



Lab Solutions

Food&Feed Line





Lab Solutions

Protein Determination in Food and Feed

JP Recirculating Water Pump for fumes aspiration

Velp Scientifica's innovative microprocessor-controlled recirculating water jet pump allows you to select two different time-related programs. These programs ensure high performance removing fumes related to the different digestion phases and to the number of digested samples.

SMS Scrubber

This very efficient unit allows correct disposal of toxic substances without emission to the work place or environment. The SMS Scrubber is designed to remove corrosive and toxic fumes during oxidative mineralization or other processes.



Kjeldahl method for nitrogen determination

The Kjeldahl's method is named after the Danish chemist who developed it more than a century ago. Today, the method is widely used according to official methods to determine nitrogen and proteins in food, feed, soil, wastewater, etc.

Velp Scientifica's equipment allows you to perform the Kjeldahl method easily and with reproducible results.

Food And Feed represent all the substances that, introduced in living organisms, supply the energy and structural components required for growth and preservation of vital functions. Food and Feed are characterized by their composition in terms of proteins, carbohydrates, and fat for their nutritional content and also according to laws of the European Economic Community (EEC), United States (US), etc. The innovative equipment manufactured by Velp Scientifica provides substantial assistance to food and feed analysis specialists involved in production and research.

Food&Feed Line

Different peripheral devices can be connected



UDK 152 - Fully Automatic Distillation and Titration unit

Superior performances and cooling water saving thanks to the innovative titanium condenser (Patent Pending)



UDK 152

Features and Benefits

- Automatic management of all the process activities: from distillation to titration, including reagent adding, residues aspiration and final result calculations
- Reduced running costs and downtime trough optimized applications and 30 predefined standard methods
- Officially approved colorimetric titration method (AOAC, EPA, ISO) simplifies validation
- High level of safety systems for user protection
- High durability to chemical corrosion
- Automatic calculation of Protein concentration and storage of up to 4000 results in memory
- Innovative titanium condenser, allows drastic savings of cooling water using an optimized patented heating exchanger
- Designed for the most demanding laboratory continuously working to achieve higher productivity and safety standards

DK Series Heating Digesters

We provide a wide range of digesters for different sizes and numbers of test tubes.

Features and Benefits

- Easy of programming by only 4 keys that control all functions
- Accurate temperature control by a microprocessor (+/- 0,5°C)
- Flexibility achieved by 20 optional programs, each with up to 4 temperature ramps
- Connectivity to a computer for data logging with RS232



DK20

DK42/26

DK20/26

DK6/48

UDK Series Steam Distilling Units

They are useful for determining ammonia, nitrogen, total Kjeldahl or direct alkaline proteic nitrogen (after reduction), phenols, volatile fatty acids, cyanides, sulphur dioxide, alcohol content, etc. in cereals, food and feed, water, soil, sludge, sediment and chemicals.

GLP Good Laboratory Practices
AOAC DIN EPA ISO

UDK 142 Automatic Steam Distillation unit



UDK 142

Titration

Features and Benefits

- The UDK 142 is a fast, easy to set up distillation unit that can be connected to various auto-titration units
- All parameters are fully programmable
- Push button operation
- Accepts multiple size flasks and tubes
- High durability to chemical corrosion
- Visible identification of process stage

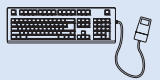
UDK 132 Semiautomatic Steam Distillation unit



UDK 132

- Mid range model offering some automated functions
- Safety features to assure safe operation
- Accepts multiple size flasks and tubes

Different peripheral devices can be connected



Different peripheral devices can be connected



DK Series Heating Digesters

In the field of qualitative and quantitative control of food and feed, increasing importance is given to "raw fiber", which by convention is defined as indigestible residue. Raw fiber determination is performed mainly in chemical, analytical and research laboratories within the Food and Feed industry.



FIWE 6



FIWE 3

FIWE 3 / FIWE 6

These extraction units with three or six places are used for raw fiber determination. Their innovative technological design allows cold or hot extractions with accurate and reproducible results through easy, reliable operation. The units include a safety system that signals the lack of cooling water.

Raw fiber determination



UDK 127

- Automatic alkali addition
- Innovative design
- Safety features to assure safe operations
- Accepts multiple size flasks and tubes
- Plastic cover

UDK 127 Steam Distillation unit

COEX Cold Extractor

COEX equipment allows rapid defatting of samples in the same glass crucibles used by FIWE 3 and FIWE 6 for subsequent crude fiber determination.

Normally used with samples with high (> 1%) fat content.



COEX



CSF 6

CSF 6

Filtration equipment is used to determine dietary fiber. The unit is equipped with a peristaltic pump that has high suction capacity and electronic control of counterpressure, allowing a sharp reduction of filtration time. Among the main analytical applications are the determination of total soluble and insoluble dietary fiber. Dietary fiber includes cellulose, hemicelluloses, lignin, pectin, gums and waxes. The American Association of Official Analytical Chemists for dietary fiber determination by thermostable enzymes proposes the method 985.29.



GDE

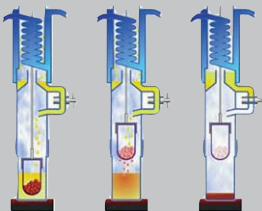
Enzymatic Digester

This thermostating unit consists of an immersion heating head, a transparent tank and a magnetic stirrer with six places. It allows precise control of temperature during critical enzymatic digestion.



Soxhlet technique

The solubilization of extractable components is performed by a cold solvent dropping from a reflux condenser. Consequently, a complete extraction lasts many hours.



Randall's technique

The first phase of extraction is performed by immersing a sample - containing thimble in boiling solvent followed by a washing with cold refluxing solvent. The fast solubilization achieved by the hot solvent results in a sharp reduction of extraction time.

Solvent Extractor

Extraction by an organic solvent allows a quantitative separation of a component or group of components (e.g. fat) from a mixture of solids. Examples of such applications include the analysis of food, feed, detergents, rubber and plastic formulates, pharmaceutical products, soils, etc. for their content of soluble components, such as fat, tensides, plastifiers and pesticides.

Our solvent extraction equipment includes three or six places for solid or semisolid products, according to Randall's technique. The equipment optimizes manual operations, reduces extraction time, maximizes solvent recovery and ensures completely safe operation. The equipment includes a safety system that signals the lack of cooling water. It is possible to print or save data related to the extraction. Comply with IP 55 protection level.

SER 148 Solvent Extractor

Different peripheral devices can be connected



SER 148

Model	Cod. N° 220-240V		Cod. N° 110-120V		Power W	Temp. °C max	Weight kg	Dimensions mm (WxHxD)	Accessories
	50 HZ	60 HZ	50 HZ	60 HZ					
DK 6	F30100182		F30110182		1100	from room temp. to 450	10	293x152x339	1,2,3,4,5,6,7,8,9,10,11,41
DK 20	F30100184				2300	from room temp. to 450	24	393x152x446	1,5,6,7,8,12,13,14,15,16,17,41
DK 20/26	F30100185		F30110185		1100	from room temp. to 450	10	293x152x339	10,19,20,41,42
DK 42/26	F30100186				2300	from room temp. to 450	24.5	393x152x446	15,19,21,41,43
DK 6/48	F30100188		F30110188		1100	from room temp. to 450	8.2	293x152x339	4,10,11,22,23,24,41
JP	F30620198	F30630198		F30640198	160		8.4	250x400x370	
SMS	F307C0199*		F307C0199*				3.5	190x500x300	37,38
UDK 127	F30200183		F30210183		2100		23	320x770x386	25,26,27
UDK 132	F30200189				2100		33	330x775x470	18,25,26,27,41
UDK 142	F30200191				2100		35	330x775x470	25,26,27,33,34,35,36,41,45
UDK 152	F30200192				2200		45	440x775x470	25,26,27,41
SER 148/3	F30300240		F30310240		500	from 100 to 260	30	480x620x390	28,29,30,39,40,41
SER 148/6	F30300242		F30310242		950	from 100 to 260	40	700x620x390	28,29,30,39,40,41
CSF 6	F30420210	F30430210		F30440210	120		28	730x380x420	31
GDE	F30400209		F30410209		1000	from room temp. to 60	7	410x500x295	32
FIWE 3	F30520201	F30530201		F30540201	800		35	530x620x390	31,44
FIWE 6	F30520200	F30530200		F30540200	1200		46	760x620x390	31,44
COEX	F30520204	F30530204		F30540204	60		19	730x300x380	31

* No Voltage

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Number	Description	Cod. N°	Number	Description	Cod. N°
1	Test tubes Ø 42x300 mm	A00001080	24	Suction cap for DK6/48	A00001101
2	Glassware handle with heat shields x DK6	A00001111	25	Test tube connection Ø 26 mm, Ø 48 mm	A00000043
3	Suction cap for DK6	A00001096	26	Test tube Ø 80x300mm for alcohol determination	A00001083
4	Stainless steel stand for glassware handle	A00001097	27	Spacer for test tube Ø 48x260mm	A00000062
5	COD test tubes Ø 42x200 mm, 200 ml	A00001040	28	Extraction cup	A00001141
6	Air refrigerators with ground cone	A00001041	29	Extraction thimbles (pack of 25 pieces)	CM0111148
7	Antisplash bells	A00001045	30	Extraction thimbles holder	A00001142
8	PTFE sheats for 29/32 cones	A00001042	31	Glass crucible	A00001140
9	Stainless steel glassware handle for COD	A00001049	32	Beaker 400 ml	A00000999
10	Support system for DK6, DK20/26,DK 6/48	A00001206	33	Connecting cable for auto-titrator Mettler	A00191200
11	Drop collector for DK6	A00001200	34	Connecting cable for auto-titrator Metrohm (CTRL)	A00191201
12	Glassware handle with heat shields x DK20	A00001112	35	Connecting cable for auto-titrator Metrohm (RS232)	A00191202
13	Suction cap for DK20	A00001093	36	Connecting cable for auto-titrator Schott	A00191203
14	Stainless steel stand for glassware handle	A00001094	37	Filter for actived carbon	A00001165
15	Support system for DK20, DK42/26	A00001204	38	Pack of 10 refill of actived carbon	A00001164
16	Drop collector for DK20	A00001202	39	Vafion seal	A00000061
17	Stainless steel glassware handle for COD	A00001098	40	SER 148 Cable for RS232	A00000011
18	Keyboard	A00000009	41	Printer	A00001009
19	Test tubes Ø 26x300 mm	A00001091	42	Suction cap for DK 20/26	A00109626
20	Glassware handle with heat shields x DK20/26	A00001110	43	Suction cap for DK 42/26	A00109326
21	Glassware handle with heat shields x DK42/26	A00001109	44	Water spray device	A00001135
22	Test tube Ø 48 mm	A00001088	45	Titrator Titroline Easy K	R30800194
23	Glassware handle with heat shields x DK6/48	A00001113			

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