



Operating Instructions

使用说明书



Mini Dry Bath Incubator

迷你干浴器

TC0401005 TC0401006 / Blockmini BlockminiT

本产品有透明盖和非透明盖 两个版本

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Safety Instructions

- Read the operating instructions in full before starting up and follow the safety instructions.
- Keep the operating instructions in a place where they can be accessed by everyone.
- Ensure that only trained staff work with the appliance.
- Follow the safety instructions, guidelines, occupational health and safety and accident prevention regulations.
- Socket must be earthed (protective ground contact).
- Before starting the device for the first time, ensure that the connector cable is suitable for the type of socket used and that a safe protective earth connection is assured.
- **Risk of burns!** Exercise caution when touching the housing parts and the heating plate. The heating plate can reach temperatures in excess of 100 °C. Pay attention to the residual heat after switching off.

The device may not be transported unless it is cold!

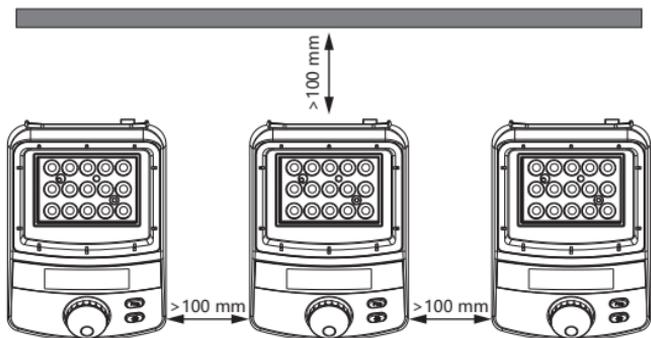
- Don't operate the appliance in explosive atmospheres, with hazardous substances or under water.
- Set up the appliance in a spacious area on an even, stable, clean, non-slip, dry and fireproof surface.
- The base plate must be clean and intact.
- The voltage stated on the type plate must correspond to the mains voltage.
- The socket for the mains cord must be easily accessible.
- The power adapter cable must not be allowed to come into contact with the hot mounting plate.
- Check the appliance and accessories before hand for damage each time you use them. Do not use damaged components.
- **Caution!** Only media whose flashpoint lies above the safety temperature limit of 130 °C may be processed or heated with this device.

- Beware of hazards due to:
 - Flammable materials
 - Combustible media with a low boiling temperature
 - Incorrect container size
 - Overfilling of media
 - Unsafe condition of container.
- Only process media that will not react dangerously to the extra energy produced through processing. This also applies to any extra energy produced in other ways, e.g. through light irradiation.
- Bear in mind the possibility of contamination that might lead to undesirable chemical reactions.
- Wear your personal protective equipment in accordance with the hazard category of the media to be processed.
Otherwise there is a risk from:
 - Splashing and evaporation of liquids
 - Ejection of parts
 - Release of toxic or combustible gases



- Do not heat liquid media except with the block. Never pour liquid media directly on to the heating plate!
- Accessories must be securely attached to the machine and can't come off by themselves.
- Always disconnect the plug before fitting accessories.
- Safe operation is only guaranteed with the accessories described in the "Accessories" chapter.
- The appliance must only be disconnected from the mains supply by pulling out the plug-in power supply unit.
To the protection of the equipment.
- The appliance may only be opened by experts.

- Do not cover the device, even partially e.g. with metallic plates or film. This results in overheating.
- Protect the appliance and accessories from bumps and impacts.
- Ensure that the base plate is kept clean.
- Observe the minimum distances between the devices, between the device and the wall and above the assembly (min. 100 mm)



Unpacking

Please unpack the device carefully and check it for damage. It is important that any transport damage is detected when the device is unpacked. If necessary, any inventory of the damage should be made immediately (postal service, railway, haulage company).

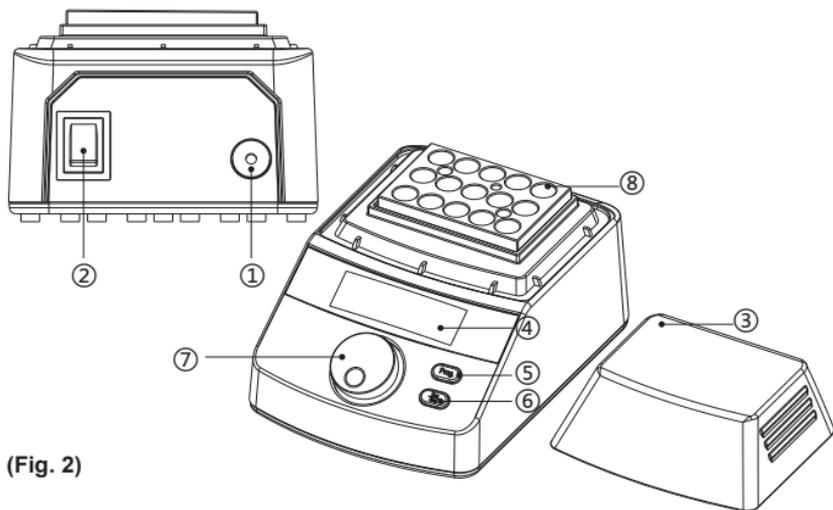
package contains:

Item	Qty.
Main Unit	1
Power adapter	1
Operating instruction	1

Correct Use

- Use
 - For heating media in block heaters
- Range of use
 - Laboratories, Schools, Pharmacies and universities

Operation



(Fig. 2)

① Power socket (DC 12V)	⑤ PRO key
② Power switch	⑥ run/stop button
③ Lid	⑦ "TEMP/TIMER" knob
④ LED Display	⑧ Block

• **Temperature Setting**

The temperature setting can only be workable when the machine is powered on but not when it's working. Short press the blue knob; the temperature value on the LED display will flash, and then set the temperature by horizontal rotation of the knob.

• **Time Setting**

The time setting can only be workable when the machine is powered on but not when it's working. Short press the blue knob twice; the time value on the LED display will flash, and then set the time by horizontal rotation of the knob.

• **Create a new program**

The system can save 5 sets of programs of the temperature and time. When the machine is powered on but not when working, short press the button of "Prog." to select the 5 default programs from P1 to P5. For example, if select P2, press and rotate horizontally the blue knob to set the new temperature and time as the method described as above. Long press "Prog." continuously to save the new data as P2..

• **Program for quick operation**

When the machine is powered on but not when working, short press "Prog." to select the required program for quick operation. The program data can be changed by the blue knob.

Temperature Calibration

Calibration Procedure

Your device is calibrated before shipment. If the internal sensor's temperature deviates more than 0.5°C from the actual dry bath temperature (measured by a calibrated external probe), recalibrate following the steps below. The calibration follows a 4-point calibration of 40°C, 60°C, 80°C, and 100°C.

Calibration Requirements:

- Ambient Temperature: Below 40°C
- Initial Block Temperature: Ambient temperature (below 40°C)

Calibration Modes:

There are three calibration modes:

1. CA01 (Manual, No PT1000): Use an external temperature probe as the calibration reference.
2. CA02 (Automatic, With PT1000): Uses the connected PT1000 sensor as the calibration reference.
3. CA03 (Manual, With PT1000): Use an external temperature probe as the calibration reference.

Calibration Steps:

1. Prepare the Block:

- Choose a center well.
- Fill it with a high-boiling-point solution (above 120°C, e.g., glycerin) to the brim.
- Place the calibration reference probe in the well.

2. Enter Calibration Mode:

- Press P1 and P4 simultaneously.

3. Select Calibration Mode:

- No PT1000: CA01 is automatically selected.
- With PT1000: Use the "TEMP/TIME" knob to toggle between CA02 and CA03.

4. Start Calibration:

- Automatic Calibration (CA02): Press "RUN/STOP" and let the system complete all points.
 - Manual Calibration (CA01 or CA03):
- The P1, P2, P3, P4 buttons correspond with 40°C, 60°C, 80°C, and 100°C respectively.

- Press the desired point (start from P1)
- Press "RUN/STOP" to start heating.

Note: Steps 5-8 are only applicable to the manual calibration modes.

5. Wait for Temperature Stability:

- Once the system reaches "HOLDING" mode, wait 30 minutes.

6. Adjust Calibration:

- Read the temperature on the reference probe.
- Use the "TEMP/TIME" knob to adjust the device's reading to match the reference.

7. Save Calibration Point:

- Press "RUN/STOP" to save the calibration and end heating for the current point.

8. Repeat for Other Points:

- Repeat steps 4-7 for the remaining calibration points (follow the sequence from P1 to P4)

Reboot the device after calibration has completed.

Temperature Calibration

Item	Calibration Point	Reading of the thermometer
1	40°C	
2	60°C	
3	80°C	
4	100°C	

Maintenance and Cleaning

The appliance is subject only to the natural wear and tear of components and their statistical failure rate. Use only cleansing agents which have been approved by us to clean our devices.

To remove use:

Dyes	isopropyl alcohol
Constructions materials	water containing tenside / isopropyl alcohol
Cosmetics	water containing tenside / isopropyl alcohol
Foodstuffs	water containing tenside
Fuels	water containing tenside

For materials which are not listed, please request information from us. Please disconnect the main plug and do not allow moisture to get into the appliance when cleaning. Wear the proper protective gloves during cleaning of the devices.

Electrical devices may not be placed in the cleansing agent for the purpose of cleaning. Before using another then the recommended method for cleaning or decontamination, the user must ascertain with the manufacturer that this method does not destroy the instrument.

Technical Data

Model	TC0401005	TC0401006
Temperature Control Range	RT + 5°C~100°C	RT + 5°C~100°C
Heating Lid	No	Yes
Timing Range	0~99h59min	0~99h59min
Temp. Control Accuracy	±0.5°C	±0.5°C
Display Accuracy	±0.1°C	±0.1°C
Heating Time (40°C to100°C Temp.)	≤15min	≤15min
Input Power	40W	45W
Dimension (mm)	164 x 116 x 98	164 x 116 x 98
Net Weight	0.9kg	0.9kg

Warranty

You have purchased an original laboratory machine which meets the highest engineering and quality standards. In accordance with our warranty conditions, the warranty period is 24 months. For claims under the warranty please contact your local dealer. You may also send the machine directly to our works, enclosing the delivery invoice and giving reasons for the claim. You will be liable for freight costs.

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请仔细阅读说明书并在说明书的操作指导下安全使用本仪器。
外形和性能指标如有变动，概不另行通知。

前言

欢迎使用《迷你干浴器说明书》。用户在使用本仪器前应仔细阅读本说明书，了解相关注意事项，并按照说明书中的指导和规范进行操作。

符合性声明

仪器结构符合以下安全标准：

E2006/95/EG

2004/108/EG

2011/65/EU指令

并符合以下标准或标准性文档

EN 61010-1:2010

EN 61326-1:2006

EN 61010-2-010:2003

1. 安全说明

- 为了能够安全地使用设备，每个用户必须首先阅读操作说明并遵守其中包含的安全说明



注意

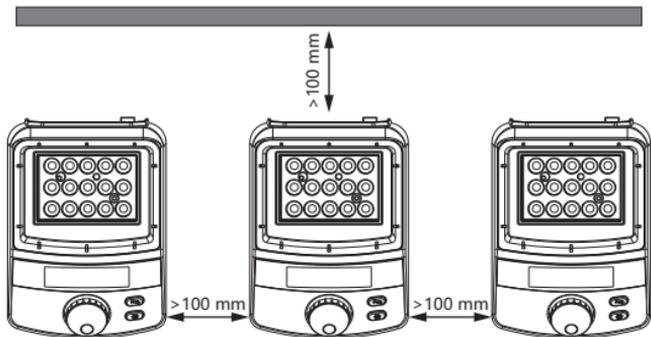
这些操作说明，并将它们放置在每个人都可以查阅到的地方。

- 请遵守所有相关的安全指示和指示，以及实验室使用的工作安全和事故预防规定。
- 本仪器只适用于加热物质
- 输入电压必须与仪器铭牌上标示的电压一致。
- 小心高温！触摸仪器外壳和盘面时小心烫伤。
- 仪器工作时盘面可能处于高温状态。仪器关闭后，也请注意余热，只有仪器温彻底冷却后才可以移动机器
- 禁止在爆炸性环境中使用本仪器；本仪器不具有防爆功能。
- 使用能够形成爆炸性混合物的物质，必须采取合适的安全措施，例如，在通风橱下工作。
- 为避免人身伤害和财产损失，请在处理危险物品时遵守相关的安全和事故预防措施。
- 只有使用机器原装选配件才可确保安全。
- 请注意避免仪器电源线/温度传感器线缆触及盘面。
- 每次使用前请检查仪器和配件并确保无损，请勿使用损毁的仪器和配件。



注意 以下情形可能产生的危险：

- 易燃物质
 - 低沸点可燃物质
 - 易碎玻璃容器
 - 容器大小不合适
 - 溶液过量
 - 容器处于不安全状态
- 处理病原体介质时，请使用密闭容器并在合适的通风橱中进行
 - 为保证无人监控下的安全操作，请仅处理闪点高于安全温度值的介质。
(EN 61010-2-010)
 - 请使用我司原装选配件。
 - 确保仪器放置间距合理：
 - 仪器之间至少 100 mm
 - 仪器距离四周墙壁至少 100 mm



2. 开箱检查

2.1 开箱检查

用户如发现任何包装损伤，请在收据上注明。在打开包装后如果发现任何内部损伤，请联系供货商。



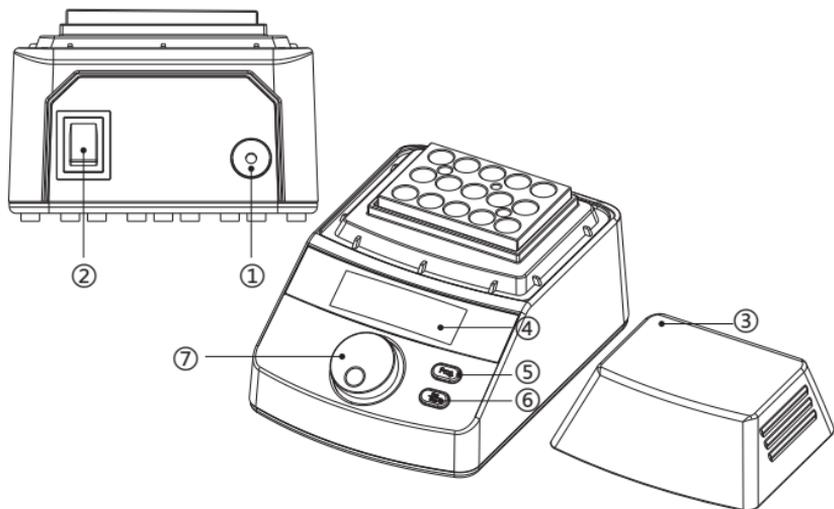
注意：

如发现仪器上有任何明显的损伤，请不要将其连接到电源。

2.2 装箱清单

名称	数量
主机	1
电源适配器	1
干浴器模块	-
使用说明书	1

3. 操作说明



① 适配器电源接口	② 电源开关	③ 隔热罩/透明隔热罩
④ 显示屏	显示时间，温度，校准状态等	
⑤ PRO键	长按：保存当前参数，短按：切换程序	
⑥ run/stop 按键	运行/停止	
⑦ 多功能旋钮	调节时间，温度参数	

4. 开机运行

第一步：温度校准

校准流程

设备在出厂前已完成校准。如果内部传感器的温度与实际样品温度（通过外置传感器测量）偏差超过0.5°C，请按照以下步骤重新校准。本次校准采用4个校准点，包括40°C、60°C、80°C和100°C

校准要求：

- 环境温度：低于40°C
- 初始模块温度：环境温度（低于40°C）

校准模式：

共有三种校准模式：

1. CA01（手动，无PT1000）：使用外置传感器作为校准参考。
2. CA02（自动，有PT1000）：使用连接的PT1000传感器作为校准参考。
3. CA03（手动，有PT1000）：使用外置传感器作为校准参考。

校准步骤：

1. 准备模块：
 - 选择一个中央孔。
 - 使用高沸点溶液（高于120°C，如甘油）装满孔。
 - 将校准参考探针插入孔中。
2. 进入校准模式：
 - 同时按下P1和P4键。
3. 选择校准模式：
 - 无PT1000：自动选择CA01模式。
 - 有PT1000：使用“TEMP/TIME”旋钮在CA02和CA03之间切换。
4. 开始校准：
 - 自动校准（CA02）：按下RUN/STOP，系统将自动完成所有校准点。
 - 手动校准（CA01或CA03）：
 - P1、P2、P3、P4 按钮分别对应40°C、60°C、80°C和100°C。
 - 按下目标校准点（从 P1 开始）。
 - 按下 RUN/STOP 开始加热。

注意：以下步骤5-8仅适用于手动校准模式。

5. 等待温度稳定：

- 当系统进入“HOLDING”模式时，等待30分钟。

6. 调整校准：

- 读取外置传感器的温度值。
- 使用“TEMP/TIME”旋钮将设备显示的温度值调整到与外置传感器测量值一致。

7. 保存校准点：

- 按下“RUN/STOP”保存校准并结束当前校准点的加热。

8. 校准其他点：

- 按照P1至P4的顺序，重复步骤4-7完成剩余校准点的校准。

校准完成后，请重新启动设备。

第二步：温度设置

温度设置只可以在系统停止状态下进行；按下TEMP/TIME键，温度显示栏闪动，此时可以调节编码开关至所需设置温度。

第三步：预约时间设定

预约时间设置只可以在系统停止状态下进行；按下TEMP/TIME键，温度显示栏闪动，再次按下TEMP/TIME键，时间显示栏闪动，此时可以调节编码至所需设定时间。

第四步：华氏/摄氏温度转换

同时按下P1，P2键可以在华氏/摄氏温度间切换。

第五步：加热参数保存

系统可以保存四组常用的运行参数，包括温度和时间，可供用户快捷调用。在停止状态下，长按P1(P2/P3/P4)可将当前参数保存到P1(P2/P3/P4)对应的参数组。

第六步：加热参数调取

通过快捷方式调取已经保存的加热参数。在停止状态下，短按P1(P2/P3/P4)可以调取已经保存的参数作为当前运行参数，也可以通过旋转编码器调用P1/P2/P3/P4对应的运行参数。同时，右下角显示对应参数号Pn。

第七步：预约取消与启动

通过同时按下P1,P3取消/启动预约功能。在预约模式下，启动加热功能，则系统不会马上加热，待到达预约时间后再启动加热，且系统持续加热。在非预约模式下，当启动加热功能时，系统马上开启加热，且到达保温状态后定时器开始计时，计时完成后，系统停止加热。

5. 故障排除

- 开机时设备无法工作
 - 检查机器与适配器连线是否接好
 - 检查适配器是否连接接电
- 加热精度不准
 - 重新进行一次温度校准

6. 维护和清理

- 正确地使用和维护仪器，使其处于良好的工作状态，有利于延长使用寿命。保持仪器整洁，切勿将溶液流入机内。
- 维护和清理之前必须切断电源，只能使用我们推荐的方法清理仪器。

染料	异丙醇
建筑材料	水溶表面活性剂/异丙醇
化妆品	水溶表面活性剂/异丙醇
食物	水溶表面活性剂
燃料	水溶表面活性剂

祛除方法：

- 没有列出的材料，请先咨询制造商售后服务部门。
- 在采用其他清理方法之前，用户必须与制造商/供货商确认该方法不会损坏仪器。
- 清理时，请戴上防护手套。



注意：

- 电子设备不能用清洁剂清理。
- 送修仪器必须清理，同时避免危险物质的污染，并把仪器放回原始包装箱发送。
- 当产品长期不用时，请将仪器断电存放，并置于干燥，洁净，常温，平稳处。

7. 技术参数

型号	Blockmini	BlockminiT
温度控制范围[°C]	室温+5°C~100°C	室温+5°C~100°C
时间设置范围	0~99小时59分	0~99小时59分
温度精度[°C]	±0.5	±0.5
温度显示精度[°C]	±0.1	±0.1
加热时长(40°C-100°C)	≤15分	≤15分
带热盖	透明盖	√
外形尺寸 [长 x 宽 x 高 mm]	164 x 116 x 98	164 x 116 x 98
重量[kg]	0.9	0.9
货号	TC0401005	TC0401006

8. 保修

根据本公司保修规定本机保修 2 年。保修期内如果有任何问题请联络您的供货商，您也可以将仪器附发票和故障说明直接发至我们公司，经我方事先确认后运费由贵方承担。保修不包括零件的自然磨损，也不适用于由于过失、不当操作或者未按操作说明书使用和维护引起的损坏。

9. 选配件

模块型号	描述
TC0401005-30	24 x 0.5mL 离心管
TC0401005-31	40 x 0.2mL 离心管
TC0401005-32	15 x 1.5mL 离心管
TC0401005-33	15 x 2.0mL 离心管
TC0401005-45	8-12.5x12.5x32mm 比色皿专用模块
TC0401005-46	4 x 15ml 离心管
TC0401005-100	2 x 50ml 离心管