

# JK9870

## Fully Automatic Kjeldahl Analyzer

v25.1.01

The Kjeldahl method is a classic technique for determining nitrogen.

It is widely used for the measurement of nitrogen in soil, food, livestock, agricultural products, feed, and other nitrogen-containing compounds. The process for sample analysis using this method involves three main steps: sample digestion, distillation and separation, and titration analysis.

Our company is one of the creators of the national standard GB/T 33862-2017 for "Fully (Semi) Automated Kjeldahl Nitrogen Analyzer." Therefore, the Kjeldahl analyzer series products we develop and manufacture comply with both the GB standard and relevant international standards.



### Light intensity auto adjustment

The patented technology features an automatic adjustment system for the intensity of red, green, and blue (RGB) lights based on the color concentration of the absorption solution, ensuring adaptability to different operating environments.



### 304 stainless steel steam generator

Offers reliable performance, high pressure resistance and a long service life.

### Patented separated capacitive liquid level sensor

Offers reliable performance, high precision, and long service life.



### Splash prevention bottle

Made of polymer material that is resistant to acids, alkalis, and high temperatures.



### 304 stainless steel condenser

Offers high cooling efficiency and long service life.

## Product Features

One-button automatic completion: Automatically completes reagent addition, temperature control, cooling water control, sample distillation and separation, titration analysis, data storage and display, waste liquid discharge, titration cup cleaning, and completion prompt.

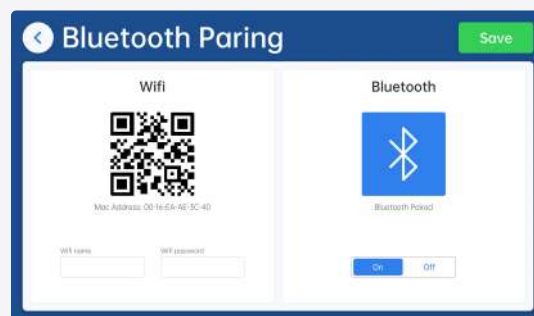
Control system: 7-inch color touchscreen with easy language switching between English and Chinese.

Three-level authority management: Supports electronic records, electronic labels, and an operation traceability query system that meets certification requirements.

Dual analysis mode: Switches between automatic and manual modes as needed.

★ (Optional feature): Unique "sample weighing data automatically uploaded to the nitrogen analyzer via a downloadable app on mobile devices," reducing transcription errors and improving efficiency.

★ (Optional feature): Remote monitoring of the nitrogen analyzer's operational status via mobile phone, with real-time data sharing and download capabilities.



★ Automatic shutdown: Shuts down automatically after 60 minutes of inactivity, ensuring energy savings and safety.

★ Built-in protein factor lookup table: When the coefficient = 1, the result is displayed as "nitrogen content," and when the coefficient > 1, the result is converted to "protein content." The results are displayed, stored, and printed.

Titration system: Uses RGB coaxial light sources and sensors, offering wide color adaptability and high precision.

★ Patented RGB light intensity adjustment system: Automatically adapts to different sample concentrations.

Titration speed: Adjustable from 0.05ml/sec to 1.0ml/sec, with a minimum titration volume of 0.2μl per step.

High-precision titration system: Comprises a German ILS 10mL (optional 25mL) syringe and a linear motor with 0.6mm lead screw.

Visible titration cup: Allows easy observation of the titration process and facilitates cleaning.

Distillation time: Adjustable from 10 to 9990 seconds.

Data storage: (16M) Can store up to 1 million data sets for user reference.

5.7CM thermal printer: Features automatic paper cutting.

★ Anti-splash bottle: Made from high molecular PP plastic, suitable for high-temperature, strong alkaline, and strong acidic environments.

★ Steam system: Made from 304 stainless steel, with patented "separated capacitive liquid level sensor control" technology, ensuring safety, reliability, and longevity.

★ Condenser: Made from 304 stainless steel for fast cooling and stable analysis.

Leakage protection system: Ensures operator safety.

Safety door and alarm system: Ensures personal safety.

Digestion tube misalignment protection system: Prevents injury from reagents and steam.

Steam system low-water alarm: Prompts shutdown to prevent accidents.

Steam boiler over-temperature alarm: Shuts down to prevent overheating.

## Technical Specification

Analysis range: 0.1—240 mg N  
Precision (RSD):  $\leq 0.5\%$   
Recovery rate: 99-101%  
Minimum titration volume: 0.2  $\mu\text{L}$ /step  
Titration speed: 0.05—1.0 ml/s, adjustable  
Distillation time: 10—9990 seconds, adjustable  
Sample analysis time: 4-8 minutes (cooling water at 18°C)  
Titrant concentration range: 0.01—5 mol/L  
Titration cup capacity: 300 ml  
Touch screen: 7-inch color LCD touch screen  
Data storage capacity: 1 million sets of data  
Printer: 5.7 cm thermal printer with automatic paper cutting  
Safe alkali addition mode: 0—99 seconds  
Automatic shutdown time: 60 minutes  
Working voltage: AC 220V/50Hz  
Heating power: 2000W  
Main unit dimensions: 500 mm (L) x 460 mm (W) x 710 mm (H)

## Product Packing List

JK9870 main unit: 1 unit  
5L reagent bucket: 2 pieces  
10L distilled water bucket: 1 pieces  
20L waste liquid bucket: 1 pieces  
1L titration bottle: 1 pieces  
Reagent tubing: 4 tubes  
Cooling water tubing: 2 tubes  
Power cord: 1 cord  
Digestion tube: 1 tube  
Printer paper: 8 rolls