

K12 Fully Automatic Kjeldahl Nitrogen Analyzer

K12 — Fully Automatic Kjeldahl Nitrogen & Protein Analyzer

Overview

Reagent addition, distillation, titration, digestion tube and titration buret waste removing, discharging & washing, calibrating, fault detecting, solution level monitoring, and outcome calculating all can be realized fully automatically. Make the entire experimental process simple and efficient. Standard data-processing software (the control software is also optional).

Features

- Fully automatic single-sample testing: once a sample starts, the complete test cycle runs with no operator attendance required.
- Built-in autosampler interface — pairs with the A20 (20-position) or A35 (35-position) autosampler to run 20 or 35 samples consecutively, for true unattended batch operation.
- Comply with international / national standard, adopt national standard Kjeldahl method: digest sample in concentrated sulphuric acid environment, steam distillation in alkaline environment, boric acid absorption, indicator titration end-point color determination method. Adopt international advanced high-precision high-resolution 16-bit tri-phosphor digital signal color sensor determinate titration end-point method (successfully developed in 2005).
- Dynamic titration technology (known as distilling while titrating, successfully developed in 2007) could accomplish the distillation, titration and calculation synchronically.
- The visible titration flask make the color change during the titration could be clearly shown.
- In 2007, Sonnen successfully developed the unique auto determining module for nitric nitrogen and high nitrogen.
- Sonnen is one of the drafters of China's national standard GB/T22923-2008.
- Sonnen is one of the drafters of the China's official standard JJF 109-2012 "Calibration Specification for Nitrogen Analyzer".
- Adding acid, adding alkali, distillation, titration, calibration, liquid level detection, waste discharging & washing (digestion tube and titration cup), calculation and print can all be realized fully automatically.
- Whole new multicore ARM operating system, 10-inch high definition color touch LCD screen, realtime monitoring and displaying experimental process.
- Multi safety monitoring function: monitoring the safety of safety door, digestion tube, steam pressure, cooling water temperature, distillate temperature, water level of steam generator and lack of water. Ensuring experimental safety.
- High precision titration system, achieve dynamic titration and variable speed titration, could accomplish the distillation, titration, calculation, data transmission synchronically, reduce experimental time by 40%. The external titration cup with protection real time visible and with anti interference capability.
- Multi data output modes. WIFI, RS232/RS485, double USB2.0 interface. Data processing by Word, Excel software.
- The instrument stores up to 5,000,000 test results internally. Test results can be exported in 12 formats, including Word and Excel.
- Fourth level permission grading function, using different permissions from program administrator, main administrator, auxiliary administrator, and operator. Built-in time lock & data lock complies with "GLP and GMP" regulations.

- Titration color can be calibrated automatically or manually. The titration endpoint determined by high accuracy 16-bit three primary color digital signal color sensor.
- PTFE (Teflon) bellows pump, acid and alkali resistance and corrosion resistance, Resistance to particle plugging structure, steady liquid addition controled by stepper motor, negative pressure suction without danger.
- PTFE (Teflon) splash-proof bottle, resistance to high temperature and strong alkali, no ammonia leakage, ensure high recovery rate.
- The liquid level detection of bucket ensure no lack of liquid during experiment.
- Capable of detecting trace nitrogen content, accurate to 10ppm.
- Optional addition of nitrate nitrogen or high nitrogen(the sample nitrogen content higher than 45%) automatic testing module.

Specifications

Measurement range	0.1-240 mg N
Measurement time	3-8 min/sample
Recovery	≥99.5%
Repeatability	≤0.5%
RSD	≤1%
Steam flow rate	0-100%
Titration accuracy	0.1 µL/step
Sample size	Solid ≤6 g / Liquid ≤25 ml
User-defined schemes	500
Data storage	5,000,000 test results
Connectivity	USB, Wi-Fi, host control
Auto-sampler interface	Yes (for A20 / A35 autosamplers)

Compiled from the manufacturer's datasheet — request the full specification sheet for this model.

Applicable standards

GB/T22923-2008 · JJF 109-2012

Application fields

Food & feed, dairy, soil & agriculture, fertilizer, environmental monitoring and the chemical industry — any method built on Kjeldahl nitrogen / protein determination, across research, teaching and quality-supervision laboratories.

Specifications as published at www.sino-sonnen.com. Final configuration is confirmed per order — request a quotation: info@sino-sonnen.com · R&D: Jiading District, Shanghai · Manufacturing: Luoyang, Henan, China