INSTRUCTIONS FOR INCUBATOR SHAKER II

MODELS 136400, 136400S & 136400-2

(PLEASE READ THESE INSTRUCTIONS COMPLETELY BEFORE OPERATING)

PRODUCT INFORMATION

The Boekel Shake 'N' Bake (Incubator Shaker II) is designed for scientists that prefer to use heat sealed bags and Tupperware® or Rubbermaid® containers for hybridizing and pre-hybridizing membranes in Southern and Northern blotting techniques. The Boekel Shake 'N' Bake uses a microprocessor to control incubation temperature. The unit's shaking action can be adjusted from approximately 8 to 25 strokes per minute or the unit can be operated with no motion as a conventional incubator.

PRODUCT PERFORMANCE

The Boekel Incubator Shaker II has a chamber temperature range of ambient plus 5°C to 70°C. The unit, within the bounds of the shelves, has a chamber uniformity of ± 1.3° C at 65° and an "in the container" uniformity of ± 0.7°C at 65° (temperature uniformity of the hybridization liquid in a heat sealed bag or Tupperware® box). The Incubator Shaker II provides three shaking shelves which can be loaded to a maximum combined total weight of 1 Kg (2.2 lbs.) The shelves are spaced at 6.35 cm (2.5 inches) to allow the use of either heat sealed bags or shallow Tupperware® containers. Shelves may be removed to allow more space for larger containers. Shelf shaking speed is controlled by an on/off switch and a front panel mounted variable speed control knob.

UNPACKING

1. Remove the Incubator Shaker II and tray set from the carton.

2. Inspect for damage. Report all shipping damage to the carrier immediately. Shipping damages are covered by the carrier and repair and/or replacement for shipping damages must be coordinated through the carrier.

3. Retain all packaging material in the event that the unit must be returned.

4. Completely fill out and return the self-addressed Boekel Warranty Registration Card to Boekel Scientific.

SET-UP

1. Place the unit in a clear, draft free environment. Ensure that the surface on which the unit is placed will withstand the radiated heat produced by typical laboratory incubators. Ensure that the side ventilation holes are not blocked.

2. Plug the power cord into a grounded receptacle of appropriate voltage.

3. Place the heat sealed hybridization bag directly on the shelf or on the supplied tray. Then place the tray on the shelf. Note: Use of the trays may diminish chamber uniformity due to temperature stratification.

Tupperware® boxes up to 6.35 cm (2.5 inches) high may be used on the lower two shelves. However, to prevent shelf jamming, use a box no higher than 3.3 cm (1.3 inches) on the top shelf of Incubator Shaker II. Boxes taller than 3.3 cm may be used on the top shelf only if they can be placed to the right hand side of the shelf so that they do not jam against the chamber ceiling on the upward stroke of the shelf.

OPERATION

1. Turn the "Power" switch ON. Ambient chamber temperature will be displayed on the digital readout.

2. Turn the "Shaker" switch on to start the shelf rocking action. Increase the shaking speed by rotating the "Shaker Speed" knob in the clockwise direction.

Setting Temperature

The Temperature Controller has three buttons. When the button on the left is depressed it will display "Target Temperature". When the left button is depressed simultaneously with the middle button, the "Target Temperature" value is lowered. When the left button is depressed simultaneously with the button on the right, the "Target Temperature" is increased. When all buttons are released, actual chamber temperature is displayed. In the event of power loss, the Temperature Controller retains last "Target Temperature" value. The flickering green dot in the upper left corner of the Controller Display is the heat indicator light.

CLEANING

1. Disengage power cord before performing any cleaning.

2. The interior bottom, sides, shelves and trays of the unit can be cleaned using a suitable cleaning and disinfecting solution. Allow to dry thoroughly before restarting unit.

3. The exterior can be cleaned with a damp cloth or sponge.

4. Be sure to properly dispose of all cleaning materials, especially any radioactive items.

SERVICE: RETURN AUTHORIZATION IS REQUIRED.

Should service be required, contact your salesperson or call Boekel Scientific Customer Service.

NOTE: Before shipping this unit for service, the unit must be thoroughly cleaned and decontaminated of any radioactivity. Shipment of unmarked radioactive units is illegal. All incoming units will be tested for radioactivity. Disposal and/or decontamination costs will be charged for any radioactive unit returned for repair.

SPECIFICATIONS

Size:
Exterior: 14.5"D (37 cm) x 16"H (41 cm) x 14W (36 cm)
Chamber: 11.5"D (29 cm) x 10.5"H (27 cm) x 11.5W (29 cm)
Tray: 8"D (20 cm) x 0.5"H (1.3 cm) x 8.5W (22 cm)
Shelf Separation: 2.5" (6.35 cm)
Shelf Area: 9"D (23 cm) x 9.5"W (24 cm)
Temperature Range: Ambient plus 5°C to 70°C Operation above 70°C not recommended.
Shaking Speed: 8 to 25 strokes per minute, typical
Weight: 24 lbs (11 kg)
Power: Model 136400, 136400S 115 VAC, 230 watts
Model 136400-2 230 VAC, 230 watts

TYPICAL CHAMBER TEMPERATURE PERFORMANCE

Condition [1]	Chamber Stability [2]	Chamber Uniformity [3]
37°C without trays	37°C ±0.2°C	±0.5°C
37°C with trays	37°C ±0.5°C	±1.2°C
65°C without trays	65°C ±1.0°C	±1.3°C
65°C with trays	65°C ±1.0°C	±2.3°C
65°C in sealed bag or box on shelf – Uniformity of 65°C ±0.7°C		

1 – With trays refers to brown plastic drip trays supplied with unit. When placed on shelves, trays can create some temperature stratification.
2 – Chamber average of 5 test points within the shelf boundaries of the unit during operation.
3 – Greatest variation between 5 test points at any instant in time.

Boekel Scientific
855 Pennsylvania Blvd.
Feasterville, PA 19053
TEL (215) 396-8200
FAX (215) 396-8264

E-MAIL: boekel-info@boekelsci.com