GDANA
ROGETSCIENTIFIC

N810

Water-Cooling-Free Fully Automatic Kjeldahl Nitrogen Analyzer



Grand Analytical Instrument Co.,Ltd.

The new generation of Water-Cooling-Free Fully Automatic Kjeldahl Nitrogen Analyzers leads the innovation in nitrogen analysis technology

More accurate, safer, and more environmentally friendly

The new generation N810 Water-Cooling-Free Fully Automatic Kjeldahl Nitrogen Analyzer breaks away from the limitations of traditional Kjeldahl nitrogen analyzers that rely on external water supplies or chiller-based condensation. Equipped with a water-cooling-free system, it enhances experimental accuracy and efficiency while significantly improving instrument reliability. This innovative design greatly reduces the procurement cost of external cooling water circulation systems and daily water consumption.The instrument integrates multiple full-process functions, including water-free condensation, automatic addition of alkali and acid, automatic addition of diluent, automatic distillation titration, automatic digestion tube emptying, automatic solution level monitoring, automatic over-temperature monitoring, automatic cleaning and waste disposal, and automatic result calculation, enabling unattended operation of Kjeldahl nitrogen analysis.



Water-Cooling-Free Condensation Technology for Distillation

The N810 main unit features a built-in water-free condensation technology, innovatively integrating multiple cooling methods.

Stable Condensation Performance Independent of External Conditions

The distillation process requires no external tap-water cooling, eliminating the impact of high water temperature or low water pressure on condensation efficiency.

Water-saving and Eco-friendly, Reducing Water Costs

Water-saving and environmentally friendly, this device significantly conserves water resources, aligning with the current trend of energy conservation andenvironmental

High-Efficiency Condensation for Accurate and Reliable Results

The enhanced condensation ensures that water vapor and ammonia are instantaneously liquefied and fully absorbed, with no loss. This fundamentally guarantees more accurate and reliable results.

Space-saving and Flexible Placement

The N810 does not require a dedicated faucet or circulating water chiller, allowing for flexible placement within the laboratory.

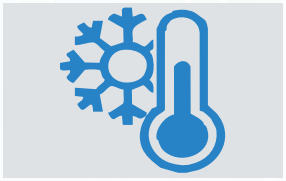
Technical Specification

Instrument model	N810	Maximum Power of the Steam Generator	2000W
Detection range	0.1-250mgN	Display method	10-inch color touchscreen
Measured sample weight	Solid ≤ 6g, liquid ≤ 20mL	Output format	XLS, XML and PDF
Titration accuracy	0.5μL/step (standard), 0.2μL/step (optional) 0.1μL/step (optional)	Data storage capacity	≥ 2,000,000 pieces of data, with unlimited cloud storage
Repeatability error	RSD≤1.0% (1-250mgN)	Power supply	220VAC ±10% 50Hz
Recovery rate	99-101% (1-250mgN)	Operating temperature	10-30°C
Condensation method	No need for external water source for condensation	Transmission interface	USB, LAN, RS232, WiFi, Bluetooth
Automation	Automatic reagent addition, distillation, titration, and calculation	Permission settings	Three-level permission management
Distillation time	Continuous adjustable from 0 to 1000s	Dimension	460*450*760 (mm)
Steam flow	Adjustable from 0 to 100%	Weight	50kg

Product Features

Advanced Metal Condensation System

The nitrogen analyzer features a built-in refrigeration system that enables water-free condensation without the need for external tap water or a chiller. The condenser is constructed from corrosion-resistant titanium and equipped with a high-precision temperature sensor for real-time monitoring of condensation temperature. This design ensures complete, loss-free condensation of ammonia and water vapor, delivering stable and highly efficient performance. In addition, the compact integrated structure saves installation space and reduces water consumption by up to 99% compared with conventional instruments.



Fully Automated Operation for Efficient Experiments

Fully automated operation enables automatic addition of alkali, acid, and diluent, and the automatic execution of distillation and titration, cleaning, digestion tube emptying, solution level monitoring, over-temperature monitoring, and waste disposal. The system automatically performs result calculation, output, and printing, and supports two operating modes: distillation followed by titration, and simultaneous distillation and titration.



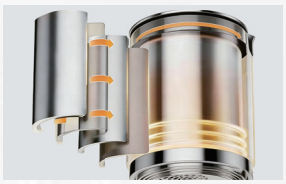
High-precision Syringe Pump Micro-controlled Titration System

The titration system adopts dynamic titration technology, enabling simultaneous distillation and titration while automatically adjusting the titration speed and volume according to the experimental progress, improving efficiency and enhancing testing accuracy. The instrument is equipped with a high-precision syringe pump titration system and comes standard with a 25 mL burette, with compatibility for 5 mL, 10 mL, 35 mL and other burette sizes to meet different titration precision requirements.



Dual-layer Vacuum Insulation Structure Design

The steam generator is constructed from food-grade 304 stainless steel and features a dual-layer vacuum insulation structure. It integrates automatic thermal insulation with constant-temperature control and automatic liquid level monitoring, effectively reducing heat-up time and enabling instant steam generation, thereby ensuring efficient and convenient operation throughout the experimental process.



Equipped with a 10-inch Color Touchscreen and Android System for Enhanced Functionality

Equipped with a 10-inch color touchscreen and an Android-based operating system, the system supports Chinese and English user interfaces. It provides a rich set of functions with simple and intuitive operation, enabling real-time monitoring and display of the experimental process.



Cloud Service Functions

Supports Wi-Fi and other network connectivity options and can be integrated with LIMS (Laboratory Information Management Systems). Enables cloud-based data storage or local data download, with a storage capacity of more than 2,000,000 data records.



Rich Software Interface for Real-time Process Monitoring

The software interface provides comprehensive functionality and displays the entire titration process in real time through graphical curves. Data including color changes, titration volume, steam temperature, and condensation temperature are synchronously displayed in real time, offering a clear and intuitive overview.



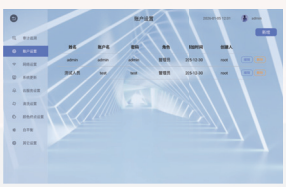
Status Indicator Light for Real-time Instrument Status Feedback

The front panel of the instrument is equipped with a status indicator light, with different light colors providing real-time visual feedback of the instrument status, including standby, operation, and fault conditions.



Safety Compliant with FDA 21 CFR Part 11

Test results can be exported in XLS, XML, or PDF formats to accommodate various customer needs and are fully compliant with FDA 21 CFR Part 11. The system incorporates a built-in, multi-level user access control with at least three permission levels, ensuring secure and fully traceable data management.



Kjeldahl N-Digester



Instrument mode	NDS-20
Batch Capacity	20 samples per batch
Temperature Range	Ambient to 450°C
Temperature Accuracy	±1°C
Heating Block Material	High-purity graphite block
Time Setting Range	1min-99hr
Controller Display	5-inch HD capacitive LCD touchscreen
Power Supply	220V±10%，50Hz
Dimension	515*400*182 (mm)



NDS–20 Kjeldahl N-Digester



Kjeldahl Digestion Tube Rack



WD-20 Waste Exhaust Device



Exhaust Gas Absorber

- The instrument can store more than 10 digestion methods. The controller and main unit feature a split design.
- Equipped with a high-purity graphite heating module, featuring minimal hole-to-hole temperature deviation to ensure uniform heating and improved thermal efficiency.
- Utilizes PID intelligent temperature control with high accuracy; heating from ambient temperature to 400°C takes only 20 minutes.
- The waste exhaust device is made of PTFE corrosion-resistant material.
- Provides 20-position waste discharge capacity. Equipped with a tap-water vacuum pump to remove acidic gases under negative pressure and absorb harmful odors; the sealed cover is made of PTFE, resistant to acids, alkalis, and high temperatures. An optional water-free exhaust gas absorber is available to reduce water consumption.
- The instrument housing is constructed from 304 stainless steel, with a corrosion-resistant coating applied around the enclosure.
- Supplied with a quick-cooling Kjeldahl Digestion Tube Rack.

www.gdana.com

Grand Analytical Instrument Co.,Ltd.

86 020-87684303

5th Floor, Building 7, Liandong U Valley Guangzhou Nansha International Enterprise Port, No. 8, Zhixin 1st Road, Dagang Town, Nansha District, Guangzhou, Guangdong Province, China

WeChat

official website