



IbX instruments LBX CODB150 Digital Dry Bath User Manual

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Security Instructions

	Connect the equipment to a source of power provided with ground to guarantee the safety of the instrument and the experiment; connect the power when the equipment requires it.
	The use of this equipment in flammable and explosive, toxic or highly corrosive experiments is prohibited.
	The equipment must be used by previously qualified personnel who know the equipment and its operation by means of the user manual.
	Do not place the device in areas close to sources of heat.
	During operation, hazardous materials such as flammable liquids or pathological materials must be kept away.
	If the device is switched on without supervision, it can cause overheating of some parts of the work area in contact with it. Pay attention to the residual heat after turning off the equipment.
	When the equipment is in operation, do not touch the heating surface to avoid burns.
	Read the instruction manual before using the equipment.

During the use of the equipment, using personal safety protection will avoid risks of possible damage such as:

- Splash burns and evaporation of liquids.
- Poisoning by emission of toxic or combustible gases.
- Place the equipment on a flat, stable, clean, non-slip and fireproof surface. Do not use the equipment in

explosive atmospheres, with hazardous materials or underwater.

- Beware of the dangers caused by:
 - Flammable materials or media with a low boiling temperature.
 - Oxidizing materials
 - Insecure containers
- Use closed containers in case of processing of pathogenic material.
- Check equipment and accessories before each use. Do not use components in poor condition. Safe operation of the device is guaranteed only with the accessories described in the “Packing list” chapter. The accessories must be firmly attached to the equipment and cannot be detached. Always disconnect power before installing accessories.
- The equipment can only be disconnected from the socket by pulling on the base of the plug, not the cable.
- The voltage indicated on the equipment must correspond to the voltage of the electrical network.
- Make sure that the main power cable is not in contact with the heating surface. Do not cover the equipment.
- Keep the equipment away from high magnetic fields.

Rules of use

This equipment is specially designed to dry-heat metal blocks for educational, industrial or research purposes. This device is not suitable for domestic use or in environments that could be dangerous for the user or the equipment.

Reception

Carefully unpack the instrument and check that the equipment and / or accessories have arrived without apparent damage. If necessary, contact the supplier who supplied the equipment to request technical assistance.



Note:

If the equipment is damaged, it should not be connected to the electrical network.

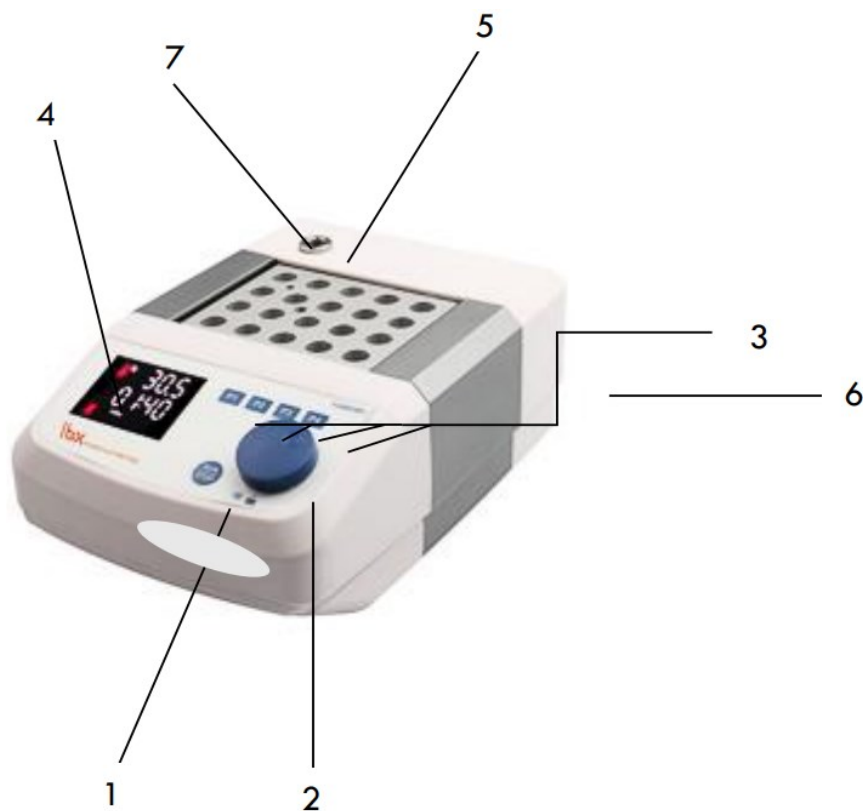
Packing list

The package includes the following items:

CODB150

Content	Qty
Main unit	1
Power cable	1
External temperature probe	1
Control clamping with screw	1

Control elements



1. "Run/Stop"
2. Command adjust parameters
3. Program memory
4. LED screen
5. Thread for support
6. USB connector
7. ON button

Operation

To be able to operate the device it will be necessary to connect it to an electrical outlet and ensure that it is deposited on a stable surface with a minimum distance of 30 cm on each side.

Temperature Setting

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

NOTE: Celsius and Fahrenheit

You can change the temperature scale by pressing buttons P1 and P2 simultaneously

Time Setting

The time setting can only be workable when the machine is powered on but not in working. 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.

Memorize programs

The system can save 4 different settings of temperature and time. To save them, press (P1, P2, P3 y P4) once both parameters have been selected. You will be able to switch through the memorized programs by turning the blue knob.

Operation modes

Incubation Mode

This function will allow us to program the incubation time during which the device will maintain the same temperature.

The device will be programmed with a time and a temperature by pressing and turning the blue button. Once the Run / Stop button is pressed, the unit will go into “heating” mode until it reaches the chosen temperature. Once the desired degrees have been reached, the equipment will be put into “holding” mode and will maintain the temperature during the time established by the user.

Reservation Mode

This function will allow us to set the time for the device to start heating. To activate and deactivate it, press the P1 and P3 buttons at the same time. When the reservation mode is active, a clock will appear to the left of the timer.

The device will be programmed with a time, after which, the heating process will start (heating mode followed by the “holding” mode) that will stop when the user presses the “Run / Stop” button.

Faults

If the unit cannot work properly, it might be due to the below fault list. The faults will appear on the screen after beeping for warning.

Item	Fault description	Fault code
1	External sensor short-circuit	E1
2	Internal sensor open circuit	E2
3	Internal sensor short-circuit	E3
4	External sensor isn't in the block	E4

In case of faults nº 1,2 or 3, contact your supplier. In case of fault 4, please check that the probe is placed inside the block to take the measurements.

Temperature Calibration

Each instrument has been calibrated before shipment. But it could have a deviation between the actual temperature and the displayed temperature due to some reasons, you can do as follows to calibrate the unit again.

Calibration modes: Press P1 and P4 simultaneously to activate the calibration mode)

CB01: Adjust the internal temperature probe (the external sensor should not be connected)

CB02: Automatic setting NOTE: To be able to calibrate with the automatic mode you need to calibrate the probe first. This calibration mode will execute the sequence from 30°C to 90°C automatically pressing the button (“Run / Stop”)

CB03: Adjust the external temperature probe. You need to use a sample with a high boiling point (above 100°C,

for example: glycerin) and place it into the block middle, you will also need a thermometer (Make sure the precision of the thermometer is within 0.1°C and the thermometer probe absolutely merged into the sample). Turn the device on and select the calibration point: (P1:3C). Plunge the external thermometer into the sample and press (“Run / Stop”) After 30 minutes of the “Holding” mode, read the data from the thermometer and adjust the temperature of the device accordingly by pressing the blue knob and pressing it again to save the setting. Repeat this process selecting a different calibration and temperature point to. Restart the machine after calibrating.

Maintenance and cleaning

- Proper maintenance allows the equipment to function properly and extend its useful life.
- Do not spray cleaning products directly on the instrument.
- Turn off the main power during cleaning.
- Do not use the following cleaning agents:

Colorants	Isopropyl alcohol
Building materials	Water containing surfactants / isopropyl alcohol
Cosmetics products	Water containing surfactants / isopropyl alcohol
Food products	Water containing surfactants
Fuels	Water containing surfactants

- Before using another cleaning or decontamination method, the user should check with the manufacturer that this method does not damage the instrument.
- Wear suitable protective gloves while cleaning the equipment.
- The equipment must be cleaned and disinfected before being sent for repair. Always use the original packaging.
- Use the equipment in a dry and clean place with a stable ambient temperature.

Storage and Transportation

- Keep the equipment in a dry and clean place, with good ventilation and free of corrosive gases and flammable or corrosive atmospheres.
- Prevent the equipment from getting wet and suffering blows that could affect the equipment during transport.

Technical data

Specifications	CODB-TC1	CODB-TC2
Voltage [VAC]	220-240	220-240
Frequency (Hz)	50/60	50/60
Power output/input[W]	165	250
N° of blocks	1	2
Dimension of the housing block [mm]	96 x 76	96 x 156
Temperature range [°C]	TAmb +5° – 150°C	TAmb +5° – 150°C
Temperature display	LED	
Temperature stability < 60 °C [°C]	±0.2 °C	±0.5 °C
Temperature stability of the blocks > 60°C [°C]	±0.2 °C	1
Temperature uniformity [°C]	±0.2 °C	±0.5 °C
Heating time with external probe[°C/min]	5	4.5
Time range	1 – 99h 59min	1 – 99h 59min
Timer	Si	Si
Dimensions [W x D x H mm]	152 x 86 x 190	152 x 86 x 300
Weight [Kg]	1.5 (without heating block)	2.5 (without heating block))
Allowed temperature	5-40 °C	5-40 °C
Allowed humidity	80%	80%
Protection needed(according with DIN EN 605 29)	IP 21	IP 21
External probe connector	DIN 12 878	DIN 12 878
External sensor variation	$\leq \pm (0,15 + 0,002 \times ITI)$	$\leq \pm (0,15 + 0,002 \times ITI)$

Service

If help is needed, you can always contact the Service Department of manufacturer for technical support:

www.labbox.com

e-mail: info@labbox.com

Please provide the customer care representative with the following information:


- Serial number
- Description of problem
- Your contact information

Warranty

This instrument is warranted to be free from defects in materials and workmanship under normal use and service, for a period of 24 months from the date of invoice. The warranty is extended only to the original purchaser. It shall not apply to any product or parts which have been damaged on account of improper installation, improper connections, misuse, accident or abnormal conditions of operation. For claim under the warranty please contact your supplier.



Documents / Resources

 The image shows the cover of the user manual for the LBX CODB150 Digital Dry Bath. It features the lbX instruments logo at the top, a photograph of the digital dry bath unit in the center, and the text 'LBX CODB150 Digital Dry Bath' and 'user manual' at the bottom.	<p>lbX instruments LBX CODB150 Digital Dry Bath [pdf] User Manual LBX CODB150 Digital Dry Bath, LBX CODB150, Digital Dry Bath, Dry Bath, Bath</p>
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References

- [Lab supplies - Labbox Export](#)