FastGene® CapMaster Pro

Automated Screw Cap Decapper

Product name	Catalog No.
FastGene® CapMaster Pro	FG-CDC05
FastGene® CapMaster Pro Gripper Set	FG-CDC05-GS

For research only.

Safety precautions

Before using FastGene® CapMaster Pro for the first time, please read this entire operation manual carefully. To guarantee problem-free, safe operation of the FastGene® CapMaster Pro, it is essential to observe the following sections.

Intended use

The FastGene® CapMaster Pro is intended to be used by trained personnel to perform screw cap decapping/capping. In this manual, we assume that the user has knowledge of basic laboratory procedures.

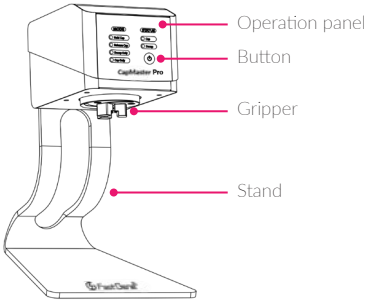
General safety

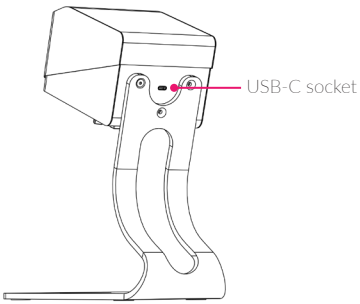
PHYSICAL INJURY HAZARD.

Using the device in a manner not specified by NIPPON Genetics EUROPE may result in personal injury or damage to the device.

- Do not use the device in a potentially explosive environment or with potentially explosive chemicals.
- Avoid placing the device in direct sunlight.
- Install the device in a location free of excessive dust.
- Install the device in a room with a temperature of 15 - 30 °C, relative humidity of 20 - 80%.
- Choose a flat, stable surface capable of bearing the weight of the device.
- Make sure the power source conforms to the required power supply specifications.
- To avoid electric shock, make sure the device is plugged into a grounded electrical outlet.
- Do not allow water or any foreign objects to enter the various openings of the device.
- The use of excessive force should be avoided.
- Only use the original power adapter supplied by the manufacturer.
- To ensure proper ventilation, make sure the device has at least 30 cm of free space all around.
- Do not place this device where it is difficult to disconnect the power adapter.

Product overview





Installation

1. Plug the USB-C jack of the power adapter into the USB-C socket on the back of the device.
2. Plug the power adapter into an external power source.

Operation modes

Five operation modes satisfy users with various needs for decapping and capping screw caps.

Indicator	Mode	Action
Hold Cap	**Hold cap**	Decapping with cap held → Capping the held cap
Release Cap	**Release cap**	Decapping with cap released → Capping the cap on the top of the tube
Decap Only	**Decap only**	Decapping and releasing cap immediately
Cap Only	**Cap only**	Capping the cap on the top of the tube
Release Cap Decap Only	**Decap and Release**	Decapping and releasing cap after 1.5 sec

Decapping/capping

1. Press the button for 3 seconds to turn on the device.
2. Press the button to select the mode.
3. If the cap is too tight, it may need to be manually loosened firstly.
4. Hold the tube in hand, and lightly press straight up on the center of the disc to trigger the motor. Once the motor is triggered, you don't need to apply upward force.
   Tip I: It could be easier to open the cap by holding the tube and turning it in the opposite direction when the motor is activated.
   Tip II: If the cap is not closed correctly, repeat steps 3 and 4.
5. If the cap needs to be extremely tight, it may need to be tightened manually.
6. Press the button for 3 seconds to turn off the device.

Cycle time setting

The FastGene® CapMaster Pro is built with 3 different cycle times for selection to accommodate most tubes. "Shorter time" setting provides express operation, while "Longer time" setting is for the tubes needing longer cycle time. Follow the procedures to set the cycle time.

1. Press the button for 3 seconds to turn on the device.
2. In "Hold Cap" mode, use a tube to press up on the center of the disc to trigger the motor. The indicators will show: "Hold Cap" in mode and "Cap" in status.

3. Press the button for 3 seconds to select the different cycle time. The LEDs will blink when setting the cycle time.

Setting	Decapping Cycle Time (sec)	Capping Cycle Time (sec)
Setting 1- Default	1.1	1.0
		
Setting 2- Shorter time	1.1	0.7
		

Setting	Decapping Cycle Time (sec)	Capping Cycle Time (sec)
Setting 3- Longer time	1.9	1.8

4. Use a tube again to press up on the center of the disc to trigger the motor and complete the setting.

Note: The cycle time setting will be kept even rebooting the FastGene® CapMaster Pro.

Transportation and storage

This device should be transported and stored in an environment with a temperature between -10 and 60 °C and with a relative humidity of 20 - 80%.

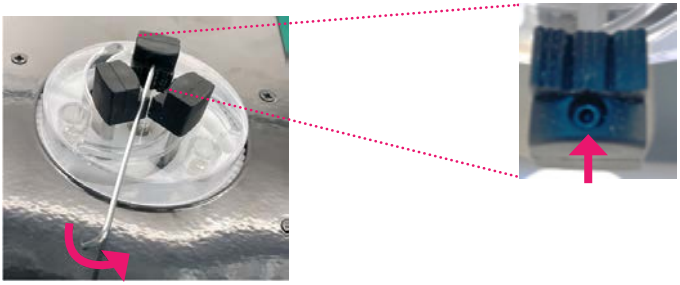
Maintenance

Cleaning and decontaminating

Before cleaning or decontamination, disconnect the power adapter. The decapper can be cleaned or decontaminated with 70% ethanol or a 10% commercial bleach solution.

Gripper replacement

The grippers will require occasional replacement, particularly when the grippers can't grab the cap firmly. Use an M2 Allen key to remove the hexagon socket screws on the inside of the grippers. Replace the three grippers with new ones.



Disposal

Do not dispose of this product as unsorted municipal waste.

Follow local municipal waste ordinances for proper disposal provisions to reduce the environmental impact of waste electrical and electronic equipment (WEEE).
European Union Customers: Call your local NIPPON Genetics EUROPE distributor's customer service office for device pick-up and recycling.

Specifications

Dimensions (L x W x H)	240 x 170 x 300 mm
Weight	3.8 kg
Cycle time decap/cap	< 3 sec
Compatibility	11 - 40 mm diameter screw cap tubes
Sensing method	Pressure sensor
Operation Modes	Five modes
Power adapter	Input: AC100 - 240 V, 50/60 Hz; Output: DC 24 V, 2.7 A
Power Jack	USB-C
Certification	CE

NIPPON Genetics EUROPE
INNOVATION FOR YOU

+49 2421 55496 0
info@nippongenetics.eu
+49 2421 55496 11
www.nippongenetics.eu