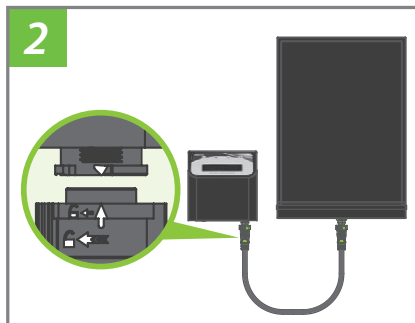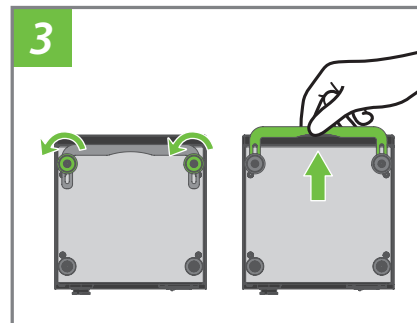# How to use :

## ◆ Mars Graphite Heating System

**1**

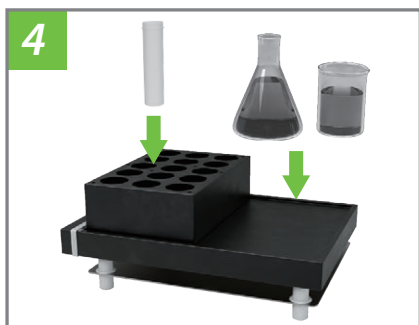Install the Mars Graphite Hotplate in a functional fume hood.

**2**

Connect the hotplate and controller together by plug-in cable and connect controller to power supply.

◆ Do NOT bundle the cable.
◆ Please align the arrows on both side of plug-in cable and insert it.

**3**

Loose the front pads, pull out wall-mounted accessory and hang the controller outside of the fume hood.

◆ Controller is designed for both wall-mounted and desktop.
◆ 3M 17004 adhesive hook is recommended.
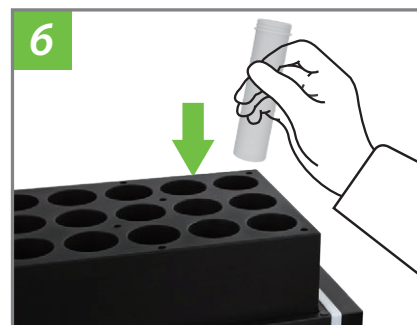
**4**

Choose the heating system by digestion vessels:
**(1) hotplate or (2) hotblock**

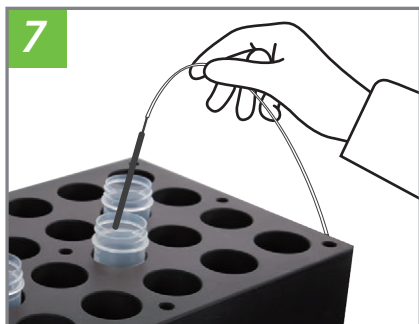◆ Please assemble and change the block(s) at room temperature.

**5**

Switch on the controller, select a program or modify the parameters. Press ▶/■ to preheat after setting is complete.
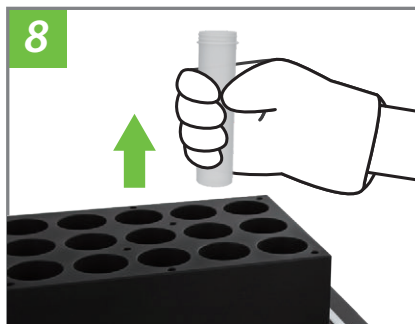
◆ Please refer to Parameter Setting for modification.

**6**

Put the samples in the preheated graphite heating system.

**7**

Connect the PTFE temperature sensor to connector if needed. Insert it into sample to observe the liquid temperature.

◆ If no sensor is connected, TE= --- is displayed.

**8**

The instrument will stop heating while end of countdown timer. Wear THICK gloves to immediately remove the samples or let the samples cools to room temperature for subsequent experiments.

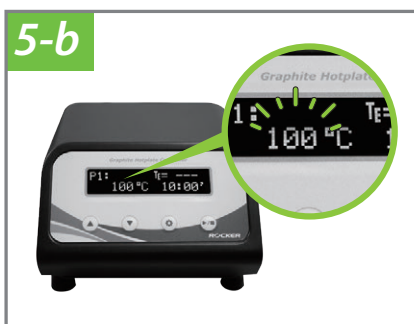◆ If 00:00 is set, heating should be stopped by pressing ▶/■.

**9**

After cooling to room temperature, clean surface with damp cloth or mild soap.

# How to use :

**ROCKER**
*make filtration easy*

## ◆ Parameter Setting

**5-a**



Press ▲ / ▼ to select a program, then modify the parameters by pressing ⚙ .

**5-b**



Press ▲ / ▼ to modify the flash figure, press ⚙ to others parameter setting.

◆ Setting cycle as temp., hour, minute.
◆ Timer is displayed as hh:mm, 00 : 00 indicates continuous heating.

**5-c**



Press ▶ / ■ to save the setting after setting is complete.

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*Ordering Information*

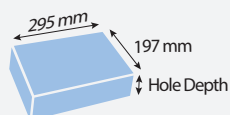| | |
|---|---|
| 178320-22 | Mars 320, Graphite Hotplate, AC220V, 50/60Hz |
| 178430-22 | Mars 430, Graphite Hotplate, AC220V, 50/60Hz |
| 178200-45 | PTFE-Coated Temperature Sensor |

### ◆ Digestion Tube

| | Tube Volume | | |
|---|---|---|---|
| | **15 ml** | **50 ml** | **100 ml** |
| PP | 178200-15-PP | 178200-50-PP | 178200-100-PP |
| Borosilicate Glass | 178200-15 | 178200-50 | 178200-100 |
| PTFE | 178200-15-PTFE | 178200-50-PTFE | 178200-100-PTFE |

\* Max. Operating Temperature • PP : 130℃ • Glass / PTFE : 200 ℃

PP   Glass   PTFE

### ◆ Graphite Block  (L x W ): 295 x 197 mm

295 mm
197 mm
Hole Depth

| | Hole Diameter | Hole Depth | Max. Capacity | Applicable Tube |
|---|---|---|---|---|
| 178200-07 | 16.5 mm | 45 mm | 70 well | φ 16 mm COD tube |
| 178200-08 | 20.5 mm | 55 mm | 54 well | φ 20 mm COD tube |
| 178200-09 | 25.5 mm | 70 mm | 40 well | φ 25 mm COD tube |
| 178200-10 | 19 mm | 90 mm | 54 well | 15 ml  digestion tube, φ 18 mm tube |
| 178200-11 | 32 mm | 90 mm | 24 well | 50 ml  digestion tube, φ 30 mm tube |
| 178200-12 | 47 mm | 90 mm | 15 well | 100 ml digestion tube |

178200-07   178200-11

178200-10   178200-12

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