A Geno Technology, Inc. (USA) brand name

Mini Nitrogen Evaporator Sample Concentrator for 6 samples

Cat. No. BT1605

1-800-628-7730 ♦ 1-314-991-6034 ♦ info@BTLabSystems.com

Thanks for choosing BT Lab Systems' Mini Nitrogen Evaporator Sample Concentrator for 6 samples. This operation manual describes the function and operation of the instrument. In order to use the instrument properly, please read this manual carefully.

IMPORTANT SAFETY INFORMATION

- Please read this operation manual carefully before using the instrument.
- This product is an indoor Instrument.
- These units are designed for laboratory use by persons knowledgeable in safe laboratory practices.
- The operator should never open or repair the instrument. Opening or repairing the instrument will void the guarantee and can cause accidents.
- The power plug should safeguard against an electric shock. The 3-pin plug supplied with the instrument should be matched with a suitable grounded socket.
- The temperature of metal block will be very high during the normal operation. The liquid will be boiling. Do not touch any part of the body to the instrument due to risk of scalding.
- Close the test tube lid before putting the tube into the block. Liquids may spill out in the block or onto the device if the tube lid is opened, which will damage the block or the device.
- Make sure the rated electrical outlet load is no lower than the demand. Power line should be replaced with the same type if it is damaged. Make sure there is nothing else on the power line. Hold the jack when pulling out the power line. Do not pull the power line. Do not put the power line in a place where there is a tripping hazard.
- The instrument should be used in an area with low temperature, little dust, no water, no sunshine or hard light and with good air circulation. Do not use where there is corrosive gas or a strong magnetic field. Keep far away from central heating, camp stove and other hot sources. Do not put the instrument in a wet and dusty area. The vent on the instrument is designed for aeration. Do not wall up or cover the vent. The distance between each device should be more than 100cm when there is more than one instrument.
- Power off when not in use. If the instrument will not be used for a long period, unplug, and cover with a piece of cloth to protect it from dust.
- In case of the following, unplug the instrument at once and contact BT Lab Systems.
    - The instrument comes into contact with liquid
    - The instrument gets soaked or burned
    - The instrument emits an abnormal sound or smell
    - The instrument is dropped or the outer shell damaged
    - The instrument functions abnormally.

MAINTENANCE

The well in the block should be cleaned by a cloth dampened with alcohol to assure good heat translation between the block and the test tube and no residue. If there are smudges on the instrument, clean it with a dry cloth.

Power off when cleaning the instrument. Do not drop the cleaning fluid in the well when cleaning. Do not use corrosive cleaning fluid.

WARRANTY

The instrument is warranted against defects in materials and workmanship for 1 year. If any defects occur in the instrument or accessories during this warranty period, BT Lab Systems will repair or replace the defective parts at its discretion without charge.

For any inquiry or request for repair service, contact your local BT Lab Systems office. Inform BT Lab Systems of the model and serial number of your instrument.

INTRODUCTION

The nitrogen sample concentrator is mainly used for concentrating or preparing samples in batches such as drug screening, hormone analysis, liquid phase and mass spectrometry in the analysis of sample preparation. It works by blowing nitrogen in the surface of the sample which is being heated to accelerate evaporating and separating the solvent in the samples without oxygen. Instead of the rotary evaporation instrument, nitrogen sample concentrator can efficiently concentrate dozens of samples simultaneously.

KEY FEATURES

- The instrument works with heating by dry bath in the bottom and blowing nitrogen on the surface which accelerates liquid evaporation and sample concentration.
- The position of the gas needle in air chamber plate can be adjusted to suit for different types of tubes.
- The height of the air chamber plate can be adjusted. The length of a standard gas needle is 150mm.
- Gas needle is controlled independently. Separate blowing of each needle and flow regulating of each needle are available to avoid gas waste.
- The instrument can be put into ventilation cabinet when the concentration sample is toxic solvents.
- Built in overheat protection, automatic fault detection and fault beep alarm devices.
- LED displays immediate temperature and diminishing time. Operation is simple and convenient.
- Standard configured air cavity and adjustable bracket.

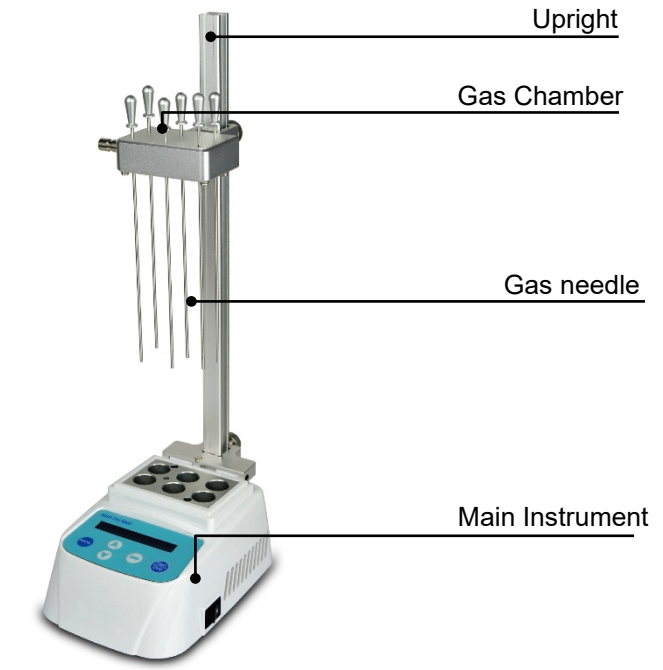
NORMAL OPERATING CONDITIONS

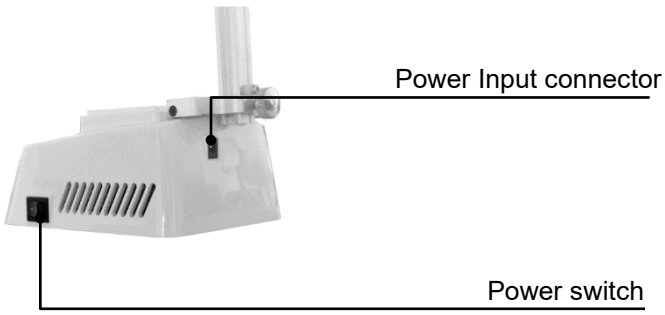
Ambient temperature: 5°C ~30°C
Relative humidity: ≤ 70%

TECHNICAL SPECIFICATIONS

Temperature Range	R.T.+5°C ~ 100°C
Heating Time	≤12min (from 40°C to 100°C)
Temperature Accuracy (40~100°C)	±0.5°C
Blocks Quantity	1 block
Time Range	1 to 999min or 1 to 999 sec
Nitrogen Flow Rate	0-10L/min
Nitrogen Pressure	<0.1MPa
Power Input	DC 24V
Max Power/ Avg Power	60/15 W
Dimensions (mm)	110 x 156 x 400

OVERVIEW





INSTRUMENT INSTALLATION

1. Put the instrument on a solid and stable bench.
2. Remove the M3 screws from the pole as shown
3. Fully insert the column into the square hole of the column holder behind the instrument, then screw knob into the column mounts, and finally tighten the knob to secure the uprights.
4. Place the air chamber on to the pole and secure with the screws.
5. Attach the final screw

OPERATION

Key Function

START/STOP Start or stop the operation program

PROG. Select operation program

▲ ▼ Set Temperature or Timing value

→ Enter value set or move cursor

Programming

1. Press **PROG.** Select the option program (e.g. P2) and press → to enter the temperature setting. Use the arrow to move the cursor and the up and down arrows (▲ ▼) to adjust the temperature. Two sections can be entered for each program.
2. Press the arrow key for 2 seconds in the timing section to allow the change of minutes and seconds. Use up and down arrows to change and right arrow to confirm.
3. To run a program, press PROG to select the required program. Press start to begin.
4. Display will show NOTOK until desired temperature is reached, when it will read OK.
5. Press "START" to run the segment 1. "■" which indicates segment 1 flickers. When segment 1 finishes, segment 2 will begin and 2 flickering "■" can be seen
6. At the end of segment 2 a buzzer will sound and program will read PROGRAM END. Press any key to return to start area.

TEMPERATURE CALIBRATION

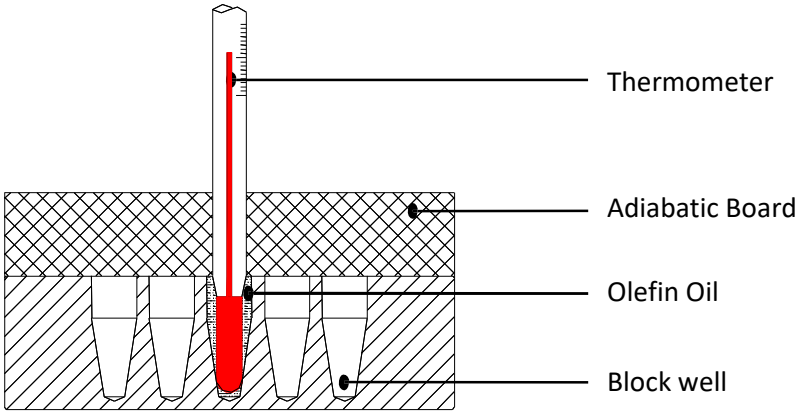
The temperature of the instrument has been adjusted before it is sold. If there is s deviation between the actual temperature and the displayed temperature, you can do as follows to calibrate it.

NOTICE:

The instrument uses two temperature adjustments to ensure its accuracy. It is linearly adjusted on 40 ° C, and 100 ° C. The temperature accuracy will be within ±0.5 ° C after the temperature calibration. Both the environmental and the block temperature should be lower than 35 ° C when calibrated.

Adjustment Methods

1. Start up the instrument, it enters waiting interface. Make sure the current temperature in display is below 35 ° C. If the temperature is higher than 35 ° C please wait until it is below 35 ° C.
2. Inject olefin oil into one of block wells. Put a thermometer into this well (the precision of the thermometer should be 0.1° C. The temperature ball should be immersed into the block well). Adiabatic material is needed on the block to separate it from the oil.



NOTICE: To ensure the calibration precision, read the actual temperature and allow 20 minutes for the temperature to reach calibration point.

3. Press “UP” and “DOWN” arrow simultaneously to enter the temperature calibration interface. LED displays “40.0 Adj✶ ” in the time display, the temperature displays the current temperature and the program auto controls the temperature to 40° C.

   When the temperature reaches 40° C, the decimal digit begins to flicker. Wait for at least 20 minutes, press “UP” or “DOWN” arrow of temperature to amend the temperature value to the actual temperature of the thermometer. Press “Start/Stop” to confirm.

   Program saves the value. Temperature rises to 100° C automatically.

4. When the temperature reaches 100° C, the decimal digit begins to flicker. Wait for at least 20 minutes, press “UP” or “DOWN” arrow of temperature to amend the temperature value to the actual temperature of thermometer , Press “Start/Stop” to confirm.
5. After temperature have been adjusted, press and “UP” and “DOWN” arrow simultaneously to exit the temperature calibration and return to waiting interface.

Notice: After temperature calibration, the temperature display is the same as the practical temperature of block.

Press “UP” and “DOWN” arrow simultaneously during the calibration to exit the adjustment procedure, the calibration is invalid.

TECHNICAL SUPPORT

BT Lab Systems offers technical support for all of its products. If you have any questions about the product's use or, operation, please contact BT Lab Systems at the following:

E-Mail: info@BTLabSystems.com