Preface

Thank you for purchasing the NEST cell thawing device. This user manual contains information on the functions and operating procedures of the device. To ensure proper and safe use of the device, please read the manual carefully before operating the device. Please keep the manual properly for quick reference in case of any issues.

Unpacking and Inspection

When the user opens the device packaging for the first time, please check the device and accessories against the packing list. If there are any errors, missing or abnormal accessories, please contact the seller or manufacturer.

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Important Notice

1. Important Safety Information

Before operating the device safely, the user needs to have a complete understanding of how the device works. Please read this manual carefully before operating the device.

It is forbidden for anyone to operate the device before reading the manual. If the device is not operated according to the instructions in the manual, the heat generated during operation may cause serious burns and electrical accidents. Please read the following safety tips and guidelines and take all preventive measures.

2. Safety

During the operation, maintenance and repair of this device, the following basic safety precautions must be followed. Failure to comply with these measures or warnings elsewhere in this manual may affect the protection provided by the device and its expected use.

This device is a Class B ordinary device that meets the GB9706.1 standard. This device is for indoor use only.

Please read this operating manual carefully before operating the device, otherwise, personal injury may occur. Only qualified inspectors who have received training on how to install and use electrical equipment can operate this device.

Operators should not attempt to open or repair the device, as doing so will void the warranty and may result in electric shock. If repairs are needed, the company is responsible for the repairs.

Before connecting the power supply, ensure that the voltage of the power supply is consistent with the voltage required by the device. Also, ensure that the rated load of the power outlet is not less than the requirement of the device.

If the power cord is damaged, it must be replaced. When replacing, use a power cord of the same type and specification. The power cord should not be pressed on during use, and it should not be placed in a place where people walk.

When plugging and unplugging the power cord, be sure to hold the plug. When inserting the plug, ensure that it

is fully inserted into the socket. Do not pull the power cord hard when unplugging the plug.

During normal operation, the temperature of the metal module may also become very high, which may cause burns or boiling of liquids. Therefore, it is strictly forbidden to touch any part of the body during the entire operation to avoid burns!

The device should be placed in a place with low humidity, less dust, away from water sources, and avoid direct sunlight and strong light sources. The indoor area should be well-ventilated, free of corrosive gases or strong magnetic field interference, and away from heaters, stoves, and all other heat sources. Do not place the device in a damp or dusty place.

The openings on the device are designed for ventilation. To avoid overheating, do not block or cover these ventilation holes. When multiple devices are used at the same time, the distance between each device should not be less than 30cm.

When stopping work, turn off the power supply. When the device is not used for a long time, unplug the power plug and cover the device with a soft cloth or plastic paper to prevent dust from entering.

In the following situations, immediately unplug the device's power plug from the power outlet and contact the supplier or trained repair personnel for handling:

- Liquid spills inside the instrument;
- The instrument is exposed to rain or water;
- The instrument is not working properly, especially if there are any abnormal sounds or odors;
- The instrument falls or the casing is damaged;
- The instrument's functions have changed significantly.

3. Device Maintenance

The device should be regularly cleaned with a clean, soft cloth dampened with a small amount of anhydrous alcohol to ensure sufficient contact between the cryogenic vial and the cone wall, good thermal conductivity, and to avoid contamination.

If there are stains on the surface of the device, it can be cleaned with a soft cloth and cleaning

paste.

When cleaning the device, the power must be disconnected.

It is strictly forbidden to drip cleaning agents into the cone holes when cleaning the cone holes on the cleaning module.

Corrosive cleaning agents are strictly prohibited from cleaning the surface of the device.

Chapter 1 Introduction

1. Product Introduction and Features

The anhydrous cell thawing device is a special equipment for thawing cell cryovials based on thin film heating technology and non-contact temperature measurement technology. The unique cryovial clamping technology and non-contact temperature measurement method can quickly and effectively complete the thawing of cell cryogenic vials.

This product has the following features:

- Dynamic LED display, real-time display of thawing steps.
- Dry thawing technology without water, good consistency and high repeatability.
- Automatic cumulative timing function for single thawing.
- Automatic temperature rise and constant temperature when turned on.
- Automatic cryovial clamping technology.
- Built-in software and hardware double over-temperature protection device for more reliable use.

2. Normal Working Conditions

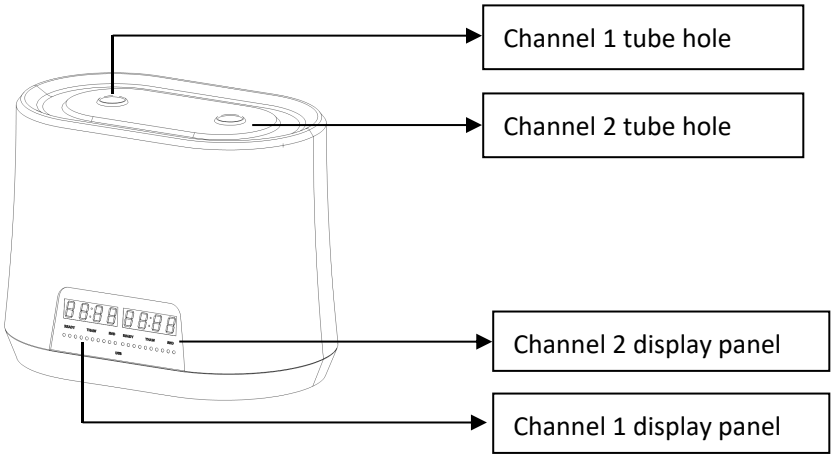
Operating temperature: 0°C ~ 35°C
Relative humidity: ≤90%
Power supply: AC110~220V/50-60HZ

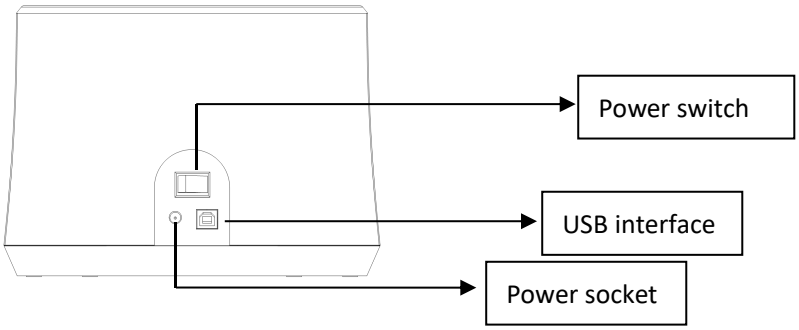
3.Basic Parameters

Item	Parameter
Thawing time	≤3 minutes (typical value)
Temperature control accuracy of sample platform	≤±1.0℃
Number of channels	Two 1.8~2.0ml cryogenic vials
Typical capacity of a single vial	0.8~1.5mL
Voltage & power	DC24V/5A 125W
Dimensions (mm)	225x140x161 mm
Weight	2.0Kg

Chapter 2 Overview of the Device

1. Structural Introduction





Chapter 3 Basic Operation Guide

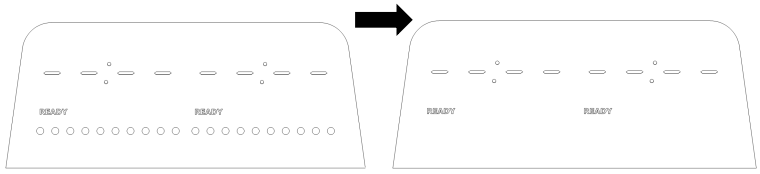
1. Power On

1.1 Preheating after Power On:

After the device is powered on, each channel will start to heat up automatically to the set value. During the heating process, the display screen will display the real-time temperature of the current module. As shown below:

1.2 Enter waiting mode after preheating:

After the boot preheating is completed, the progress indicator lights up at intervals of one second, and the Ready indicator light is turned on after all the progress indicator lights are on. At the same time, all progress indicator lights will be turned off. At this time, the device is in waiting mode, and the user can prepare the sample tube to start the thawing process at any time. As shown in the figure below:



1.3 Start thawing and resuscitation:

Insert the cryogenic vial that needs to be thawed into the channel vertically, and insert the cryogenic vial to the bottom appropriately. At this time, the cryogenic vial clamp block will automatically close. The device will emit a prompt sound, indicating that the cryogenic vial is inserted correctly. The user can release the hand at this time, and the device will start to run the thawing process.

After the resuscitation thawing starts, the THAW indicator light is turned on, the Ready indicator light is turned off, and the device will immediately start counting time (minutes: seconds). In this stage, the progress indicator lights will be dynamically displayed from left to right as shown in the figure below:

Note! If the device detects that the temperature of the outer wall of the cryogenic vial is higher than 0℃ when it is inserted, the thawing program cannot be run, and a short continuous prompt sound will be emitted!

1.4 Thawing ends

After running the thawing program for a period of time, the device will automatically judge the temperature of the outer wall of the cryogenic vial and start counting down. At this time, the progress indicator lights will flash from left to right in sequence and light up, and before the final thawing is completed in the last 10 seconds, the

device will continuously emit a prompt sound to remind customers to prepare to take out the thawed cryogenic vial.

After the thawing process is over, the device will automatically release the cryogenic vial clamp block so that the customer can take out the cryogenic vial. At this time, the THAW indicator light is turned off, and the END indicator light is turned on and flashing.

Note! Please take out the cryogenic tube in the hole as soon as possible after thawing is completed.

Chapter 4 Fault Analysis and Handling

Fault Phenomenon	Fault Analysis/Processing
No response after power-on	Power is not connected (a)
Slow warming up or inability to warm up after booting up	Heating system abnormality (b)
Sreen displays Err3, as shown below: 	The current channel right temperature sensor or temperature control is abnormal (b)
Screen displays Err2, as shown below: 	The current channel left temperature sensor or temperature control is abnormal (b)
Screen displays Err1, as shown below: 	The current channel master temperature sensor is abnormal (c)

1. Check the power cord connection to ensure that the external power supply meets the requirements.
2. Restart the device. If the problem still exists, please contact the supplier or manufacturer for solution.

The product has high voltage inside, and it is strictly forbidden to disassemble it privately!