nitrogen blowdown evaporator with 360 degree viewable window

Nitrogen blowdown evaporator through the high-purity nitrogen or other inert gases to a certain flow rate blown into the sample surface, under the condition of heating to promote rapid evaporation of solvents, so as to realize the oxygen-free concentration of the sample processing.

Nitrogen Blowdown Evaporator

Nitrogen blowdown evaporators are suitable for the treatment of heat-sensitive substances, which can avoid the degradation of samples due to high-temperature oxidation.

Features of Nitrogen Blowdown Evaporator

1. **Intelligent control:** Equipped with digital temperature controller and PID self-tuning function, real-time double digital display temperature and time, can be set to over-temperature alarm, improve operational safety.
2. **Multi-channel independent control:** Each gas needle channel can be adjusted individually or in combination to meet the needs of diversified samples processed at the same time.

3. **Corrosion-resistant materials:** 316 stainless steel, anodized aluminum or sprayed protective layer is used for the part in contact with reagents, which has strong anti-corrosion performance, easy to clean and high durability.
4. **Flexible structural design:** Spring clamp design to adapt to different specifications of containers (test tubes, beakers, centrifuge tubes, etc.), the sample rack 360-degree rotation, easy to pick up and put down and observation.
5. **Friendly operation interface:** Bright touch screen supports one-key setting of parameters, concentration time, temperature, air pressure at a glance. Optional split screen is convenient to be placed outside the fume hood operation.
6. **Strong auxiliary function:** Equipped with adjustable rotor gas flow meter, 360 degree illumination window to clearly observe the sample concentration process.

Advantages

1. **Energy-saving and high efficiency:** Nitrogen flow can be adjusted accurately to avoid wasting gas. Multiple samples can be handled, significantly improving work efficiency.
2. **Concentration uniformity:** Water bath heating heat transfer uniformity, to ensure the synchronization and reproducibility of each sample concentration.
3. **Oxygen-free environment:** Blowing inert gas, effectively avoiding oxidative decomposition reaction, suitable for handling sensitive samples.

4. **Adaptable:** Compatible with 1ml to 50ml containers, suitable for a variety of sample processing tasks.
5. **Safety design:** Over-temperature alarm and isolation control design, to protect the safety of laboratory operators.

Working Principle

The core principle of the nitrogen blowdown evaporator is inert gas purging and constant temperature heating and evaporation. The instrument works by blowing high purity nitrogen from the nitrogen blowing needle to the surface of the sample at a directional, constant flow rate, while providing a constant temperature heating environment through a water bath, so that the volatile solvents in the sample are rapidly evaporated, while the target analytes are retained in the container. The process is completed under oxygen-free conditions to avoid sample oxidation while allowing for high throughput simultaneous concentration.

Main Application Areas

1. **Pesticide residue detection:** Concentration of pesticide residues in extracts of fruits and vegetables, soil, etc.
2. **Food and beverage detection:** Pretreatment of additives and contaminants in beverages, dairy products, oils and fats.
3. **Pharmaceutical analysis:** Concentration of active ingredients in drugs, commonly used in pharmacokinetic and drug quality analysis.

4. **Environmental monitoring:** Air, water and soil samples of trace pollutants in the concentration of pre-treatment.
5. **Forensic science:** Body fluids, toxic extract samples for volatilization before concentration.
6. **Biological sample preparation:** Concentration of plasma, urine and other complex biological matrix samples, conducive to subsequent LC-MS/MS and other analyses.

Model	**NE4-24**
Heating method	water bath heating
Number of samples	24
Temperature accuracy	±1°C
Temperature range	ambient to 100°C
Power	1000W
External dimensions	360x360x720mm
Power supply	220Vac, 50Hz