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# **Infitek**

# Kjeldahl System

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Laboratory and Medical equipment one-stop solution provider

INFITEK CO., LTD.



# **Kjeldahl Analyzer**

#### KJA-9830



#### **KJA-9830 Unique Advantages and Features**



Built-in protein coefficient query table:

Built-in protein coefficient query table for users to read, query and participate in system calculations.



The system automatically shuts down after 60 minutes of no operation, which is energy-saving, safe and secure.

Input the titration volume to automatically calculate the analysis results and store, display, and query them, which has some functions of a fully automatic product.

Distillation time can be set freely from 10s to 9990s.

Data storage can reach 1 million items for users to check.

The steam system is made of 304 stainless steel, safe and reliable.

The cooling system is made of 304 stainless steel, which has fast cooling speed and stable analysis data.



Energy-saving, safe and secure:

The system automatically shuts down after 60 minutes of no operation, which is energy-saving, safe and secure.





#### Operating system:

7-inch color touch screen, simple and easy to operate.

Three-level authority management, electronic records, electronic labels, and operation traceability inquiry systems.

#### Safety protection

The leakage protection system ensures operator safety.

The safety door and safety door alarm system ensure personal safety.

The digestion tube absence protection system prevents reagents and steam from injuring people.

Steam system water shortage alarm prompts and shuts down to prevent accidents.

The steam boiler has over-temperature alarm and shutdown to prevent accidents.

#### **Specifications**

Model	KJA-9830
Analytical Range	0.1-240 mg N
Accuracy (RSD)	≤0.5%
Recovery Rate	99-101%
Distillation Time	10s-9990s free setting
Sample Analysis Time	4-8min / (cooling water temp. 18°C)
Titrant Concentration Range	0.01-5mol/L
Touch Screen	7-inch color LCD touch screen
Data Storage Capacity	1 million groups
Safe Alkali Adding Mode	0-99s
Automatic Shutdown Time	60minutes
Electricity	AC 220V/50Hz
Heating Power (W)	2000
External Dimension (mm)	500*460*710
Package Dimension (W*D*H) (mm)	990*620*990
G.W.(kg)	60

# **Kjeldahl Analyzer**

#### KJA-9830A





#### **Features**

Distillation time can be set freely from 10s to 9990s.

The steam flow rate can be adjusted arbitrarily from 1% to 100% to suit samples of different concentrations.

The automatic discharge of waste liquid from the digestion tube reduces the labor intensity of operators.

Shut down and automatically clean the alkali pipeline to prevent pipeline blockage and ensure liquid supply accuracy.

Data storage can reach 1 million items for users to check.

5.7CM automatic paper cutting thermal printer.

The steam system is made of 304 stainless steel, safe and reliable.

The cooling system is made of 304 stainless steel, which has fast cooling speed and stable analysis data.

#### KJA-9830A Unique Advantages and Features



#### Energy-saving, safe and secure:

The system automatically shuts down after 60 minutes of no operation, which is energy-saving, safe and secure.



#### Has some functions of a fully automatic product:

Input the titration volume to automatically calculate the analysis results and store, display, query and printing, which has some functions of a fully automatic product.



#### Built-in protein coefficient query table:

Built-in protein coefficient query table for users to read, query and participate in system calculations.



#### Operating system:

10-inch color touch screen, simple and easy to operate.

Three-level authority management, electronic records, electronic labels, and operation traceability inquiry systems.

#### Safety protection

The leakage protection system ensures operator safety.

The safety door and safety door alarm system ensure personal safety.

The digestion tube absence protection system prevents reagents and steam from injuring people.

Steam system water shortage alarm prompts and shuts down to prevent accidents.

The steam boiler has over-temperature alarm and shutdown to prevent accidents.

Steam over-pressure alarm and shutdown to prevent accidents.

Sample over-temperature alarm and shutdown prevent sample temperature from rising and affecting analysis data.

Cooling water flow monitoring prevents insufficient water flow from causing sample loss and affecting analysis results.

#### **Specifications**

Model	KJA-9830A
Analytical Range	0.1-240 mg N
Accuracy (RSD)	≤0.5%
Recovery Rate	99-101%
Distillation Time	10s-9990s free setting
Sample Analysis Time	4-8 min/ (cooling water temp. 18 °C)
Titrant Concentration Range	0.01-5mol/L
Touch Screen	10-inch color LCD touch screen
Data Storage Capacity	1 million groups
Printer	5.7CM thermal automatic paper
Communication Interface	Cooling water
Digestion Tube Waste Discharge Mode	Manual/automatic discharge
Steam Flow Regulation	1%~100%
Safe Alkali Adding Mode	0~99s
Automatic Shutdown Time	60minutes
Electricity	AC220V/50Hz
Heating Power	2000W
External Dimension	500*460*710mm
Package Dimension (W*D*H) (mm)	990*620*1000

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# **Automatic Kjeldahl Analyzer**

**KJA-9840** 



#### **Application**

It is widely used in food processing, feed production, tobacco, livestock, soil fertility, environmental monitoring, medicine, agriculture, scientific research, teaching, quality control and other fields for the test of nitrogen or protein content, can also be used for the test of ammonium, volatile fatty acid / alkali, and so on.

#### **Features**

Automatic accurate distribute alkali and boric acid solution.

Perfect safety protection system gives distiller and tubes measurement and protection against over temperature and over pressure.

Calibration function: Dilution water calibration, Alkali solution calibration, Boric acid solution calibration and washing flow calibration.

Safety door, digestion tube and cooling water condition are displayed at real time when running.



#### **Specifications**

Model	KJA-9840
Measuring Range	0.1∼240mg N
Recovery	≥99.5%
Sample Capacity	Solid≤ 6g/sample, liquid≤16ml/sample
Distillation Speed	3-6mins/sample
Cooling Water Consumption	1.5L/min
Operating Mode	Manual/automatic mode
Display Modes	4.3" LCD screen
Power Supply	220VAC±10%, 50Hz
Power	1.3kW
Dimensions	400mm*385mm*735mm
Net Weight	30kg

#### Characteristics



Calibration Function: Dilution water calibration, Alkali solution calibration, Boric acid solution calibration and Washing flow calibration.



Manual/Automatic mode changeover

Automatic or manual filling mode is optional according to test need.



Automatic Alkali pipeline washing function.



Emergency stop operation is able to deal with unexpected accidents.

#### Characteristics



Display: 4.3 inch color screen.

Safety door, Digestion tube and cooling water condition are displayed at real time when running.



Built in-testing model to detect most functions condition

Intelligent design of nitrogen tube peripheral facilities including safety designs and displacement hint



Automatic cleaning of control system and distiller, ensuring high measurement accuracy.

Intelligent cooling water control system achieves cooling water control and test.



Distillation time can be edited freely, and automatic alarming upon completion.

Automatic fault detection and intelligent audible and visual alarm system are available.

# **Automatic Kjeldahl Analyzer**

**KJA-9860** 





#### Description

This product is widely used in food processing, feed production, tobacco, animal husbandry, soil and fertilizer, environmental monitoring, medicine, agriculture, scientific research, teaching, quality supervision and other fields to determine nitrogen or protein content.



#### **Specifications**

Model	KJA-9860
Measuring Range	0.1~240mgN
Analysis Time	5~10min/sample
RSD	≤0.5%
Recovery	≥99.5%
Burette Volume	2.0µL/step
Capacity	Solid≤ 5g/sample, Liquid≤20mL/sample
Water Consumption in the Distillation Process	1.5L/min
Data Storage Capacity	1000 groups
Electricity	220VAC±10%, 50Hz
Power	2kW
External Dimension	455*391*730mm
Net Weight	38kg

#### **Features**

Automatic cleaning ensures operators' safety and saves time.

External titration cup design gives the operator real-time control of the whole test process.

High-precision charging pump and titration system ensure the accuracy of test results.

The temperature of the distilled liquid is detected real-time. If the temperature of the distilled liquid is abnormal, the instrument will stop working to ensure the accuracy of experiment result.

Easy maintenance: Pre-install functions of cleaning, including receiving cup cleaning, alkali pipeline cleaning, boric acid pipeline cleaning, acid washing, steam bottle evacuation. Support customers make the routine maintenance easily.

High accuracy dozing and working.

High titration accuracy, up to 2.0µL/step.

Integrated printer on the instruments.



# **Kjeldahl Analyzer**

#### **KJA-9870**



#### **Features**

The titration system uses R, G, and B coaxial light sources and sensors, with a wide color adaptability range and high accuracy.

The R, G, and B three-color light intensity automatic adjustment system is suitable for the analysis of samples with different concentrations.

The titration speed can be set arbitrarily from 0.05ml/second to 1.0ml/second, and the minimum titration volume can reach 0.2µL/step.

The German ILS 25mL injection needle and 0.6mm lead linear motor form a high-precision titration system.

Visible titration cup design makes it convenient for users to observe the titration process and clean it.

Distillation time can be freely set from 10 seconds to 9990 seconds.

Data storage can reach 1 million items for users to check.

5.7CM automatic paper cutting thermal printer.

#### KJA-9870 Unique Advantages and Features



#### Energy-saving, safe and secure:

The instrument has a built-in protein coefficient query table for users to read, query and participate in system calculations. When the coefficient=1, the analysis result is "nitrogen content". When the coefficient>1, the analysis result is automatically converted to "protein content" and displayed, stored and printed.



#### Has some functions of a fully automatic product:

The steam system is made of 304 stainless steel, safe and reliable.

The cooling system is made of 304 stainless steel, which has fast cooling speed and stable analysis data.



#### Operating system:

7-inch color touch screen, simple and easy to operate.

Three-level authority management, electronic records, electronic labels, and operation traceability inquiry systems.

#### Safety protection

The system automatically shuts down after 60 minutes of no operation, which is energy-saving, safe and secure.

The leakage protection system ensures operator safety.

The safety door and safety door alarm system ensure personal safety.

The digestion tube absence protection system prevents reagents and steam from injuring people.

Steam system water shortage alarm prompts and shuts down to prevent accidents.

The steam boiler has over-temperature alarm and shutdown to prevent accidents.

#### **Specifications**

Model	KJA-9870
Analytical Range	0.1-240 mg N
Accuracy (RSD)	≤0.5%
Recovery Rate	99-101%
Min. Titration Volume	0.2μL/step
Titration Speed	0.05-1.0ml/s can be set at will
Distillation Time	10s-9990s free setting
Sample Analysis Time	4-8min/ (cooling water temp. 18°C)
Titrant Concentration Range	0.01-5mol/L
Titration Cup Volume	300ml
Touch Screen	7-inch color LCD touch screen
Data Storage Capacity	1 million groups
Printer	5.7CM thermal automatic paper
Safe Alkali Adding Mode	0-99s
Automatic Shutdown Time	60minutes
Electricity	AC220V/50Hz
Heating Power	2000W
External Dimension	500*460*710mm
Package Dimension (W*D*H) (mm)	980*620*990

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# **Automatic Kjeldahl Analyzer**

KJA-9870A



#### **Advantages and features**



#### Operating system:

The control system adopts a 10 inch color touch screen to uniformly control the nitrogen analyzer host and refrigeration system, without the need for multiple switch settings, which is convenient, simple, and safe.



#### Standard cooling system:

The standard cooling system can save a lot of water resources for users, and is energy-saving, environmentally friendly, and has stable analysis data.

# Has a built-in protein coefficient query table:

The instrument has a built-in protein coefficient query table for users to read, query and participate in system calculations. When the coefficient=1, the analysis result is "nitrogen content". When the coefficient>1, the analysis result is automatically converted to "protein content" and displayed, stored and printed.

#### Titration system:

The titration system uses R, G, and B coaxial light sources and sensors, with a wide color adaptability range and high accuracy.

The R, G, and B three-color light intensity automatic adjustment system is suitable for the analysis of samples with different concentrations.

The German ILS 25mL injection needle and 0.6mm lead linear motor form a high-precision titration system.

#### Titration speed:

The titration speed can be set arbitrarily from 0.05ml/second to 1.0ml/second, and the minimum titration volume can reach  $0.2\mu L/step$ .

#### **Titrant concentration:**

The internal standard of titrant concentration eliminates the systematic error caused by the difference between human and instrument judgment, and is highly precise, convenient and fast.

#### Convenient for users:

Visible titration cup design makes it convenient for users to observe the titration process and clean it.

#### Save analysis time:

The simultaneous distillation and titration mode can save analysis time and reduce ineffective distillation power consumption.

#### Distillation time:

Distillation time can be freely set from 10 seconds to 9990 seconds.

#### Steam flow rate:

The steam flow rate can be adjusted from 1% to 100% to suit samples of different concentrations.



#### **KJA-9870A**



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#### Over-temperature alarm:

Sample over-temperature alarm and shutdown prevent sample temperature from rising and affecting analysis data.

#### Low level alarm:

Low level alarm in reagent barrel and titration bottle.

#### Cooling water flow monitoring:

Cooling water flow monitoring prevents insufficient water flow from causing sample loss and affecting analysis results.

#### Safety protection

#### Energy-saving, safe and secure:

The system automatically shuts down after 60 minutes of no operation, which is energy-saving, safe and secure.

#### Steam system:

The steam system is made of 304 stainless steel, safe and reliable.

#### Cooling system:

The cooling system is made of 304 stainless steel, which has fast cooling speed and stable analysis data.

#### Leakage protection system:

The leakage protection system ensures operator safety.

#### Ensure personal safety:

The safety door and safety door alarm system ensure personal safety.

# Digestion tube absence protection system:

The digestion tube absence protection system prevents reagents and steam from injuring people.

#### Alarm prompts:

Steam system water shortage alarm prompts and shuts down to prevent accidents.

#### Over-temperature alarm:

The steam boiler has over-temperature alarm and shutdown to prevent accidents.

#### Prevent accidents:

Steam over-pressure alarm and shutdown to prevent accidents.





#### Waste liquid from the digestion tube:

The automatic discharge of waste liquid from the digestion tube reduces the labor intensity of operators.



#### Clean the alkali pipeline:

Shut down and automatically clean the alkali pipeline to prevent pipeline blockage and ensure liquid supply accuracy.



#### Data storage:

Data storage can reach 1 million items for users to check.



#### Thermal printer:

5.7CM automatic paper cutting thermal printer.



# Unique "sample weighing data automatic upload data package":

The unique "sample weighing data automatic upload data package" eliminates the need to record and enter the weight of samples one by one, reducing input errors and improving work efficiency.

#### Ammonia separator:

The ammonia separator is made of "polyphenylene sulfide" (PPS) plastic, which can be used under high temperature and alkaline working conditions.



#### **Specifications**

	KJA-9870A
Analytical Range	0.1-240 mg N
Accuracy (RSD)	≤0.5%
Recovery Rate	99-101%
Min. Titration Volume	0.2μL/step
Titration Speed	0.05-1.0ml/s can be set at will
Distillation Time	10s-9990s free setting
Sample Analysis Time	4-8min/ (cooling water temp. 18°C)
Titrant Concentration Range	0.01-5mol/L
Titrant Concentration Input Method	Manual input/instrument internal standard
Titration Mode	Standard/Steaming while dripping
Titration Cup Volume	300ml
Touch Screen	10-inch color LCD touch screen
System	
Communication Interface	Cooling water
Data Storage Capacity	1 million groups
Printer	5.7CM thermal automatic paper
Digestion Tube Waste Discharge Mode	1% -100%
Steam Flow Regulation	1% -100%
Safe Alkali Adding Mode	0-99s
Automatic Shutdown Time	60minutes
Electricity	AC220V/50Hz
Heating Power	2000W
External Dimension	500*460*710mm

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# **Automatic Kjeldahl Analyzer**

#### KJA-S06

#### **Application**

It is widely used in the fields of food processing, feed production, tobacco animal husbandry, soil and fertilizer, environmental monitoring, medicine, agriculture, scientific research, teaching, quality supervision, etc. to determine nitrogen content or protein content and cation exchange capacity.



#### **Features**



Brand-new multi-core ARM operating system, 10-inch LED high-definition color LCD touch screen, real-time monitoring and display of experimental process.

The Kjeldahl method is used: Digestion of samples in concentrated sulfuric acid environment, Steam distillation in alkaline environment, Boric acid absorption, Indicator titration endpoint color determination method.

The ultra-trace nitrogen content can be accurately tested to 10ppm.

There are 2 working modes as standard, and the nitrate nitrogen and high nitrogen automatic testing modules can be added according to needs.



Fully automatic reagent addition, distillation, titration, titration cylinder waste discharge, calibration, liquid level monitoring, calculation, data storage, test report generation and upload, the entire experimental process is fully automated and simple.

Double distillation mode, steam flow rate is adjustable from 0-100%.

High-precision titration system and professional integrated plunger ensure test accuracy and reliability.

The splash-proof bottle is made of polymer material, which is resistant to high temperature and strong alkali, and at the same time ensures that ammonia does not leak and the recovery rate is not low.



External titration cup, the experimental process is visible in real time, the titration system lighting configuration and mature color endpoint determination software are combined to minimize the impact of external light sources.

The titration system adopts dynamic titration technology and automatic speed titration technology. The titration system automatically detects and switches the titration speed, truly achieving the simultaneous completion of the distillation, titration and calculation processes, reducing the experimental time by 40%.

The titration color can be calibrated automatically or manually. The titration endpoint is determined by using a high-precision 16-bit three-primary color digital signal color sensor to collect color signals.

#### **Features**



Fully automatic fault monitoring: safety door and digestion tube in place detection; the distillation generator has multiple protections such as pressure sensor, steam over-pressure protection, temperature sensor, temperature protection switch, water level float and potential dual detection; distillation distillate temperature and volume detection to avoid excessive temperature or distillation volume fluctuations affecting the test results; real-time monitoring of cooling water flow, low water pressure alarm, automatic termination of operation when water is cut off; condensate effluent temperature monitoring to ensure complete condensation of samples and accurate and reliable experimental results.



The pump body adopts polytetrafluoroethylene bellows pump: resistant to strong acid and alkali corrosion, excellent particle clogging resistance structure, stepper motor control, stable liquid addition. Negative pressure suction is safe.



The instrument can store 100,000 sets of data, and the test results can be expressed in 12 ways, including Word and Excel.



The liquid level in the reagent barrel is monitored to ensure that there is no lack of liquid during the experiment.



The instrument has self-check function, one-key reset, built-in operation assistant, and is more intelligent.



304 stainless steel distillation reaction chamber, Teflon treated visual safety door.



The distillation system specially designed according to the law of ammonia escape ensures high and reliable test recovery rate.

#### **Specification**

Model	KJA-S06
Measuring Range	0.1~240mgN(conventional nitrogen)
Measuring Speed	3-7mins/sample
Recovery Rate	≥99.5%
Repeatability Error	≤0.5%
	RSD≤1%
Linear Range	(The sample in the digestive tube is within the range of 1-3 times the nitrogen content)
Distillation Flow Rate	0~100% adjustable
Titration Accuracy	0.1μL/step
Measured Sample Amount	Solid: ≤6g, liquid ≤25mL
Data Storage Capacity	100,000 (inside the instrument)
User-Defined Solution	500set
	0.5L/min (cooling water temperature is 15 °C);
Consumption of Cooling Water	1.5L/min (cooling water temperature is 25 °C);
	The cooling water temperature should be kept below 35°C for normal
	use of the instrument.
External Dimension	500*460*780mm
Net Weight	52kg



# Kjeldahl Analyzer

**KJA-S1305** 



#### **Application**

It is used to detect nitrogen content or protein content, cation exchange capacity in the fields of food, medicine, soil, chemical industry, agriculture, forestry, materials, environmental monitoring, etc.



#### **Features**



Reliable PTFE bellows pump, special anti-corrosion, resistant to particle clogging, stable liquid addition, no danger of negative pressure suction.



The distillation system specially designed according to the law of ammonia escape ensures high and reliable test recovery rate.



The facilities around the digestive tract are intelligently designed, with a transparent acrylic protective cover to avoid danger.



It has a self-check function, which can detect whether each function is normal.

#### **Features**



Color LCD touch screen, distillation time and reagent addition are set through the screen, and the conditions can be automatically saved.

The Kjeldahl method is used: Digestion of samples in concentrated sulfuric acid environment, Steam distillation in alkaline environment, Boric acid absorption, Indicator titration endpoint color determination method.

ABS engineering plastic panel, corrosion-resistant, waterproof and anti-electricity.



Automatically add dilution water, reagents (alkali solution and absorption solution), distill, and equipped with calculation software, the calculation results are convenient and fast.

Water-saving design, circulating water flow ≥ 1.5L/min, circulating water is only turned on during the distillation process. Real-time monitoring of cooling circulating water flow, low water pressure alarm display, automatic termination of operation prompt when water is cut off.



Safety door in place, digestion tube in place, steam boiler liquid level, steam boiler temperature, cooling water temperature monitoring and prompts.

Adopts stable steam generator technology, automatic preheating, water replenishment, automatic control of steam pressure, automatic dry burning prevention, and automatic cleaning.

Automatically control steam pressure within a safe range, away from the danger of steam over-pressure.

Adopts double distillation mode, manual and automatic switching at will.

#### **Specification**

Model	KJA-\$1305
Measuring Range	0.1~240mgN (conventional nitrogen, nitrate nitrogen)
Measuring Speed	3-8mins/sample
Recovery Rate	≥99.5%(100%±0.5%)
Repeatability Error	±0.5%
Measured Sample Amount	Solid: ≤6g, liquid ≤ 25mL
Steam Flow Setting	0~100%
Consumption of Cooling Water	≥1.5L/min
Distillation Time	0∼99 minutes
Distillation Delay	0∼99 minutes
Electricity	AC 220V±10%, 50Hz
Power	1800W
External Dimension	420*365*720mm
N.W./G.W.	37kg/41kg
Shipping Dimension	530*480*950mm

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# Kjeldahl Analyzer

**KJA-S1306** 



#### **Application**

It is used to detect nitrogen content or protein content, cation exchange capacity in the fields of food, medicine, soil, chemical industry, agriculture, forestry, materials, environmental monitoring, etc.



#### **Features**



Reliable PTFE bellows pump, special anti-corrosion, resistant to particle clogging, stable liquid addition, no danger of negative pressure suction.



The distillation system specially designed according to the law of ammonia escape ensures a highly reliable test recovery rate.



The instrument has self-check, one-key reset function.



The facilities around the digestive tract are intelligently designed, with a transparent acrylic protective cover to avoid danger.



Fully automatic fault detection and prompting: safety door, digestion tube in place monitoring and prompting, reagent level monitoring and prompting, steam furnace level and temperature detection and prompting.



Water-saving design, circulating water flow rate 1.5L/min, cooling water is only turned on during the distillation process, cooling water flow is monitored in real time, low water pressure alarm is displayed, and the operation is automatically terminated when the water is cut off.

#### **Features**



Color LCD touch screen, real-time monitoring and display of experimental process, conditions can be automatically saved.

The Kjeldahl method is used: Digestion of samples in concentrated sulfuric acid environment, Steam distillation in alkaline environment, Boric acid absorption, Indicator titration endpoint color determination method.

2.0µL high-precision titration system and professional integrated precision plunger ensure the test accuracy and reliability of use.

Can store 1000 sets of complete test data.



Fully automatic addition of alkali and acid, fully automatic distillation titration, fully automatic waste discharge and cleaning of the titration cup, fully automatic calibration, fully automatic fault detection, fully automatic solution level monitoring, fully automatic calculation, data storage, and test report generation.

The titration color can be calibrated automatically or manually. The titration endpoint is determined by using a high-precision 16-bit three-primary color digital signal color sensor to collect color signals.

Polymer material splash-proof bottle design; Reagent barrel liquid level monitoring ensures that there is no liquid shortage during the experiment.



Adopts stable steam generator technology, automatic preheating, water replenishment, automatic control of steam pressure, automatic dry burning prevention, and automatic cleaning.

Automatically control steam pressure within a safe range, away from the danger of steam over-pressure.

Dual distillation mode, manual and automatic switching at will.

The steam generator has multiple protections such as pressure sensor, temperature sensor, temperature protection switch, and water level double detection.

#### Specification

Model	KJA-S1306
Measuring Range	0.1~240mgN
Measuring Speed	3-8mins/sample
Recovery Rate	≥99.5%
Repeatability Error	≤0.5%
Measured Sample Amount	Solid: ≤5g, liquid ≤ 25mL
Steam Flow Setting	0-100%(enhanced version)
Distillation Time	0-99 minutes dynamic continuous adjustable
Distillation Delay	0-999minutes
Consumption of Cooling Water	≥1.5L/min
Electricity	AC 220V±10%, 50Hz
Power	1800W
External Dimension	420*365*720mm
N.W./G.W.	40kg/43kg
Package Dimension	530*480*950mm



# **Automatic Kjeldahl Analyzer**

KJA-T200E

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#### **Selling point**

- Measuring range:0.1mgN-200mgN(Nitrogen content: 0.1%-99%)
- Recovery rate: ≥99% (relative error, include digestion process)
- Repetition rate: relative standard deviation < ±1%
- Distillation time: 5-15 minutes



#### **Specifications**

Model	KJA-T200E
Measuring range	0.lmgN-200mgN (Nitrogen content: 0.1%-99%)
Magaurament variety	Food stuff, feed stuff, foods, dairy products, drink, soil, water,
Measurement variety	medicine, precipitate and chemical.
Recovery rate	≥99% (relative error, include digestion process)
Repetition rate	Relative standard deviation<±1%
Working mode	Automatic and manual (without titration)
Storing data	250 datum
Working time	Distillation time: 5-15 minutes;
	The user can set automatically according to different samples.
Cooling water consumption	Distillation fraction: 3L /min (Water temperature is less than 20 $^\circ$ C)
Voltage	AC 220V, 50Hz
Electricity of distillation fraction	1000W

#### Description

It adopts microcomputer control process, which can distill various samples such as food, feed, food, dairy products, beverage food, feed, etc. There are manual mode and automatic mode, which can be set and switched according to user needs

#### **Features**



Large array LCD display, touch key, easy to operate;



Automatic distillation control, water addition, water level control, and automatic water stop;



Various security protections: digestive system security device, steam generator water shortage alarm, water level detection fault alarm.



Stored operation procedure quantity: 250



The shell of the instrument is made of special plastic-sprayed steel plate, and the working area is made of ABS anti-corrosion panel, which is resistant to chemical reagent corrosion and mechanical damage, and is resistant to acid and alkali.



Once detected fault, controlling system will power off automatically.



KJA-T200E Automatic Kjeldahl Analyzer is generally used with Digestive Furnace KJD-T4E, KJD-T8E, KJD-T20E

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# **Kjeldahl Analyzer**

**KJA-P500** 





#### **Features**



Intermittent alkali addition ensures that the acid-base reaction is controllable to eliminate splashing during sample distillation.



The constant pressure design prevents the solution from being sucked back into the collection bottle.

#### **Application**

It is widely used to detect the overall content of ammonia nitrogen and protein nitrogen in grain, oil, food, dairy products, beverages, feed, soil, chemical fertilizers, drugs, sediments and chemical products. It is an important physical and chemical analysis instrument for product quality inspection.

#### **Beautiful Appearance**

The instrument shell is made of ABS engineering plastic mold, which is resistant to strong acid and alkali, and heat insulated.

High temperature, acid and alkali resistant materials are used to ensure the internal anti-corrosion, anti-leakage and sealing inside the instrument.

High temperature resistant, acid and alkali resistant materials are used to ensure the internal corrosion resistance, leakage prevention and sealing of the instrument.

#### Safety

The distiller adopts double liquid level control (double safety) to prevent dry burning.

#### Convenience



One-touch start of operation interface, LCD touch screen, easy to operate and enter the test program with one step.



Large LCD screen display, independent circuit, water and gas, external reagent bucket.



Alkali can be added manually at any time during the distillation to ensure the accuracy of sample data.



Manual and auto mode can be switched freely, and the entire test process can be tracked and displayed in real time.



Data storage and editing methods: Automatic preheating, cleaning and acid/alkali/dilution addition, and 999 programs can be stored.

#### **Specification**

Model	KJA-P500
Measuring Range	0.08~240mgN
Measured Sample Volume	Solid < 6g, liquid <16mL
Recovery Rate	> 99.5% (1~240mgN)
Repeatability (RSD)	≤ 0.5% (1~240mgN)
Sample Testing Time	3-8min
Distillation Time	1-99min
Distillation Power	1,500W, adjustable
Delay Time	0-1,800s (easy to detect fertilizer)
Distillation Capacity	15-30mL/min, adjustable
Data Storage	999 distillation programs
Water Supply	Water pressure > 0.15MPa
Cooling Water Consumption	> 1.5L/min (Water temperature ≤ 20°C)
Shell	One-time molding by using ABS engineering plastics
Function	Automatic addition of acid, alkali, dilute solution, automatic
runction	replenishment of water, automatic distillation and data storage, etc.
Electricity	AC 220V ± 10%, 50-60Hz
External Dimension	370*300*680mm
N.W./G.W.	15kg/26kg
Package Dimension	495*440*860mm

# **Automatic Kjeldahl Analyzer**

**KJA-P2800** 





#### **Beautiful Appearance**

The whole instrument is made of ABS engineering plastics: it has the characteristics of corrosion resistance, long life, high strength and excellent insulation performance.

Pipeline corrosion resistance: corrosion-resistant pipes are used inside the instrument.

#### **Application**

It is widely used to detect the overall content of ammonia nitrogen and protein nitrogen in grain, oil, food, dairy products, beverages, feed, soil, chemical fertilizers, drugs, sediments and chemical products. It is an important physical and chemical analysis instrument for product quality inspection.

#### **Features**



#### Color determination method

Reliable three primary colors of red, green and blue are used, with three curves, standard acid amount and protein (nitrogen) content displayed in real time. It helps users to monitor the distillation, calculation and titration process in real time.



#### Intermittent alkali addition

ensures that the acid-base reaction is controllable to avoid the escape of ammonia caused by violent acid-base reaction in the absence of steam.



#### True uninterrupted distillation

constant steam, uninterrupted steam during water replenishment to ensure smooth vaporization of ammonia.



#### Adjustable distillation power

ensure good recovery of low concentration samples.

#### Safety

It has the function of real-time detection and control of the temperature of the distillation flask. If the temperature is too high, the instrument will automatically stop heating.

It can automatically detect pressure sensor, cooling water flow and water pressure in real time and alarm.

The distiller adopts double liquid level control (double safety). If the distillation flask is short of water, the instrument automatically stops heating to prevent the distillation flask from dry burning.

It has the safety door status and digestion tube in-place monitoring function to prevent accidents.

#### Convenience

Built-in test plan: it can be directly retrieved from the instrument database to efficiently complete the testing tasks without writing it into the database again.

Automatic acid addition, automatic alkali addition, automatic dilution addition, automatic distillation, titration (distillation and titration are carried out at the same time), automatic storage, automatic printing, calculation results, automatic recording of all analysis data.

Optional data transmission function: sample data, weight results, batch information and analysis results can be uploaded to the computer via USB or wireless transmission system. Automatic recording and data uploading can significantly reduce the risk of error, realize full traceability of sample parameters, and ensure that all data is safely stored on the computer for future reference, report and audit.

Optional permission classification function can realize data traceability management.

#### Specification

Model	KJA-P2800
Measuring Range	0.1~240mgN
	3-8min/sample (Extra-large titration flask ensures long-term
Measuring Speed	distillation and large-volume titration, and the distillation time can be
	set according to samples)
Repeatability (RSD)	< 0.5% (1~240mgN)
Recovery Rate	> 99.5% (1~240mgN)
Measured Sample Amount	Solid <5g, liquid <20mL
Distillation Time	0-20min, continuously adjustable, steam flow rate adjustable
Distillation Capacity	15~30mL/min, adjustable
Titration Accuracy	RSD ≤ 0.01µL/step
Delay Time	0-1800s (Suitable for measuring nitrate nitrogen)
Staged Alkali Addition	Interval 0-9s
Host Memory	10,000 groups of data
Printer	Ribbon printer, permanent data storage without color fading
Electricity	AC 220V ± 10%, 50-60Hz
Digestion Tube Dimension	300mL
External Dimension	500*350*720mm
N.W./G.W.	23kg/32kg
Package Dimension	585*440*828mm

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#### Infitek

# **Graphite Digester**

#### KJD-8E KJD-10P KJD-15P KJD-20P



#### Description



#### **Features of E Series Products**

It adopts liquid crystal temperature controller, with timing shutdown and it has PID intelligent control which is cost-effective.



KJD-10P





Features of P series products

High-density graphite heating module is a product designed and created for samples that is difficult to digest. Its high temperature (the designed temperature may reach 550°C), good uniformity and small temperature buffer make it an ideal heating material.

#### **Specifications**

Model	KJD-8E	KJD-10P	KJD-15P	KJD-20P	
Number of sample holes	8 holes	10 holes	15holes	20holes	
Hole size	Φ43.5mm	Ф43.5mm	Ф43.5mm		
Heating module material	6061 aluminium alloy	High density graphite			
Designed temperature	450℃	<b>550</b> ℃			
Temperature control accuracy	±1°C	±1°C			
Heating rate	≈8-15 °C/min	≈8-15℃/min			
Operating system	Liquid crystal temperature controller	5.5-inch color touch screen			
Control mode		single point heating			
Recipe management		9 groups			
Timing shutdown	1–999 minutes	1–999 minutes			
Working voltage	AC220V/50Hz	AC220V/50Hz			
Heating power	2.1Kw	1.4kw	2.1KW	2.8Kw	
Net weight (Kg)	18kg	18 Kg	21 Kg	26 Kg	

#### **Features**



#### Integrated design of S/P series

P and S series products have integrated design for the heating plate, and the overall performance and inter-hole uniformity of the heating plate have been greatly improved. Product component of these two series products have strong commonality, therefore is easy to replace and maintain.

The heating block has two materials - graphite P and aluminum alloy S - for users to choose.



#### Furnace shell design of S/P series

The furnace shell adopts front and rear isolation design, and its strong ventilation and cooling ensures the long-term and stable operation of the equipment.

The shell surface is equipped with over-temperature protection sensor, when the temperature of the surface is too high, it will alarm and stop to prevent accidents.



#### 304 brushed stainless steel of E series

The table top is made of 304 brushed stainless steel, which has certain corrosion resistance and beautiful appearance.

The equipped digestive tube is made of 2mm high quality borosilicate glass with high transparency and durability.

The digestive tube holder is made of 304 stainless steel material, which is corrosion resistant and practical.



The intelligent temperature control system adopts 5.5-inch color touch screen, and the information displayed is detailed, and easy to understand and operate.



The input method of recipe program is tabular fast input method with clear logic, fast speed and not easy to go wrong.



0-40 sections of program can be arbitrarily selected and set.



Dual-mode of single point heating and curve heating that can be arbitrarily selected. Intelligent P, I, D self-adjustment with high precision, reliability and stability.



The electrical control system uses solid state relay (regulating module) for mute and strong anti-interference capability.



Segmented power supply and restart function to avoid power failure preventing potential risks.

#### Infitek

# Kjeldahl Aluminium Alloy Digester

KJD-E08 KJD-E20





#### Features

Color LCD touch screen, easy to operate.

510 groups of user-defined schemes, each with up to 21 custom heating stages; 0-999 minutes digestion time for each stage; 2 independent timing modes for each stage: start timing from heating and start timing from reaching target temperature.

The machine shell is sprayed with Teflon and has good corrosion resistance.

It adopts anti-corrosion isolation design and has a guide groove structure to prevent acid from corroding the instrument.

Over-voltage, over-current and overheating protection, real-time monitoring of sensor status and instrument working environment temperature with sound and alarm prompts.

#### **Application**

It can be used for sample digestion preparation for nitrogen and protein testing, COD digestion, sample pretreatment for total phosphorus, arsenic, etc., and sample pretreatment for heavy metal detection (lead, copper, zinc, tin, etc.).



#### **Specifications**

Model	KJD-E08	KJD-E20	
Processing Capacity Per Batch	8	20	
Digestive Tube Specification	300ml	300ml	
Sample Amount for Digestion (Solid)	≤6g/sample	≤6g/sample	
Sample Amount for Digestion (Liquid)	≤25ml/sample	≤25ml/sample	
Temperature Range	RT.~450 ℃		
Temperature Control Accuracy	±1°C		
Thermal Insulation Material	Ceramic fiber, using ceramic and air duct insulation		
Automatic Lifting Frame	Optional Optional		
Electricity	AC 220V±10%, 50Hz		
Power	1500W	2500W	
External Dimension	320*290*200	320*450*200	
N.W./G.W.	20/23kg	36/40kg	
Package Dimension	380*370*580mm	500*600*620mm	

# **Kjeldahl Digester**

KJD-P20L









# Description It is mainly used for digestion treatment of samples such as plants, seeds, feed, soil, and minerals before chemical analysis in agriculture, forestry, environmental protection, geology, petroleum, chemical industry, food and other departments as well as colleges and universities and scientific research departments.

#### **Features**



Infrared radiation technology is used for this series of products and stainless steel heating pipe is used for the heating element, which has the characteristics of fast heating and long life



The surface of the aluminum alloy heating module adopts aviation industry coating technology, which is beautiful and durable.



LCD display for the temperature controller with timed shutdown and alarm functions. Intelligent PID control technology is used with high temperature control accuracy and small temperature impact range, simple and easy to learn.



The instrument tabletop and test tube rack are welded with brushed stainless steel plates to prevent corrosion.



The optional exhaust system is corrosion and temperature-resistant, so that SO2 and other harmful gases escaping from the digestion tube can be discharged from the water into the sewer through the sewage pipe and the suction pump to effectively inhibiting the escape of harmful gases.

#### **Specification**

Model	KJD-P20L
Number of Sample Holes	20
Pore Size	φ43.5mm
Heating Module	Aluminium alloy
Design Temperature	450°C
Temperature Control Accuracy	±1°C
Heating Rate	About 8~15°C/min
Timed Shutdown	1-999min
Electricity	AC 220V/50Hz
Heating Power	2.8kW
External Dimension	330*530*210mm
N.W./G.W.	21kg/29kg
Package Dimension	870*460*460mm

Exhausting System **Infitek** 

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# **Exhausting System**

**KJD-SCB** 

# **Exhausting System/Scrubber**

KJD-SCB-A

#### Description

Mould design, compact appearance.

Absorption device area is translucence design, easy for inspection and changing.

The suction intensity and negative pressure can be adjusted in real time to avoid acid gas overflow and evacuation.

Anti-corrosion vacuum pump, low noise, large suction, reduce wasted gas exhausting and environmental friendly

Ternary filtration system (water condensation, alkali neutralization and active carbon filtration) ensure perfect neutralization and absorption performance.

PTFE anti-corrosion pipe design can improve using life.



Power supply	AC (220±22) V;		
1 Ower suppry	(50±1) Hz		
Power	320W		
Weight	25kg		
Dimension	390mm×340mm ×550mm(L×W×H)		

#### Description

The sample digestion process will produce a large amount of acid mist, which will cause serious pollution to the environment and damage facilities. This device is a good equipment for collecting, neutralizing and filtering acid mist because it consists of three-stage filters. In the first stage, the acid mist is neutralized by an alkaline solution of corresponding concentration. In the second stage, distilled water is used to continue filtering the residual waste gas. In the third stage, the residual waste gas enters the buffer bottle for buffering. The gas after three-stage filtration can meet the emission standards and will not cause harm to the environment and facilities, ultimately achieving pollution-free emissions.



#### Product detail picture







#### **Specifications**

Model	KJD-SCB-A
Extraction Flow Rate	18L/min
Air Extraction Port	φ8-10mm
Alkali Solution Bottle	1.8L
Distilled Water Bottle	1.8L
Lye Concentration	15%~30%
Electricity	AC 220V/50Hz
Power	120W
Net Weight	10kg
External Dimension	300*300*390mm

#### **Features**

This product is an acid and alkali neutralization equipment with negative pressure pump. The pump has large flow rate, long lifespan, and user-friendly operation.

The three-stage absorption of lye, distilled water and gas ensures the reliability of gas exclusion.

The instrument is simple, safe and reliable to use.

The replacement of neutralization solution is convenient and easy to operate.

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## **Waste Gas Collection Hood**

**KJD-WGH** 





#### Description

A necessary part for collecting digester's waste gas

Using PFA sealing cover with longer service life and better sealing.

Clip-on sealing cover, easy for changing.

Adopting specialized water jet vacuum pump, no electricity needed.

The drip tray reducing corrosion damage from acid solutions.

#### **Product detail picture**







## **Exhaust Gas Collection Hood**

KJD-WGH-20

#### KJD-WGH-8 KJD-WGH-10 KJD-WGH-15 KJD-WGH-20



#### **Features**

The sealing cover is made of fluorinerubber, resistant to high temperature and strong acid.

The alkali pipe is made by American CPC company, resistant to strong acid and has a long service life.

The collection tube with high reliability, is deep in the tube to collect acid gas.

The stainless steel shell has certain corrosion resistance.

KJD-WGH-15

#### Description

The exhaust gas collection device is specially designed for digestors. It collects acid gas (acid mist) generated during sample digestion. The exhasut gas collection device should be connected to a suitable scrubber unit. After being neutralised, the gas (acid mist) can reach the discharge standard.

#### **Specifications**

Model	KJD-WGH-8	KJD-WGH-10	KJD-WGH-15	KJD-WGH-20
Collection port	8	10	15	20
Extraction opening	1	1	2	2

#### Infitek

# **Kjeldahl Digestion System**

#### KJD-T8E







- √ Sample holes:4/8/20
- √ Digestive pipe capacity:300
- √ Measurement range:0.lmgN-200mgN (mg nitrogen)
- √ Digestion time:60-90 min/batch (according to sample quantity)

#### Description

• The box of this product is made of special sprayed steel plate, and the work surface is made of stainless steel; At the same time, it has good corrosion resistance, easy to use.

#### **Features**



CE

Adopts quartz infrared heating pipe, which is mainly radiation and supplemented by conduction; and has short heating time and high efficiency;



Machine box adopts specially made plastic spray steel; Working area adopts stainless steel materials, has good corrosion resistance.



Double-layer shell design, air insulation layer and aluminum silicate insulation layer, with double insulation effect



Has multiple protection: over-pressure, over-current, over-heating



The whole machine is small and beautiful, easy to operate, convenient and fast to use.

#### **Specifications**

Model	KJD-T8E
Sample holes	8
Digestive pipe capacity	300ml
Heating module material	Infrared
Temp.control mode	Digital
Temp.control range	RT~500°C
Temp. control accuracy	±1°C
Measurement range	0.lmgN-200mgN (mg nitrogen)
Digestion time	60-90 min/batch (according to sample quantity)
Power	1.5 kW
Electricity	AC220V/50Hz

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# **Waste Gas Collection Hood**

**KJD-WGH-E08** 

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KJD-WGH-E20

#### **Application**

Effectively control waste gas emissions during the digestion process and protect experimental equipment and the environment.



#### **Features**

PFA sealing cover exhaust gas collection hood, corrosion-resistant and temperature-resistant.

The drip tray design prevents acid from dripping and contaminating the laboratory table after digestion.

The connection pipe is made of imported special acid-resistant and high-temperature resistant material.

#### **Specification**

Model	KJD-WGH-E08
Collection Port	8
Extraction Opening	1

#### Application

Effectively control waste gas emissions during the digestion process and protect experimental equipment and the environment.



**Waste Gas Collection Hood** 

#### **Features**

PFA sealing cover exhaust gas collection hood, corrosion-resistant and temperature-resistant.

The drip tray design prevents acid from dripping and contaminating the laboratory table after digestion.

The connection pipe is made of imported special acid-resistant and high-temperature resistant material.

#### **Specification**

Model	KJD-WGH-E20
Collection Port	20
Extraction Opening	2

# **Kjeldahl Digestion System**

**KJD-220F** 

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#### Description

It adopts advanced PID temperature control technology, and can heat up to 400 °C with high precision in only 25 minutes. There are two temperature control modes: curve heating and linear heating. It can edit and store 10 groups of digestion programs, and each group can set up to 5 temperature and time gradients to meet different experimental needs of users.

#### **Specifications**

Model	KJD-220F
Temperature Range	RT.+5~450 °C
Temperature Accuracy	±1°C
Heating Method	Infrared heating and high-purity graphite conduction
Heating Insulation Method	Unique air duct insulation technology
Digestion Tube Capacity	300mL
Capacity	20pcs./batch
Electricity	220 VAC±10%, 50Hz
Power	3600W
Dimensions	515mm*421mm*211mm
Net Weight	25kg

#### Characteristics



20 positions, enhance working efficiency rapidly. Corrosion-resistant design.

It adopts advanced insulation technology, which is eco-friendly, and can minimize energy intensity.



It's used with microwave reaction system, so as to pretreat for microwave digestion or removing acid after digestion.



Multi-protection, over-current protection, high temperature warning, overload protection.

LCD display.

Linear and curve temperature rise mode, up to 5 stages temperature setting.

Curve temperature rise and linear temperature rise temperature control modes.

# KJD-WGH/KJD-SCB (optional)



# **Kjeldahl Digestion System**

**KJD-420F** 









#### Description

It adopts globally advanced high-temperature infrared radiation heating technology and microprocessor control platform, ensuring accurate temperature control and quick temperature rise. It has two kinds of temperature rise modes: linear and curve temperature rise mode. It can edit and store 500 groups of digestion programs, and each group can set up to 25 temperature and time gradients.

#### Characteristics



20 positions enhance working efficiency rapidly.

Graphite block has longer life after special anti-oxidation processing and can heat more uniform.

Corrosion-resistant design.



It adopts 5.7" color screen, easy for use.

t adopts PID temperature control technology, with high accuracy heating up to 400°C only in 25minutes

Multi-protection, over-current protection, high temperature warning, and overload protection.

Temperature control model, program control, and curve and linear temperature rise models.

#### **Specifications**

Model	KJD-420F
Temperature Range	RT.+5~450 °C
Temperature Accuracy	±1°C
Heating Method	Infrared heating and high-purity graphite conduction
Heating Insulation Method	Unique air duct insulation technology
Digestion Tube Capacity	300mL
Capacity per Batch	20pcs./batch
Electricity	220 VAC±10%, 50Hz
Power	3600W
Dimensions	515mm*458mm*730mm
Net Weight	40kg

#### Combination & Matching Scheme

Combination & Matching Scheme	Kjeldahl Analyzer Model	KJA-9830 KJA-9830A KJA-9870 KJA-9870A	KJA-9840 KJA-9860	KJA-S1305 KJA-S1306 KJA-S06	KJA-T200E	KJA-P500 KJA-P2800
Digestion Scheme 1	KJD-8E KJD-WGH-8 KJD-SCB-A	√				
Digestion Scheme 2	KJD-10P KJD-WGH-10 KJD-SCB-A	√				
Digestion Scheme 3	KJD-15P KJD-WGH-15 KJD-SCB-A	√				
Digestion Scheme 4	KJD-20P KJD-WGH-20 KJD-SCB-A	√				
Digestion Scheme 5	KJD-220F KJD-WGH KJD-SCB		√			
Digestion Scheme 6	KJD-420F KJD-WGH KJD-SCB		√			
Digestion Scheme 7	KJD-E08 KJD-WGH-E08			√		
Digestion Scheme 8	KJD-E20 KJD-WGH-E20			√		
Digester	KJD-T4E				√	
Digester	KJD-T8E				√	
Digester	KJD-T20E				√	
Digester	KJD-P20L					√

