By press (+) or (-) button, the temp Set value increase or decrease. Set Value blinks for 5 times & save value. After that you will see "Room temperature" on screen .

- For fast increment and decrement of temperature setting, long press (+) or (-) button continuously. (after set desire value in window, the value will blink for 5 times and then blink will stop, It means the value is save.

Note: Heating function works only when the set temperature is above room temperature

10. 2. 2 PROBE SELECTION

- By Long press MODE Key (about 1.5 sec) , Probe mode will be activated.
- Probe LED will flash with the probe mode activation.
- Without probe mode, device will automatically work in plate mode. User can change Plate/Probe mode by long press MODE button only at standby operation.
- In Probe mode, NTC probe to be kept in block to measure the accurate temperature

10. 2. 3 TIME FUNCTION

- By pressing MODE button the time led will flash. It will show the Time command activation and we can change time parameters in this situation.
- "19.59"(19hr:59min) value will display on window at first time initiate machine
- To set Time value , press(+) and (-) for increment and decrement of Value from 00.01 to 19hr:59 min. After set desire value in window, the Value will blink for 5 times then stop, it means the value is saved.
- The time value will increment in 1 minute by single press. Time unit will be in (hour . minute) as shown upon display.
- In running condition if time changed, timer will reset & count from the beginning. After 19hr:59 mins, there is infinite mode which is shown as "][".

11. CALIBRATION (PROBE MODE)

- Press (MODE) and (+) button together After Set temperature reached in display of Unit.
- Set reference temperature as per master instrument temperature, display will blink 5 times and the value is saved.

Example: set value is 100 reference value is 101.2. then set 101.2 in calibration mode and calibration is done once the value is saved.

- In case of reset of calibrated value, press [Mode] and(+) together and change the value of "set temperature"

Note: In Probe calibration for perfect result it is suggested to calibrate twice.

12. CLEANING & MAINTENANCE

- As the dry bath has no mechanical moving part, it requires very little maintenance and cleaning.
- Cleaning should be done with mild detergent and water
- Unplug the unit from its power source before any cleanup process. In case of any spillage allow the device to cool before any cleanup or removal of blocks.
- The holes of the blocks should be regularly cleaned with the damp cloth to ensure the tube be well contacted with the wall to have good heat conduction.
- Use a slight Damp cloth for cleaning process.
- Wipe the exterior of the machine with a Damp cloth.
- Cover the samples with the device lid over the block, this cover provides thermal insulation and reduces the water condensation.

Note: User is solely responsible for decontamination of the unit in case of spillage of hazardous material.

13. TROUBLESHOOTING

Error code	Cause	Effect	Solution
Er 01	Break in safety circuit	Heating off	Switch off device & allow to cool down. Otherwise to carried by authorized service person
Er 02	Heating not progress	Heating off	Switch off device. Otherwise to carried by authorized service person
Er 03	NTC probe sensor failed	Heating off	Switch off device. Only to be carried by authorized service person
Er 04	Probe not in liquid medium	Heating off	Put probe in liquid medium
Er 05	Heater NTC 100k failed	Heating off	Switch off device. Only to be carried by authorized service person

14. WARRANTY STATEMENT

This products is warranted to be free from defects in material and workmanship for a period of two (2) years from date of purchase. Your product will be duly repaired upon prompt notification in compliance with the following conditions :

This warranty is valid only if the product is used for its intended purpose and within the guidelines specified in this instruction manual. This warranty does not cover damage caused by accident, neglect, misuse, improper service, natural forces or other causes not arising from defects in original material or workmanship. This warranty does not cover any incidental or consequential damages, commercial loss or any other damages from the use of this product.

All items returned for service should be set postage prepaid in the original packaging or other suitable carton, added to avoid damage.

This warranty is valid only if the warranty is registered with the supplier within 30 days from the date of purchase.

For your reference, make a note of the serial number, date of purchase and supplier here.	
Serial No.	Purchase Date
Supplier	

15. PRODUCT DISPOSAL

In case the product is to be disposed of, the relevant legal regulations are to be observed. Information on the disposal of electrical and electronic devices in the European Community.

The disposal of electrical devices is regulated within the European Community by national regulations based on EU Directive 2012/19/EU on waste electrical and electronics equipment (WEEE). According to these regulations, any devices supplied after 13.06.05 in the business to a business sphere, to which this product is assigned, may no longer be disposed of in municipal or domestic waste. They are marked with the following symbol to indicate this.

As disposal regulations within the EU may vary from country to country please contact your supplier if necessary.

Accumax Lab Devices Private Limited.

Plot No. 15, 16 & 32 GIDC Electronic Park SEZ, Sector 26, Gandhinagar, Gujarat, India - 382026.

Website: www.neuation.com

0602-00-0000-02-003-R0

NEUATION

iTHERM D150-1

PRODUCT USER MANUAL

1. INTRODUCTION

This manual provides important safety information for this Dry Bath. It should be kept near the equipment for quick & easy reference. The Dry bath is equipped with better display for safe operations. This dry bath has range from ambient +5°C to 120°C making it useful for wide range of applications. Probe is provided for monitoring accurate temperature of samples.

2. INTENDED USE

The dry bath is intended to use for specific applications such as Enzymatic / kinetic reactions Denaturation of DNA/RNA and protein samples, Labelling of nucleic acids and proteins, quantification assays, Lysis reactions, Immuno precipitation etc.

NOTE: Before using the instrument, please read this user manual carefully. This user manual is intended to assist with the operation and care of the unit only and not its repair. For repair please contact the supplier.

3. FEATURES

- Dry heating block with temperature control range from ambient +5°C to 120°C
- Aluminum made blocks, resistant to chemical spillage & temperature shocks.
- 1 heating blocks with long timer range from 1min- 19hr:59mins & infinite mode
- Clear display shows critical parameters, Can be used as bead bath & water bath
- Various type tube capacity with convenient lifting gear for cleaning & disinfecting.
- Rapid heating & constant temperature across the blocks throughout operation.
- Build in safe temperature protection

4. STANDARD ACCESSORIES

- Power adapter, Dry block lifter, Product user manual & warranty card

5. TECHNICAL SPECIFICATIONS

Temperature Range	Ambient +5 to 120°C
Temperature Uniformity	± 0.5°C
Temperature Stability	± 0.5°C
Set-up Block material	Aluminium alloy
Number of Blocks	1 Nos
Display	Digital
Run Time & Modes	1min to 19Hr 59min
Ambient Temperature	5-40°C
Permissible Relative Humidity	≤80%
IP Rating	IP21
Dimension with Stack Lid	193 x 92 x 145 mm
Power Adapter Detail	Input - 100-240 VAC, 50/60 Hz Output - 24V ⎓ 4A
Power Consumption	85 W
Altitude	Use upto an altitude of 2000 m above MSL
Pollution Degree	2
Environment	For indoor use only

6. SAFETY PRECAUTIONS

⚠ Read all safety & usage information provided in this manual carefully before using the device.

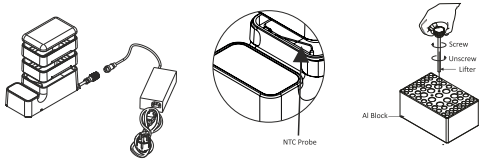
- Never use the instrument in any manner not specified in this manual or by the manufacturer might result in the laps of warranty.
- Repairs must only be performed by authorized service technician.
- Only use recommended original spare parts for best result & product safety.
- If liquids are spilled in blocks, the instrument must be cleaned carefully and properly before being used again.
- Prior to operation, the tubes should be visually inspected for material damage.
- Damaged tubes must not be used as this can result in sample loss and the contamination of the product.
- This product must be used for specified applications only. It must not be operated in a hazardous or flammable environment and must not be used to mix explosive or highly reactive substances.
- Do not place the potential hazardous material within the clearance area/ envelope.
- Wear your personal protective equipment in accordance with the hazards category of the medium to be processed. There is risk of liquid splashing.
- Do not move the instrument while it is operating or connected to the main power supply.
- Do not touch the Block surface when temperature of dry bath is over 50°C, this could result in serious burns or injury. Pay attention to the residual heat after switching off.
- Properly lift the device with both hands while moving or installing. Also, the device should only be moved from its position once it attains the room temperature.
- Ensure that only closed tubes are used in thermal reactions.
- Do not lean on the equipment. It may damage the equipment or harm the operator.
- Do not fill tubes near the device. Liquid spillage may harm the device.
- In the event of contamination caused by aggressive agents, the device must be cleaned immediately using a natural cleaning liquid. If any damage is seen, contact the service technician.
- Only process media which will not react dangerously to the extra energy produce by mixing.
- Do not operate the appliance in explosive atmosphere with hazardous substance or under water.

7. INSTALLATION

Gently remove the upper packaging and take out the dry bath by holding it from the bottom. When this equipment is used for the first time, ensure that all the packaging accessories are removed from the product.

LOCATION & MOUNTING

Place the device on a flat and levelled surface and ensure that all four feet stand on the surface firmly. Avoid installing on a slippery surface or surface prone to vibration.



1. Ideal ambient temperature is 20°C ± 5°C; avoid placing the device in direct sunlight.
2. Keep clearance of at least at least 30 cm from all sides to guarantee cooling efficiency.
3. Keep this away from heat or water to avoid sample temperature issues.
4. Do not place the device in such a place that it becomes difficult to operate.
5. Lid extended can be used with 15 and 50ml block to increase the height of the dry bath ensuring the closure of the lid to maintain the Temp. uniformity

8. REMOVING & INSTALLING BLOCKS

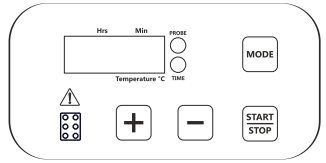
REMOVING BLOCKS

Device blocks can be removed / changed by a simple screwing device in to the blocks for lifting/removing/changing the blocks . Above image shows the process to remove blocks.

INSTALLING BLOCK

Follow the exact reverse process to insert the blocks back to dry bath. Above image shows the step by step procedure to replace the blocks back in the unit.

9. USER INTERFACE & DISPLAY



CONTROL PANEL OPERATION

Buttons	Function
START STOP	Start /stop button for operation start and stop.
MODE	1. Probe / plate mode selection (**long press standby condition**) 2. Temp / time change (**single press**)
+ −	(+) and (-) button will increase and decrease the value of TEMPERATURE/TIME and Prog command.

All LED will blink as per status of command.

10. OPERATION

SWITCH ON THE DEVICE

After connecting the power cord, switch ON the main power supply. Make sure that tubes are placed properly in the wells.

10.1 START / STOP OPERATION

- Single Press this button to "START" Operation (as per set Time, Temp & Mode).
- With the start of operation, temperature will increase on display. Press this button again to "STOP "

10.2 MODE

- When we select the "MODE" button we can enable Time and Temperature Mode alternate. To change its value, Press (+) and (-) button.
- You can set time from 1 min to 19 hr: 59 min or infinite "]["Mode.
- The TIME value will increase by 1 min by single press (+) button.
- After adjusting temp & time, value will be save after 5 times blinks and then it will show you home screen alternatively.

10. 2.1 HEATING FUNCTION

- You can Set Temperature from Ambient + 5°C to 120°C.
- The temperature value will increase by 0.1°C by single press (+) button & decrease by (-) button. The temperature remains in CELSIUS Unit.
- With the start of unit, display show value for temperature function default.