

KJELDAHL DIGESTION SYSTEMS



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The Kjeldahl method also known as Kjeldahl digestion is a quantitative technique used for determining the nitrogen content of organic substances and a few inorganic molecules like ammonia and ammonium. In the Kjeldahl method, amine nitrogen is first converted into ammonium ions and digested in concentrated sulfuric acid with the assistance of a catalyst. Further, it is heated and distilled which converts ammonium ions into ammonia gas after reacting with sodium hydroxide solution. This ammonia gas is introduced to the solution for trapping where it is neutralized after it dissolves. The remaining acid is titrated with a reference base solution i.e. NaOH so, the amount of ammonia extracted from the digestive solution and the amount of nitrogen in the protein can be calculated simultaneously. It is widely utilized in the treatment of industrial effluent, sewage treatment plants, chemical analysis of soil water or wastewater, etc.

Used in Widely used in such fields as food, medicine, agriculture, forestry, environmental protection, chemical engineering, biochemistry, universities, research departments, for sample digestion prior to the chemical analysis of soil, feed, plants, seeds, minerals.

Also known as Kjeldahl System.

LTKDG8-1 KJELDAHL DIGESTION SYSTEM

20 positions enhance working efficiency rapidly.

Corrosion-resistant design.

Graphite block have longer life after special anti-oxidation processing and heating more uniform.

It adopts advanced PID temperature control technology, high accuracy heating up to 400°C only 25minutes.

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

It adopts 5.7" color screen, easy for use.

Standard configuration with waste gas collection hood.

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



SPECIFICATIONS

Model	LTKDG8-1
Temperature range	Room temperature +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
Power supply	220 VAC±10% 50HZ
Power	3600W
Net weight	40Kg
Dimensions	515mmX458mmX730mm

LTKDG8-2 GRAPHITE DIGESTER

20 positions, enhance working efficiency rapidly.

Corrosion-resistant design.

It adopt advanced insulation technology, eco-friendly, reduce energy intensity maximum limitedly.

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

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

LCD display.

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

Curve temperature rise and linear temperature rise two temperature control modes.



SPECIFICATIONS

Model	LTKDG8-2
Temperature range	Room temperature +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
Power supply	220 VAC±10% 50HZ
Power	3600W
Net weight	25Kg
Dimensions	515mmX421mmX211mm

LTKDG9-1 KJELDAHL DIGESTION SYSTEM

Automation, Fully automatic distillation, titration, calculation, printing, waste disposal, fault self-test.

With side-distillation titration and variable-speed titration technology, reducing experiment time by one-third.

With batch testing function, it makes the batch sample experiment operation simple and simple, reducing test time.

New Android operating system, easy to use, powerful, with 10 inch high-definition color touch screen, real-time control of the entire experimental process.

Monitoring the condensate effluent temperature in real time to ensure complete condensation of the sample, ensuring the test results are accurate and reliable.

The titration module is used to titrate the receiving liquid, the titration result is more accurate, and the titration precision is higher.

The titration graph displays the online monitoring of the entire experimental process in real time, and the experimental method can be adjusted in real time to improve the test accuracy and efficiency.

All sample weight weigh by balance can be output directly for analysis.

New metal condensing unit, ultra high efficiency for condensing, saving up to 50% water.

Distillation and titration in real time, variable speed titration technology, reducing experiment time up to 30%.

High accuracy, burette accuracy can be adjust from 0.2 to 1 μ L/Step.



SPECIFICATIONS

Model	LTKDG9-1
Measuring range	0.1mg ~240mg N
Analysis time	3~8min/sample
Reproducibility	Average value relative error \pm 0.5%
Recovery	\geq 99.5%
Burette accuracy	1.0 μ L/step optional:0.2 μ L/step and 0.4 μ L/step
Sample capacity	solid \leq 5g/sample, liquid \leq 20mL/sample
Water consumption in the distillation process	0.5L/min
Data storage capacity	1 million groups
Power supply	220VAC \pm 10%, 50Hz
Power	2KW
Net weight	38Kg
Dimensions	460mm \times 360mm \times 725mm

LTKDG9-2 KJELDAHL DIGESTION SYSTEM

Automatic distillation, calculation, printing, titration, drain and cleaning function, safety and saving-time.

Large LCD touch screen gives visual operation and abundant information, enabling user to have a good command of it.

User friendly design, color touch screen, easy for operating.

Titration while distillation, enhance the efficiency rapidly.

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

Reagent barrel enjoys fluid absence warning function, ensuring smooth test going.

Steam flow is controllable, satisfying different test requirements.

Test results accuracy is ensure by high-precision charging pump and titration system.

Distilled liquid temperature is detected real time. Emergency stop against temp anomaly.

To avoid Operator touch distilled hot reagents, protecting operators, Digestion tube fast drain function is used.

Faster ARM system, faster operating rate.

Double distillation model meets different experiments, to retard the speed of acid-base reaction.of acid-base reaction.

Compatible with $\phi 42$ mm digestion tube.

Printer is built in.



SPECIFICATIONS

Model	LTKDG9-2
Measuring range	0.1mg ~ 240mg N
Analysis time	5 ~ 10min/sample
Reproducibility	Average value relative error $\pm 0.5\%$
Recovery	$\geq 99.5\%$
Burette accuracy	1.0 μ L/step
Sample capacity	solid ≤ 5 g/sample, liquid ≤ 20 mL/sample
Water consumption in the distillation process	1.5L/min
Data storage capacity	1800 groups
Power supply	220VAC $\pm 10\%$, 50Hz
Power	2Kw
Net weight	38Kg
Dimensions	455mm \times 391mm \times 730mm

LTKDG9-3 KJELDAHL DIGESTION SYSTEM

Automatic cleaning ensure operator safety and save time.

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

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

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

Routine maintenance easy due to Pre-install functions of cleaning, include receiving cup cleaning, alkali pipeline cleaning, boric acid pipeline cleaning, acid washing, steam bottle evacuation.

High accuracy dozing and working: adopt 4 KNF pumps work for dozing, measurement liquid volume.

Integrated printer on the instruments.

High titration accuracy, up to 2.0 μ L/step.



SPECIFICATIONS

Model	LTKDG9-3
Measuring range	0.1mg ~ 240mg N
Analysis time	5 ~ 10min/sample
Reproducibility	Average value relative error $\leq \pm 0.5\%$
Recovery	$\geq 99.5\%$
Burette accuracy	2.0 μ L/step
Sample capacity	solid ≤ 5 g/sample, liquid ≤ 20 mL/sample
Water consumption in the distillation process	1.5L/min
Data storage capacity	1000 groups
Power supply	220VAC $\pm 10\%$, 50Hz
Power	2Kw
Net weight	38Kg
Dimensions	455mm \times 391mm \times 730mm



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