

**Labnet
Microplate Shaker
Model 2020T**

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Introduction

The Model 20T Benchtop Shaker has been designed for shaking standard or deep well microplates. The shaker can be used in environments from 4°C to 65°C. This allows for cold room use as well as incubated applications.

The shaker operates in a circular motion with an orbit of 3mm. Speed is variable, from 100 to 1200rpm. The Model 20T's platform will hold 2 standard or deep well microplates. The shaker also features a timer that can be set for a maximum operating time of 30 minutes or placed in the hold position for continuous operation.

The Model 20T Benchtop Shaker is constructed of heavy gauge steel. This provides the shaker with a stable base for vibration free operation, even at maximum speed.

Before attempting to operate the Model 20T Benchtop Shaker, read this instruction manual thoroughly. All persons operating this piece of equipment should review the Safety Precautions section of this manual.

Warranty

Labnet International guarantees that the Model 20T Benchtop Shaker you have received meets its published specification. The Model 20T Benchtop Shaker is guaranteed to be free of defects in materials and workmanship for a period of one year from the date of purchase. This guarantee is valid only if the unit has been used in accordance with the instructions in this manual and for its intended purpose. Labnet International shall not be responsible for consequential damages or damages resulting from the abuse or misuse of this equipment. Labnet International's liability shall be limited to the repair or replacement of the unit or refund of the purchase price, at Labnet International's discretion.

In the event that service is required, Labnet International's Service Department must first be contacted to receive a return authorization number.

Labnet International reserves the right to alter the specification of the Model 20T Benchtop Shaker without notice. This allows the incorporation of improvements as they are developed.

Please fill in the following information. This information will be required in the event that service becomes necessary.

Serial Number _____

Date of Purchase _____

Specifications

Shaking speed	100 to 1200rpm
Shaking motion	Orbital
Shaking orbit	3mm
Timer	0.5 to 30 minutes or hold
Capacity	2 microplates
Operating environment	4°C to 65°C
Voltage requirements	115V~, 60 Hz/230V~, 50 Hz
Power/current	15W/0.5 Amps

Unpacking and Installation

Upon receipt of the Model 20T Benchtop Shaker, examine the exterior carton for damages. In the event of shipping damage, a claim must be filed with the transportation carrier within 10 days.

Carefully unpack the unit and check for completeness. Included in the carton should be the following:

Shaker with microplate platform
Instruction Manual
Warranty Card

If any of these items are missing, contact Labnet International's Customer Service Department immediately.

Save the original packaging until the unit has been shown to be operating properly.

Verify that the unit is rated for the proper voltage by checking the panel on the back. Check that the proper power cord has been received. The serial number is also found on the back panel. Make note of the serial number in the space provided in the Warranty section of this manual.

The Model 20T Benchtop Shaker should be located on a level, stable surface near a grounded electrical outlet. Allow sufficient clearance on all sides of the unit, at least 3 inches, for proper ventilation. Ensure that the platform will not touch other objects while in operation.

Before operating the shaker, be sure that the platform is securely attached to the base. There are four black knobs that hold the platform in place - two in the front and two in the back. These knobs are attached to a screw which in turn attaches to the shaker base. The

platform has four upside down “U” shaped cutouts that fit over the screws. The knobs should be tightened down to hold the platform in place. Failure to properly secure the platform could result in damage to the shaker or injury to the user.

Plug the power cord into a grounded wall socket. The Model 20T Benchtop Shaker is now ready for use.

Operating the Model 20T Benchtop Shaker

All of the controls for the Model 20T Benchtop Shaker are located on the front panel. These controls are, left to right, power switch, start/stop switch, shaker speed control and timer.

To begin operation of the shaker, turn the power switch to the “on” position. The power indicator will light at this time. Adjust the speed to the desired level using the shaker speed control. Set the desired time interval or turn the knob to the hold position for continuous operation. To begin shaking, press the start/stop button. Note: To use the shaker at high speeds, it is recommended to start the shaker at the minimum speed and slowly increase to the desired speed level.

The Model 20T shaker can be used in two different modes, continuous operation or timer terminated operation. Continuous operation is achieved by turning the time knob to the hold position. In this mode, the shaker will operate continuously until the start/stop button is pressed.

Timer terminated operation allows for timed shaking procedures. The desired time is set using the time knob. When the set time expires, shaking will cease. Note: When in timer terminated mode, the time knob does not move. After the end of a timer run, the run can be repeated with the same parameters by simply pressing the start/stop button. Time can be set from 0.5 minutes up to 30 minutes.

Operation can be interrupted at any time by pressing the start/stop button. To resume operation, press the start/stop button again. When in timer terminated mode, the start/stop button must be pressed two times to resume operation.

NOTE: Certain load and speed ratios may cause vibration of the entire unit. If such vibrations occur, the speed and/or load should be increased or decreased as necessary to eliminate the vibration.

Safety Precautions

The following precautions should be taken when operating or working near the Model 20T Benchtop Shaker:

Never operate the shaker without a platform securely attached.

Always wear shatterproof eye protection.

Always make certain that the platform and any hardware are secure before operating the shaker.

Load the shaker symmetrically. Unbalanced loads should be avoided.

Solvents and flammables should not be used on or near the shaker.

Service and repair must only be performed by qualified professionals.

Hazardous samples should be shaken only in appropriate containment vessels.

Care and Maintenance

After each use, the Labnet Model 20T Benchtop Shaker should be wiped down with a soft, damp cloth. Do not immerse the shaker in water or pour liquids over the unit as electrical shock may occur.

The motor and shaking mechanism in the Model 20T Benchtop Shaker require no routine maintenance or lubrication. To assure a long life for the shaker, it should be used in a dry, non-aggressive environment.

Where to Call

If you have a question about the Model 20T Benchtop Shaker contact Labnet International's Customer Service Department at 732 417-0700, Monday through Friday, 8:30am to 5:30pm, EST.

For service inquiries, contact Labnet International's Service Department at 732 417-0700, Monday through Friday, 9:00am to 5:00pm, EST. Before returning a unit for service, a Return Authorization (RA) number must first be obtained from the service department. Equipment sent in without prior authorization will be returned at the customer's expense.