

PRACTICAL

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SMART

Classical Kjeldahl Distillation

LABQUEST
BY BOROSIL®



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SAFE | SIMPLE | EFFICIENT
DISTILLATION SYSTEMS
for Labs

Classical Kjeldahl Digesters

SAFE SIMPLE EFFICIENT

DISTILLATION SYSTEMS for Labs

- Available with complete set of heaters, glassware and accessories
- Classic laboratory heaters for reliable and lasting intensive heating
- Compact for serial heating in batches



CKD065

Model Name	CKD015	CKD065	CKD038*
No. of positions	1	6	3
Flask Capacity	500ml Kjeldahl flask, compatible with 800ml Kjeldahl flask too		800ml Kjeldahl flask
Element Temperature	450 °C		
Temperature accuracy	NA		
Temperature regulators	1	6	3
Ramps/ Flask	4		
Display	LED Display with time & process status		
Timer	1-999 Minutes		
Power consumption	150W	900W	450W
Electrical regulation	0.65A	3.9A	1.9A
HSN Code	84198990		
Ordering Code	BLFACKD01500000000	BLFACKD06500000000	BLFACKD03800000000

* subject to availability

ACCESSORIES

Description- 1 & 6 position	Description- 3 position
Graham condenser 200 mm	Graham condenser 400 mm
Classical Kjeldahl splash head	Classical Kjeldahl splash head
Kjeldahl Flask 500ml	Kjeldahl Flask 800ml

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Scientific

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Block Digesters

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SAFE

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DIGESTION SYSTEMS

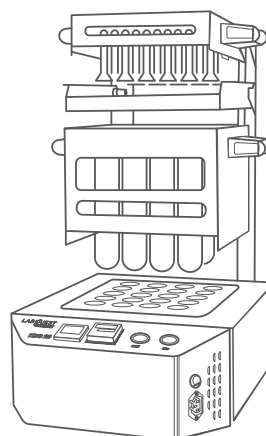
for Labs

Block Digesters

SAFE SIMPLE EFFICIENT

DIGESTION SYSTEMS for Labs

- Fast, safe and complete digestion of samples through aluminium blocks
- Intricately control digestion temperature curves for unsupervised digestion
- Monitor process parameters & pre-set sample cycles
- Recommended for industries & Labs that process large numbers of samples in a day, assures complete consistent digestion in all sample tubes



Model Name	KBD062	KBD082	KBD122
Type	Block Digester		
No. of positions	6	8	12
Tube capacity (ml)	250	250	250
Temperature Range	Ambient to 470°C		
Timer Range	1-300 mins		
Temperature Precision	±1°C		
Ramp and Hold	upto 4		
Preset	upto 99		
Auto scrubber ON/OFF	Yes		
PID control	Yes		
Auto OFF after achieving set time	Yes		
Temperature Calibration	Yes, single and two point		
PC & Printer Connectivity	Yes, upgradable		
Display	Graphical LCD		
Body	Stainless steel with control pannel of glass reinforced polymer		
Current Consumption	6A	6A	8A
Dimensions (W x D x H) mm	(414 X 450 X 665)	(416 X 554 X 595)	
Power Consumption	1300W	1300W	1600W
HSN Code	84198990		
Ordering Code	BLFAKBD06200000000	BLFAKBD08200000000	BLFAKBD12200000000

Cooling Stations



Cooling stations increase throughput by decreasing the cooling time post digestion

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Distillation

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Kjeldahl Distillation Systems
with unmatched

Reproducibility and Repeatability

- Borosilicate glass assembly along with SS steam generator for extended unit life
- Process kill switch to halt the process in case of accidental door opening
- Detachable bottom drip tray for extra protection against acidic attack during sample loading
- Anytime alkali addition during the distillation cycle
- Tube sensor that enables safe operating conditions in event of tube damage
- Reagent refill level sensor to avert reagent dry out

Feature/ Model	KDI010	KDI040
Steam addition	Automatic	
Distilled water addition	Manual	Automatic
Alkali addition	Manual	Automatic
Boric acid addition	Manual	Automatic
Input for 20 sample processing	Yes	NA
Display	LCD	
Tube Capacity (ml)	250 / 400ml	
Steam power (Adjustable)	25% to 100%	
Minimum distillation Time (mins)	5	
Reagent level sensor	NA	Yes
Anytime alkali addition	Yes	
Tube error detection	Yes	
Door close sensor	Yes	
Process resume from stop	Yes	
One point alkali and distilled water pump	NA	Yes
Two point calibration for acid pump	NA	Yes
Real time monitoring of process parameter	Yes	
SELV protection	Yes	
User Editable Programs	NA	50 (10 pre defined editable programs)
Nitrogen recovery	>99.5%	
Nitrogen reproducibility	±1 %	
RSD	<1%	
LOD	1-200mg with of ≥0.1mg of Nitrogen	
Current Consumption	5.5 A	5.5 A
Power consumption	1000 W	1000 W
Dimension (L X B X H)	(380 x 350 x 725) mm	(650 x 350 x 725) mm
HSN Code	84790000	
Ordering Code	BLFAKDI010000000000	BLFAKDI040000000000

ACCESSORIES

Description	Code
KDI Drip Tray ASM	BLA0KDI000DRP0TRAY
Oven Mittes - KDI ASM	BLA0OVM000KDI00000
Polypropylene Aspirator Bottle-34101 ASM	BLA0ASBPP050034101

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PROUDLY MADE IN 
india

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Fume Scrubber



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BOROSIL TECHNOLOGIES LIMITED

Four Steps for a lab free of toxic fumes



SAFE

- Practically zero exposure of harmful sulfur dioxide fumes to user
- Maximum safety with a self-contained design
- High capacity pump for larger capacity digesters

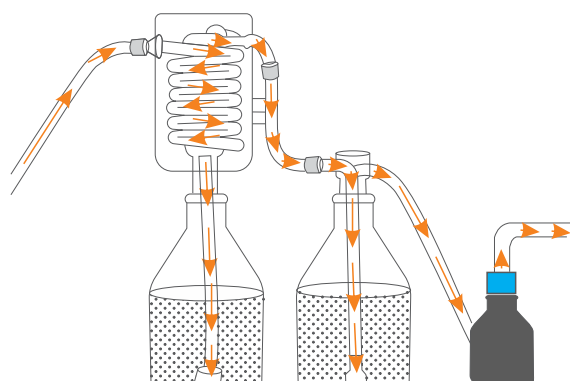


EFFICIENT

- Full control of the Scrubber via the digester
- Maximal neutralization efficiency by the vacuum pump
- Easy compatibility with all digesters

Cleaning Steps

- Stage 1 : Fume extraction and condensation
- Stage 2 : Neutralization by distilled water
- Stage 3 : Neutralization by alkali
- Stage 4 : Neutralization by carbon filter



Model Name	KSC010	KSC020
Current Consumption	1A	1A
Pump delivery Rate	28 Ltr/Min	45 Ltr/Min
Dimensions (WxDxH)	365 X 375 X 480 mm	365 X 375 X 480 mm
Ordering Code	BLFAKSC01000000000	BLFAKSC02000000000
HSN Code	84141000	

ACCESSORIES

Description	Product Code
KSC010 Condenser V2 ASM	BLMAFUTV2KSCCD2932
KSC010 Carbon Bottle ASM	BLM0BGW25012200211
BL 2L Clear Bottle 34/35 Ground Neck ASM	BLA0BGW10001500030
Viton Rubber Tube - 10 mm ID x 14 mm OD	BLA0VRT10D0014DBLK

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Block Digesters



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SAFE | SIMPLE | EFFICIENT
DIGESTION SYSTEMS
for Labs

Block Digesters

SAFE - SIMPLE - EFFICIENT

DIGESTION SYSTEMS for Labs

- Fast, safe and complete digestion of samples through aluminium blocks.
- Intricately control digestion temperature curves for unsupervised digestion
- Monitor process parameters & pre-set sample cycles
- Autolift enables complete automation and safety
- Cooling stations increase throughput by decreasing the cooling time post digestion

Model Name	KBD083	KBD123	KBD203
Type	Block Digester	Block Digester	Block Digester
No. of positions	8	12	20
Tube capacity (ml)	250 / 400		
Temperature Range	Ambient to 470°C		
Timer Range	1-300 mins		
Temperature Precision	±1°C		
Ramp and Hold	upto 4		
Presets	upto 99		
Auto scrubber ON/OFF	Yes		
PID control	Yes		
Autolift	Yes		
Auto OFF after achieving set time	Yes		
Temperature Calibration	Yes, single and two point		
PC & Printer Connectivity	Yes, upgradable		
Display	Graphical LCD		
Body	Stainless steel with control pannel of FRP		
Current Consumption	6A	8A	12A
Dimensions (W x D x H)	(416 X 554 X 595) mm		(410 x 585 x 735) mm
Power Consumption	1400W	1600W	2800W
HSN Code	84790000		
Ordering Code	BLFAKBD08300000000	BLFAKBD12300000000	BLFAKBD20300000000

ACCESSORIES

Description	Product Code
Viton Rubber Tube - 10 mm ID x 14 mm OD	BLA0VRT10D0014DBLK
TEFLON FUME CAP for KBD/ KIR	BLAAFUT100PTFE1651
KBD082 TEST TUBE HOLDER ASM	BLAAKBD08220000000
KBD202 TEST TUBE HOLDER ASM	BLAAKBD20220000000
8 position cooling station 2 X 4	BLFATHW81000000000
12 position cooling station 6 X 2	BLFATHW12100000000
20 position cooling station 5X4	BLFATHW20000000000
250 ml Borosilicate Test Tube ASM (Set of 5)	BLMATTB01041250000
250 ml Quartz Test Tube ASM (Set of 2)	BLGATTQ01041250000
400 ml Borosilicate Test Tube ASM (Set of 5)	BLAATTB01050400001

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Kjeldahl Distillation with Autotitrator



Comfortable and reliable Labquest steam distillation unit designed predominantly *for Kjeldahl analysis*

Perform Kjeldahl nitrogen or protein determinations in the Food & Feed industries and several other applications in environmental control, agricultural produce, products, soil industries after having digested the sample accurately in the most cost-effective way

KDI050 is compliant with many official methods of steam distillation for different applications such as the determination of ammoniacal nitrogen, protein determination, nitrogen content (direct or indirect), nitric nitrogen (after reduction/Devarda's Alloy) and alcohol content.



EFFORTLESS USE

- Simple programming and straight forward operation
- Quick start option with favourite method menu



ENERGY SAVING

- Start and stop cooling water automatically during the distillation process with excellent insulation of internal parts.



COMPETENCE

- Robust acid resistant housing
- Compact footprint saves useful laboratory bench space.



SAFETY

- Brilliant supervision of all crucial functions
- Comprehensive built-in safety systems for operator protection

KDI060 is a solution to quantify the nitrogen/protein content with the Kjeldahl method. Automated with Inbuilt autotitration, offers the highest sample throughput without compromising on result accuracy and precision. The automated Kjeldahl analyzer is undoubtedly the most productive system available.

Sample analysis requires no monitoring.

The inbuilt N/Protein calculator with extraction of results makes the system versatile like never before



- Automatic dilution, steam, alkali, acid and test tube drain
- Anti corrosive FRP body construction
- 7" colored touch screen display
- Steam regulation (10-100%)
- Process kill switch to halt the process in case of accidental door opening
- Process resume from stop
- Detachable bottom drip tray for extra protection against acid attack
- Anytime alkali addition during the distillation cycle
- Tube sensor that enables safe operating conditions in event of tube damage
- Reagent refill level sensor to avert reagent dry out
- One point calibration of alkali and distilled water pumps
- Two point calibration for acid pump
- Real time monitoring of process parameters
- SELV protection
- Nitrogen reproducibility $\pm 1\%$
- RSD $< 1\%$
- LOD of 1-200mg with of ≥ 0.1 mg of Nitrogen
- Nitrogen recovery $> 99.5\%$

Technical details

Model Name	KDI060
Steam Addition	Automatic
Distilled water addition	Automatic
Alkali addition	Automatic
Residue drain	Automatic
Display	7" colored touch screen
Tube Capacity (ml)	250 / 400ml
Steam power regulation (Adjustable)	10 to 100%
Minimum distillation time (mins)	5
Reagent level sensor	Yes
Anytime alkali addition	Yes
Tube error detection	Yes
Door close sensor	Yes
Process resume from stop	Yes
One point alkali and distilled water pump	Yes
Two point calibration for acid pump	Yes
Real time monitoring of process parameter	Yes
SELV protection	Yes
Programs	40 preset, 10 user editable
PC Connectivity	Yes
Nitrogen recovery	>99.5%
Nitrogen reproducibility	0.01
RSD	<1%
LOD	1-200mg with of =0.1mg of Nitrogen
Titration Type	pH base
Water Addition	Automatic
Distillation Residue Removal	Automatic
Titration Cleaning Vessel	Automatic
Detection Limit	0.1ml
Analysis time	upto 1min
Titration Residue Removal	Automatic
Boric Acid Addition	Automatic
Burette Resolution	0.03ml/drop
Power Supply	230V/50Hz
Current Consumption	10A
Power Consumption	1800 W
Dimension (L x B x H) mm	(480 × 470 × 820) mm
HS Code	84198990
Ordering code	BLFAKDI06000000000

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Kjeldahl Distillation



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KDI050 is compliant with many official methods of steam distillation for different applications such as the determination of ammoniacal nitrogen, protein determination, nitrogen content (direct or indirect), nitric nitrogen (after reduction/Devarda's Alloy) and alcohol content.



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- Simple programming and straight forward operation
- Quick start option with favourite method menu



ENERGY SAVING

- Start and stop cooling water automatically during the distillation process with excellent insulation of internal parts.



COMPETENCE

- Robust acid resistant housing
- Compact footprint saves useful laboratory bench space.



SAFETY

- Brilliant supervision of all crucial functions
- Comprehensive built-in safety systems for operator protection

KDI050 is the unique range solution to quantify the nitrogen/protein content with the Kjeldahl method. The automated Kjeldahl analyzer, with premium performance offers the highest sample throughput with increased boiler capacity and is the most productive system available.

Sample analysis requires no monitoring.

The inbuilt N/Protein calculator with extraction of results makes the system versatile like never before



- Automatic dilution, steam, alkali, acid and test tube drain
- Anti corrosive FRP body construction
- 7" colored touch screen display
- Steam regulation (10-100%)
- Process kill switch to halt the process in case of accidental door opening
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- Anytime alkali addition during the distillation cycle
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- Reagent refill level sensor to avert reagent dry out
- One point calibration of alkali and distilled water pumps
- Two point calibration for acid pump
- Real time monitoring of process parameters
- SELV protection
- Nitrogen reproducibility $\pm 1\%$
- RSD $< 1\%$
- LOD of 1-200mg with of ≥ 0.1 mg of Nitrogen
- Nitrogen recovery $> 99.5\%$

Technical details

Parameters	KDI050
Tube Capacity (ml)	250ml/ 400ml
Minimum distillation time (mins)	5
Current Consumption (A)	10
Power consumption (W)	1500
Dimension (L X B X H)mm	(480 X 470 X 820)
HSN Code	84198990
Ordering Code	BLFAKDI050000000000

Accessories

Description	Code
KDI Drip Tray ASM	BLA0KDI000DRP0TRAY
Oven Mittes - KDI ASM	BLA0OVM000KDI00000
Polypropylene Aspirator Bottle - 34101 ASM	BLA0ASBPP050034101

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