



Taiwan  
Advanced  
Nanotech

# Maelstrom™ 4810

## REVOLUTIONIZING MAGNETIC BEAD HANDLING

Meet your demand for throughput



Company Profile

## 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



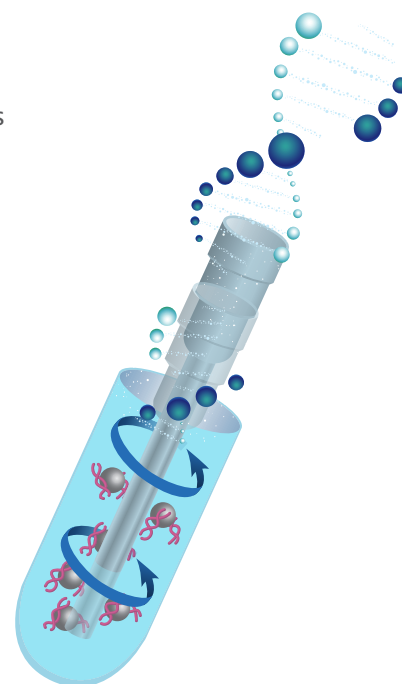
### Easy Operation

- 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

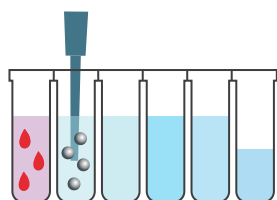


## Principle of Nucleic Acid Extraction

● Sample   ● Bead   ○ DNA

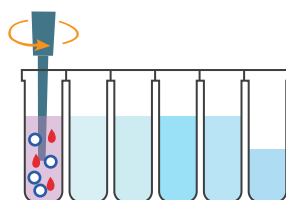
### Step 1

Activate beads



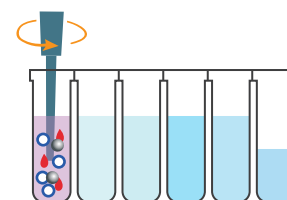
### Step 2

Mix sample with Lysis Buffer



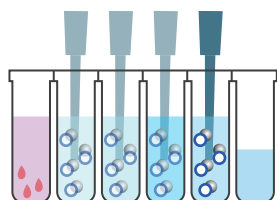
### Step 3

Mix sample with beads



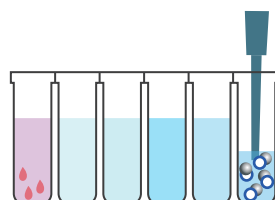
### Step 4

Wash bead-DNA from #2 ~ #5 well



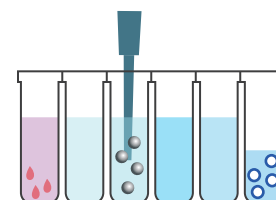
### Step 5

Elute DNA



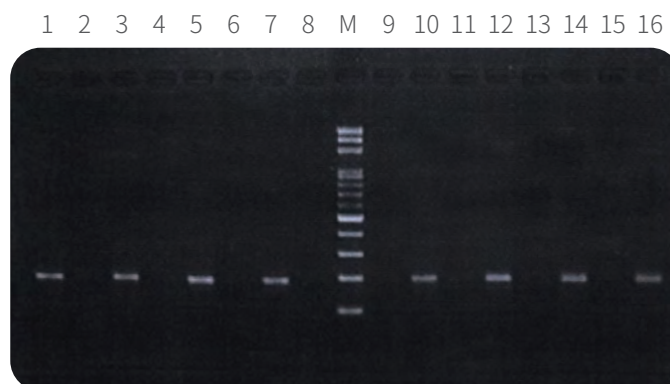
### Step 6

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 ▶



## 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

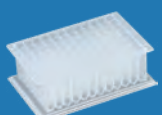
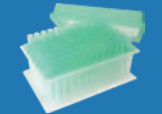
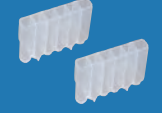
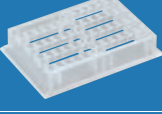

Scan QR code for  
more reagents ▶

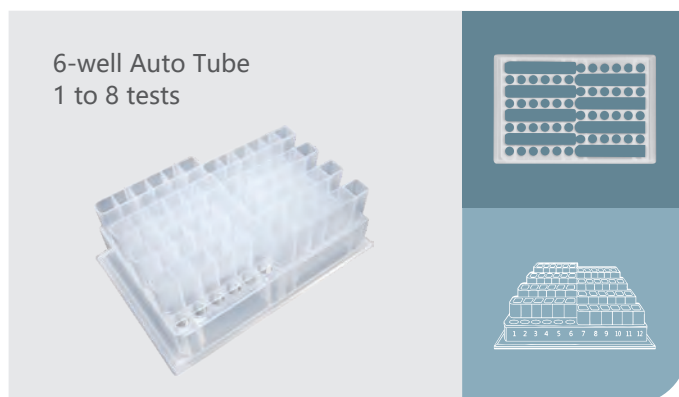
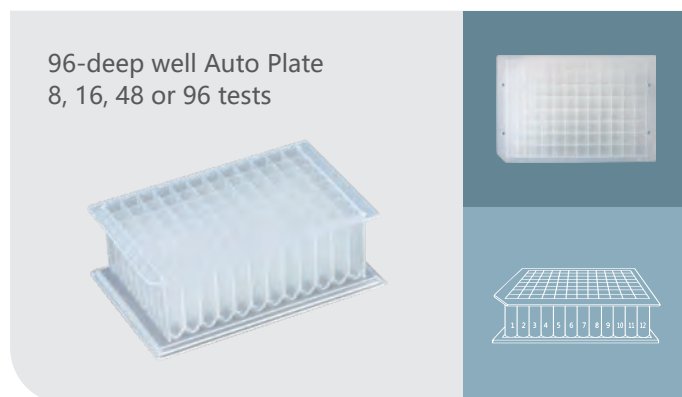
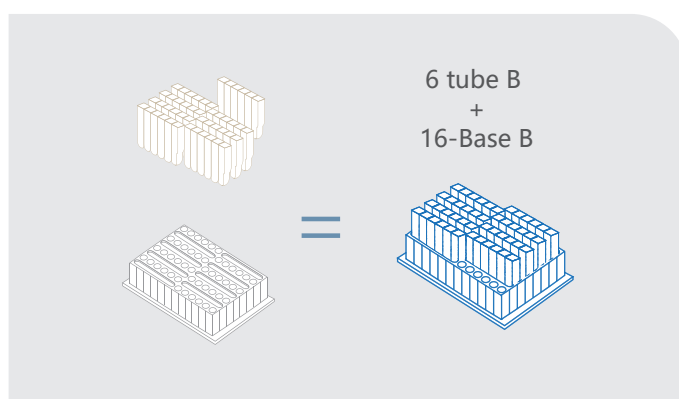
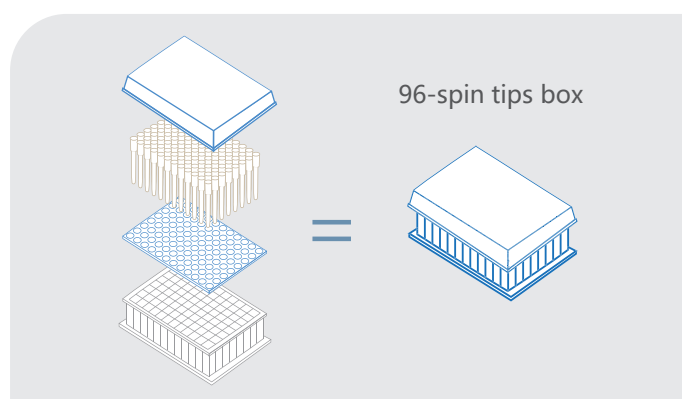


| Sample   | Description                          | Test | Reference No. | Ordering No. |
|----------|--------------------------------------|------|---------------|--------------|
| Blood    | TANBead Blood DNA Auto Plate         | 96   | M611A46       | 301126       |
| Plant    | TANBead Plant DNA 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<br>(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<br>(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<br>Auto Tube | <ul style="list-style-type: none"> <li>A unique design to maximum mixing efficiency</li> </ul>   | 056.CSM03.111 |



Taiwan Advanced Nanotech

[www.tanbead.com](http://www.tanbead.com)

6F., No. 188, Wenhe Rd., Guishan Dist., Taoyuan City 333, Taiwan

T. +886-3-3167568 F. +886-3-3173369 E. [success@tanbead.com](mailto:success@tanbead.com)

2022-07