

## **nitrogen evaporator with digital temperature controller**

Nitrogen evaporator is a kind of laboratory equipment based on nitrogen blowing technology, which is widely used in many fields, such as pesticide residue analysis, environmental analysis, pharmaceutical drug testing, bio-analysis, food and beverage testing and so on.

### **Nitrogen Evaporator**

The nitrogen evaporator accelerates the process of solvent evaporation through the use of nitrogen or other inert gases, thus realizing oxygen-free concentration, separation and purification of samples. The device is easy to operate, efficient, able to complete the sample concentration in a relatively short period of time, and ensures temperature control and sample protection during the concentration process.

### **Main Features of the Nitrogen Evaporator**

1. Digital temperature control system: the instrument is equipped with a digital temperature controller with double digital display, which can precisely adjust the temperature. The regulating system adopts PID technology to ensure more stable and precise temperature control, and it also has the function of over-temperature alarm to effectively avoid the damage to the samples caused by too high temperature.



2. Adjustable distribution chamber: the gas needle channels in the distribution chamber can be used in combination or individually as needed. The height of the dispensing chamber can also be adjusted according to the needs of the samples, which is more flexible and meets the needs of different experiments.
3. Corrosion-resistant materials: the instrument may be in contact with solvents in the part of the 316 stainless steel, aluminum alloy or surface plastic spray treatment, to ensure that the equipment has a long service life, and cleaning and maintenance is more convenient.
4. High-efficiency blowing complementary collection technology: the use of nitrogen or other inert gases, through the way of blowing complementary collection to accelerate the evaporation process of the solvent, to achieve high-efficiency concentration. This technology not only improves the concentration efficiency, but also avoids the destruction of the sample composition at high temperature, which is suitable for heat-sensitive samples.
5. Using a water bath heating method.

### **Working Principle**

The nitrogen evaporator helps the solvent evaporate quickly by heating the sample and introducing nitrogen or other inert gases, using the blowing effect of the gas. During the operation of the equipment, the nitrogen gas sweeps the surface of the sample through the gas needle channel and takes away the solvent vapors, which makes the solvent in the sample quickly removed and the solute part is concentrated. Through the precise temperature control system, the solvent evaporation can be completed at low temperature to avoid the degradation of heat-sensitive substances.

## **Advantages**

1. Fast and efficient: nitrogen purge can significantly accelerate the solvent evaporation process, saving time and improving work efficiency.
2. Gentle operation: through the low-temperature evaporation, can protect heat-sensitive chemicals or biological samples from damage, suitable for experiments that require precise control.
3. Easy to use: digital temperature control and adjustable dispensing chamber makes the equipment operation simple and intuitive, and has a high degree of flexibility.
4. Durable and easy to clean: 316 stainless steel, aluminum alloy and other corrosion-resistant materials, long service life, easy to clean, reducing maintenance work.

## **Application Areas**

1. Pesticide residue analysis: widely used in pesticide residue detection, through the nitrogen blowing concentration technology to improve the concentration of target substances in the sample.
2. Environmental analysis: used for solvent concentration of water quality, soil and other environmental samples to help rapid detection of pollutants.
3. Pharmaceutical and drug testing: In drug analysis, nitrogen evaporators are used to extract and concentrate drug components to ensure accurate analysis results.
4. Biological analysis: widely used in the concentration of biological samples, in liquid chromatography and other analyses before.

5. Food and beverage testing: used for the concentration of food extracts to help detect trace ingredients and additives in food.
6. Other scientific research: in a variety of scientific research experiments, nitrogen evaporator as an important tool for sample processing, to help experimentalists in a short period of time to complete the sample concentration efficiently.

| <b>Model</b>         | <b>NE1-12</b>      | <b>NE1-24</b> |
|----------------------|--------------------|---------------|
| Heating method       | water bath heating |               |
| Number of samples    | 12                 | 24            |
| Temperature accuracy | ±1°C               |               |
| Temperature range    | ambient to 100°C   |               |
| Power                | 400W               | 1000W         |
| External dimensions  | φ250x820mm         | φ360x720mm    |
| Power supply         | 220Vac, 50Hz       |               |