

Kjeldahl

Sampler System K-370/K-371



AutoKjeldahl Unit K-370 – the total solution with integrated titration and data management

The K-370 is the most convenient solution available for precise analysis in Kjeldahl labs handling large sample throughputs. The K-370 is a fully-automatic system designed for the most demanding users. The K-370 sets new standards of safety, guarantees accurate measurement results, and for the first time, offers an upgrade option to include an autosampler.



Advantages

- Rapid installation on standard lab desks
- Automatic emptying of sample tube and receiving vessel after distillation and determination
- Compact stand-alone unit with modern, functional design
- Leading-edge, high-performance multitasking software
- Numerous safety features
- Transparent distillation area enabling visual monitoring of the process
- Electronic regulation of steam output 30%–100%
- Working parts easily accessible from front thanks to service door

Options

- Automated sample changing in combination with Autosampler K-371
- Level sensors for monitoring chemical and waste tanks
- External dosage device for back titration
- External keyboard

High-performance – multitasking software – convenient operation

Multilingual

- Eleven different languages at your choice



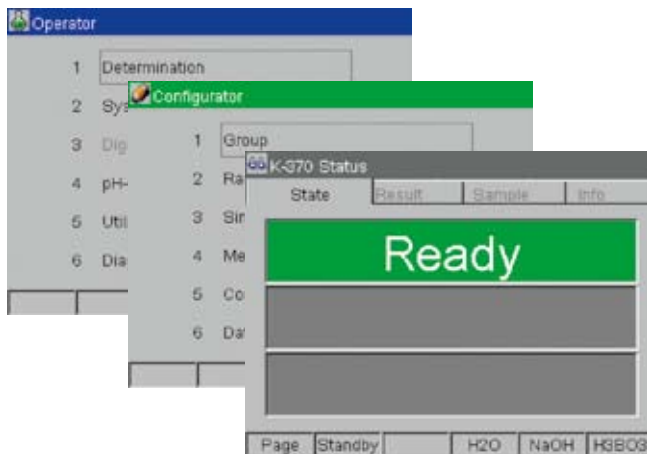
Convenient operation

- High-resolution, high-contrast color-display
- Easy to read control panel with integrated keyboard
- High-performance software



Multitasking software

- Simultaneously carry out measurements, or process output data



High-performance

- Maintenance free, high-performance steam generator



Numerous safety features

- Protective door sensor
- Sample tube in place sensor
- Service door sensor
- Warnings and error messages
- Cooling water flow sensor
- Cooling water ON/OFF-automatics
- Level sensors for monitoring chemical and waste tanks (optional)
- Drip tray
- System for automatic emptying (aspiration) of sample tube and receiving vessel when procedure is finished
- Automatic dosage of NaOH, water and boric acid
- Automatic self-test



Kjeldahl Sampler System K-370/K-371 – an outstanding team for fully-automatic, safe operation in the lab

The Kjeldahl Sampler System combines the AutoKjeldahl Unit K-370 with the Autosampler K-371. This outstanding team will help you work with high efficiency while saving time. The sampler features an innovative sample-changing mechanism that uses steam to transfer samples to the distillation unit. Carefully selected materials and numerous safety features ensure optimum protection for users and the environment.

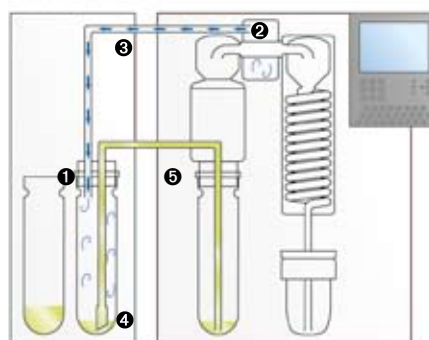
Advantages

- High-quality, highly reliable analytical results
- Modular system with compact dimensions thanks to unique sample transfer technique
- Rack with space for 20 sample tubes, compatible with Digest System K-437 and Digest Automat K-438
- Express rack with space for 4 sample tubes
- High levels of user and environmental safety thanks to numerous features such as acrylic glass safety shield (locked during process), sample tube and collision detection system, and high-quality materials used in steam and transfer tubes
- Enables both automatic and manual operation by simply changing the software parameter



Transferring samples

- 1 Movable sample arm with dip tube positioned
- 2 Steam generated in K-370's steam generator
- 3 Steam passes to sample tube on K-371 via steam tube
- 4 Steam presses sample into dip tube
- 5 Sample passes through transfer tube into K-370's sample tube



K-371

K-370

Following sample transfer the distillation and the titration are performed. During the entire distillation process, steam is transferred via the K-371 to the K-370's sample tube, thus ensuring thorough cleaning of sample tube and transfer tube.

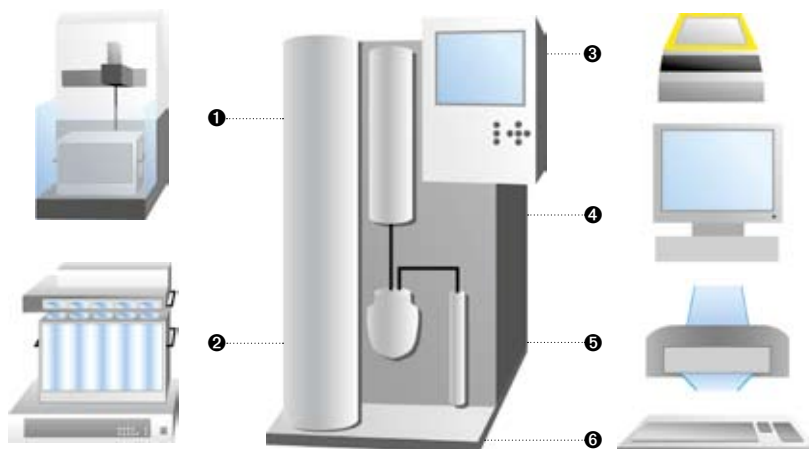
The complete Kjeldahl solution for a fully automated workflow

Peripheral devices

Various peripheral devices can be connected.

- ❶ Autosampler K-371 for automatic sample changing
- ❷ Digest Automat K-438 for controlled, documented digestion
- ❸ Balance for determining and automatically transmitting the weight of the sample
- ❹ PC for data transfer and backup purposes
- ❺ Printer with PCL3 support
- ❻ External PC keyboard (US, CH) or barcode reader

Kjeldahl Sampler System K-370/K-371



- Automatic sample changing of 20 samples
- Straight forward data transfer to PC (data can be read, e.g. in MS Excel)
- Automatic transmission of weight when connecting a balance
- Digestion procedure, e.g. temperature profile of the K-438 can be monitored and stored on the K-370.

Applications for a wide range of industries

The K-370 allows to work in accordance with official methods such as AOAC, EPA, DIN, etc.

- Kjeldahl nitrogen and protein in food, beverages and feed
- Devarda nitrogen in fertilizers and soil samples
- TKN (Total Kjeldahl Nitrogen) and Ammonia in waste water, lake water and sludge
- TVBN (Total Volatile Basic Nitrogen) in fish and seafood
- Kjeldahl nitrogen in chemicals and pharmaceuticals



Order information

	Order no.
AutoKjeldahl Unit K-370 (standard)	
Complete with steam generator, integrated titrator, pH electrode, stirrer, pair of glass tongs, calibration solutions, sample tube, connecting hoses and mains cable. Includes four 10-liter tanks.	43100
Autosampler K-371	
Autosampler including safety shield, rack (space for 20 sample tubes), express rack (space for 4 sample tubes), drip tray, steam and transfer hoses, sample tubes and mains cable.	43700
AutoKjeldahl Unit K-370 (prepared):	
Same as AutoKjeldahl Unit K-370 (standard), but fully prepared for optional use with the Autosampler K-371. Includes two 10-liter and two 20-liter tanks.	43110
Kjeldahl Sampler System K-370/K-371	
Complete system for combined operation, comprising the two components: AutoKjeldahl Unit K-370 (prepared) and Autosampler K-371.	43120
Upgrade kit	
Contains all parts required to upgrade an AutoKjeldahl Unit K-370 (standard) to the prepared version for the ability to add the Autosampler K-371.	43140

	Order no.
Accessories for AutoKjeldahl Unit K-370	
300 ml sample tubes (set of 4)	37377
500 ml sample tube	26128
Temperature sensor	43369
External PC keyboard (US)	31456
External PC keyboard (CH)	31457
Tanks:	
10 l: chemicals/waste	43468/43470
20 l: chemicals/waste	43469/43471
Tanks with level sensors:	
10 l: chemicals/waste	43472/43474
20 l: chemicals/waste	43473/43475
External dosage device, 115 V	43367
External dosage device, 230 V	43596
Cable K-370/external dosage device	43443
IQ/OQ-Set K-370 (en)	11055726
IQ/OQ-Set K-370/K-371 (en)	11055727
Accessories for Autosampler K-371	
Stand for rack	38639
Retainer plate, (holds tubes firmly in rack for machine-washing)	38559

Technical data

	AutoKjeldahl Unit K-370	Autosampler K-371
Mains voltage	230 V \pm 10%	200–230 V
Frequency	50/60 Hz	50/60 Hz
Power consumption	2200 W	120 W
Current consumption (230 V)	9.5 A	500 mA
Weight	24 kg	42 kg (without sample tubes)
Dimensions (W x H x D)	455 x 660 x 400 (405) mm	514 x 658 x 590 mm (working position) 514 x 923 x 590 mm (ready position)
Interfaces	RS 232/Centronics	RS 232
Recovery Rate	\geq 99.5%	
Reproducibility (RSD)	$\leq \pm$ 1%	
Detection limit	\geq 0.1 mg nitrogen	

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