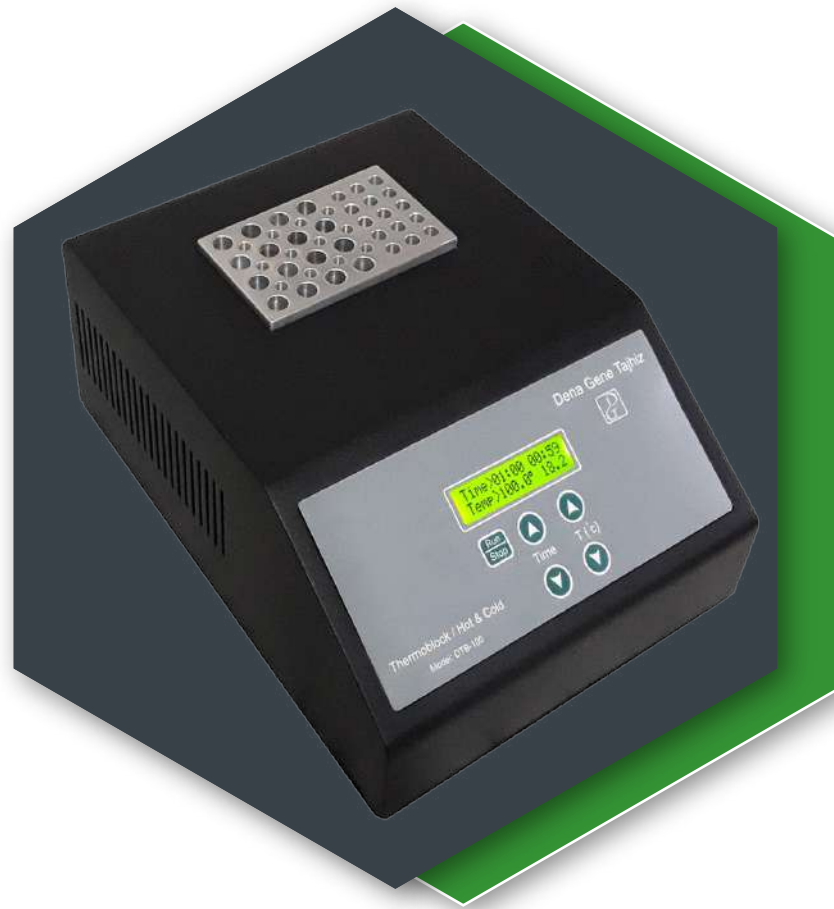


Thermoblock User Guide

Denagene Tajhiz Company
Biotechnology Lab Equipment manufacturer and designer





Thermoblock

www.Denagene.com

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Thanks for choosing Denagene Tajhiz Company's Thermoblock. This operation manual describes the function of the instrument. To ensure correct operation, please read the manual carefully before using it. Keep this manual for future reference in case you encounter any difficulties. Upon unpacking for the first time, please verify the instrument and accessories against the packing list. If anything does not match, please contact us.

This manual serves as a valuable resource for all users of our products, whether you are a seasoned professional or just starting your scientific journey. It has been meticulously crafted to help you clearly understand the features, functionality, and proper usage of our laboratory equipment.

Within these pages, you will find detailed instructions, diagrams, and troubleshooting guides to assist you in harnessing the full potential of our products. We have organized the content logically, making it easy for you to navigate through the manual and quickly locate the information you need.

Moreover, this manual is a living document that reflects our ongoing commitment to excellence. As we continue to develop and improve our product offerings, we will provide updates and revisions to this manual to ensure you always have the most current information at your fingertips.

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Introduction

Traditionally, in the past, water baths were commonly used for incubating biological samples at the desired temperature. The water bath controls the temperature of the samples, but it comes with issues such as environmental water contamination, low-temperature control accuracy, and slower temperature ramping.

Therefore, the thermal block or dry bath incubator is now more commonly used. The thermal block is used for incubating molecular biology samples at various temperatures with high precision.

Considering the technology employed in the thermal block manufactured by Denagene Tajhiz Company, users can define temperatures ranging from very low (usually up to zero degrees Celsius) to 100 degrees Celsius with high ramping speed and temperature accuracy of 0.1 degrees Celsius to incubate their samples.

Device Information

A Dry Block Heater (Thermoblock) is a laboratory device used to generate the required temperature for temperature-sensitive samples during experiments. Dry Block Heaters, also known as dry baths, are essential where reproducible results and high temperature stability are required.

Thermoblocks are widely used for incubation and activation of culture media, enzymatic reactions, immunoassays, melting point and boiling point determinations, as well as a broad range of laboratory applications. In addition to precise temperature control, they also provide physical protection for the samples. Unlike water baths, this instrument generates dry heat.

The Thermoblock belongs to digestion laboratory equipment and is designed for extensive use in chemical, biochemical, clinical, and other laboratories for storage, heating, digestion, incubation, concentration, and other heating and cooling processes (hot/cold block).

Thanks to its three-step temperature programming, this device is highly useful in enzymatic tests and other catalytic chemical reactions.



WARNING



Surfaces may become hot during use.



Do not check the temperature by touching it. Use a thermometer for this purpose.



Do not touch surfaces that become hot during use at high temperatures.



Use the apparatus only as instructed in the manual. Otherwise, the apparatus may be damaged.



After transferring or storing the apparatus in a humid environment, dry the apparatus before connecting it to ensure a dry voltage. During the drying process, the internal safety of the apparatus may be compromised.



Connect the apparatus only to a suitable power source. Only connect it to a power source that ensures a safe margin.



Use only the main cables that have been tested for connecting to the power supply.



Safety Instruction

- Ensure that the main switch and the power button are easily accessible during use.
- Place the apparatus on a non-flammable surface and keep it away from flammable materials.
- Never place a hot block on a flammable surface.
- To reduce the risk of eye injury during use at high temperatures, use safety goggles.
- Ensure that the operating temperature is lower than the maximum operating temperature specified on the apparatus.
- If a liquid is spilled inside the apparatus, first disconnect it from the power source and have it inspected by an experienced individual.
- It is the user's responsibility to be cautious if hazardous substances are spilled on or inside the device.
- Clean the apparatus only with a damp, lint-free cloth. Do not use chemical cleaning agents.
- Before using any pollution removal method (except the methods mentioned here), the user must contact the Denagene technical Team.
- Disconnect the power before removing the outer cover. Remember that there is no helper around you.

Technical Specification

Model	DTB - 100
Temperature Range	5-100
Speed Of Temperature Increase	About 5 degrees Celsius per minute
Capacity (ML)	$16 \times 1.5 + 15 \times 0.5 + 12 \times 0.2$
Maximum Activity Time (Hour)	100
Weight (KG)	4
Input Power	220 volt AC



Set up and Installation

Installation

Carefully unpack the device and inspect it. If there is any damage to the device, report it to Denagene Tajhiz Company. In case of any issues, keep all packaging materials in front of you.

If there is any physical problem, do not attempt to use the apparatus.

Set up and Installation

1. Connect the main cable to the socket at the back of the apparatus.
2. Press the power button to turn on the apparatus.
3. By pressing the run/stop button, the user can start the device if it's stopped or stop it if it's running.

Note that adjustments to the apparatus can only be made when it's in the stopped state.



4. To set the temperature, the user can use the up and down keys, adjusting the temperature with an accuracy of 0.1 degrees Celsius within the range of 0 to 100 degrees Celsius.
5. For setting the device's time, using the up and down keys, the user can adjust the time with an accuracy of 1 minute, up to 99:59 hours.
6. Now, the device will start heating or cooling the block.



7. Allow the block to reach the desired temperature before using.
8. After completing the task, an alarm indicating the end of the apparatus's operation will sound. This way, the user will be notified when the incubation time for their samples is complete.
9. To turn off the apparatus, press the button located at the back of the apparatus.

Maintenance

After turning off the apparatus, clean it with a damp cloth. Do not use corrosive materials or solvents to clean the thermal block.

Fuse Replacement

1. Pull the IEC power cable from the back of the device.
2. Use a fuse puller to remove the fuse from its slot.
3. Check the fuse, and if necessary, replace it with a functional fuse.

Repairs

Please consider that if any issues arise and you send the device for repairs, all parts of it must be free from biological, chemical, and hazardous radioactive materials.

If the device is contaminated, Denagene Tajhiz may refuse to accept the device for repair or component replacement.



Warranty

- The Denagene Tajhiz thermoblock comes with a one-year warranty for replacement parts, and in case of any technical issues with the device, the company takes responsibility for it.
- The warranty is void if there is damage, mechanical and electrical shocks, spillage of liquids and chemicals on electronic systems, or if the device is opened by individuals lacking qualifications.
- The DTB-100 thermal block model has a 10-year after-sales service warranty.



Documentation and Support

To obtain support for the latest services and support information for all locations, go to:

www.Denagene.com

At the website, you can:

- Access worldwide telephone and fax numbers to contact Technical Support and Sales facilities
- Search through frequently asked questions (FAQs)
- Submit a question directly to Technical Support
- Search for user documents, SDSs, vector maps and sequences, application notes, formulations, handbooks, certificates of analysis, citations, and other product support documents
- Obtain information about customer training
- Download software updates and patches

