

nitrogen blowdown concentrator with stand lifting function

Nitrogen blowdown concentrator is a kind of laboratory equipment specialized in concentration, drying or solvent removal during liquid sample pre-treatment, which is widely used in laboratory automation and high throughput processing scenarios.

Nitrogen Blowdown Concentrator

The nitrogen blowdown concentrator accelerates the solvent evaporation process by blowing nitrogen or other inert gases in a uniform air stream over the sample surface, combined with the constant temperature environment provided by the heating module, to enhance the concentration efficiency, and is suitable for the parallel processing of a large number of samples.

Main Features

- **Intelligent touch operation interface:** Full-color LCD touch screen, real-time display of working time, heating temperature, nitrogen air pressure and other core parameters, easy and intuitive to operate.
- **Multi-specification heating module optional:** Module hole depth of 45mm, aperture covers 15mm, 17mm, 21mm and other conventional sizes, can also be customized according to customer demand for special aperture or opening form, to meet the needs of different experimental vessels adaptable.



- **High corrosion-resistant material design:** 316 stainless steel, alumina or plasticized surface treatment of key components in contact with solvents, to enhance the corrosion resistance and durability of the equipment, to ensure long-term stable operation.
- **Flexible configuration of nitrogen blowing needle:** Each gas needle channel supports independent or combined use, applicable to different sample concentration programs, enhance the flexibility of the experiment.
- **Adjustable design of the ventilation plate:** The gas distribution structure supports direction and height adjustment, which is convenient for users to pick and place test tubes and improve the efficiency of experiments.
- **Diversified lifting mode:** The basic model provides manual lifting function, and can also be equipped with electric lifting module to adapt to different operating habits and scenarios.
- **High-precision temperature control system:** Integrated digital PID thermostat, with over-temperature protection function, to achieve temperature control accuracy and safety of the double guarantee.
- **A variety of heating modes to choose from:** Provide dry heating and water bath heating two models, respectively, for different heat-sensitive or reactive samples processing needs.

Advantages

- **Rapid concentration, significant efficiency:** Through the gas purge + heating double accelerate solvent evaporation, suitable for high-throughput sample processing.
- **Strong sample protection:** Nitrogen as an inert gas can form a protective atmosphere, effectively preventing sample oxidation, degradation, to protect the integrity of analytes.
- **Modular design:** A variety of modules, heating methods and gas circuit structure can be flexibly matched to adapt to a variety of experimental application scenarios.
- **Easy to maintain and clean:** Corrosion-resistant materials significantly reduce the risk of contamination and damage to the instrument, prolonging the service life.
- **Humanized operation experience:** Touch screen control, rotating sample holder, electric lift and other designs greatly enhance the convenience of use.

Working Principle

The basic principle of the nitrogen blowdown concentrator is to use nitrogen or other inert gases from the gas needle to blow to the sample liquid surface at a constant flow rate, while the heating module to provide a constant temperature environment, prompting the solvent to evaporate in a short period of time. Since the inert gas is not involved in the sample reaction, the concentration process can be carried out in an oxygen-free environment, effectively avoiding oxidative loss of target compounds. The whole machine stabilizes the temperature through the PID temperature control system, and the gas flow is precisely controlled through the flow regulating valve or rotor flowmeter to achieve repeatable and reliable concentration operation.

Main Application Areas

- **Pesticide residue analysis:** Fruits and vegetables, food in the trace pesticide residue extract concentration.
- **Food safety testing:** Dairy products, beverages, condiments in the concentration of additives or pollutants in the pretreatment.
- **Biomedical analysis:** Blood, urine, serum samples of drug metabolite concentration.
- **Environmental monitoring:** Surface water, groundwater, air particulate matter in the analysis of organic matter pretreatment.
- **Pharmaceutical quality control and research and development:** Sample concentration of traditional Chinese medicine extracts, APIs and preparations.
- **Forensic toxicology analysis:** The concentration operation required for toxicant screening or trace component detection.

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| Model | NE2-12 | NE2-24 | NE3-12 | NE3-24 | NE3-36 |
|----------------------|--------------------|---------------|------------------|---------------|---------------|
| Heating method | water bath heating | | dry bath heating | | |
| Number of samples | 12 | 24 | 12 | 24 | 236 |
| Temperature accuracy | ±1°C | | | | |
| Temperature range | ambient to 100°C | | ambient to 150°C | | |
| Power | 150W | 200W | 150W | 200W | 300W |
| External dimensions | 340x230x380mm | 340x310x380mm | 340x230x380mm | | 340x310x380mm |
| Power supply | 220Vac, 50Hz | | | | |