

Operating Instructions

Bio-Rad Laboratories Mini Incubation Oven

1660501 and 1660521

For Technical Service Call Your Local Bio-Rad Office,
Or in the U.S., call 1-800-4BIORAD (1-800-424-6723)



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1. Specifications

Bio-Rad's Mini Incubation Oven is a compact general purpose convection incubator capable of uniformly heating samples up to a maximum of 70°C. The unit comes with a movable shelf and has a clear plexiglass window so samples can be observed without opening the door, thus preventing heat loss.

The Mini Incubation Oven is designed to be safe at least when operated under the following conditions:

Temperature range:	Ambient +5°C to 70°C
Ambient Humidity:	Ambient +5°C to 70°C, 70% RH, non-condensing
Controls:	Analog - hydraulic
Unit size W x D x H:	28.5 x 28 x 33.5 cm
Chamber size W x D x H:	23 x 20 x 20 cm
Capacity:	6 L
Unit weight:	8.3 kg
Electrical:	115V~ +/- 10%, 50/60Hz, 0.6 A 230V~ +/- 10%, 50/60Hz, 0.5 A
Fuse:	250V AC 1A, 5 x 20 mm
Working Environment Temperature:	5°C to 40°C
Working Location:	Indoor use only
Ambient Pressure:	70 kPa to 106 kPa
Pollution Rating:	Pollution Degree 2

2. Unpacking

Carefully inspect the unit and accessories thoroughly upon receipt for any damage that may have occurred during shipping. Severe damage to the packaging container may indicate damage to the unit. If you suspect damage to the unit, immediately file a claim with the carrier in accordance with their instructions before contacting Bio-Rad Laboratories. Also verify that all accessories are included and that the unit is in good working order before discarding the shipping packaging.

The Mini Incubation Oven is shipped with the following:

- Stainless steel shelf
- Thermometer
- Power cord (two cords included with the 166-0521)

3. Installation



Your satisfaction and safety require a complete understanding of this unit. Read the instructions thoroughly and be sure all operators are given adequate training before attempting to put the unit in use. NOTE: This equipment must be used only for its intended application; any alterations or modifications will void your warranty and may cause injury.

Local city, county, or other ordinances may govern the use of this equipment. If you have any questions about local requirements, please contact the appropriate local agency. Installation may be performed by the end user.

3.1 Power Source

Check the data plate for voltage, cycle, wattage and ampere requirements. If matched to your power source, plug the power cord into a grounded outlet. Voltage should not vary more than 10% from the data plate rating.

3.2 Location

In selecting a location, consider all conditions which might effect performance, such as heat from radiators, autoclaves, etc. Avoid direct sun, fast-moving air currents, heating/cooling ducts and high traffic areas. Allow a minimum of 5cm between the unit and walls or partitions which might obstruct free airflow.

4. Controls Overview

4.1 Power Switch (Front Panel)

The main power switch is on the front panel and controls all power to the unit. The switch will light when the unit is energized.

4.2 Temperature Controller (Front Panel)

This control knob is marked TEMPERATURE. It controls the operating temperature of the unit on a scale of 1 to 10.

4.3 Heating Lamp (Front Panel)

This light is ON when unit is heating. When the unit has reached the set point temperature the light will be on only when the unit is calling for heat to maintain temperature.

5. Operation



Do not use this incubator in explosive or flammable environments. Do not heat or incubate flammable, explosive or highly reactive materials in this incubator as serious injury may result.

5.1 Place the unit on a level surface and plug the unit into a properly grounded electrical outlet of appropriate voltage.

5.2 Install the shelf at the desired height, with the shelf edges down. If you intend to place samples on the bottom of the chamber, install the shelf so that it sits with the edges down on the chamber bottom, thus creating an air gap between the chamber bottom and your samples. When installing your shelf, remember to leave clearance for the thermometer bulb that will come down from the roof of the chamber.

5.3 Gently insert the thermometer into the hold found on the top of the incubator. Avoid inserting or removing the thermometer too quickly; this can dislodge the rubber grommet that is used to hold the thermometer. For maximum accuracy, insert the thermometer to a point where the thermometer immersion line is just inside the incubator chamber.

5.4 Push the power switch to the ON position. The switch should illuminate.

5.5 Set Temperature Controller to 10. When the thermometer reaches the desired operating temperature turn the control down until the heating light turns off. Wait for the temperature to stabilize. Make small adjustments up and down as required until the desired operating temperature is obtained. Allow the unit to stabilize between each adjustment. Temperature stability is obtained when the HEATING lamp is going on and off automatically and the temperature remains constant.

5.6 Optional – The oven has a port in the back of the unit for passing a power cord out of the rear of the unit. This is for powering a small piece of equipment (shaker, etc.) in the incubation chamber. To pass a cord through, rotate the inner and outer doors up to reveal the pass through. Then slide the end of the power cord through the port. Then close both doors, resting the cord in the notch

6. Cleaning and Maintenance



Prior to any cleaning or servicing on this unit, disconnect power cord from the unit.

6.1 No routine maintenance is required on the unit.

6.2 Clean the unit internally and externally with a damp cloth and mild soap. Do not immerse the unit or spill liquids into or on the unit. Use of alcohol or ammonia-based cleaners on the window may cause the window to craze.

Allow the incubator to dry completely inside and out before reconnecting the power and using.

7. Troubleshooting and Service

If the unit fails to operate, check that the unit is plugged into a working outlet. Check that the unit is switched on and the power switch is illuminated and that the temperature controller is turned up. Finally, check the fuses. If the problem persists, contact Bio-Rad's technical support team at 1-800-424-6723. Please have your purchase order number and the serial number of the unit available when you call.

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