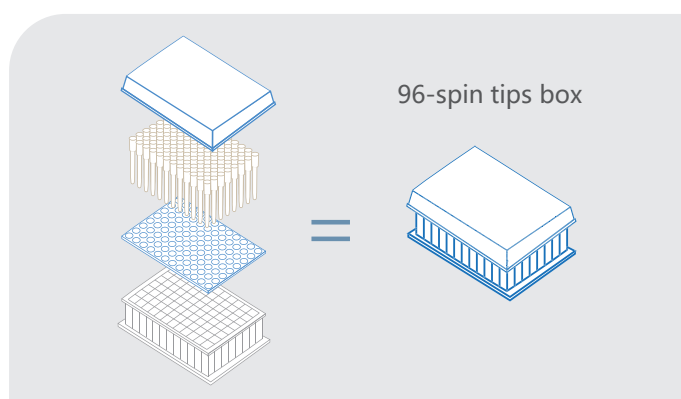


Sample	Description	Test	Reference No.	Ordering No.
Blood	TANBead Blood DNA Auto Plate	96	M611A46	301126
Plant	TANBead Plant DNA Auto Plate	96	M613A46	301134
cfDNA	TANBead OptiPure cfDNA Auto Plate	96	M61CA46	301385
FFPE	TANBead OptiPure FFPE DNA Auto Plate	96	M61PA46	301152
Virus	TANBead OptiPure Viral Auto Plate	96	M665A46	301148
Tissue	TANBead Tissue DNA Auto Plate	96	M612A46	301130
Fungi	TANBead Fungi DNA Auto Plate	96	M61FA46	301150
Forensic	TANBead Forensic DNA Auto Plate	96	M6TFA46	301424
Bacteria	TANBead Gram Bacteria DNA Auto Plate	96	M61GA46	301138
Stool	TANBead Stool Cell DNA Auto Plate	96	M6SCA46	301387
Pathogen	TANBead STIs Extraction Auto Plate	96	M6STA46	301414



## Consumables

Images	Product Name	Format	Description	Ordering No.
	96 deep well plate (Unique hook design)	Auto Plate	<ul style="list-style-type: none"> <li>Processing volume 50µl-1,600µl</li> <li>Widely use for molecular diagnostics</li> </ul>	083.CSM01.203
	96-spin tips box (Unique hook design)	Auto Plate	<ul style="list-style-type: none"> <li>96 pcs of Medium (pen-shape) spin tips in one box</li> </ul>	083.MSP09.10X
	6 tube B	Auto Tube	<ul style="list-style-type: none"> <li>Special Package for single or small number of tests</li> <li>Minimal consumable waste</li> <li>No reagent loss</li> </ul>	104143
	16-Base B	Auto Tube	<ul style="list-style-type: none"> <li>Incorporate with 6 tube B for small number of tests</li> </ul>	104026
	Spin tips	Auto Plate Auto Tube	<ul style="list-style-type: none"> <li>A unique design to maximum mixing efficiency</li> </ul>	056.CSM03.111



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