

VWR INTERNATIONAL
**ALL YOU NEED
FOR WINE**

Essential supplies and consumables

Filtration and microbiology

Equipment and accessories

Chemicals and reagents



INTRODUCTION

This all you need guide has been designed with you the creator and producer of wines in mind. It is a selection of essential products that can be used for sampling right through to the quality control of the finished product. This guide is intended to help you save valuable time searching for the products you routinely use. As well as products for specific analyses. This brochure offers you a comprehensive selection of consumables, filtration products, equipment and chemicals for the wine industry.

Your one stop shop for chemicals, consumables, equipment and services.

VWR can also provide you with a complete range of safety, personal protection and waste disposal products. As well as offering a broad range of technical and validation services that can help you optimise your analyses and controls of your wine.

This brochure can only give you a flavour of what is available. Complete product listings are available in our **webshop**, **catalogues** and **specialist brochures**.

Want easy ordering? VWR is here to help.

Our webshop provides you with extensive search capabilities, extensive product information or even creating favourite lists so that you do not need to remember which product or article number you ordered last time.



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VWR2Go is the solution! It offers the VWR website with all functionalities available on your smartphone or tablet. Simply download the app and you are done! Visit our information page on **vwr.com** for more information.



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The VWR Technical Service team offers a wide range of servicing options to support your laboratory equipment

In the VWR repair centres across Europe, our expert teams of manufacturer trained technicians can repair small equipment and measuring instruments. These highly equipped workshops handle every brand, every type of model, even those not sold by us, minimising your downtime and providing a professional, cost effective and timely solution. Repairs can be followed with a calibration procedure to make sure that your equipment is in compliance with GMP/GLP and FDA regulations.

We have an extensive knowledge and a wide range of manufacturer original spare parts to re-invigorate the following equipment:

- pH meters
- Conductivity meters
- Turbidity meters
- Shakers
- Mixers
- Stirrers
- Hotplates
- Heating baths
- Dataloggers
- Pumps
- Spectrophotometers
- Air samplers
- Centrifuges
- Balances
- Autoclaves
- Refrigerators
- Incubators
- etc...

SPECIALIST SERVICES

Air sampler calibration services

Air samplers are key to any environmental monitoring programme, so regular checking of the volume of aspirated air is imperative to ensure that there are no errors in the monitoring of contamination. VWR has a comprehensive calibration and service programme on air samplers. We recommend performing the air sampler's calibration every 6 - 12 months and also if the air sampler has potentially been damaged or the flow rate has been compromised.

Brand independent calibration and adjustment of thermometers and dataloggers

Our fast, efficient and competitive service provides calibration, adjustment and repair services for all brands and models both with and without accreditation. Our tailored services can meet any specific calibration demand you may have. All calibration services are directly traceable to a National Measurement Standard or can be certified with ISO 17025:2005 accreditation. Every calibrated thermometer or datalogger is provided with a calibration certificate.



VWR's multi-brand pipette calibration and maintenance is accurate and reliable

VWR's pipette services is our total care programme for pipette calibration and service of single and multichannel pipettes, steppers, burettes, volumetric glassware, titrators and other liquid handling equipment. To remain compliant, regular pipette calibration is required by GLP, GMP, FDA and ISO.

A complete service solution – in-house or on-site

VWR's calibration service of pipettes, steppers, burettes and volumetric glassware covers:

- Calibration procedures according to ISO 8655/ISO 4787
- Adjustment
- Preventative maintenance
- Corrective maintenance/repair
- Troubleshooting and diagnosis
- Calibration certificate
- Due time reminder system

We set the highest standards – officially trained technicians and full ISO 17025 accredited facilities

- Calibration according to ISO 8655
- Genuine spare parts for repairs
- Accredited Competence Centre compliant with ISO 17025
- VWR technicians fully certified and trained by the manufacturers

Traceable from beginning to end...

Every calibration is registered with a free calibration certificate including the individual calibration results. If an accredited calibration according to ISO/IEC 17025 is required the certificate is provided with the accreditation logo which gives direct traceability to a National Standard. In case of an adjustment of your pipette you always receive two calibration certificates from us, one from before adjustment and one after.

For all **GLP laboratories** we perform an '**as found**' and an '**as left**' calibration. This means that we perform a calibration before preventative maintenance and after.

Every calibrated pipette gets a calibration label with calibration date and recalibration date. To keep your pipette in a calibrated status we have our due time reminder system. This system will inform you about the due-time to send the pipette in again for service.

For more information on any of our technical and validation services, please contact your local VWR sales office.





Essential Supplies and Consumables

Gloves, food grade



Nitrile, non sterile, powder-free, textured fingertips

The gloves are manufactured from 100% nitrile which contains no natural rubber latex. They are therefore excellent for use in environments where natural rubber is not desirable or for people who suffer from allergic reactions. The gloves are very light, but strong and durable, due to the excellent tensile and elongation properties, and especially suitable for food handling (Food contact approved according to European Directive EC 1935/2004)

- Ambidextrous
- Beaded cuffs
- Textured fingertips for better grip

Length: 240 mm
Colour: Blue
EC 1935/2004, AQL 1.5

Size	Pk	Cat. No.
XS	1000	112-1873
S	1000	112-1874
M	1000	112-1875
L	1000	112-1876
XL	1000	112-1877

General purpose gloves



Latex, non sterile, powdered and powder-free, textured fingertips

Single-use, ambidextrous gloves made from natural latex. Suitable for food handling, laboratory and industrial applications with complex risks and for medical applications (powder-free version only).

- Free from phthalates and softeners
- Textured fingertips for excellent grip
- Rolled cuffs minimise the risk of tearing
- Tested and certified according to 1935/2004 - suitable for food contact

Length: 240 mm
Thickness: 0,12 mm (palm - single measured)
Colour: Natural
Powdered: EN 420, EN 374; AQL 1,5; Cat. III
Powder-free: EN 420, EN 455 (1-2-3-4), EN 374; AQL 1,5; Cat. III

Type	Size	Pk	Cat. No.
Powdered	S	100	112-1565
Powdered	M	100	112-1566
Powdered	L	100	112-1567
Powdered	XL	90	112-1568
Powder-free	S	100	112-2750
Powder-free	M	100	112-2751
Powder-free	L	100	112-2752
Powder-free	XL	90	112-2753

Safety spectacles, Brussels



Single lens

Modern and stylish spectacles with clear lenses. Designed for use in all industrial and laboratory settings.

- Scratch and impact resistant polycarbonate lenses
- Can be used as visitor safety spectacles

EN 166

Type	Lenses	Colour	Pk	Cat. No.
Anti-scratch	Clear PC	Transparent	1	111-8135

Eyewash stations with one bottle
Plum



Wall-mounted station containing 1×500 ml eyewash complete with pictogram. Especially suitable for workplaces where on-the-spot rinsing is required.

Rinsing time: Approximately 5 minutes
W×D×H wall holder: 80×57×35 mm
W×D×H pictogram: 90×3×300 mm

Description	Pk	Cat. No.
Eyewash station with 1×500 ml eyewash, Southern Europe	1	118-0064
Eyewash station with 1×500 ml eyewash, Scandanavia	1	118-1715
Eyewash station with 1×500 ml eyewash, Europe	1	118-1701

Bench protectors



High quality, smooth, absorbent paper that quickly absorbs liquid spills with a thick, laminated polyethylene layer that prevents seeping onto the work surface.

- Retains leaked reagents in radio-chemical laboratories and prevents radioactive contamination
- Recovery of leaked, expensive materials
- Breakage protection for hard surfaces
- Absorption layer for water or solvent moisture chambers
- Ideal, impermeable protective material for lining animal cages

Absorbence rate 115-9220 + 115-9221: 500 ml/m²
Absorbence rate 115-0673: 750 ml/m²

L×W (mm)	Colour	Packed	Pk	Cat. No.
Bench protectors				
570×460	White	50 single sheets	50	115-9220
50000×460	White	1 roll of 50 m	1	115-9221
Maxi bench protectors				
460×570	White	50 single sheets	50	115-0673

Bench protection paper



Cellulose and cotton
These protection papers are available in different formats. They can be used for bench protection as well as for the packaging of glass parts.

- Sheets are available flat or folded
- Suitable for food contact

L×W: 420×520 mm
Weight: 65 g/m²
Thickness: 0,16 mm
Porosity: 7 - 10 µ
Colour: White or grey

L×W (mm)	Thickness (mm)	Colour	Packed	Pk	Cat. No.
420×520	0,16	White	Sheets, flat	500	115-2319

Wash bottles, narrow or wide mouth, colour coded



LDPE, translucent, with coloured PP screw cap

Economical, soft and very easy to squeeze. For use with general solutions such as water, soap, dilute acids and dilute alkalis. Dispensing tube with pointed end made of PP to optimize the backflow of the medium.

- Good chemical resistance
- Heat resistant up to +80 °C
- Colour coded caps for quick identification

Capacity (ml)	Colour code	Thread	Pk	Cat. No.
Narrow mouth				
250	Blue	GL 25	5	215-2496
250	Red	GL 25	5	215-2497
250	Green	GL 25	5	215-2498
250	Yellow	GL 25	5	215-2499
250	Natural	GL 25	5	215-2500
Wide mouth				
500	Blue	GL 45	5	215-2529
500	Red	GL 45	5	215-2530
500	Green	GL 45	5	215-2531
500	Yellow	GL 45	5	215-2532
500	Natural	GL 45	5	215-2533

Wash bottles, narrow mouth
KAUTEX TEXTRON



LDPE, translucent with LDPE spray cap

Economical, soft and very easy to squeeze. For use with general solutions such as water, soap, dilute acids and dilue alkalis. The tip can be cut off to increase the flow rate.

- Good chemical resistance
- Heat resistant up to 80 °C
- Leakproof

Pk	Cat. No.
1	KAUT76083

Draining racks
Kartell



PS, white

With integral extra wide draining channel and 72 draining rods which are 95 mm long, 15 mm Ø. The rod insertion apertures are closed at the back. This prevents water from seeping into the wall.

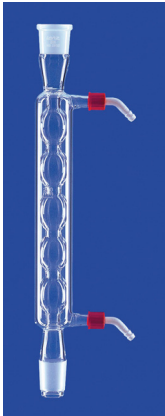
- The draining rods can be inserted and replaced as required
- Supplied complete with drainage tube and fixtures for wall mounting
- Optional rods for narrow-necked vessels are available to order under article number 212-6109

Description	W×D×H (mm)	Pk	Cat. No.
Draining rack	450×110×630	1	149-1310

Accessories			
Description	Ø×L (mm)	Pk	Cat. No.
Rods for narrow-necked vessels	6×95	11	212-6109

Allihn condensers with standard ground joints

Lenz



DURAN® , borosilicate glass

For condensing vapours. With core and jacket. Water supplied through plastic connectors with 8 mm external diameter and GL 14 threaded joints.

- Very good chemical resistance
- High temperature resistance
- Minimal thermal expansion giving relatively high resistance to temperature changes

201-1168 and 201-1678 according to DIN 12581

Cone size (NS)	Socket size (NS)	Jacket length (mm)	Pk	Cat. No.
14/23	14/23	160	1	201-1677
19/26	19/26	160	1	201-1168
19/26	19/26	250	1	201-1169
24/29	24/29	400	1	201-0361
29/32	29/32	250	1	201-1678
29/32	29/32	400	1	201-1679

Liebig condenser with standard ground joints

Lenz



DURAN® , borosilicate glass

For condensing vapours, with fused mantle, cone and socket. Water supplied through plastic connectors with 8 mm external diameter and GL 14 threaded joints.

- Very good chemical resistance
- High temperature resistance
- Minimal thermal expansion giving relatively high resistance to temperature changes

DIN 12576

Cone size (NS)	Socket size (NS)	Jacket length (mm)	Pk	Cat. No.
14/23	14/23	250	1	201-1676
19/26	19/26	160	1	201-1171
19/26	19/26	250	1	201-1170
29/32	29/32	250	1	201-1675
29/32	29/32	400	1	201-1684



Water jet pump

Brand



PP, grey

For generating a vacuum and evacuating liquids and vapours (a cooling trap may have to be fitted upstream).

- Extremely low water consumption (190 l/h at 3,5 bar flow pressure)
- Constant final pressure (16 mbar at 12 °C water temperature)
- Good suction capacity, ~400 l air per hour (against atmospheric pressure, 12 °C water temperature, 3,5 bar flow pressure)
- Good chemical resistance - the media to be transported only comes into contact with parts made from PP, FKM and PTFE
- Max. temperature in continuous operation 80 °C

Delivery information: Includes the water jet pump, an R ¾" cap nut, an R ½" reducing adapter, a hose nozzle (10 - 12 mm external diameter) for the water connector and a hose connector with 6 - 9 mm external diameter that can be unscrewed for the vacuum connection.

Flow rate pressure/ suction (l/min)	Final pressure (mbar)	Water pressure (bar)	Water consumption		Temperature	Length (mm)	Pk	Cat. No.
				(l/h)				
6,67	16	3,5		190	80 °C	210	1	181-9100

Bottles, wide mouth, with screw cap



LDPE, natural
Perfect for sample collection, storage and transport. Ideal for liquids, pastes and granular material. The wide mouth allows easy filling and cleaning. Without graduations.

- Good chemical resistance
- Leakproof, tough and versatile
- Suitable for packaging and storing food



Bottles with screw cap						
Capacity (ml)	Ø ext. (mm)	Height (mm)	Neck I-Ø (mm)	Neck Ø ext. (mm)	Pk	Cat. No.
100	47	94	24	32	10	215-5631
250	63	119	31	40	10	215-5632
500	78	152	39	50	12	215-5633
1000	96	206	50	65	12	215-5634
1500	109	226	50	65	6	215-5635
2000	120	247	50	65	6	215-5636

Spare screw caps, LDPE natural colour				
	Thread (mm)	For bottles (ml)	Pk	Cat. No.
	32	50/100	10	215-5646
	40	250	10	215-5647
	50	500	10	215-5648
	65	1000/1500/2000	10	215-5649

Laboratory bottles, narrow mouth, with screw cap

Grade 3.3 borosilicate glass with PP screw cap
Round, with graduation, DIN thread, pouring ring and blue screw cap.



- Very good chemical resistance
- High temperature resistance
- Minimal thermal expansion, giving relatively high resistance to temperature changes

DIN EN ISO 4796-1

Capacity (ml)	Thread	Ø ext. (mm)	Height (mm)	Pk	Cat. No.
100	GL 45	56	100	10	215-3139
250	GL 45	70	138	10	215-3140
500	GL 45	86	176	10	215-3141
1000	GL 45	101	225	10	215-3142
2000	GL 45	136	260	1	215-3143
5000	GL 45	181	330	1	215-3144

Sealing film, PARAFILM® M

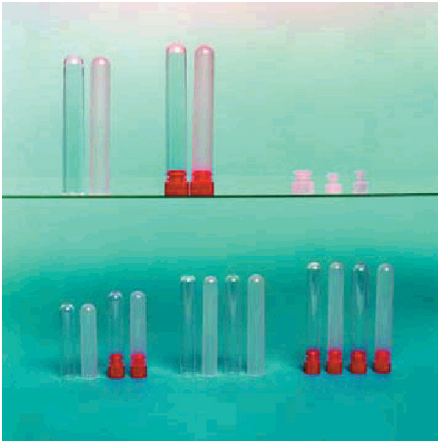


Universal, semi-transparent, highly elastic film designed for airtight and moisture-proof sealing and many other applications. The film can be stretched up to 200% and forms a completely tight seal even with irregular shapes and areas.

- Resistant to polar substances such as saline solutions, inorganic acids and alkalis for up to 48 hours
- Effective temperature range -45 to +50 °C (melting point ~+60 °C)
- Odourless and taste-free

Width (mm)	Length (m)	Pk	Cat. No.
50	75	1	291-1214
100	38	1	291-1213

Test tubes



Polystyrene (PS), clear or polypropylene (PP), natural

Universal tubes with round bottom for a wide range of applications. Available in either crystal clear (PS) or translucent (PP).

- Can be centrifuged up to 3000×g
- Can be delivered sterile with red plug or non sterile without plug
- Additional plugs and other colours upon request

Length (mm)	Ø ext. (mm)	Material	Pk	Cat. No.
Non sterile				
75	13	PS	4000	212-1834
75	13	PP	4000	212-1836
Winged plugs				
For tubes			Pk	Cat. No.
11 mm I.D.			2500	217-7005

Test tubes with round, conical or flat bottom



PS, crystal or PP, translucent, with or without caps

Ideal for sampling, transport and centrifugation. Wide variety of diameters and sizes covering all analytical needs.

- With or without cap, aseptic or sterile (10 kGray)
- Can withstand centrifugation of 3000×g, unless otherwise indicated
- Suitable for the majority of automated testing systems

Capacity (ml)	Material	Cap	Type	Ø ext. (mm)	Length (mm)	Pk	Cat. No.
Round bottom							
10	PS	without stopper	aseptic	15,4	95,0	1250	212-0179
10	PP	without stopper	aseptic	15,4	95,0	1250	212-0180

Centrifuge tubes, SuperClear™

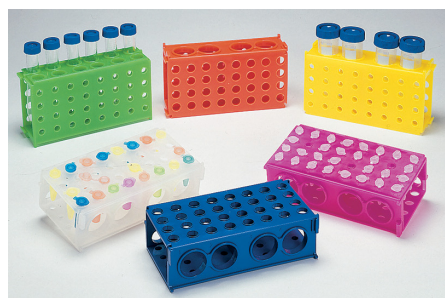


SuperClear™ PP or PS, conical, printed graduation, with flat or plug caps

- Extra thick walls to allow centrifugation up to 15000×g
- With extra large, solvent resistant, white labelling area and black graduations
- Flat PE caps can be closed with a quick ¾ turn, allowing one handed opening and closing; leakproof plug seal caps (50 ml tubes only) are perfect for use with horizontal shakers or for extended storage
- Patented Earth Friendly® racks can be labelled with lab markers
- Sterile tubes are radiation sterilised to ensure non cytotoxicity
- Certified non cytotoxic, nuclease, and pyrogen-free
- Patented ViewPoint™ labelling areas that help reduce smearing of lab markers and also helps protect sample labelling from damage during procedures

Capacity (ml)	Ø×L (mm)	Packed	Type	Pk	Cat. No.
Centrifuge tubes, 15 ml, PP, conical bottom, 15000×g, with printed graduations and flat caps					
15	17×118	50/bag, 10 bags/case	Non sterile	500	525-0149

Test tube racks



PP, coloured

With four sides that can be loaded independently. Create as large a rack as needed by linking together multiple racks. Practical and compact. Very good chemical resistance. High thermal resistance, autoclavable.

- Side 1: 4×30 mm diameter holes for 50 ml centrifuge tubes
- Side 2: 12×17 mm diameter holes for 15 ml centrifuge tubes
- Side 3: 32×12 mm diameter holes for 1,5/2,0 ml microcentrifuge tubes
- Side 4: 32×8 mm diameter holes for 0,5 ml microcentrifuge tubes

Colour	W×D×H (mm)	Pk	Cat. No.
Orange	175×95×51	1	211-0200
Green	175×95×51	1	211-0201
Pink	175×95×51	1	211-0202
Yellow	175×95×51	1	211-0203



Beakers, low form



PP, highly translucent

Ideal for general laboratory use. With spout and easy to read blue graduations.

- Good chemical resistance
- Resistant to heat up to +121 °C (for 20 minutes), prolonged use at +100 °C
- Smooth surfaces for easy, fast cleaning

ISO 7056



Capacity (ml)	Height (mm)	Ø ext. (mm)	Division (ml)	Pk	Cat. No.
100	70	52	20	12	213-1623
250	94	68	50	6	213-1624
400	109	77	50	1	213-1725
600	125	91	100	1	213-1726
1000	149	102	100	1	213-1642
2000	183	133	200	1	216-1643

Beakers, low form

Kartell



PMP (TPX®), crystal clear

Ideal for general laboratory use. With spout and easy to read embossed graduations.

- Good chemical resistance
- Heat resistant up to +150 °C (up to +170 °C for short periods), autoclavable
- Smooth surfaces for easy, fast cleaning

ISO 7056



Capacity (ml)	Height (mm)	Ø ext. (mm)	Division (ml)	Pk	Cat. No.
250	95	71	10	1	213-0188
500	119	88	10	1	213-0189
1000	146	110	20	1	213-0190

Beakers, low form



Grade 3.3 borosilicate glass, with spout

The economical alternative for a wide range of laboratory applications. With volume graduations and labelling area.

- Very good chemical resistance
- High temperature resistance
- Autoclavable

DIN 12331, ISO 3819



Capacity (ml)	Height (mm)	Ø ext. (mm)	Pk	Cat. No.
100	70	50	10	213-1122
150	80	60	10	213-1123
250	95	70	10	213-1124
400	110	80	10	213-1125
600	125	90	10	213-1126
800	135	100	10	213-1127
1000	145	105	10	213-1128
2000	185	130	10	213-1129

Beakers, tall form



Grade 3.3 borosilicate glass, with spout

The economical alternative for a wide range of laboratory applications. With volume graduations and labelling area.

- Very good chemical resistance
- High temperature resistance
- Autoclavable

DIN 12331, ISO 3819



Capacity (ml)	Height (mm)	Ø ext. (mm)	Pk	Cat. No.
100	80	48	10	213-1170
150	95	54	10	213-1171
250	120	60	10	213-1172
400	130	70	10	213-1173
600	150	80	10	213-1174
800	175	90	10	213-1175
1000	180	95	10	213-1176
2000	240	120	10	213-1177

Measuring beakers with handle



PP, highly translucent

Ideal for general laboratory use and a wide variety of other applications. With embossed scale, blue graduations and spout.

- Good chemical resistance
- Resistant to heat up to +121 °C (for 20 minutes), prolonged use +100 °C
- Smooth surfaces for easy, fast cleaning



Capacity (ml)	Height (mm)	Ø ext. (mm)	Division (ml)	Pk	Cat. No.
250	120	70	5	12	213-3401
500	133	91	10	12	213-3402
1000	170	116	10	1	213-3403
2000	215	150	20	1	213-3404

Erlenmeyer flasks, narrow or wide mouth



Borosilicate glass, grade 3.3

With beaded rim and graduation.

- Very good chemical resistance
- High temperature resistance
- Minimal thermal expansion, giving relatively high resistance to temperature changes

Capacity (ml)	Height (mm)	Ø ext. (mm)	Neck Ø ext. (mm)	Pk	Cat. No.
Narrow mouth					
100	105	64	22	10	214-0251
250	145	85	34	10	214-0252
500	180	105	34	10	214-0254
1000	220	131	42	10	214-0255
Wide mouth					
100	105	64	34	10	214-0257
250	140	85	50	10	214-0258
300	156	87	50	10	214-0259
500	175	105	50	10	214-0260
1000	220	131	50	10	214-0261
2000	280	153	69	10	214-0264

Measuring cylinders



PP, translucent, tall form, autoclavable, class B

Non wetting properties mean no loss of liquid. The measured liquid quantity is the same as the quantity dispensed.

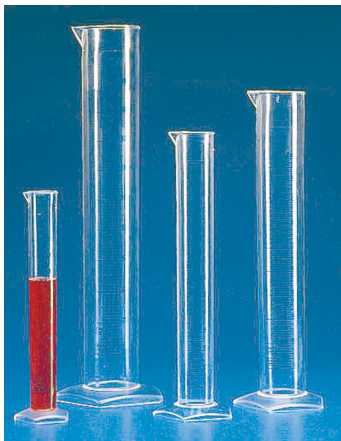
- Ring moulded graduations, overprinted in blue
- Large hexagonal base for better stability
- Anti-drip lip
- Autoclavable at 121 °C for 20 minutes

DIN 12681, ISO 6706



Capacity (ml)	Division (ml)	Tolerance (± ml)	Height (mm)	Pk	Cat. No.
100	1,0	1,0	260	12	612-4403
250	2,0	2,0	315	6	612-4404
500	5,0	5,0	350	1	612-4405
1000	10,0	10,0	440	1	612-4406
2000	20,0	20,0	482	1	612-4407

Measuring cylinders
Kartell



- PMP (TPX®), transparent, tall form, autoclavable**
- Pouring spout, pentagonal base and moulded blue graduations
 - No meniscus, chemically non absorbent, non wetting surface, excellent chemical resistance
 - Can be used with liquids up to +170 °C
- ISO 6706, BS 5404 Part 2



Capacity (ml)	Division (ml)	Tolerance (± ml)	Height (mm)	Pk	Cat. No.
250	2,0	2,0	315	1	612-4072
500	5,0	5,0	361	1	612-4073
1000	10,0	10,0	438	1	612-4074

Measuring cylinders



- Borosilicate glass, tall form, class A**
- Calibrated to contain (TC, In)
 - Hexagonal glass base, with spout
 - Blue graduations with ring marks at major graduations
 - Certificate of conformity with batch number
- DIN 12680



Capacity (ml)	Division (ml)	Tolerance (± ml)	Pk	Cat. No.
100	1	0,5	2	612-3836
250	2	1	2	612-3837
500	5	2,5	2	612-3838
1000	10	5	1	612-3839
2000	20	10	1	612-3840

Volumetric flasks, class B
Kartell



- PP, translucent, with PE stopper
- Narrow neck with no meniscus for easy reading
 - Calibrated gravimetrically at +20 °C
 - Autoclavable, chemically non absorbent, non wetting surface



Capacity (ml)	Height (mm)	NS	Pk	Cat. No.
25	121	12/21	1	612-3000
50	143	14/23	1	612-3001
100	174	14/23	1	612-3002
250	225	19/26	1	612-3003
500	265	19/26	1	612-3004
1000	325	19/26	1	612-3005

Volumetric flasks, class A, blue graduation



- Borosilicate glass, with PE stopper
- Marks in white and inscriptions in blue enamel
 - Certificate of conformity with batch number
 - Calibrated to contain (TC, In)
- DIN EN ISO 1042



Capacity (ml)	NS	Tolerance	Pk	Cat. No.
25	10/19	± 0,040 ml	2	612-3742
50	12/21	± 0,060 ml	2	612-3743
100	14/23	± 0,100 ml	2	612-3744
200	14/23	± 0,150 ml	2	612-3745
250	14/23	± 0,150 ml	2	612-3746
500	19/26	± 0,250 ml	2	612-3818
1000	24/29	± 0,400 ml	1	612-3819

Transfer pipettes, High Performance



- LDPE, disposable
- Non toxic and can be incinerated
 - Can be heat-sealed and frozen at very low temperatures such as in liquid nitrogen
- Packaging:** Sterile pipettes are packaged in medical grade paper and non toxic film.



Graduated

Capacity (ml)	Drop vol. (µl)	Suction volume (ml)	Stem Ø (mm)	Length (mm)	Graduation (ml)	Sterile	Packed	Pk	Cat. No.
6,0	45,4	1,5	5	230	1,5	-	Bulk	400	612-2842

TLC plates, silica gel 60, unmodified and chemically modified layers, aluminium



TLC plates, unmodified silica gel 60

This range of plates uses Merck silica gel 60 with a unique polymeric binder that results in a uniform and hard surface that will not easily crack or blister. The smooth and extremely dense plate coating ensures narrow bands and maximum separation efficiency with the lowest background noise.

- Layer thickness 200 µm, particle size of 10 - 12 µm
- Flexible aluminium plates that can easily be cut to match individual separation requirements
- Two inorganic fluorescent indicators for UV detection of colourless substances
- Samples which absorb shortwave UV at 254 nm are detected due to fluorescence quenching

Description	Format (mm)	Pk	Cat. No.
TLC silica gel 60 F254**, unmodified	200×200	25	1.05554.0001

** F254: fluorescent indicator

TLC and PLC plates, aluminium oxide 60



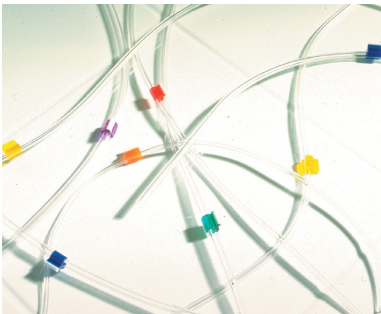
TLC plates, aluminium oxide 60

Merck TLC aluminium oxide plates use neutral or basic aluminium oxide with 60Å pore size with or without fluorescent indicator to suit different application needs.

- Distinct separation advantages with regard to the pH
- 250 µm layer thickness for basic or 200 µm layer thickness for neutral plates

Description	Pk	Cat. No.
TLC aluminium oxide 60 F254 neutral, aluminium	25	1.05550.0001

Pump tubing, Tygon® R 3607 fitted with stops
Saint Gobain Performance Plastics France



Tygon® laboratory tubing, crystal clear



This tubing can be used for virtually all inorganic chemicals found in laboratories. It is non oxidising and non contaminating. It is durable, tear resistant and less permeable than rubber tubing. The smooth inner wall helps to avoid deposits and makes cleaning easier. This pump tubing has a service life double that of other transparent tubing.

- Exceptional chemical resistance
- Autoclavable
- Fitted with 2 or 3 stops as required

Temperature resistance: -50 to +74 °C
Hardness (Shore durometer A): 55
Density: 1,18

Ø int. (mm)	Wall thickness (mm)	Colour code	Pk	Cat. No.
Two-stop configuration				
0,51	0,90	Orange/Yellow	12	224-2234
0,76	0,85	Black/Black	12	224-2237
0,89	0,85	Orange/Orange	12	224-2238
1,02	0,85	White/White	12	224-2240
1,14	0,85	Red/Red	12	224-2242
1,30	0,85	Grey/Grey	12	224-2244
1,42	0,85	Yellow/Yellow	12	224-2245
1,85	0,85	Green/Green	12	224-2249
2,06	0,85	Violet/Violet	12	224-2250

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Filtration & Microbiology

Syringe filters



Membranes with pore size of 0,2 µm are used for filtration of fine particles, those of 0,45 µm are appropriate for clarifications.
According to USP Class VI



PP membrane

For HPLC sample preparation.
Chemically resistant to organic solvents.
Low or no extractables prevent erroneous peaks with UV detection.

Pore size (µm)	Ø (mm)	Pk	Cat. No.
0,2	25	100	514-0064
0,45	25	100	514-0065

PTFE membrane

For HPLC sample preparation.
Chemically resistant to organic solvents.
Low or no extractables prevent erroneous peaks with UV detection.

Pore size (µm)	Ø (mm)	Pk	Cat. No.
0,2	25	100	514-0070
0,45	25	100	514-0071

Nylon membrane

For HPLC sample preparation.
Chemically resistant to organic solvents.
Low or no extractables prevent erroneous peaks with UV detection.

Pore size (µm)	Ø (mm)	Pk	Cat. No.
0,2	25	100	514-0066
0,45	25	100	514-0067

Syringe filters, Acrodisc® GHP



Hydrophilic PP membrane with PP housing

The universal membrane filter for all analytical filtration requirements. For aqueous and aggressive organic solvent-based solutions. Low protein binding, HPLC certified for low levels of extractables.

Ø (mm)	13	13	25	25
Pore size	0,2 µm	0,45 µm	0,2 µm	0,45 µm
Inlet/outlet	Female Luer lock/minispike	Female Luer lock/minispike	Female Luer lock/male slip Luer	Female Luer lock/male slip Luer
Max. temperature (°C)	55	55	55	55
Max. pressure (bar)	6,3	6,3	4,1 at 21 – 24 °C; 2,1 at 55 °C	4,1 at 21 – 24 °C; 2,1 at 55 °C
Water flow rate	17 ml/min (0,7 bar)	28 ml/min (0,7 bar)	215 ml/min (2,1 bar)	300 ml/min (2,1 bar)

Pore size (µm)	Filtration area (cm²)	Ø (mm)	Pk	Cat. No.
0,2	1	13	100	514-4121
0,2	1	13	1000	516-6916
PSF/0,2	3,9	25	50	514-4082
PSF/0,2	3,9	25	1000	514-4083
PSF/GxF/0,2*	3,9	25	50	514-4063
PSF/GxF/0,2*	3,9	25	1000	514-4062
0,45	1	13	100	514-4034
0,45	1	13	1000	516-6913
PSF/0,45	3,9	25	50	514-4080
PSF/0,45	3,9	25	1000	514-4081
PSF/GxF/0,45*	3,9	25	50	514-4079
PSF/GxF/0,45*	3,9	25	1000	514-4078

* with glass fibre prefilter

** in AutoPack™ tubes

Acrodisc® PSF syringe filters are Zymark and SOTAX Automation Certified to assure smooth operation and worry-free performance 24 hours a day in automated workstations.

Single-use syringes, 2-piece, NORM-JECT®



Disposable, two-piece, without needle, PP barrel and PE piston, latex- and silicone-oil free

- Defined position of the plunger at volume "0" to feel when plunger is completely inserted
- No dead space for 1 ml insulin and tuberculin syringe
- Extended graduation for wider range of applications
- Positive safety stop to prevent accidental spills

Syringes are also available with especially designed oral tip, which prevents accidental Luer or hypodermic connection, in volumes of 5 or 10 ml. Incompatible with injection needles. Please enquire for details.

Packaging: Sterile versions are packed in individual blister strips. Non sterile versions are bulk packed.

Description	Capacity (ml)	Pk	Cat. No.
Sterile			
Single-use syringe, Luer tip	2	100	613-2003
Single-use syringe, Luer lock tip	2	100	613-2004
Single-use syringe, Luer tip	5	100	613-2005
Single-use syringe, Luer lock tip	5	100	613-2006
Single-use syringe, Luer tip	10	100	613-2007
Single-use syringe, Luer lock tip	10	100	613-2008
Single-use syringe, Luer tip	20	100	613-2009
Single-use syringe, Luer lock tip	20	100	613-2010
Single-use syringe, Luer tip	30	50	613-2033
Single-use syringe, catheter tip	30	50	613-2034
Single-use syringe, Luer lock tip	30	50	613-2035
Single-use syringe, Luer tip	50	30	613-2036
Single-use syringe, catheter tip	50	30	613-2037
Single-use syringe, Luer lock tip	50	30	613-2038
Non sterile			
Single-use syringe, Luer tip	2	6300	613-1629
Single-use syringe, Luer tip	5	3600	613-1630
Single-use syringe, Luer tip	10	2000	613-1631
Single-use syringe, Luer tip	20	1000	613-1633
Non sterile, mini bulk packaging			
Single-use tuberculin syringe with ml graduation, Luer tip	1	100	613-2151
Single-use syringe, Luer tip	2	100	613-2152
Single-use syringe, Luer lock tip	2	100	613-2153
Single-use syringe, Luer lock tip	5	100	613-2155
Single-use syringe, Luer lock tip	10	100	613-2157
Single-use syringe, Luer lock tip	20	100	613-2159
Single-use syringe, Luer tip	30	50	613-2161
Single-use syringe, Luer lock tip	30	50	613-2160
Single-use syringe, Luer tip	50	30	613-2163
Single-use syringe, Luer lock tip	50	30	613-2162

Funnels with short stem, disposable



PP or PS
Suitable for use with standard filter paper.

- Good chemical resistance
- Good temperature resistance
- PP funnels are autoclavable

Funnel O-Ø (mm)	Stem length (mm)	Stem O-Ø (mm)	Length (mm)	Pk	Cat. No.
PP					
65	22,7	7,4/4,3	74,4	100	221-0251
55	27,1	7,4/4,3	71,3	100	221-0252
PS					
55	27,1	7,4/4,3	71,3	100	221-0253

Funnels, with short stem



Borosilicate glass, grade 3.3
With smooth internal walls.

- Very good chemical resistance
- High temperature resistance
- Minimal thermal expansion giving relatively high resistance to temperature changes

ISO 4798

Funnel O-Ø (mm)	Stem O-Ø (mm)	For filter Ø (mm)	Stem length (mm)	Pk	Cat. No.
35	6	45 - 55	35	2	221-0175
45	6	55 - 70	45	2	221-0176
55	8	70 - 90	55	2	221-0177
70	8	110 - 125	70	2	221-0178
80	10	125 - 150	80	2	221-0179
100	10	150 - 185	100	2	221-0180
120	16	185 - 240	120	2	221-0181
150	16	240 - 270	150	2	221-0182

Funnel stand
Bürkle



White PP
Can be used for two or four funnels, with tapered openings.

- Accomodates funnels with diameters from 40 to 160 mm
- Unbreakable in normal use
- With variable height ajustment

For	W×D×H (mm)	Pk	Cat. No.
2 funnels	300×140×480	1	519-2721
4 funnels	550×150×500	1	519-2722

Qualitative filter papers



Plain filters

Grade	402	410	413	415
Weight	84 g/m²	80 g/m²	73 g/m²	80 g/m²
Thickness	0,17 mm	0,15 mm	0,16 mm	0,16 mm
Particle retention	8 - 12 µm	2 - 3 µm	5 - 13 µm	12 - 15 µm
Max. pore size	40 µm	20 µm	45 µm	50 µm
Min. pore size	23 µm	9 µm	20 µm	1 µm
Filtration speed	150 s (Herzberg)	2500 s (Herzberg)	160 s (Herzberg)	70 s (Herzberg)
Wet burst strength	2,5 psi	1 psi	9 psi	0,8 psi
Dry burst strength	17 psi	22 psi	28 psi	8,5 psi

Grade	Size (mm)	Pk	Cat. No.
402	150	100	516-0283
410	75	100	516-0800
410	90	100	516-0801
410	110	100	516-0802
410	125	100	516-0803
410	150	100	516-0804
410	185	100	516-0805
413	15	100	516-0810
413	42,5	100	516-0811
413	55	100	516-0812
413	75	100	516-0813
413	90	100	516-0814
413	110	100	516-0815
413	125	100	516-0816
413	150	100	516-0817
413	185	100	516-0818
413	205	100	516-0819
413	240	100	516-0820
415	55	100	516-0830
415	75	100	516-0831
415	90	100	516-0832
415	110	100	516-0833
415	125	100	516-0834
415	150	100	516-0835
415	185	100	516-0836
415	205	100	516-0837
415	250	100	516-0838
415	330	100	516-0839

Folded filters

Grade	301	315
Weight	84 g/m²	73 g/m²
Thickness	0,2 mm	0,17 mm
Particle retention	12 - 15 µm	17 - 30 µm
Max. pore size	50 µm	70 µm
Min. pore size	31 µm	40 µm
Filtration speed	70 s (Herzberg)	60 s (Herzberg)
Wet burst strength	2 psi	6,5 psi
Dry burst strength	11 psi	17,5 psi

Grade	Size (mm)	Pk	Cat. No.
301	125	100	516-0276
301	150	100	516-0277
301	185	100	516-0278
301	240	100	516-0279
301	270	100	516-0280
301	320	100	516-0281
315	130	100	516-0840
315	150	100	516-0841
315	190	100	516-0842
315	250	100	516-0843
315	330	100	516-0844
315	400	100	516-0845

Qualitative filter papers, folded

Superior vellum paper, tight texture quality, for qualitative analysis. Recommended for use in research and analysis laboratories, university hospitals, food, pharmaceutical and chemical industries. For use in conical 60° funnels.

Average burst strength: 2 kg

Particle retention	4 - 7 µm
Thickness	15 - 100 µm

Size (mm)	Pk	Cat. No.
150	100	512-0290
190	100	512-0291
250	100	512-0292

Qualitative filter papers, standard grades

Whatman (GE Healthcare)



Grade (plain)	Grade (folded)	Application
1	-	Used for routine applications with medium retention and flow rate. This grade covers a wide range of laboratory applications and is frequently used for clarifying liquids. Separations of precipitates such as lead sulphate, calcium oxalate (hot) and calcium carbonate. Used for numerous routine techniques to separate solid foodstuffs from associated liquid or extracting liquid. Teaching grade.
2	2V	Slightly more retentive and more absorbent than Grade 1. In addition to general filtration in the 8 µm particle size range, the extra absorbency is utilised, for example, to hold soil nutrient in plant growth trials.
3	-	Double the thickness of Grade 1. The extra thickness gives increased wet strength and makes this grade highly suitable for use in Büchner funnels. The high absorbency is particularly valuable when the paper is used as a sample carrier.
4	-	Extremely fast filtering with excellent retention of coarse particles and gelatinous precipitates such as ferric hydroxide and aluminium hydroxide. Very useful as a rapid filter for routine clean-up of biological fluids or organic extracts during analysis.
5	5V	The maximum degree of fine particle filtration in the qualitative range. Capable of retaining the fine precipitates encountered in chemical analysis. Slow flow rate. Excellent clarifying filter for cloudy suspensions and for water and soil analysis.
595	595 1/2	Very popular, thin filter paper, medium fast with medium to fine particle retention. Used for many routine analytical applications in different industries, (e.g. particle separation from food extracts or filtration of solids from digested environmental samples, e.g. for ICP/AAS analysis).
597	597 1/2	A medium fast filter paper with medium to fine particle retention. Used for a wide variety of analytical routine applications in different industries like food testing (e.g. determination of fat content acc. to Section 35 LMBG) or removal of carbon dioxide and turbidity from beverages (e.g. beer analysis).

Plain filters

Grade	1	2	3	4	5	595	597
Weight	88 g/m²	103 g/m²	187 g/m²	96 g/m²	98 g/m²	68 g/m²	85 g/m²
Thickness	0,18 mm	0,19 mm	0,39 mm	0,20 mm	0,20 mm	0,15 mm	0,18 mm
Particle retention	11 µm	8 µm	6 µm	20 - 25 µm	2,5 µm	4 - 7 µm	4 - 7 µm
Filtration speed	150 s (Herzberg)	240 s (Herzberg)	325 s (Herzberg)	37 s (Herzberg)	1420 s (Herzberg)	80 s (Herzberg)	140 s (Herzberg)

Grade	Size (mm)	Pk	Cat. No.
1	10	500	512-0573
1	15	500	512-0569
1	20	400	512-0374
1	25	400	512-0375
1	30	400	512-0376
1	32	100	512-0377
1	25	100	512-0570
1	30	100	512-0571
1	42,5	100	512-1000
1	47	100	516-3104
1	55	100	512-1001
1	70	100	512-1002
1	85	100	516-0593
1	90	100	512-1003
1	110	100	512-1004
1	125	100	512-1005
1	150	100	512-1006
1	185	100	512-1007
1	240	100	516-0594
1	270	100	516-0595
1	320	100	516-0596
1	400	100	516-0597
1	385	100	512-0572
1	500	100	512-0378
2	42,5	100	512-0381
2	47	100	512-0574
2	55	100	512-1009
2	70	100	512-1010
2	90	100	512-1011
2	110	100	512-1012
2	125	100	512-1013
2	150	100	512-1014
2	185	100	512-1015
2	240	100	516-0599
2	270	100	512-0458
2	320	100	512-0382
2	385	100	512-0459
2	500	100	512-0460
3	23	100	512-0465
3	55	100	512-1016
3	70	100	512-1017
3	90	100	512-1018
3	110	100	512-1019
3	125	100	512-1020
3	150	100	512-1021
3	185	100	512-1022
3	240	100	512-0383
3	320	100	512-0464
4	25	100	512-0473
4	27	400	512-0470
4	42,5	100	516-3402
4	47	100	512-0412
4	50	100	512-0471
4	55	100	512-1024
4	70	100	512-1025
4	90	100	512-1026
4	110	100	512-1027
4	125	100	512-1028
4	150	100	512-1029
4	185	100	512-1030
4	240	100	516-0601
4	270	100	512-0472
4	320	100	512-0384
4	400	100	512-0474
5	42,5	100	512-0476
5	47	100	512-0475
5	320	100	512-0477
5	25	100	512-0478
5	500	100	512-0479
5	55	100	516-3505
5	70	100	512-1031
5	90	100	516-3508
5	110	100	512-1032
5	125	100	512-1033
5	150	100	512-1034

Grade	Size (mm)	Pk	Cat. No.
5	185	100	512-1035
5	240	100	516-0602
595	110	100	512-3618
595	125	100	512-3619
595	150	100	515-4505
597	12,7	1000	512-0004
597	45	100	515-4299
597	55	100	515-4300
597	70	100	515-4301
597	90	100	515-4302
597	110	100	515-4303
597	125	100	515-4304
597	150	100	515-4305
597	185	100	515-4306
597	240	100	515-4307
597	320	100	515-4309

Folded filters

Grade	2V	5V	595 ½	597 ½
Weight	103 g/m²	98 g/m²	68 g/m²	85 g/m²
Thickness	0,19 mm	0,20 mm	0,15 mm	0,18 mm
Particle retention	8 µm	2,5 µm	4 - 7 µm	4 - 7 µm
Filtration speed	240 s (Herzberg)	1420 s (Herzberg)	80 s (Herzberg)	140 s (Herzberg)

Grade	Size (mm)	Pk	Cat. No.
2V	125	100	512-1039
2V	150	100	512-1040
2V	185	100	512-1041
2V	240	100	512-0415
2V	270	100	512-0302
2V	320	100	512-0303
2V	385	100	512-0456
2V	400	100	512-0455
2V	500	100	512-0416
5V	185	100	512-0578
595 ½	500	100	515-5511
595 ½	70	100	515-5501
595 ½	90	100	512-3620
595 ½	110	100	512-3621
595 ½	125	100	512-3622
595 ½	150	100	512-3623
595 ½	185	100	512-3624
595 ½	210	100	512-0002
595 ½	240	100	512-3625
595 ½	270	100	512-3626
595 ½	320	100	512-3627
595 ½	385	100	515-5510
597 ½	70	100	515-5301
597 ½	90	100	515-5302
597 ½	110	100	515-5303
597 ½	125	100	512-3628
597 ½	150	100	512-3629
597 ½	185	100	512-3630
597 ½	240	100	512-3631
597 ½	270	100	512-3632
597 ½	320	100	512-3633
597 ½	385	100	512-3634
597 ½	500	100	515-5311

Other grades and sizes are available, please check www.vwr.com.

Cellulose chromatography papers
Whatman (GE Healthcare)

Whatman chromatography papers are widely used across the world, reflecting their purity, high quality and consistency. They are made from specially selected cotton cellulose and rigorously quality controlled to ensure uniformity within the grade.

- Pure cellulose produced from the highest quality cotton linters, with no additives, ensures that no contamination will occur during the transfer steps
- Manufactured and tested specifically for chromatographic techniques to ensure the wicking capability and uniformity of capillary action that is important in obtaining clean and even transfers during blotting

Grade 1 Chr

Smooth surface, 0,18 mm thick with a linear flow rate (water) of 130 mm/30 min. Good resolution for general analytical separations.

Description	Size (mm)	Pk	Cat. No.
Sheets	200×200	100	588-3112

Forceps for membrane filters



Stainless steel, PP
With polypropylene finger grips and flat, wide tips. Ideal for handling membrane filters and other filter discs.

- Corrosion resistant
- Easy and safe to handle
- Very good thermal resistance, autoclavable



Description	Pk	Cat. No.
Membrane filter forceps set, with coloured PP finger grips (1 each of orange, blue and chartreuse)	3	232-0142
Membrane filter forceps with black PP finger grip	1	514-4149

Membrane filters



Type	Material type	Applications
Nyloflo™	Hydrophilic nylon	Highly versatile laboratory membrane filter. Excellent chemical compatibility with esters, bases and alcohols. HPLC certified.
GH Polypro	PP hydrophilic	Universal membrane for aqueous and aggressive organic solvents. Low protein binding and low level of extractables. HPLC certified.

Type	Pore size	Thickness	Max. temperature (°C)	Water flow rate
Nyloflo™	0,2 µm	127 µm	100	12 ml/min/cm² (0,7 bar)
	0,45 µm	127 µm	100	16 ml/min/cm² (0,7 bar)
GH Polypro	0,2 µm	101 µm	55	20 ml/min/cm² (0,7 bar)
	0,45 µm	114 µm	55	31 ml/min/cm² (0,7 bar)

Type	Pore size (µm)	Ø (mm)	Pk	Cat. No.
Nyloflo™	0,2	47	100	514-4055
Nyloflo™	0,45	47	100	514-4057
GH Polypro	0,2	47	100	514-4053
GH Polypro	0,45	47	100	514-4052

Membrane disc filters, FP Vericel™



Hydrophilic PVDF

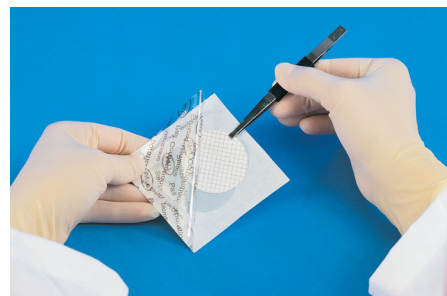
Compatible with aggressive and non aggressive solvent-based solutions.

- HPLC certified. Provide assurance that the filter will not add artifacts to your analysis
- Excellent chemical compatibility, even with aggressive acids and alcohols
- Membrane is autoclavable
- Not recommended for acetone, DMF, DMSO, or bases >6 N

Pore size	0,2 µm	0,45 µm
Thickness	140 µm	127 µm
Water flow rate	5 ml/min/cm² (0,7 bar)	26 ml/min/cm² (0,7 bar)
Max. temperature (°C)	100	100

Type	Pore size (µm)	Ø (mm)	Pk	Cat. No.
FP200	0,2	47	100	514-4049
FP450	0,45	47	100	514-4051

Membrane disc filters for microbiology



All membranes are certified for use in microbiological analysis. Sterile versions are sterilised by gamma irradiation.

Filter media: GN-6 MetriceI® , hydrophilic mixed cellulose esters

Applications: Analysis of potable, waste, process and natural waters, ideal for isolation and enumeration of total and faecal coliforms, E. coli, faecal streptococcus, fungi and other heterotrophic organisms.

- Provides maximum recovery of organisms
- Unique dot grid for quantification of bacterial colonies

Meets and surpasses US EPA and ASTM specifications.



Thickness	152 µm
Water flow rate	>65 ml/min/cm² (0,7 bar)
Max. temperature (°C)	74
Weight	4 mg/cm²

Type	Pore size (µm)	Ø (mm)	Pk	Cat. No.
GN-6, grid, individual sterile pack (S-Pack)	0,45	47	200	514-4202
GN-6, grid, individual sterile pack (S-Pack)	0,45	47	1000	514-4185
GN-6, grid, individual sterile pack (S-Pack)	0,45	47	2000	514-4193

Filter media: MetriceI® black, hydrophilic modified PES (polyethersulphone)

Applications: Isolation and enumeration of yeast and mould colonies, spoilage organism monitoring and identification in food and beverage quality control laboratories, ideal for monitoring particulate contamination of process fluids in the microelectronic industry.

- Dark background provides excellent contrast for counting colonies
- Exclusive dot grid neither inhibits nor enhances microbial growth

Pore size	0,45 µm	0,8 µm
Thickness	130 µm	147 µm
Water flow rate	>34 ml/min/cm² (0,7 bar)	>102 ml/min/cm² (0,7 bar)

Type	Pore size (µm)	Ø (mm)	Pk	Cat. No.
Black, white grid, individual sterile pack (S-Pack)	0,45	47	200	514-4223
Black, white grid, individual sterile pack (S-Pack)	0,8	47	200	514-4225

Membrane filter funnels, magnetic, SENTINO™



Polyphenylsulfone, autoclavable

Designed for use with the Sentino Microbiology Pump.

- Accepts 47 mm membrane filters
- No-leak magnetic seal allows one handed operation
- Graduated at 50 ml increments for accurate sample measurement

Effective filtration area: 150 and 300 ml: 9,6 cm²; 500 ml: 13,1 cm²

Overall Ø×H: 150 ml: 76×118 mm; 300 ml: 76×168 mm; 500 ml: 89×166 mm

Capacity (ml)	Description	For filter Ø (mm)	Pk	Cat. No.
150	SENTINO™ funnel	47	1	PALL4271
300	SENTINO™ funnel	47	1	PALL4273
500	SENTINO™ funnel	47	1	PALL4277

Accessories and spare parts				
Description	For filter Ø (mm)	Pk	Cat. No.	
Base with support screen for use with Sentino Pump	47	1	PALL4279	
Adapter for use with Sentino Pump	47	1	PALL4283	
Tubing, drive for Sentino Pump, 2 ft. length	47	1	PALL4285	

Microcheck® II beverage monitors



Membrane: GN Metrical® (mixed cellulose esters), Metrical® Black (modified polyestersulfone), sterile

Easy to use disposable filter funnel with versatility to meet all microbial analysis needs.

Applications include finished product testing of beverages for microbial contamination prior to release, monitoring process conditions for bioburden levels, evaluation of raw materials such as syrups, flavorings, water, and other liquid additives for microbial content.

- Squeeze to separate funnel from base
- Can convert to a Petri dish for culturing
- Ready to use directly on a filter manifold without adapters
- Gamma irradiated



External graduation marks according to standard methods for the analysis of water and wastewater.

Membrane	Capacity (ml)	Pore size (µm)	Pk	Cat. No.
GN-6 Metrical® white, with grid	100	0,45	50	516-0201
GN-4 Metrical® white, with grid	100	0,8	50	516-0202
Metrical® Black, with grid	100	0,45	50	516-0203
Metrical® Black, with grid	100	0,8	50	516-0204

Microbiology pump system, Sentino™



The Sentino™ pump system is ideal for microbiological MF technique using Pall MicroFunnel™ filtration units. Designed to use peristaltic action to draw the sample through the filter and send filtrate directly to drain or waste collection. The housing is a PC ABS-blended polymer, the keypad and label PE, the pump head PEI with PTFE-filled PBT rollers. The fluid path adaptor is PP.

The peristaltic flow design pulls sample through the filter and fluid path eliminating the need for a vacuum source. It also ensures the fluid flows in one direction without the potential for back-up and contamination of analysis. Operating parameters are preset and fixed to best satisfy published requirements for MF technique in US EPA, ISO, and ASTM methods; thereby eliminating the need for extensive validations. Fixed conditions also prevent changes to filtration parameters that may adversely affect colony recoveries and integrity of results.

- Safety: The system eliminates the need for a fluid trap under vacuum, preventing implosion accidents
- The disposable design also eliminates the need to clean and autoclave manifold set-up, saving valuable time
- Easy to clean: Shape of unit and materials of construction are easy to wipe down with standard laboratory disinfectants
- EasySoft-touch keypad has simple on/off function and pulse features to control filtration, no complicated programming

Delivery information: Sentino microbiology pump system contains one pump, one disposable fluid path, one power transformer (compatible with 120 or 240 V), one power cord with IEC-320 connection and a European Shuko plug, one power cord with IEC-320 connection and a UK BS1363 plug, plus one User Guide CD.
Replacement disposable fluid paths (PN PALL4861 - 10/pk) have to be ordered separately.

Description	W×D×H (mm)	Weight (kg)	Pk	Cat. No.
Microbiology pump system, Sentino™, including pump, disposable fluid path, power transformer, power cord with IEC-320 connection and user guide	95×136×104	0,680	1	516-0416
Accessories				
Description			Pk	Cat. No.
Fluid path for Sentino™ pump			10	516-0417

Filter funnels, MicroFunnel™



Ready to use disposable filter funnels with 47 mm diameter filtration membrane for microbiological analysis. Eliminates the cleaning and sterilisation required with reusable funnels. Membrane easily removed for culturing on agar or broth medium.



Membranes:

- GN-6 Metrical®: Mixed cellulose esters, white
- Supor®: Polyethersulfone, white
- Metrical Black: Modified polyethersulfone, black

Filtration area: 13,46 cm²
Ø×H: 100 ml: 61×76 mm with cover; 300 ml: 88×91 mm with cover

Packaging: Sterile, individually bagged.

Membrane	Capacity (ml)	Pore size (µm)	Pk	Cat. No.
GN-6 Metrical®, gridded	100	0,45	50	516-8958
Metrical® Black, gridded	100	0,45	50	516-8962
GN-6 Metrical®, gridded	300	0,45	20	516-8966
Metrical® Black	300	0,45	20	516-8968

Filter funnels, MicroFunnel™ Plus



Product includes sample container and filter funnel all-in-one. No need to transfer sample from cup to disposable funnel and risk introducing contamination. Vented lid snaps on to the funnel to give a liquid-tight seal and allows filtration without having to open the funnel.



Filtration area: 13,46 cm²
Max. temperature: GN-6 Metrical® and Metrical Black: ambient; Supor®: 90 °C
Ø×H: 100 ml: 61×76 mm with cover; 300 ml: 87×89 mm with cover

Membranes:

- GN-6 Metrical®: Mixed cellulose esters, white
- Supor®: Hydrophilic polyethersulfone, white
- Metrical Black: Modified polyethersulfone, black

Packaging: Sterile, individually bagged.

Membrane	Capacity (ml)	Pore size (µm)	Pk	Cat. No.
GN-6 Metrical®, gridded	100	0,45	50	516-8964
GN-6 Metrical®, gridded	300	0,45	20	516-9337
Metrical Black, gridded	100	0,45	50	516-9890
Supor®, gridded	100	0,2	50	516-9891
Supor®, gridded	100	0,45	50	515-0055
Supor®, gridded	300	0,2	20	515-0051
Supor®, gridded	300	0,45	20	515-0052
Supor®, gridded (Plus AP)	100	0,2	50	515-0156
Supor®, gridded (Plus AP)	100	0,45	50	515-0157

Accessories				
Description			Pk	Cat. No.
Autoclavable adapters for vacuum manifold when using rubber stopper			3	516-7706
Lid kit accessory for culturing membrane in place			20	515-0172

Vacuum filter holders



Aluminium, autoclavable
Only for MicroFunnel™ filtration systems.



Description	Pk	Cat. No.
1 place, for MicroFunnel™ and Microcheck®	1	516-0079
3 places, for MicroFunnel™ and Microcheck®	1	516-6940
6 places, for MicroFunnel™ and Microcheck®	1	516-6941

Filter holders with receiver, Nalgene®
Thermo Scientific



Polysulfone, autoclavable, reusable
Suitable for analytical or sterile filtration, under vacuum or pressure.



- Graduated receiver
- Two side-arms for tubing 6 - 8 mm inner diameter
- With cover for convenient sterile storage of filtrate

Delivery information: Supplied with holder and receiver, analytical plate, sterilisation plate and cover.

Capacity (ml)	Filtration area (cm²)	Pk	Cat. No.
250/250	11,25/13,3	1	513-3001
500/500	11,25/13,3	1	513-3002
500/1000	11,25/13,3	1	513-3003

Vacuum/pressure pump

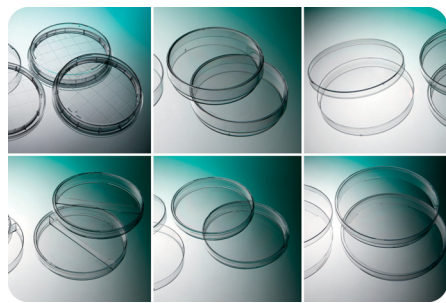


This vacuum/compressed air supply is guaranteed oil and dust-free and helps to keep the entire laboratory spotlessly clean.

- Reduced risk of contamination; air seal between the pump and cylinder guarantees an oil- and dust-free vacuum/compressed air supply
- Features a diaphragm for cleaner, quieter operation
- Compact design frees up space in the laboratory

Pump housing	Aluminium die-casting		
Diaphragms	Neoprene		
Seals	Stainless steel		
Filter elements	PU foam		
Vacuum (mbar)	813		
Final pressure (abs.) (mbar)	4200		
Motor	1/8 HP		
W×D×H (mm)	200×165×275		
Weight (kg)	6,54		
Description		Pk	Cat. No.
Vacuum/pressure pump		1	516-7546

Petri dishes



Transparent PS

All dishes are manufactured under strict aseptic conditions using on line production and packaging (Class 100). Sterile dishes are gamma irradiated (10 kGy) with proof of sterility and batch number displayed on the box.

- Stable stacking
- Perfectly flat and retain shape up to 55 °C
- Excellent optical quality - total transparency
- Stringent quality control procedures
- Compliant with automatic plate pourers

Certificates on request.

Version	Ø (mm)	Height (mm)	Pk	Cat. No.
With 3 vents	55	14,2	1620	391-0865

Petri dishes, sterile



PS dish, cellulose pad

Ideal for microbiological analysis when performing the membrane filter technique. Petri dishes with absorbent pads can be used with broth media, or users can pour agar into dishes without absorbent pads. Accepts 47 mm membrane filter.

- Gamma irradiated - no EtO residuals to impede microbial growth
- Easy to use - opens easily with one hand, yet closes to a tight seal
- Uses less space on the lab bench or in the incubator with easy stacking base

Version	Ø (mm)	Height (mm)	Pk	Cat. No.
With absorbent pads	50	9	100	516-0832

Igientest HACCP

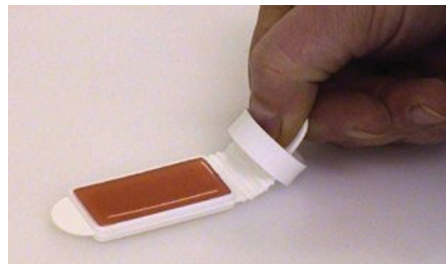


A simple quick test for hygiene control of work surface. Application fields: Food industry, catering, dairy industry, health authority, HACCP consultants. The colorimetric scale to interpret the results is printed on each tube. The comparison between the solution colour and the colorimetric scale confirms if the surface is clean or dirty. It's enough to streak the wet swab on a surface and to insert the swab into the tube. Break the glass vial contained in the tube by using the clamp. At the end of the test the tube can be disposed as normal waste, room temperature storage.

- Quick - results in only 10 minutes
- Simple to use
- Easy interpretation

Description	Pk	Cat. No.
Igientest HACCP surface hygiene monitoring test	1	710-0895
Clamp to break the glass vial of Igientest HACCP	1	710-0904

Dip slides



Dip slides for semi-quantitative monitoring of surfaces and in liquids. Testing with dip slides is a safe, reliable, economical and fast indicator of the presence of microorganisms. The dip slides with a push cap have a larger contact area.

- Supplied sterile
- Sampling takes only a few seconds
- The results are easily read after just 24-48 hours

Type	Push cap	Screw cap
Contact area (cm²)	10	7
Dimensions	30 mm tube, 110 mm high	24 mm tube, 92 mm high
Paddle size (mm)	80×28	72×20
Tray W×L (mm)	50×22	50×15

Description	Pk	Cat. No.
Push cap		
Baird Parker	10	535302D
Baird Parker and Total count agar	10	535304D
Baird Parker and VRBG	10	535308D
Malt extract agar	10	535328D
Nutrient agar with TTC and malt extract agar	10	535102B
Nutrient agar and Pseudomonas agar	10	535182R
Nutrient agar with TTC	10	535092Q
Nutrient agar with TTC and rose bengal agar	10	535112D
Nutrient agar with TTC and neutralisers	10	535309D
TSA with plate count agar	10	535122F
Plate count agar and MacConkey agar	10	535142J
Plate count agar and OGYE agar with neutralisers	10	535132H
Plate count agar MacConkey agar with neutralisers	10	535152L
Plate count agar and VRBGA	10	535162N
Plate count agar and VRBGA with neutralisers	10	535172P
Plate count agar with neutralisers	10	535324D
Plate count agar with TTC	10	535311D
Plate count agar with TTC and MacConkey agar 3	10	535318D
Plate count agar with TTC and MacConkey agar 3 with neutralisers	10	535316D
Plate count agar with TTC and neutralisers	10	535313D
Pseudomonas CFC and MacConkey 3 agar	10	535322D
Rose bengal agar	10	535202E
TSA with neutralisers	10	535326D
TSA with malt extract agar	10	535320D
Screw cap		
Total Count agar	10	535306D

Culture Media, Ready-to-use, Compact Dry



Ready to use dehydrated film media in rigid plastic with lid for cultivating and counting microorganisms in food, for monitoring product quality and potential contamination. The plates can be used to test raw material as well as finished products. The microorganisms are identified by the colours, developed by chromogenic substrates and redox indicators.



- Ready to use - place 1 ml sample onto the plate and incubate
- Easy to read - colonies are pigmented with different colours
- Easy to store at room temperature - long shelf life
- Space saving and stackable

Dry TC, EC, CF, YM, XSA are AOAC approved
Dry TC, EC, CF, ETB, XSA are MicroVal approved
Dry TC, EC, CF, ETB, XSA are NordVal approved
European validation and certification alternative methods acc. to EN ISO 16140

Description	Pk	Cat. No.
Compact Dry CF (Coliform)	40	710-2007
Compact Dry CF (Coliform)	240	710-2008
Compact Dry CF (Coliform)	920	710-2039
Compact Dry EC (E. coli, Coliform), AOAC RI approved	40	710-2004
Compact Dry EC (E. coli, Coliform), AOAC RI approved	240	710-2005
Compact Dry EC (E. coli, Coliform), AOAC RI approved	920	710-2038
Compact Dry LS (Listeria)	40	710-2016
Compact Dry SL (Salmonella)	40	710-2023
Compact Dry SL (Salmonella)	240	710-2024
Compact Dry TC (total counts), AOAC RI approved	40	710-2001
Compact Dry TC (total counts), AOAC RI approved	240	710-2002
Compact Dry TC (total counts), AOAC RI approved	920	710-2037
Compact Dry VP (V.parahaemolyticus)	40	710-2019
Compact Dry VP (V.parahaemolyticus)	240	710-2020
Compact Dry VP (V.parahaemolyticus)	920	710-2042
Compact Dry YM (yeast & mould), AOAC RI approved	40	710-2010
Compact Dry YM (yeast & mould), AOAC RI approved	240	710-2011
Compact Dry YM (yeast & mould), AOAC RI approved	920	710-2040

Dilution rack for Compact Dry



Sterile cups for easy 10-fold dilution of samples. Filled with 9 ml buffered sodium chloride solution.

- Cups can be separated into singles
- Easy to open
- Storage at room temperature
- Long shelf life



Description	Pk	Cat. No.
Rack MT-11	128	710-0605
Accessories		
Description	Pk	Cat. No.
Opener for dilution cups	1	710-2014

Culture media - ready to use



Description	Filling	Pk	Cat. No.
Media in Bottles			
Buffered peptone water VWR®	100 ml	10	300173ZA
DEV-agar water analyses in breweries and other beverage plants		9	710-0747
Lactose broth VWR®	100 ml	10	300440ZA
Lactose broth VWR®	90 ml	10	310440ZA
NBB®-agar (NBB®-A) all types of samples in the brewing industry		9	710-0740
NBB®-broth (NBB®-B) all types of samples in the brewing industry		9	710-0741
NBB®-broth-enrichment-medium (NBB®-B-AM) all types of samples in the brewing industry		9	710-0738
SSL-broth all types of samples in the brewing industry		9	710-0852
Media in Dishes			
Orangenserum agar		20	100731ZA
Cetrimide agar VWR®	20 ml	20	100793ZA
OGYE agar VWR®	20 ml	20	100720ZA
Plate count agar VWR®	20 ml	20	100774ZA
Wort agar	20 ml	20	112321TA
Media in Plates			
Buffered peptone water VWR®	9 ml	20	610173ZA
Lactose broth VWR®	9 ml	20	690440ZA
NBB®-B-tubes all types of samples in the brewing industry		20	710-0746
Orange serum agar	20 ml	20	730731ZA
Ringer solution VWR®	10 ml	20	601770ZA

Microbiological media in ampoules



A wide variety of sterile ampoule media for common microbiological analyses, in clear glass or plastic ampoules. Supplied pre-measured for maximum efficiency and convenience. For public wastewater and drinking water: MF-Endo and M-FC (with and without rosolic acid for helping to increase the specificity of the medium for faecal coliforms) media are used when analysing water samples for Total Coliforms, Faecal Coliforms and E. coli. For food and beverage: M-TGE, HPC, M-Green YM, and Orange Serum broths are used in the food and beverage industry to QC final products (and fluids used in the manufacture of these products) to detect potential spoilage organisms. Trypticase soy broth, M-TGE, and HPC may be used to test final products and process waters for total bacteria in the pharmaceutical and microelectronics industries. Pseudomonas and KF-Streptococcal broths are highly selective media for organisms in these genera, and are used to monitor samples wherever contamination by these organisms must be prevented.

- 2 ml ampoules are a practical, time saving aid for culturing microorganisms on membrane filters
- Ready to use, no dilutions necessary
- Shelf life up to 1 year storing at 2 to 8 °C
- Meet Membrane Filter (MF) Technique Standard Methods requirements with 2 ml ampoules (requirements referenced in Standard Methods for the Examination of Water and Wastewater, 1992 APHA, AWWA, WEF, 20th Edition)

Description	For	Tests	Colour	Pk	Cat. No.
2 ml plastic ampoules					
Pseudomonas broth	Pseudomonas sp	Ps. aeruginosa	Light Brown	50 Amp.	516-9077
HPC media with TTC indicator	Total Count	E. coli; S. epidermidis	Light Yellow	50 Amp.	516-9081
MF-Endo broth	Total Coliforms	Total Coliforms	Red	50 Amp.	516-7965
M-TGE broth	Total Count	E. coli; S. epidermidis	Light Yellow	50 Amp.	516-7966
M-Green YM broth	Yeast and Moulds	S. cerevisiae	Green	50 Amp.	516-7967
Orange serum broth	Lactobacillus sp, acid resistant bacteria	L. plantarum; S. cerevisiae	Dark Brown	50 Amp.	516-7969



Equipment and Accessories

Bunsen burners
Usbeck



Nickel plated brass with cast iron foot

- With air regulation ring

Height: 165 mm
Head Ø: 17 mm (14 mm for propane models)

Description	Pk	Cat. No.
Without stopcock, for natural gas	1	451-0075
Without stopcock, for propane	1	451-0076
With needle valve, for natural gas	1	451-0077
With needle valve, for propane	1	451-0078
With needle valve, for all gases	1	451-0083
With needle valve and pilot flame, for natural gas	1	451-0079
With needle valve and pilot flame, for propane	1	451-0080

Gas tubing for gas burners



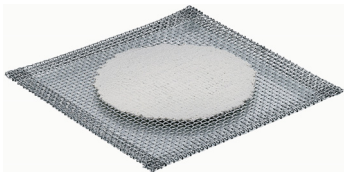
Rubber, red

Gas tubing for gas burners, without sheath or armouring, in line with DIN 30 664. For all gases in line with DVGW process sheet G 260.

Operating pressure up to 100 mbar

Ø int. (mm)	Ø ext. (mm)	Wall thickness (mm)	Pk	Cat. No.
10	14	2	1 m	451-4330

Wire gauze
Usbeck



Zinc plated iron wire, ceramic centre

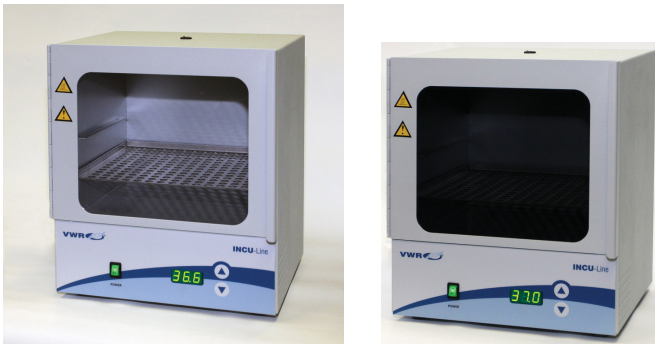
L×W (mm)	Pk	Cat. No.
120×120	1	451-9201
160×160	1	451-9202
200×200	1	451-9203

Tripod stands
Usbeck



L×H (mm)	Pk	Cat. No.
Stainless steel 18/8		
100×180	1	451-9101
120×210	1	451-9102
120×250	1	451-0160
120×260	1	451-0161
140×220	1	451-9103
160×230	1	451-0159

Digital incubators, INCU-Line® , IL 10 and IL 23



The IL 10 and IL 23 digital incubators offer an economical and space saving solution for microbiology or haematology applications. The temperature can be freely adjusted in increments of 0,1 °C up to a maximum of 70 °C. Heating elements are incorporated into the housing base and walls to ensure temperature stability and uniformity. The IL 10 is available with a transparent plexiglas® window to provide full visibility or a painted, opaque plexiglas® window to protect photosensitive samples. The housing and door frame are constructed entirely of epoxy coated mild steel.

- Compact design (footprint is only 0,08 m² IL 10 model)
- Digital PID control with PT100 sensor and LED display, temperature control can be re-adjusted with a certificated reference temperature measuring instrument
- Excellent temperature stability
- Easy to use, safe and reliable

Model	IL 10	IL 23
Temperature range (°C)	Ambient +5...70	Ambient +5...70
Temperature fluctuation (time) (°C)	at 37 °C: ±0,5	at 37 °C: ±0,5
Temperature variation (spatial) (°C)	at 37 °C: ±0,5	at 37 °C: ±0,5
Capacity (l)	10	23
Convection type	Natural convection	Natural convection
Shelves supplied (max.)	1 (2)	2 (3)
Internal W×D×H (mm)	230×220×200	290×290×270
External W×D×H (mm)	285×280×335	340×360×400
Nominal power consumption (W)	70	160
Weight (kg)	8,3	12,8

Delivery information: IL 10 is supplied with one perforated stainless steel shelf, IL 23 is supplied with two. The IL 10 can, optionally, be loaded with up to two specially designed aluminium tube racks for vertical incubation of a maximum of 24 dip slide tubes.

Type	Pk	Cat. No.
IL 10 mini incubator, transparent window	1	390-0384
IL 10 mini incubator, painted opaque window	1	390-0385
IL 23 incubator, transparent window	1	390-0482

Accessories		
Description	Pk	Cat. No.
Tube rack for dip slides, 2×6 positions, Ø 32 mm	1	390-0386
Extra shelf for IL 10, stainless steel, 226×215 mm	1	390-0387
Extra shelf for IL 23, stainless steel, 286×285 mm	1	390-0483

Magnetic stirring bars, cylindrical

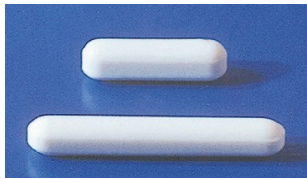


PTFE covered, strong Alnico V magnetic core. Round, smooth surface.

- Very good chemical resistance
- Extremely temperature resistant, suitable for use at high and low temperatures (–200 to +250 °C)

Length (mm)	Ø (mm)	Pk	Cat. No.
10	6	10	442-0295
12	4,5	10	442-4521
15	4,5	10	442-4522
20	6	10	442-4523
25	6	10	442-4524
30	6	5	442-4525
35	6	5	442-4530
40	8	5	442-4527

Magnetic stirring bars, micro



PTFE covered, strong Alnico V magnetic core. Round, smooth surface. For use in the smallest containers.

- Very good chemical resistance
- Temperature resistant, suitable for high and low temperature applications (–200 to +250 °C)

Length (mm)	Ø (mm)	Pk	Cat. No.
White			
10	3	10	442-0365
13	3	10	442-0366
15	1,5	10	442-0367
20	3	10	442-0368

Vortex mixer, VV3



Vortex mixer suitable for a range of different applications due to 3 interchangeable attachments and various inserts. Microtubes, microtitre plates, even 250 ml Erlenmeyer flasks can be attached by means of the specially designed strap. Attachments click securely onto the unit in any position. The unit is sturdy with coated, zinc die-casting.

- Small and compact design
- Wide speed range, infinitely adjustable
- Touch or continuous mode

IP protection class according to DIN EN 60529: IP 21

Shaking motion	Orbital
Orbital diameter (mm)	4
Speed range (min ⁻¹)	500 - 2500*
Max. capacity (ml)	250
Motor input/output (W)	58/10
W×D×H (mm)	127×149×136
Weight (kg)	4,5

* Depending on attachment and loading

Delivery information: Supplied with standard attachment for test tubes or small beakers.

Description	Pk	Cat. No.
VV3 Vortex mixer, EU-plug	1	444-0007
VV3 Vortex mixer, UK-plug	1	444-0093
VV3 Vortex mixer, CH-plug	1	444-0094

Accessories			
Description	For	Pk	Cat. No.
Standard attachment for test tubes, or small beakers	Continuous or touch mode	1	412-0099
Attachment for single-handed operation, 88 mm round with rubber insert	Continuous or touch mode	1	412-0100
Universal attachment, 150 mm with rubber insert	Continuous mode	1	412-0101
Test tube attachment, for 54 microcentrifuge tubes, 1,5/2,0 ml*	Continuous mode	1	412-0102
Test tube attachment, for 18 reagent tubes, 10 mm*	Continuous mode	1	412-0103
Test tube attachment, for 12 reagent tubes, 12 mm*	Continuous mode	1	412-0104
Test tube attachment, for 8 reagent tubes, 16 mm*	Continuous mode	1	412-0105
Test tube attachment, for 8 reagent tubes, 20 mm*	Continuous mode	1	412-0106
Flask attachment for Erlenmeyer or round bottom flasks, 100 up to 250 ml*	Continuous mode	1	412-0107
Microtitre plate attachment for 1 standard microtitre plate*	Continuous mode	1	441-0036

* Use in combination with 412-0101

Magnetic stirrer with auto-start



Compact, powerful stirrer automatically starts when a beaker is placed on the corrosion resistant top plate. When the beaker is removed the stirring stops, but the setting remains unchanged for repeatable accuracy from batch to batch. The ±50 gram activation weight allows even small samples to be mixed automatically. Saves power, runs only as needed, and provides an extra measure of safety by automatically turning off when the sample is removed.

- Automatic start and stop
- Guaranteed repeatability
- Power saving

Max. stirring capacity H ₂ O (ml)	1000	
Speed range (min ⁻¹)	100 - 1200	
Plate material	Aluminium	
Plate dimensions (mm)	Ø 114	
Ø×H (mm)	165×137	
Weight (kg)	2,0	
Description		
Magnetic stirrer, EU-plug	Pk 1	444-2856
Magnetic stirrer, UK-plug	1	444-2857
Magnetic stirrer, CH-plug	1	444-2858

Magnetic hotplate stirrers, VMS Advanced series



VMS-C4 Advanced



VMS-C7 Advanced



VMS-C10 Advanced

Compact stirrers with a ceramic glass plate, providing excellent chemical resistance. Units feature digital error code display, a "hot" top indicator to warn users that surface is hot, a fixed safety circuit shuts off heater if temperature rises above 550 °C and there are three operating modes to choose from (standard, safe, adjustment protection). Stirrers have a speed display scale and optional capability to connect a PT1000 temperature sensor directly; when using this functionality control accuracy in the medium is ±0,5 °C.

- Exact temperature setting via digital potentiometer
- Simultaneous digital display of target and actual temperatures via LCD display
- Display of actual temperature value in medium with 0,1 °C resolution when using PT1000 temperature sensor
- Integrated contact thermometer VT-5 (all VT-5 functions incorporated in hotplate stirrer)
- Stirrer can be controlled using two microcontrollers

IP protection class according to DIN EN 60529: IP 21

Model	VMS-C4 Advanced	VMS-C7 Advanced	VMS-C10 Advanced
Max. stirring capacity H ₂ O (l)	5	10	15
Speed range (min ⁻¹)	100 - 1500	100 - 1500	100 - 1500
Temperature range (°C)	50...500	50...500	50...500
Heat output (W)	250	1000	1500
Power input/output (W)	15/1,5	15/1,5	15/1,5
Plate material	Ceramic glass	Ceramic glass	Ceramic glass
Plate dimensions (mm)	100×100	180×180	260×260
W×D×H (mm)	150×260×105	215×330×105	300×415×105
Weight (kg)	3	5	6

Delivery information: Supplied with PT1000 probe. A wide range of optional accessories are available.

Description	Pk	Cat. No.
VMS-C4 Advanced magnetic hotplate stirrer, EU-plug	1	442-0661
VMS-C4 Advanced magnetic hotplate stirrer, UK-plug	1	442-0662
VMS-C4 Advanced magnetic hotplate stirrer, CH-plug	1	442-0663
VMS-C7 Advanced magnetic hotplate stirrer, EU-plug	1	442-0664
VMS-C7 Advanced magnetic hotplate stirrer, UK-plug	1	442-0665
VMS-C7 Advanced magnetic hotplate stirrer, CH-plug	1	442-0666
VMS-C10 Advanced magnetic hotplate stirrer, EU-plug	1	442-0667
VMS-C10 Advanced magnetic hotplate stirrer, UK-plug	1	442-0668
VMS-C10 Advanced magnetic hotplate stirrer, CH-plug	1	442-0669

Accessories			
Description	For	Pk	Cat. No.
Glass coated PT1000 probe	VMS-Advanced magnetic hotplate stirrers	1	442-0695

Lab blender, LB 400



For sample volumes of 50 - 400 ml

Compact and easy to use blender, efficiently blends solid or liquid samples in any sterile bags (plain or filter bags).

- Optimum extraction of microorganisms
- Samples are prepared quickly, ready for analysis, eliminating difficult cleaning steps
- Stainless steel door opens fully, allowing stainless steel blending chamber to be cleaned easily
- Safe and hygienic - minimum risk of infection, no risk of cross-contamination
- Lifetime resistant shock absorbers

Paddle speed (min ⁻¹)	240, fixed speed: 8 strokes/second
Timer	30, 60, 90, 120, 150, 180, 210 seconds or continuous operation
Power (W)	Max. 300
Max./min. temperature (°C)	40/5
W×D×H (mm)	390×260×280
Weight (kg)	15

Description	Pk	Cat. No.
LB 400	1	710-0632

Straw pipette for use with LB 400

Capacity (ml)	Pk	Cat. No.
1	1000	612-1675

Accessories		
Description	Pk	Cat. No.
Drip tray for lab blender LB 400	1	710-0633
Bag holder for 10×400 ml bags	1	710-0634
Automatic straw pipette SP100 for 1:10 dilutions, autoclavable	1	710-1021

Lab-blender bags



- PE, sterile**
- Fit all conventional lab blenders
 - Choice of plain or filtered bags, plain bags have capacities from 80 ml to 3500 ml
- Irradiated at 10 kGy

Description	Capacity (ml)	W×L (mm)	Packed	Pk	Cat. No.
Plain bags	80	105×150	60×bags of 25	1500	129-9873
Plain bags	400	180×300	20×bags of 25	500	129-9866
Plain bags	400	180×300	10×bags of 50	500	129-9867
Plain bags	3500	380×510	20×bags of 25	500	129-9872
Bags with lateral filter	400	190×300	60×bags of 25	1500	129-9868
Bags with lateral filter	400	190×300	10×bags of 50	500	129-9874
Bags with full page filter	400	190×300	10×bags of 50	500	129-9875

Accessories		
Description	Pk	Cat. No.
Clips for lab blender bags	200	129-9869

Ultrasonic cleaning baths



Ultrasonic cleaning penetrates even microscopic openings to provide complete cleaning of the objects treated. This makes it one of the most effective, economical and powerful cleaning methods available. It has applications in laboratories, dental and medical technology, microelectronics, precision engineering, cosmetics, optics and the automotive industry.

The baths have a heavy duty ultrasonic generator which ensures that the ultrasonic output remains constant, regardless of the bath temperature, fill level and cleaning material. This feature guarantees consistent and reproducible cleaning results. 'Frequency sweeping', a frequency modulation of the ultrasonic output generated,

prevents 'standing waves' from being generated and ensures extremely homogeneous energy distribution in the cleaning bath.

All models have a timer. The analogue version is equipped with a mechanical timer up to maximum of 15 minutes. The digital version has a digital time setting of 1 to 99 minutes. An analogue and digital series with integrated, adjustable heating up to 80 °C completes the range (except model USC100TH; heating 65 °C, not adjustable). On the digital models, the bath temperature is displayed with an accuracy of ±2 °C. They also have an adjustable ultrasonic function from 10 to 100% of the effective output. In this way, the energy can be adjusted precisely to the objects to be cleaned.

- Housing and cleaning baths made from rust-proof stainless steel
- Digital models have a heater with integrated protection to prevent unit running dry
- High performance PTZ ultrasonic converter with ceramic technology
- Digital models with degassing function to homogenise the bath contents
- Baths with 9,2 litre capacity and upwards are fitted with a drain cock

All models are compliant with the European standards for EMC and electrical safety.

Analogue models with timer, frequency 45 kHz

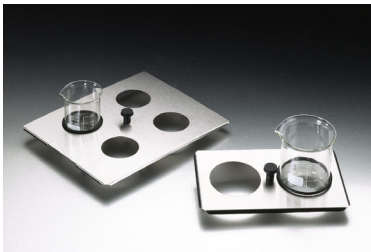
Type	Capacity (l)	Max. output power (W)	Tank dimensions W×D×H (mm)	W×D×H (mm)
USC100T	0,80	60	190×85×60	205×100×155
USC200T	1,80	120	148×134×100	175×165×270
USC300T	2,80	160	237×134×100	265×162×235
USC500T	4,20	200	237×134×150	265×162×295
USC600T	5,40	260	297×148×150	325×176×295

Description	Pk	Cat. No.
USC100T	1	142-6044
USC200T	1	142-6046
USC300T	1	142-6001
USC500T	1	142-6004
USC600T	1	142-6007

Accessories for ultrasonic baths



Set comprising of lid and mesh basket



Positioning lids for beakers

Stainless steel and rust-proof. Beakers and test tubes to be cleaned should never lie directly on the bottom of the tank as they will not benefit fully from the cleaning action. Immersion baskets position articles being cleaned correctly in the bath and prevent the bottom of the tank from becoming scratched. Beakers for cleaning smaller parts, or for working with aggressive solutions, can be fitted in positioning covers.

Description	For	Pk	Cat. No.
Set comprising of lid and mesh basket			
Set (lid and mesh basket)	USC100 models	1	142-6048
Set (lid and mesh basket)	USC200 models	1	142-6049
Set (lid and mesh basket)	USC300 models	1	142-6020
Set (lid and mesh basket)	USC500 models	1	142-6021
Set (lid and mesh basket)	USC600 models	1	142-6022
Positioning lids for beakers			
Positioning lid for 1 beaker 600 ml	USC200 models	1	142-1704
Coverlid for 2 beakers 250 ml	USC100 models	1	142-6050
Positioning lid for 2 beakers 250 ml	USC200 models	1	142-1701
Positioning lid for 2 beakers 250 ml	USC300/USC500 models	1	142-6028
Positioning lid for 2 beakers 250 ml	USC600 models	1	142-1702
Positioning lid for 2 beakers 600 ml	USC300/USC500 models	1	142-6035
Coverlid for 2 beakers 600 ml	USC600 models	1	142-6037
Beakers, glass, for positioning lids			
Glass beakers, 250 ml	all models	2	142-6042
Glass beakers, 600 ml	all models	2	142-6043

Pipette filler, Manupette



For glass and plastic pipettes from 1 to 100 ml

The Manupette pipette filler facilitates the pipetting of a wide range of liquids. The practical arrangement of the controls makes work easier and gives maximum safety during serial pipetting.

- Replaceable hydrophobic membrane filter to protect the instrument from liquid penetration
- Separate buttons for aspirating/dispensing and discharging
- Silicone adapter for leakproof positioning of each pipette

Ordering information: Supplied with three separate nose cones in three different colours.

Description	Pk	Cat. No.
Pipette filler Manupette	1	612-4548
Accessories		
Description	Pk	Cat. No.
Replacement filter set 0.45 µm	5	612-3678
Replacement silicone pipette holder	1	612-3679
Replacement filter set 0.2 µm	5	612-3681

Pipette controller, Accurpette



For glass and plastic pipettes from 1 to 100 ml

The Accurpette pipette controller delivers efficient performance with a powerful but quiet motor to speed up large volume pipetting. The mode selection switch enables the user to choose between high or low aspirate/dispense speed. An additional gravity dispense mode is designed for use with 'To Deliver' (TD) pipettes. The Accurpette is now supplied with additional coloured nose cones to allow laboratory, application or user colour coding to minimise the risk of cross-contamination.

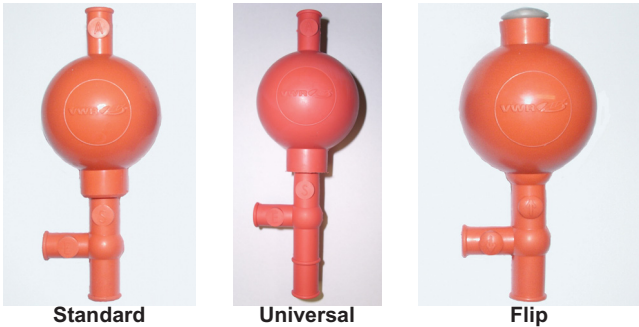


- Replaceable hydrophobic membrane filter protects the unit against liquid influx and protects samples against contamination
- Environmentally friendly rechargeable NiMH battery allow continuous usage for 4 hours; Low battery light, rechargeable during use

Ordering information: Supplied with charger, two spare hydrophobic filters (1×0.45 µm, 1×0.2 µm), bench stand/wall bracket and a coloured nose cones set.

Description	Pk	Cat. No.
Pipette controller Accurpette, EU-charger	1	612-4552
Pipette controller Accurpette, UK-charger	1	612-4553
Accessories		
Description	Pk	Cat. No.
Replacement filter set 0.45 µm	5	612-3678
Replacement silicone pipette holder	1	612-3679
Replacement filter set 0.2 µm	5	612-3681

Safety pipette fillers, Standard/Universal/Flip



Natural rubber

- For measuring and volumetric pipettes up to 10 ml (Standard) or 100 ml (Universal/Flip)
- Standard/Universal: Three ventilation valves
- Flip: Only two operating points for easier usage (release through an automatic removable valve)

Description	Colour	Pk	Cat. No.
Safety pipette filler Standard	Red	1	612-1930
Safety pipette filler Universal	Red	1	612-1931
Safety pipette filler Flip	Red	1	612-1920

Graduated pipettes, total delivery

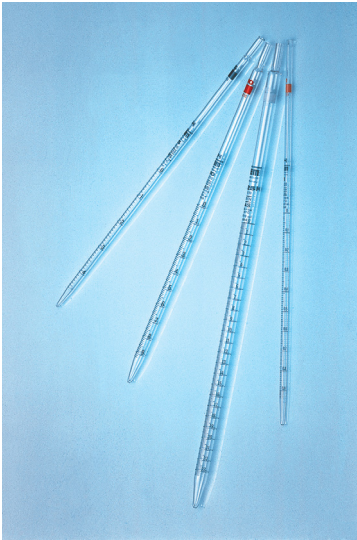


- AR-Glas® , class B**
- Calibrated to deliver (TD)
 - Graduation and inscriptions in high contrast amber stain
 - With cotton plug upper end

DIN 12696

Capacity (ml)	Division (ml)	Tolerance (± ml)	Pk	Cat. No.
5	0,05	0,045	3	612-4124
10	0,1	0,075	3	612-4125
20	0,1	0,15	2	612-4126
25	0,1	0,15	2	612-4127

Graduated pipettes, type 3, total delivery
Hirschmann Laborgeräte



- AR-Glas® , class AS**
- Main point ring graduation, graduated to the tip, blue graduation
 - Certificate of conformity with dated batch identification available on internet (www.hirschmannlab.de)

DIN EN ISO 835
Length: 360 mm ±5 mm except for 25 and 50 ml pipettes: 450 mm ±5 mm

Capacity (ml)	Division (ml)	Tolerance (± ml)	Pk	Cat. No.
5	0,1	0,03	1	612-1040
10	0,1	0,05	1	612-1041
20	0,1	0,1	1	612-1042
25	0,1	0,1	1	612-1043

Bulb pipettes



- AR-Glas® , 1 mark, class AS**
- Calibrated to deliver, total delivery
 - Ring mark and inscriptions in highly contrasting amber stain
 - Conformity certified, with dated batch identification
 - Batch certificate included
 - Not available with single certificate

DIN EN ISO 648

Capacity (ml)	Tolerance (± ml)	Length (mm)	Pk	Cat. No.
5	0,015	410	3	612-4133
10	0,020	450	3	612-4134
20	0,030	520	2	612-4135
25	0,030	530	2	612-4136

Bulb pipettes
Hirschmann Laborgeräte



- AR-Glas® , 2 marks, class AS
- Calibrated to deliver 'Ex'
 - Amber stain graduation
 - Certificate of conformity with dated batch identification available on internet (www.hirschmannlab.de)

DIN 12691

Capacity (ml)	Tolerance (± ml)	Length (mm)	Suppl. to DIN	Pk	Cat. No.
1	0,008	300	-	1	612-2783
2	0,01	330	-	1	612-2784
3	0,01	350	✓	1	612-2785
5	0,015	400	-	1	612-2786
10	0,02	440	-	1	612-2787
15	0,03	510	✓	1	612-2788
20	0,03	510	-	1	612-2789
25	0,03	520	-	1	612-2790

Single channel pipettes, mechanical, Ergonomic High Performance (EHP)



Linear stand

Variable volume, fully autoclavable

The new Ergonomic High Performance pipettes provide accuracy and precision you can rely on. The new upgraded ergonomic features deliver comfortable pipetting even during extensive periods of use.

- Significantly reduced plunger forces
- Effortless volume adjustment with volume lock
- Superior accuracy and precision for critical applications
- Tapered shaft and adjustable 'Easy Grip' ejector for universal tip fit
- Extended finger rest for convenient pipetting

Ordering information: Three Starter Kits available:

- Starter Kit 1 includes 3 single channel pipettes (2 - 20 µl / 20 - 200 µl / 100 - 1000 µl)
Starter Kit 2 includes 3 single channel pipettes (0,1 - 2 µl / 0,5 - 10 µl / 10 - 100 µl)
Starter Kit 3 includes 3 single channel pipettes (0,5 - 10 µl / 10 - 100 µl / 100 - 1000 µl)

Capacity (µl)	Accuracy (%)	Imprecision (%)	Pk	Cat. No.
Without ejector				
0,2 - 2	±12,0 - ±1,5	<6,0 - <0,7	1	613-5268
0,5 - 10	±1,2 - ±0,6	<2,8 - <0,4	1	613-5269
2 - 20	±1,0 - ±0,6	<1,5 - <0,3	1	613-5270
5 - 50	±0,9 - ±0,6	<2,0 - <0,4	1	613-5271
10 - 100	±0,6 - ±0,5	<0,8 - <0,2	1	613-5272
20 - 200	±2,5 - ±0,5	<0,6 - <0,2	1	613-5273
50 - 250	±1,0 - ±0,6	<0,4 - <0,3	1	613-5274
100 - 1000	±0,9 - ±0,6	<0,4 - <0,15	1	613-5275
1000 - 5000	±0,6 - ±0,5	<0,25 - <0,15	1	613-5276
1000 - 10000	±2,5 - ±0,5	<0,6 - <0,2	1	613-5277
With ejector				
0,2 - 2	±12,0 - ±1,5	<6,0 - <0,7	1	613-5258
0,5 - 10	±1,2 - ±0,6	<2,8 - <0,4	1	613-5259
2 - 20	±1,0 - ±0,6	<1,5 - <0,3	1	613-5260

With ejector				
5 - 50	±0,9 - ±0,6	<2,0 - <0,4	1	613-5261
10 - 100	±0,6 - ±0,5	<0,8 - <0,2	1	613-5262
20 - 200	±2,5 - ±0,5	<0,6 - <0,2	1	613-5263
50 - 250	±1,0 - ±0,6	<0,4 - <0,3	1	613-5264
100 - 1000	±0,9 - ±0,6	<0,4 - <0,15	1	613-5265
1000 - 5000	±0,6 - ±0,5	<0,25 - <0,15	1	613-5266
1000 - 10000	±2,5 - ±0,5	<0,6 - <0,2	1	613-5267

Starter Kits		
Description	Pk	Cat. No.
Starter Kit 1 incl. 3 single channel pipettes (2 - 20 µl / 20 - 200 µl / 100 - 1000 µl)	1	613-5278
Starter Kit 2 incl. 3 single channel pipettes (0,1 - 2 µl / 0,5 - 10 µl / 10 - 100 µl)	1	613-5279
Starter Kit 3 incl. 3 single channel pipettes (0,5 - 10 µl / 10 - 100 µl / 100 - 1000 µl)	1	613-5280

Accessories		
Description	Pk	Cat. No.
Carousel stand for 6 pipettes	1	613-0085
Linear stand for 6 pipettes	1	613-0086
Shelf clip for 3 pipettes	1	613-0090

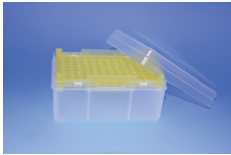
Pipette tips, universal

PP, autoclavable

- Manufactured without lubricants
- Cadmium-free pigments
- Environmentally friendly packaging systems

Colour: Yellow (2 - 200 µl), blue (50 - 1000 µl)
Length: 50 mm (2 - 200 µl), 70 mm (50 - 1000 µl)

	Capacity (µl)	Sterile	Packed	Pk	Cat. No.
	2 - 200	-	Bulk	1000	612-5755
	50 - 1000	-	Bulk	1000	612-5756

Accessories				
	Description	For	Pk	Cat. No.
	Tip-Box N, PP, with push on lid, stackable and autoclavable	2 - 200 µl tips	1	613-2287
	Tip-Box N, PP, with push on lid, stackable and autoclavable	50 - 1000 µl tips	1	613-2288

Pipette tips



All the tips are made of high quality 100% pure virgin medical grade PP. Made in the highest quality moulds, these tips can be used whenever the work demands a higher standard. Sterile products are tested for endotoxin (pyrogen) contamination and certified to USP standards. Resins are pre-tested for metal contamination. Certificates are on file by lot number for all test results.

- A wider seal assures that tips will seal easily and consistently without leaking, on old as well as new pipettes
- Guaranteed free of detectable DNA, DNase/RNase, endotoxins and heavy metals
- Autoclavable

Bulk				
Type	Capacity (µl)	Compatibility	Pk	Cat. No.
Bevel Point™	1 - 200	C	1000	613-0239
Bevel Point™	100 - 1000	L	1000	613-0340
Macro	1000 - 5000	O	250	613-0830

Pipette tips, Finntip®
Thermo Scientific

High quality PP, autoclavable

Tips designed to achieve the highest level of performance in terms of accuracy and repeatability in conjunction with Finnpiettes®.

- Unique shape of the collar assures a leak-free connection to the pipette
- Smooth, hydrophobic surface minimises liquid retention and allows total dispensing of the sample
- Certified RNase, DNase, DNA and endotoxin-free; colour-coded racks for rapid identification of the tips to be used

Packaging: Available in different volumes and packaged loose, in racks, in a starter kit (racks + refills) or as a refill kit.

	Capacity (µl)	Length (mm)	Sterile	Packed	Pk	Cat. No.
Finntip® 250 µl, colour code: Yellow						
	0,5 - 250	52	-	Bulk	1000	613-2595
Finntip® 1000 µl, colour code: Blue						
	100 - 1000	71	-	Bulk	1000	613-2608



Pipette tips, refill, Next Generation



Tips made from pure resins, packaging made from renewable materials

The Next Generation pipette tip refill system is a revolution in pipette tip refills. It goes far beyond other reload systems to bring a complete refilling solution to the lab. With a simple lift, place and snap, the user can refill VWR and other brands of pipette tip racks with 17 different styles of tips.

Far beyond simple recycle coding, the Next Generation is a complete system designed with a low carbon footprint that includes the first ever use of bioplastic (non petroleum) compostable resin in pipette tip refills. Next Generation's small footprint extends to the package, with a reclosable box that helps maximise storage space in crowded labs.

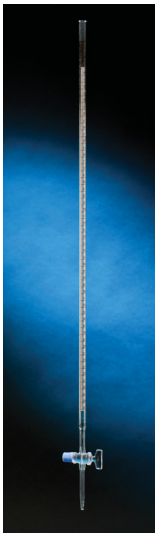
- Easy to use refill system - new pipette tip racks, inserts and transfer cover prevent tip wobbling during refill and keeps tips clean
- 95% renewable materials - compostable tip base from organic non petroleum resin, carton made from 100% recycled fibres, soy-based vegetable ink
- Certified DNA-/RNase-/DNase-free

Packaging: Compact, reclosable packaging with reduced overall weight.

Type	Capacity (µl)	Compatibility	Sterile	Pk	Cat. No.
Yellow	1 - 200	B	-	960	613-0732
Ultrafine™	100 - 1250	I	-	480	613-0738
Accessories					
Description				Pk	Cat. No.
Boxes/Racks for 1 - 250 µl tips, empty				10	613-0307
Boxes/Racks for 100 - 1250 µl tips, empty				6	613-0306



Burettes, straight stopcock



Borosilicate 3.3 glass, class AS

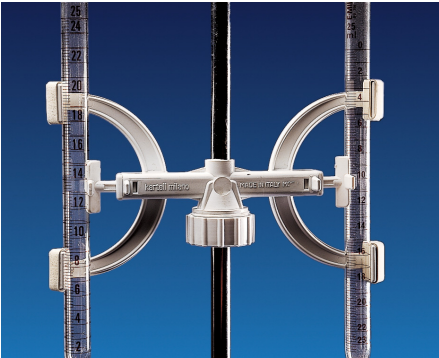
- Schellbach stripe, stopcock with glass key
- High contrast blue enamel graduations
- Batch certificate included

DIN EN ISO 385

Capacity (ml)	Division (ml)	Tolerance (± ml)	Scale length (mm)	Pk	Cat. No.
10	0,05	0,02	500	1	612-4139
25	0,1	0,03	500	1	612-4140
50	0,1	0,05	500	1	612-4141



Burette clamps
Kartell



PP, white, unbreakable

For fast and safe clamping of burettes.

- Clamps fit rods 8 to 14 mm diameter
- Clamps have rubber inserts and stainless steel springs
- Burette scale not obstructed

For	Pk	Cat. No.
One burette	1	241-2020
Two burettes	1	241-2021

Digital burette, Titras Pro



The Titras Pro digital burette combines modern design, convenient use and accuracy in one instrument. The robust outer casing does not move during the priming or dispensing sequences whilst its PTFE plunger and borosilicate glass barrel allow dispensing of aqueous solutions and some aggressive liquids. Powered by a 3,6 V lithium battery for a minimum life of 60 000 three minute titrations.

- Continuous display of volume dispensed with zero reset feature for multiple titrations
- Automatic switch-off when left unattended without losing the previous titration volume
- Automatic low battery indicator shows on the large easy to read LCD window
- Simple user calibration and factory reset for ISO 9000 and GLP requirements
- Chemically resistant and autoclavable liquid-path components
- Safety pedestal valve allows the burette to be turned off to prevent accidental delivery
- With standard 30 mm bottle neck fitting

Ordering information:



Volume (ml)	Division (ml)	Accuracy (%)	Imprecision (%)	Pk	Cat. No.
0 - 50	0,01	±0,2	<0,1	1	613-5287

Digital burettes, Titrette®
Brand



Variable volume

Titrate quickly and reliably with highest precision, even in close quarters, with no power connection needed – in production or in the field.

The Titrette® has an innovative measuring system – the tight error limits of class A glass burettes as per DIN EN ISO 385 are met.

- Light and flexible burette with compact design and high accuracy
- Smooth-running operation with large, easy-grip hand wheels for sensitive, dropwise titration
- Easier use: Adjustment with easy calibration, calibration schedule to save a date for the next calibration, save power with Automatic Off function, change decimal place settings
- Easy to dismantle: Cleaning, maintenance and part replacement
- PC interface - optional - for data transmission directly to the PC, which eliminates transmission errors during transcription of the primary data to fulfill an important GLP requirement

Ordering information: Titrette® bottle-top burette, conformity certified, supplied with performance certificate, telescopic filling tube (170 - 330 mm), recirculation tube, two micro batteries (AAA/UM4/LR03), three bottle adapters PP (GL 45/32, GL 45/S 40 and GL 32/NS 29/32), two coloured light shield inspection windows, operating manual. Additional items supplied when ordering the Titrette® with PC interface: Connector cable - Sub-D plug connector, 9-pin - and a CD with driver software, communication protocol, example application and a special operating manual.

Volume (ml)	Division (ml)	Accuracy (%)	Imprecision (%)	Pk	Cat. No.
Standard					
25	0,001	±0,07	<0,025	1	613-0795
50	0,002	±0,06	<0,02	1	613-0796

Error limits relate to the nominal volume.

Accessories		
Description	Pk	Cat. No.
Two sets of inspection windows, clear and amber coloured for protection of light-sensitive media	1	613-3742
Telescopic filling tubes, FEP, 25/50/100 ml, o. Ø 7,6 mm, 170 - 330 mm	1	613-0467
Telescopic filling tubes, FEP, 25/50/100 ml, o. Ø 7,6 mm, 250 - 480 mm	1	612-5603
Titrating tube with screw cap and integrated discharge and recirculation valve	1	613-3743
Piston head, 25 ml	1	613-3744
Piston head, 50 ml	1	613-3745
Dispensing cylinder with valve head, 25 ml	1	613-3746
Dispensing cylinder with valve head, 50 ml	1	613-3747

Bottle-top dispensers, Zippette Classic



Variable volume, autoclavable

Accurate dispensing from an easy to use dispenser. The specially designed delivery spout ensures exact dispensing into narrow neck containers and the anti-drip safety valve makes sure the Zippette does not leak when not in use.

- Fine adjustment for exact and reproducible dispensing
- All wetted parts are chemically resistant and autoclavable at 121 °C
- Easily removable PTFE piston for smooth action and easy cleaning
- Borosilicate glass barrel protected with a transparent PP sleeve can be easily removed and cleaned
- Easy priming and minimum waste with no leakage back into the reservoir - the Zippette stays fully primed all day

Delivery information: The Zippette™ Classic has a standard 30 mm neck fitting and is supplied with three bottle neck adapters (38, 40 and 45 mm), and an individual calibration certificate. Please note that the Zippette™ Classic is not supplied with a reservoir.



Volume (ml)	Division (ml)	Accuracy (%)	Imprecision (%)	Pk	Cat. No.
2,5	0,05	±0,3	0,1	1	612-4176
0,5 - 5	0,10	±0,3	0,1	1	612-4177
1 - 10	0,20	±0,3	0,1	1	612-4178
3 - 30	1,00	±0,3	0,1	1	612-4179
5 - 50	1,00	±0,3	0,1	1	612-4180

Titration, food & beverage, TitraLab® pH/Total Acidity



These automatic potentiometric titration analysers are specifically designed to determine pH & Total Acidity in different food and beverage segments, providing a compact and reliable solution for routine QC analysis measurements.

- Integrated high resolution 40 000 steps electronic burette delivers dependably accurate results
- Intuitive product interface, ready to use, pre-programmed methods and preset display provide ease of use
- Automatic buffer recognition (pH 2,00/4,01/7,00/9,21/10,90; at 25 °C)
- One, two or three-point calibration
- "All-included" application packaging including electrode and accessories (excluding reagents)
- RS 232 C interface enables communication with a computer or printer



Model	pH/Total Acidity in wine	pH/Total Acidity in milk	pH/Total Acidity in tomato products	pH/Total Acidity in brine
Measuring range	0 - 37,50 g/l tartaric acid; 0 - 24,50 g/l sulfuric acid	>0,9 °D; >0,2 °SH, >0,009 g lactic/100 ml sample	0,06 - 6,4% citric acid	0,04 - 4,5% lactic acid
Display	128×64 pt, backlit liquid crystal display	128×64 pt, backlit liquid crystal display	128×64 pt, backlit liquid crystal display	128×64 pt, backlit liquid crystal display
Keypad	7 membrane keys, splash-proof, PET	7 membrane keys, splash-proof, PET	7 membrane keys, splash-proof, PET	7 membrane keys, splash-proof, PET
Dosing volume	Sample amount	Sample amount	Sample amount	Sample amount
Burette resolution	40000 steps	40000 steps	40000 steps	40000 steps
pH - range	0 - 14	0 - 14	0 - 14	0 - 14
Ambient temperature	+15...+40 °C	+15...+40 °C	+15...+40 °C	+15...+40 °C
Measurement units	g/l tartaric acid, g/l H ₂ SO ₄	°SH, °D, g lactic acid/100 ml sample	% citric acid	% lactic acid
Connections	BNC (electrode), RCA for magnetic stirrer, RJ11 telephone connector for computer/printer, Mini-DIN for mouse	BNC (electrode), RCA for magnetic stirrer, RJ11 telephone connector for computer/printer, Mini-DIN for mouse	BNC (electrode), RCA for magnetic stirrer, RJ11 telephone connector for computer/printer	BNC (electrode), RCA for magnetic stirrer, RJ11 telephone connector for computer/printer, Mini-DIN for mouse
W×D×H (mm)	130×160×300	130×160×300	130×160×300	130×160×300
Weight (kg)	4	4	4	4

Application	Reagent
pH & Total Acidity in milk	NaOH 0,1M
pH & Total Acidity in wine	NaOH 0,5M
pH & Total Acidity in brine	NaOH 0,5M
pH & Total Acidity in tomato sauce (canned food)	NaOH 0,1M

Ordering information: Supplied with combined pH electrode with cable, 10 ml syringe with plunger, titration stand holder including magnetic stirrer, 10 titration cells (50 ml, Ø 30 mm) and power supply. Chemicals need to be ordered separately.

Description	Pk	Cat. No.
Titration TitraLab® pH/TA, for the determination of pH and acid content of tartaric acid and sulfuric acid in wine	1	709-0118
Titration TitraLab® pH/TA, for the determination of the pH and acid content of dairy products (milk)	1	709-0119
Titration TitraLab® pH/TA, for the determination of the pH/acid content of citric acid in tomato sauce and tomato products (canned food)	1	709-0121
Titration TitraLab® pH/TA, for the determination of the pH and acid content of lactic acid in brine	1	709-0123

Accessories	Pk	Cat. No.
Replacement syringe, PP, 10 ml	1	661-0147
Beakers, PP, 50 ml (inner Ø 30 mm)	10	661-0148
Sodium hydroxide, 0,1 mol/l 0,1 N aqueous solution, AVS TITRINORM volumetric solution	1 l	31770.294
Sodium hydroxide, 0,5 mol/l 0,5 N aqueous solution Reag. Ph. Eur. AVS TITRINORM® volumetric solution	1 l	31951.290

Titration, SO₂ content of wine, TitraLab® SO₂



This automatic analyser is specifically designed for potentiometric titration according to the Ripper method for the determination of the free SO₂ and total SO₂ content in wine.

- Integrated high resolution 40 000 steps electronic burette delivers dependably accurate results
- Intuitive product interface, ready to use, pre-programmed methods and preset display provide ease of use
- With integrated peristaltic pumps for automatic reagent additions that enable automatic sample preparation prior to titration and three titration programs that can be customised
- "All-included" application packaging including electrode and accessories (excluding reagents)
- RS 232 C interface enables communication with a computer or printer



Measuring range	0 - 640 mg/l SO ₂
Display	128×64 pt, backlit liquid crystal display
Keypad	7 membrane keys, splash-proof, PET
Resolution	1 mg/l
Dosing volume	Sample amount
Burette resolution	40000 steps
Ambient temperature	+15...+40 °C
Measurement units	mg/l
Connections	BNC (electrode), RCA for magnetic stirrer, RJ11 telephone connector for computer/printer, Mini-DIN (mouse)
W×D×H (mm)	130×160×300
Weight (kg)	4

Ordering information: Supplied with double platinum electrode including cable and tubes, 10 ml syringe with plunger, titration stand holder including magnetic stirrer, 10 titration cells (50 ml, Ø 30 mm) and power supply. Chemicals need to be ordered separately.

Description	Pk	Cat. No.
Titration TitraLab® SO ₂ , for the determination of SO ₂ content in wine	1	709-0117
Accessories		
Description	Pk	Cat. No.
Replacement syringe, PP, 10 ml	1	661-0147
Beakers, PP, 50 ml (inner Ø 30 mm)	10	661-0148
Double platinum electrode (Pt), 0 - 80 °C, with built-in tubes	1	661-0153
Iodine 0,01 mol/l (0,02 N) aqueous solution	1 l	PRLS85123.290
Sodium hydroxide, 4 mol/l (4 N) aqueous solution, AVS TITRINORM®, volumetric solution, low in carbonate	1 l	191373M
Potassium iodide AnalAR NORMAPUR® analytical reagent	250 g	26846.235
Sulphuric acid, 25% GPR RECTAPUR®	1 l	84513.290

Mono and binocular microscopes, VisiScope, Serie 100



Advanced biological polarisation

These microscopes fulfill all education purposes for students. The optics quality, the reliability of the mechanics are combined to an excellent price/quality ratio.

- Large choice of accessories
- Interpupillary adjustment from 48 to 75 mm
- Interchangeable objectives: Achromatic / Plan-achromatic
- One watt illumination with external power supply for low electric consumption
- Focusing mechanism with limit stop to prevent the contact between the objective and specimen

Conforms EUP 205/32/EC

Model	ML 103	ML 114	ML 124	MP 103 POL	DML 103	BL 114	BL 124	DBL 124	BL 103 POL
Type	Monocular	Monocular	Monocular	Monocular	Monocular	Binocular	Binocular	Binocular	Binocular
Contrasting technique	Brightfield	Brightfield	Brightfield	Brightfield and polarisation	Brightfield	Brightfield	Brightfield	Brightfield	Brightfield and polarisation
Head	30° inclined, 360° rotating								
Eyepiece	WF 10×/18	WF 10×/18	WF 10×/18	WF 10×/18	WF 10×/18	WF 10×/18	WF 10×/18	WF 10×/18	WF 10×/18
Nosepiece	Triple	Quadruple	Quadruple	Triple	Triple	Quadruple	Quadruple	Quadruple	Triple
Objectives	Achromatic 4×, 10×, 40×	Achromatic 4×, 10×, 40×, 60×	Achromatic 4×, 10×, 40×, 100×	Achromatic 4×, 10×, 40×	Achromatic 4×, 10×, 40×	Achromatic 4×, 10×, 40×, 60×	Achromatic 4×, 10×, 40×, 100×	Achromatic 4×, 10×, 40×, 100×	Achromatic 4×, 10×, 40×
Focusing system	Coaxial coarse and fine drive								
Stage	Plain. 125×120 mm with sample clips	Mechanical. 125×116 mm with sample holder	Mechanical. 125×116 mm with sample holder	Rotable. Ø 120 mm	Plain. 125×120 mm with sample clips	Mechanical. 125×116 mm with specimen holder	Mechanical. 125×116 mm with specimen holder	Mechanical. 125×116 mm with specimen holder	Rotable. Ø 120 mm
Condenser	0,65 N.A. with diaphragm	1,20 N.A. with diaphragm	1,20 N.A. with diaphragm	1,20 N.A. with diaphragm	0,65 N.A. with diaphragm	1,20 N.A. with diaphragm	1,20 N.A. with diaphragm	1,20 N.A. with diaphragm	1,20 N.A. with diaphragm
Illumination	LED	LED	LED	LED	LED	LED	LED	LED	LED
Camera	-	-	-	-	Built-in 1,3 MPx camera	-	-	Built-in 3,14 MPx camera	-

Description	Pk	Cat. No.
Monocular microscope, ML 103	1	630-1550
Monocular microscope, ML 114	1	630-1551
Monocular microscope, ML 124	1	630-1552
Monocular microscope, MP 103 POL	1	630-1555
Monocular microscope, DML 103	1	630-1556
Binocular microscope, BL 114	1	630-1553
Binocular microscope, BL 124	1	630-1554
Binocular microscope, DBL 124	1	630-1623
Binocular microscope, BL 103 POL	1	630-1802

Eyepieces		
Description	Pk	Cat. No.
Eyepiece H5×	1	630-1624
Eyepiece WF 10×/18	1	630-1625
Eyepiece WF 16×/12	1	630-1626
Eyepiece micrometer WF 10×/18	1	630-1627

Objectives			
Description	Magnification	Pk	Cat. No.
Achromatic	4×/0,10	1	630-1628
Achromatic	10×/0,25	1	630-1629
Achromatic	20×/0,40	1	630-1630
Achromatic	40×/0,65	1	630-1631
Achromatic	60×/0,85	1	630-1632
Achromatic	100×/1,25	1	630-1633
E-plan-achromatic IOS	4×	1	630-1639
E-plan-achromatic IOS	100×	1	630-1643

Accessories			
	Description	Pk	Cat. No.
	Eyepiece H5×	1	630-1624
	Polarising filter set	1	630-1635
	Dust cover	1	630-1636
	Solar battery pack, SBP 10	1	630-1637
	Cleaning and maintenance set, incl. lens tissue, cleaning solution, brush	1	630-1803
	Mechanical stage	1	630-1634
	Wooden box with sliding front cover, 27×27×46 mm	1	630-1809

Mono, bino and trinocular microscopes, VisiScope, 200 Series



Biological teaching

A refined and ergonomic design are the first qualities of this series, which also offers reliability and innovation.

- Objectives conform to DIN
- High contrast and excellent resolution
- P-LED powered illumination system with adjustable intensity
- Easy to carry: The revolving nosepiece can be used as a handle
- Components treated to prevent the formation of moulds and fungi
- Increased reliability: Strict controls on materials and production processes optimised by ISO 9001:2008 quality system

Model	ML 224	ML 214	BL 224	BL 214	BL 224 PI	TL 224
Type	Monocular	Monocular	Binocular	Binocular	Binocular	Trinocular
Contrasting technique	Brightfield	Brightfield	Brightfield	Brightfield	Brightfield	Brightfield
Head	30° inclined, 360° rotating					
Eyepiece	WF 10×/18	WF 10×/18	WF 10×/18	WF 10×/18	WF 10×/18	WF 10×/18
Nosepiece	Quadruple, reversed					
Objectives	Achromatic 4×, 10×, 40×, 100×	Achromatic 4×, 10×, 40×, 60×	Achromatic 4×, 10×, 40×, 100×	Achromatic 4×, 10×, 40×, 60×	Plan achromatic 10×, 20×, 40×, 100×	Achromatic 4×, 10×, 40×, 100×
Focusing system	Coaxial coarse and fine drive					
Stage	Double layer. 125×115 mm, 70×30 mm movement					
Condenser	Abbe 1,25 N.A. with diaphragm					
Illumination	LED	LED	LED	LED	LED	LED

Description	Pk	Cat. No.
Monocular microscope, ML 224	1	630-1557
Monocular microscope, ML 214	1	630-1558
Binocular microscope, BL 224	1	630-1559
Binocular microscope, BL 214	1	630-1560
Binocular microscope, BL 224 PI	1	630-1562
Trinocular microscope, TL 224	1	630-1859

Eyepiece		
Description	Pk	Cat. No.
Eyepiece WF 16×/12	1	630-1626

Objectives			
Description	Magnification	Pk	Cat. No.
Achromatic	4×/0,10	1	630-1628
Achromatic	10×/0,25	1	630-1629
Achromatic	20×/0,40	1	630-1630
Achromatic	40×/0,65	1	630-1631
Achromatic	60×/0,85	1	630-1632
Achromatic	100×/1,25	1	630-1633
E-plan-achromatic IOS	100×	1	630-1643

Accessories		
Description	Pk	Cat. No.
Polarising filter set	1	630-1638
E-plan-achromatic IOS	1	630-1639
Mechanical stage	1	630-1634
Polarising filter set	1	630-1635
Dust cover	1	630-1636
Solar battery pack, SBP 10	1	630-1637
Cleaning and maintenance set, incl. lens tissue, cleaning solution, brush	1	630-1803
Wooden box with sliding front cover, 27×27×46 mm	1	630-1809
CCD camera adapter 0,5×	1	630-1644

Temperature and humidity loggers, EBI-20 T1, TE1 and TH1
Ebro



These temperature and humidity loggers record data automatically. The LCD displays the measured value, the battery level and the unit of measure. The waterproof loggers with NTC probe provide reliable recordings during transport and storage.



- Measurement frequency between one minute and 24 hours
- One button for "start" and minimum/maximum values
- Visual LED alarm

EN 12830. Software conforms to FDA 21 CFR Part 11

WxDxH: 69x48x22 mm

Weight: 45 g

Delivery information: Supplied with a user-replaceable CR2450 battery with a service life of 24 months and a calibration certificate. It is advisable to first order a starter kit with logger, software and interface. Then further loggers can be ordered as separate items.

Data loggers						
Description	Range (°C)	Accuracy (°C)	Resolution (°C)	Memory	Pk	Cat. No.
EBI-20 T1	−30...+60	±0,5 (−20...+40)	0,1	40 000 values	1	620-1748
EBI-20 TE1 with ext. probe	−30...+60	±0,5 (−20...+40)	0,1	40 000 values	1	620-1749
EBI-20 TH1	−30...+60 °C; 0 - 100 % RH	±0,5 (−20...+40)	0,1	40 000 values	1	620-1750
Starter kits						
Description					Pk	Cat. No.
Starting kit for temperature logger, EBI-20 T1					1	620-1751
Starting kit for temperature logger with ext. probe, EBI-20 TE1					1	620-1752
Starting kit for temperature and humidity logger, EBI-20 TH1					1	620-1753
Accessories						
Description					Pk	Cat. No.
Three-point calibration certificate					1	620-1537
Holder for EBI-20T/TH					1	620-1425

High precision temperature and humidity loggers, iLog
Escort



Stainless steel tips, 80 mm and one metre cable

These loggers offers quality control for temperature- and humidity-sensitive products. They can detect and record the smallest fluctuations.



- Alarm LED indicators
- Intuitive software for easy configuration and retrieving information
- Activation with a magnetic key or by the Console software - powerful tool for organising and analysing the data

Øxh: 76x18 mm

Weight: 70 g

Delivery information: Console software is required but not supplied.

Description	Range (°C)	Accuracy (°C)	Resolution (°C)	Memory	Pk	Cat. No.
Internal sensor	−40...+70	±0,3	0,1	32 000 values	1	620-9303
Internal temp. and humidity sensors	−40...+70 °C; 0 - 100 % RH	±0,3 °C ±3% RH	0,1 °C; 0,1 % RH	32 000 values	1	620-9302
Internal and external sensors	−20...+100	±0,3	0,1	32 000 values	1	620-9329
Two external sensors	−40...+70	±0,3	0,1	32 000 values	1	620-9301
Accessories						
Description					Pk	Cat. No.
USB interface with console software and magnet					1	620-0253
Universal serial interface with software and magnet					1	620-0240
Universal interface					1	620-0239
USB interface					1	620-1698
Interface holder for wall or other surface-mounting using moulded screw holes					1	620-0499
Battery for Junior and iLog range					1	620-9320

pH/mV/°C meter, handheld, pH 110



- IP 67 waterproof housing, large display and easy to use keypad
- Automatic temperature compensation
- 50 data sets reviewable memory
- 1000 hour battery life; auto-shut off function (30 minutes of non use)
- Electrode offset recognition; auto-lock and hold of readings on display

Warranty: 3 years for instruments and 6 months for electrodes/probes/cables

pH - range	-2,00...+16,00
pH - accuracy	±0,1% ±2 digits
pH - calibration	Auto-buffer recognition using US & VWR buffers (VWR buffers set as default: 4,01, 6,86, 9,18 at 25 °C / 4,00, 6,87, 9,23 at 20 °C)
mV - range	-1999...+1250
mV - accuracy	±0,1% ±1 digit
Temperature range (°C)	-10...+120
Temperature accuracy (°C)	±0,3 ±2 digits
Compliance	IP 67

Ordering information: Supplied in a carrying case with 1 m cable pH/°C sensor and calibration buffers (4.01/7.00/10.00).

Description	Pk	Cat. No.
Handheld pH/mV/°C meter pH 110 (incl. pH/°C probe with 1 m cable)	1	662-1350

Accessories		
Description	Pk	Cat. No.
pH electrode, 1 m cable (pH 1001)	1	662-1785
Temperature probe, 1 m cable (pH 1001)	1	662-1786
pH/temperature electrode, 1 m cable waterproof	1	662-9904
pH/temperature electrode, 4 m cable waterproof	1	662-9905
ORP electrode, 1 m cable	1	662-9906
pH buffer capsules 4,01 ± 0,02	50	332732B
pH buffer capsules 7,00 ± 0,02	50	332742D
pH buffer capsules 10,00 ± 0,02	50	332762H

pH/mV/°C meters, handheld, pH 3110 / 3210 / 3310

WTW



pH 3210



Field case

Waterproof handheld meters designed for unlimited outside use.

- Large display allowing excellent readability even under bad lighting conditions
- Robust housing and sealed silicone keypad with protection class IP 66/67
- Up to 2500 hours continuous operation time with one battery set

pH 3110: Easy and functional

Reliable, clearly designed meter for basic and standard measurements, e.g. in education applications.

- Large LCD display
- Tactile response offering clear operation
- Built-in timer for correct measurements
- Automatic temperature compensation

pH 3210: Comfortable and versatile



Equipment and Accessories

For challenging measurements in the field and plant, e.g. water/wastewater analysis, chemical/pharmaceutical industry, etc.

- Backlit graphic display
- Menu-controlled operation
- The CMC function (Continuous Measurement Control) informs the user whether he is measuring inside the calibrated range and gives an alert when he is outside
- Large data memory (date, time and ID numbers for measurements)
- 4 user selectable languages available (English, German, French, Spanish)

Model	pH 3110	pH 3210
pH - range	-2,0...+19,9 / -2,00...+19,99 / -2,000...+19,999	-2,0...+19,9 / -2,00...+19,99 / -2,000...+19,999
pH - accuracy	±0,1 / ±0,01 / ±0,001	±0,1 / ±0,01 / ±0,001
pH - calibration	1, 2 or 3 points with WTW or DIN buffers	1, 2, 3, 4 or 5 points with 16 sets of memorised buffers
mV - range	±1200,0 / ±2000	±1200,0 / ±2500
mV - accuracy	±0,3 / ±1	±0,3 / ±1
Temperature range (°C)	-5,0...+105,0	-5,0...+105,0
Temperature accuracy (°C)	±0,1	±0,1
Datalog - capacity	-	200 manual
Datalog - log function	-	Manual
Display	LCD	Backlit graphic LCD
Connections	DIN / 4 mm banana	DIN / 4 mm banana
Outputs	-	-
Batteries	4x1,5 V AA or 4x1,2 V NiMH	4x1,5 V AA or 4x1,2 V NiMH
Weight (kg)	0,6	0,6
Compliance	IP 66/67	IP 66/67

Ordering information: All pH meters are available in sets including pH electrode, STP buffers (technical buffers) and accessories.

Description	Pk	Cat. No.
pH 3110		
pH 3110 Set SenTix® 41 (instrument in field case with SenTix® 41 pH electrode, STP4 and STP7 buffers, stand, beaker, instruction manual, CD-ROM and batteries)	1	662-0505
pH 3210		
pH 3210 Set SenTix® 41 (instrument in field case with SenTix® 41 pH electrode, STP4 and STP7 buffers, stand, beaker, instruction manual, CD-ROM and batteries)	1	662-0996
pH 3310		
pH 3310 (instrument only with instruction manual, CD-ROM, batteries, software and USB cable)	1	662-0999
pH 3310 Set SenTix® 41 (instrument in field case with SenTix® 41 pH electrode, STP4 and STP7 buffers, stand, beaker, instruction manual, CD-ROM, batteries, software and USB cable)	1	662-1111
pH 3310 Set TW Set for drinking water (instrument in field case with SenTix® 81 pH electrode, STP4 and STP7 buffers, stand, beaker, instruction manual, CD-ROM, batteries, software, USB cable and measuring vessel MG/pH)	1	662-1112

Accessories		
Description	Pk	Cat. No.
pH electrode SenTix® 81, glass, KCl 3 mol/l electrolyte, temperature sensor, DIN+banana plug (1x4 mm), fixed 1 m cable	1	662-1315

Oxygen meters, handheld, Oxi 3205 / 3210 / 3310 WTW



Oxi 3310



Set Oxi 3310

Waterproof handheld meters designed for unlimited outside use.

- Large display allowing excellent readability, even under bad lighting conditions
- Robust housing and sealed silicone keypad with protection class IP 66/67
- Up to 2500 hour continuous operation time with one battery set

Oxi 3205/3210: Comfortable and versatile

For challenging measurements in the field and plant, e.g. water/wastewater analysis, chemical/pharmaceutical industry, etc.



- Backlit graphic display
- Menu-controlled operation
- Large data memory (date, time and ID numbers for measurements)
- Four user selectable languages available (English, German, French, Spanish)

The Oxi 3205 is a small version of the Oxi 3210 without memory but including simplified functions.

Oxi 3310: Communicative and professional

For professional field measurements requiring documentation and data transfer.

Same specifications as Oxi 3210, with:

- Extended memory for 5000 GLP-compliant data
- Time-controlled datalogger with adjustable intervals for long-term monitoring
- Waterproof mini USB interface to a PC

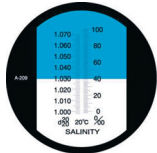
Model	Oxi 3205
DO - concentration (mg/l)	0,00 - 19,99 / 0 - 90
DO - accuracy	±0,5% of measured value
DO - % saturation	0,0 - 199,9 / 0 - 600
DO - barometric pressure range	0 - 199,9 / 0 - 1250 mmHg
Temperature range (°C)	-5,0...+50,0
Temperature accuracy (°C)	±0,1
Datalog - capacity	-
Datalog - log function	-
Display	Backlit graphic LCD
Outputs	-
Power supply	4×1,5 V AA or 4×1,2 V NiMH
Weight (kg)	0,6
Compliance	IP 66/67

Ordering information: All oxygen meters are available in sets including sensors and accessories.

Description	Pk	Cat. No.
Oxi 3205		
Oxi 3205 (instrument only with CD-ROM and batteries)	1	664-0525
Oxi 3205 Set CellOx® 325 (instrument in field case with CellOx® 325 DO probe with 1,5 m cable, cleaning solution, electrolyte, 3 spare membrane heads, stand, beaker, CD-ROM and batteries)	1	664-0526
Oxi 3205 Set CellOx® 325-3 (instrument in field case with CellOx® 325-3 DO probe with 3 m cable, cleaning solution, electrolyte, 3 spare membrane heads, stand, beaker, CD-ROM and batteries)	1	664-0527
Oxi 3205 Set DurOx® 325-3 (instrument in field case with DurOx® 325-3 DO probe with 3 m cable, cleaning solution, electrolyte, 1 spare membrane head, stand, beaker, CD-ROM and batteries)	1	664-0528
Oxi 3210		
Oxi 3210 (instrument only with CD-ROM and batteries)	1	664-0529
Oxi 3210 Set CellOx® 325 (instrument in field case with CellOx® 325 DO probe with 1,5 m cable, cleaning solution, electrolyte, 3 spare membrane heads, stand, beaker, CD-ROM and batteries)	1	664-0530
Oxi 3210 Set CellOx® 325-3 (instrument in field case with CellOx® 325-3 DO probe with 3 m cable, cleaning solution, electrolyte, 3 spare membrane heads, stand, beaker, CD-ROM and batteries)	1	664-0531
Oxi 3210 Set DurOx® 325-3 (instrument in field case with DurOx® 325-3 DO probe with 3 m cable, cleaning solution, electrolyte, 1 spare membrane head, stand, beaker, CD-ROM and batteries)	1	664-0532
Oxi 3310		
Oxi 3310 (instrument only with CD-ROM, batteries, software and USB cable)	1	664-0533
Oxi 3310 Set CellOx® 325 (instrument in field case with CellOx® 325 DO probe with 1,5 m cable, cleaning solution, electrolyte, 3 spare membrane heads, stand, beaker, CD-ROM, batteries, software and USB cable)	1	664-0534
Oxi 3310 Set CellOx® 325-3 (instrument in field case with CellOx® 325-3 DO probe with 3 m cable, cleaning solution, electrolyte, 3 spare membrane heads, stand, beaker, CD-ROM, batteries, software and USB cable)	1	664-0535
Oxi 3315 (Beverage Kit)		
Oxi 3315 Set 5 (instrument with FDO® 925 DO probe with 3 m cable, Beverage Kit (containing panel with meter holder, flow through vessel, tube, tube adapter, meter armour SM Pro), batteries, CD-ROM and USB cable)	1	664-0084

Accessories		
Description	Pk	Cat. No.
Oxygen sensor CellOx® 325 with OxiCal®-SL calibration vessel, cable 1,5 m	1	715-2917
Oxygen sensor CellOx® 325-3 with OxiCal®-SL calibration vessel, 3 m cable	1	664-0511
Oxygen sensor DurOx® 325-3 with OxiCal®-D calibration vessel, 3 m cable	1	664-0512
Oxygen sensor CellOx® 325-6 with OxiCal®-SL calibration vessel, 6 m cable	1	662-0391
Oxygen sensor DurOx® 325-6 with OxiCal®-D calibration vessel, 6 m cable	1	662-0284
Oxygen sensor CellOx® 325-10 with OxiCal®-SL calibration vessel, cable 10 m	1	662-0392
Maintenance kit for CellOx®	1	664-0514
Exchange membrane heads WP90/3 for DO sensors except Stirrox® G and DurOx® 325	3	715-2953
Stirrer RZ 300 for CellOx® 325 sensors	1	715-2991
Protective housing SM PRO for ProfiLine/MultiLine	1	662-1278
Cable, 1 m, with S7/DIN plug	1	662-1425
Protection cap for DurOx®	1	664-0513

Pocket refractometers with automatic temperature compensation



These robust refractometers are easy to use and deliver exact, consistent results. There are several different models with the relevant scale (°Brix, specific gravity, Oechsle) for juices, beverages, industrial liquids, etc.



- Automatic temperature compensation (ATC) between 10 °C and 30 °C delivers exact and reliable results
- Robust design
- Easy to read scales
- Easy to use and clean

Delivery information: Refractometer supplied in plastic box with pipette, instruction manual and adjustment tools.

Description	Range	Resolution	Pk	Cat. No.
Sugar	0 - 10 °Brix	0,1 °Brix	1	635-0164
Sugar	0 - 20 °Brix	0,1 °Brix	1	635-0165
Sugar	0 - 32 °Brix	0,2 °Brix	1	635-0166
Sugar	0 - 50 °Brix	0,5 °Brix	1	635-0167
Sugar	28 - 62 °Brix	0,2 °Brix	1	635-0168
Sugar	40 - 82 °Brix	0,5 °Brix	1	635-0169
Sugar	58 - 90 °Brix	0,5 °Brix	1	635-0170
Salinity	0 - 28% NaCl	0,2% NaCl	1	635-0171
Wine: Oeschle / sugar	30 - 140 Oechsle / 0 - 32	1 Oe / 0,2 °Brix	1	635-0172

Accessories				
Description	Resolution	Pk	Cat. No.	
End caps (replacement)	-	1	635-0174	

Spectrophotometers, scanning, UV/Vis UV-3100PC and Vis V-3000PC



Two fully scanning spectrophotometers for advanced measurements and quality control. Reliable, robust and easy to use instruments with a range of accessories that will support the creation of a personal spectrophotometer measuring station. The application software offers all the important methods expected from a 'universal' instrument. All housed in a robust cover and a well designed optical bench.



- Large LCD display (320×240 pixels)
- Full scan mode
- Easily accessible USB port for data import and export
- Supplied application software 'UV-Vis Analyst' allows PC control of the spectrophotometer
- Methods for PC control or standalone include: Basic mode, quantitative, wavelength scan, kinetics, multi-wavelength, DNA/protein
- The range of accessories includes an automatic 8-cell changer and Peltier thermostatted single cell holder

Model	UV-3100PC
Optical system	Single beam, grating 1200 lines/mm, silicon photodiode detector
Light source	Deuterium/tungsten
Spectral bandwidth (nm)	2
Wavelength range (nm)	190 - 1100
Wavelength accuracy (nm)	±0,5
Wavelength repeatability (nm)	±0,3
Photometric range	−0,3 to 3 A; 0 - 200% T; 0 - 9999 Conc
Photometric accuracy	±±0,5% T
Photometric reproducibility	±0,2% T
Stray light	±0,05% T @ 220, 360 nm
Photometric stability	±0,002 A/h @ 500 nm
Baseline flatness	±0,002 A (200 - 1000 nm)
Scan speed (nm/min)	Low, medium, high (max. 3000 nm/min)
Display	5" graphic LCD (320×240 pixels)
Interfaces	USB port to PC / parallel port to printer
Power requirements	220 V/50 Hz
W×D×H (mm)	490×360×240
Weight (kg)	14

Delivery information: Supplied with 4 optical glass cells, 2 quartz cells (not V3000-PC), dust cover, USB cable, USB (8 GB) stick, 'UV-Vis Analyst' software for PC control, 4-position cell (10 mm) holder, power cables with UK, CH and EU plugs.

Description	Pk	Cat. No.
UV-3100PC, UV/Vis scanning spectrophotometer including 4 cell holder	1	634-6002

Accessories		
Description	Pk	Cat. No.
Cell holder, 4-cell, 10 mm path length	1	634-6003
Cell holder, 4-cell, 10 to 100 mm path length	1	634-6005
Cell holder, for cylindrical cell	1	634-6006
Cell holder, water jacketed, 1 cell, 10 mm	1	634-6007
Cell holder for test tubes	1	634-6009
Cell holder, 8-position auto cell changer	1	634-6010
Cell holder, solid sample, 10 mm	1	634-6011
Cell holder, water jacketed, 4-cell, 10 mm	1	634-6012
Lamp, deuterium	1	634-6038
Thermal printer	1	634-6039
Fuse (power board) 500 mA/250 V	1	634-0652
Fuse (outlet) 3,15 A/250 V	1	634-0651
Replacement battery type CR2032	1	634-0653

Spectrophotometers, visible, GENESYS™ 20

Thermo Scientific



The GENESYS™ 20 is a single beam instrument, ideal for routine measurements in teaching laboratories, quality control or for process control in production. It is reliable, robust and precise and can be purchased with an integrated printer. A variety of single position cell holders, e.g. for COD vials, 50 mm cells, filters and test tubes are available as additional options to fit the instrument.

- Spill-proof laminated keypad for easy cleaning
- Multi-language LCD display
- Clear on-screen messages and prompts
- Simple 10 key operation



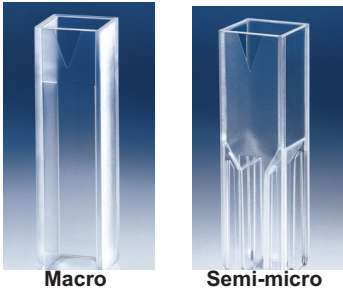
Model	GENESYS™ 20	GENESYS™ 20 with integral printer
Light source	Tungsten	Tungsten
Optical system	Single beam	Single beam
Wavelength range (nm)	325 - 1100	325 - 1100
Spectral bandwidth (nm)	8	8
Wavelength accuracy	±2,0 nm	±2,0 nm
Photometric range	-0,1 to 2,5 A; 0 to 125% T; 0 to 1999 C; Absorbance, Transmittance, Concentration, Factors	
Display	LCD, 20 character, 2 lines	LCD, 20 character, 2 lines
Supplied cell holder	Single cell for 10 mm path length square cells and test tube	
Test storage	One set of parameters in non volatile memory	One set of parameters in non volatile memory
Storage of data	None	None
Optional internal printer	-	20 column
W×D×H (mm)	300×330×190	300×330×190
Weight (kg)	4,5	4,5
Accessories included	Dust cover, operator manual and 5 disposable cuvettes	Dust cover, operator manual and 5 disposable cuvettes

Description	Pk	Cat. No.
GENESYS™ 20 spectrophotometer, EU-plug	1	634-1021
GENESYS™ 20 spectrophotometer, UK-plug	1	634-0385
GENESYS™ 20 with integral printer, EU-plug	1	634-1022
GENESYS™ 20 with integral printer, UK-plug	1	634-0387

Accessories		
Description	Pk	Cat. No.
Spare printer paper rolls (5) for GENESYS™ 20	5	634-0502
Spare single cell holder for GENESYS™ 20	1	634-0388
Spare halogen lamp for GENESYS™ 20	2	634-1000
Test tube holder	1	634-1673
Filter set standards	1	634-2113
Single cell holder (fits on 6-position cell holder platform and single cell holder platform)	1	634-1669

Further accessories are available on request.

Cuvettes, disposable



Disposable cuvettes made from optical Polystyrene (PS) with optimal transmittance from 340 to 900 nm or PMMA with a range of 300 to 900 nm.

- Minimal variation of extinction values
- Recessed windows
- Resealable packaging

Type	Window material	Volume (ml)	Range	Pk	Cat. No.
Macro	PS	2,5 - 4	340 - 900 nm	100	634-0675
Macro	PMMA	2,5 - 4	300 - 900 nm	100	634-0677
Semi-micro	PS	1,5 - 3	340 - 900 nm	100	634-0676
Semi-micro	PMMA	1,5 - 3	300 - 900 nm	100	634-0678

Rack for cuvettes

Kartell



PE
Rack for 12 cuvettes with 10 mm path length.

For	W×D×H (mm)	Pk	Cat. No.
12 (2×6)	170×50×12	1	634-8580



Chemicals and Reagents

LABWASH® cleaning agents



29870.360



29874.312

- Residue-free laboratory glassware cleaning
- Excellent cleaning power at low dosage levels
- Protects the environment
- Acid rinse concentrates available to neutralise alkaline cleaners

Type	Description	Pk	Cat. No.
Manual cleaning - immersion cleaning			
LABWASH® classic	Strongly alkaline cleaner for removal of organic and inorganic contamination; adequate substitute for chromosulphuric acid; contains active chlorine	1 kg	29870.318
LABWASH® classic		5 kg	29870.360
LABWASH® classic		10 kg	29870.411
LABWASH® classic	Mildly alkaline, low in phosphate, also used for sensitive laboratory equipment; pH value of 11,5 in 1% use solution	28 kg	29870.488
LABWASH® extra		1,3 kg	29871.312
LABWASH® extra	pH neutral, phosphate- and silicate-free, extremely gentle on materials, removes light contamination and is suitable for use with hard water	7 kg	29871.367
LABWASH® neutra		5 kg	29872.360
LABWASH® neutra		10 kg	29872.417
LABWASH® extra PF	Phosphate-free, versatile, effective cleaner; environmentally friendly; especially useful for pipette washers	1 kg	83901.310
LABWASH® extra PF		5 kg	83901.360
LABWASH® extra PF		10 kg	83901.410
LABWASH® pure	Surfactant-free, non foaming cleaner especially suitable for glassware used for organic trace analysis and also highly effective with organic and inorganic residues	1 kg	83902.310
LABWASH® pure		5 kg	83902.360
LABWASH® pure		10 kg	83902.410
Automated cleaning - washing machines			
LABWASH® powder	Mildly alkaline, chlorine- and surfactant-free cleaner with universal applications in laboratory washing machines, suitable for mechanical treatment of surgical instruments and anesthesia devices in central sterilisation	1 kg	29874.312
LABWASH® powder		10 kg	29874.414
LABWASH® alkamatic	Mildly alkaline liquid cleaner with oxidising action for the removal of organic and inorganic residues on laboratory glassware and reusable equipment	6 kg	29875.360
LABWASH® alkamatic		12 kg	29875.417
LABWASH® alkamatic		30 kg	29875.485
LABWASH® alkamatic PF	Phosphate-free, chlorine-free, alkaline liquid cleaner with universal applications in laboratory washing machines, suitable for mechanical treatment of surgical instruments in central sterilisation. Note: This cleaner is not compatible with aluminium, zinc, non ferrous metals, rubber or latex.	6 kg	29876.360
LABWASH® alkamatic PF		12 kg	29876.411
LABWASH® alkamatic PF		30 kg	29876.488
LABWASH® acidrinse C	Phosphate- and surfactant-free neutraliser, based on organic acid, also removes acid-soluble residues	1 kg	29877.312
LABWASH® acidrinse C		5 kg	29877.367
LABWASH® acidrinse C		10 kg	29877.414
LABWASH® acidrinse C	Surfactant-free neutraliser, based on inorganic acid, can also be used as pre-rinsing agent. Note: Not compatible with aluminium or zinc	25 kg	29877.460
LABWASH® acidrinse P		7 kg	29878.361
LABWASH® acidrinse P		12 kg	29878.417
LABWASH® acidrinse P		35 kg	29878.485
LABWASH® easyrinse	Environmentally friendly rinse-aid and shine aid	1 kg	29879.318
LABWASH® easyrinse		5 kg	29879.364
LABWASH® easyrinse		10 kg	29879.410
LABWASH® alkamatic LA	Strongly alkaline, surfactant-free, intensive, liquid cleaner; very effective against stubborn residues on laboratory glassware, particularly useful in microbiology and syntheses laboratories	6 kg	83903.360
LABWASH® alkamatic LA		12 kg	83903.410
LABWASH® alkamatic LA		30 kg	83903.480
LABWASH® powder PF	Phosphate-free, alkaline, chlorine- and surfactant-free cleaner for removal of organic and inorganic impurities especially with applications where the presence of phosphate is critical	1 kg	83904.310
LABWASH® powder PF		10 kg	83904.410

LABWASH PREMIUM cleaning agents



LABWASH PREMIUM Classic



LABWASH PREMIUM Alkamatic

A more concentrated version of the LABWASH range.

- Residue-free laboratory glassware cleaning
- Excellent cleaning power at low dosage levels
- NTA-free (no Nitrilotriacetic acid)
- Protects the environment, active ingredients are biodegradable
- Acid rinse concentrates available to neutralise alkaline cleaners

Description	Pk	Cat. No.
Manual cleaning - immersion cleaning		
LABWASH PREMIUM Classic, mildly alkaline concentrate for manual cleaning of laboratory glassware	5 l	84545.360
	10 l	84545.410
LABWASH PREMIUM Extra, concentrate for the manual cleaning of laboratory glassware and precision components	5 l	84546.360
	10 l	84546.410
LABWASH PREMIUM Neutra, pH-neutral concentrate for the cleaning of laboratory glassware and precision components	5 l	84547.360
	10 l	84547.410
LABWASH PREMIUM Extra PF, phosphate-free concentrate for manual cleaning of laboratory glassware	5 l	84554.360
	10 l	84554.410
LABWASH PREMIUM Pure, concentrate for soak and spray cleaning of laboratory glassware	5 l	84555.360
	10 l	84555.410
Automated cleaning - washing machines		
LABWASH PREMIUM Alkamatic, mildly alkaline, liquid cleaning concentrate for special washing machines	5 l	84549.360
	10 l	84549.410
LABWASH PREMIUM Alkamatic PF, alkaline, phosphate-free, chlorine-free, liquid cleaning concentrate for special washing machines for heavy contamination	5 l	84550.360
	10 l	84550.410
LABWASH PREMIUM Acidrinse C, phosphate-free neutraliser for special washing machines	5 l	84551.360
	10 l	84551.410
LABWASH PREMIUM Acidrinse P, neutraliser and precleaner for special washing machines	5 l	84552.360
	10 l	84552.410
LABWASH PREMIUM Easyrinse, acidic, ecological rinsing concentrate with shiny effect	5 l	84553.360
	10 l	84553.410
LABWASH PREMIUM Alkamatic LA, highly alkaline, intensive cleaner for laboratory washers	5 l	84556.360
	10 l	84556.410
LABWASH PREMIUM Powder, mildly alkaline cleaning powder for special washing machines	5 kg	84548.360
	10 kg	84548.410
LABWASH PREMIUM Powder PF, phosphate-free, alkaline powder cleaner for laboratory washers	10 kg	84557.410

Indicator paper strips, non bleeding, DOSATEST®



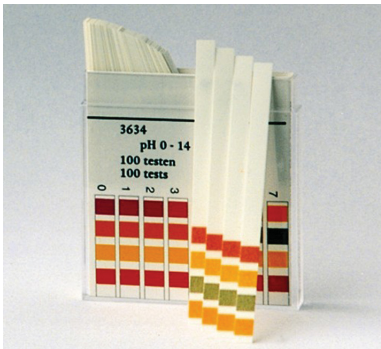
The test strips contain indicator dyes that are covalently bound to the reagent papers and then adhered to plastic strips. Contamination of the solution is therefore prevented even in strong alkaline solutions or from long immersion in weak buffered solution.

- Non bleeding - do not contaminate the solution to be measured or cross-contaminate neighbouring colour zones
- Length of the plastic strip protect fingers from contact with liquid
- Wide and narrow pH ranges available.

Delivery information: Plastic box with colour chart and 100 indicator strips 6×85 mm

Description	pH range	pH gradation	Pk	Cat. No.
pH indicator strips, DOSATEST	0 - 14	1	3	35309.606
pH indicator strips, DOSATEST	0,0 - 6,0	0,5	3	35310.601
pH indicator strips, DOSATEST	4,5 - 10	0,5	3	35311.604
pH indicator strips, DOSATEST	7 - 14	0,5	3	35312.607
pH indicator strips, DOSATEST	1,7 - 3,8	0,3	3	35315.607
pH indicator strips, DOSATEST	3,6 - 6,1	0,3 - 0,4	3	35316.601
pH indicator strips, DOSATEST	6,0 - 7,7	0,3 - 0,4	3	35317.604
pH indicator strips, DOSATEST	7,5 - 9,5	0,2 - 0,4	3	35318.607

Indicator papers in strips, DOSATEST®



For the determination of the pH of coloured solutions. Indicator and colour comparison chart are combined on the strip. Reading the pH value is quick and reliable as a colour comparison with a separate reference chart is not needed and the actual pH values are printed on each strip. With this system even the pH of coloured solutions and suspensions can be reliably determined as the colour affects the indicator and reference colours equally. The end effect is compound colours of the same shade being compared. The individual colour zones are separated by a hydrophobic barrier.

Plastic box with 200 indicator strips 11×100 mm.

Description	pH range	pH gradation	Pk	Cat. No.
DOSATEST® pH indicator strips	1 - 12	1	3	35290.601
DOSATEST® pH indicator strips	1,8 - 3,8	0,3	3	35292.607
DOSATEST® pH indicator strips	3,8 - 5,5	0,2 - 0,3	3	35293.601
DOSATEST® pH indicator strips	5,2 - 6,8	0,2 - 0,3	3	35294.604
DOSATEST® pH indicator strips	6,0 - 8,1	0,3	3	35295.607
DOSATEST® pH indicator strips	8,0 - 9,7	0,2 - 0,3	3	35296.601
DOSATEST® pH indicator strips	9,5 - 12,0	0,5	3	35297.604
DOSATEST® pH indicator strips	12,0 - 14,0	0,5	3	35298.607

Indicator test strips, water hardness, DOSATEST®



- Results within 1 minute ideal for applications in boiler testing, aquaria and laundries
- Test for both Ca²⁺ and Mg²⁺ ions in mildly alkaline conditions (pH 7 - 8,3)
- Easy to handle plastic strips (6×95 mm)

Description	Range	Pk	Cat. No.
Total hardness indicator paper in strips Dosatest® for hardness of water determinations	0 - 45 °F (1 °F = 9,89 mg/l CaCO ₃)	100 Tests	35320.616

Buffer solutions, 20 °C AVS TITRINORM®



- Solutions prepared from Analara® NORMAPUR® products for analyses
- True analytical value on the label to an accuracy of ±0,2 pH units
- Traceable to SRM from NIST
- Batch number and packing date for traceability
- Certificate of analysis available from www.vwr.com

For full information concerning health and safety data please see the VWR Chemicals catalogue or the www.vwr.com website.

Ordering information: For the full pH range of buffers and details of other pack sizes, please see the VWR Chemicals catalogue. If significant large volumes are required please contact the VWR sales office for a customised offer.

Buffer solutions in bottles		
pH value	Pk	Cat. No.
1,00	1 l	32031.297
2,00	1 l	32032.291
3,00	1 l	32033.294
4,00 (red coloured)	500 ml	32044.268
4,00 (red coloured)	1 l	32044.292
4,00	500 ml	32095.264
4,00	1 l	32095.297
5,00	1 l	32035.291
6,00	1 l	32036.294
6,88	500 ml	83601.260
6,88	1 l	83601.290
7,00	500 ml	32096.267
7,00	1 l	32096.291
7,00 (green coloured)	500 ml	32045.262
7,00 (green coloured)	1 l	32045.295
8,00	1 l	32038.291
9,00 (blue coloured)	500 ml	32046.265
9,00 (blue coloured)	1 l	32046.298
9,00	500 ml	32039.261
9,00	1 l	32039.294
9,22	500 ml	32097.261
10,00	1 l	32040.298
11,00	1 l	32041.292

Colour coded buffer solutions in dosing bottles		
pH value	Pk	Cat. No.
4,00 (red coloured)	1 l	32044.290
7,00 (green coloured)	1 l	32045.290
9,00 (blue coloured)	1 l	32046.290
Buffer solution sets		
Description	Pk	Cat. No.
Buffer solution set pH 4,00 / 7,00 / 9,00 (100 ml)	1	83610.600
Buffer solutions set pH 4,00 / 7,00 / 9,00 (250 ml)	1	83610.610

Solvents, high purity



Description	Pk	Cat. No.
2-Propanol HiPerSolv CHROMANORM® for HPLC	1 l	20880.290
2-Propanol HiPerSolv CHROMANORM® for HPLC	2,5 l	20880.320
Acetonitrile anhydrous (max. 0.003% H ₂ O) HiPerSolv CHROMANORM® gradient grade for HPLC	1 l	83639.290
Acetonitrile anhydrous (max. 0.003% H ₂ O) HiPerSolv CHROMANORM® gradient grade for HPLC	2,5 l	83639.320
Acetonitrile HiPerSolv CHROMANORM® gradient grade for HPLC	1 l	20060.290
Acetonitrile HiPerSolv CHROMANORM® gradient grade for HPLC	2,5 l	20060.320
Acetonitrile HiPerSolv CHROMANORM® for LC-MS	1 l	83640.290
Acetonitrile HiPerSolv CHROMANORM® for LC-MS	2,5 l	83640.320
Methanol gradient grade for HPLC	1 l	20864.290
Methanol gradient grade for HPLC	2,5 l	20864.320
Methanol gradient grade for HPLC	2,5 l	20864.420
Methanol HiPerSolv CHROMANORM® for HPLC	1 l	152505N
Methanol HiPerSolv CHROMANORM® for HPLC	2,5 l	152506X
Methanol HiPerSolv CHROMANORM® for LC-MS	2,5 l	83638.320
Methanol isocratic grade for HPLC	1 l	20837.290
Petroleum spirit 40-60°C PESTINORM® for pesticide residue analysis	2,5 l	83663.320
Water HiPerSolv CHROMANORM® for HPLC	1 l	23595.294
Water HiPerSolv CHROMANORM® for HPLC	2,5 l	23595.328
Water HiPerSolv CHROMANORM® for LC-MS	1 l	83645.290
Water HiPerSolv CHROMANORM® for LC-MS	2,5 l	83645.320
Water HiPerSolv CHROMANORM® gradient grade for HPLC	2,5 l	83650.320

Solvents for analysis



Description	Pk	Cat. No.
1-Butanol AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	1 l	20810.298
1-Pentanol AnalAR NORMAPUR® analytical reagent	1 l	20791.292
Dichloromethane AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	1 l	23366.293
Ethanol absolute AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	1 l	20821.296

Solvents, general purpose



Description	Pk	Cat. No.
1-Butanol GPR RECTAPUR®	1 l	20808.291
1-Butanol GPR RECTAPUR®	2,5 l	20808.325
1-Propanol GPR RECTAPUR®	1 l	20858.293
2-Propanol GPR RECTAPUR®	1 l	20839.297
(±)-2-Butanol GPR RECTAPUR®	1 l	20811.292
Acetone TECHNICAL	1 l	20063.296
Acetone TECHNICAL	5 l	20063.365
Benzyl alcohol GPR RECTAPUR®	1 l	20805.291
Chloroform GPR RECTAPUR®	1 l	22706.292
Cyclohexane GPR RECTAPUR®	1 l	23223.290
Diethyl ether GPR RECTAPUR®	1 l	23809.294
Diethyl ether TECHNICAL rectified	1 l	23807.297
Ethanol 95-97% (v/v) GPR RECTAPUR®	25 l	20824.467
Ethanol 95-97% (v/v) GPR RECTAPUR®	5 l	20824.365
Ethyl acetate GPR RECTAPUR®	1 l	23880.290
Ethylene glycol TECHNICAL	1 l	24407.292
Glycerine 98% GPR RECTAPUR®	1 l	24387.292
Glycerine 98% GPR RECTAPUR®	5 l	24387.361
Hexane (mixture of isomers) TECHNICAL	1 l	24574.298
Isoamyl alcohol TECHNICAL	1 l	20797.292
Isobutanol TECHNICAL	1 l	20835.294
Methanol TECHNICAL	1 l	20903.290
Methanol TECHNICAL	5 l	20903.368
Methylated spirit (denatured ethanol, 95-97% (v/v)) TECHNICAL	5 l	20827.365
n-Heptane GPR RECTAPUR®	1 l	24549.292
n-Hexane TECHNICAL	1 l	24611.297

Description	Pk	Cat. No.
n-Octane GPR RECTAPUR®	250 ml	26025.238
n-Pentane GPR RECTAPUR®	1 l	26206.291
n-Pentane TECHNICAL	1 l	26192.292
Petroleum spirit 40-65°C dehydrated TECHNICAL (max. 0.01% aromatic hydrocarbons)	1 l	23837.291
Petroleum spirit 80-100°C TECHNICAL	2,5 l	23841.320
Toluene TECHNICAL	5 l	28701.364
Xylene (mixture of isomers) TECHNICAL	1 l	28973.294
Water TECHNICAL demineralized	20 l	23597.440

Caustics and bases for analysis



Description	Pk	Cat. No.
Ammonia 20% AnalAR NORMAPUR® analytical reagent	1 l	21188.294
Barium hydroxide octahydrate AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	250 g	21687.232
Barium hydroxide octahydrate AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	1 kg	21687.298
Sodium hydroxide pellets AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	1 kg	28244.295

Bases, general purpose



Description	Pk	Cat. No.
Ammonia 28% GPR RECTAPUR®	1 l	21182.294
Ammonia 28% GPR RECTAPUR®	5 l	21182.363
Calcium hydroxide GPR RECTAPUR®	1 kg	22355.298
Calcium hydroxide GPR RECTAPUR®	5 kg	22355.367
Potassium hydroxide pellets GPR RECTAPUR®	1 kg	26669.290
Sodium hydroxide pellets GPR RECTAPUR®	1 kg	28245.298
Sodium hydroxide pellets GPR RECTAPUR®	5 kg	28245.367
Sodium hydroxide 30% (w/w) (40% (w/v)) aqueous solution TECHNICAL	1 l	28217.292

Acids for analysis



Description	Pk	Cat. No.
Acetic acid glacial AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	1 l	20104.298
Acetic acid glacial AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	2,5 l	20104.334
Benzoic acid AnalAR NORMAPUR® analytical reagent	100 g	20172.180
Benzoic acid AnalAR NORMAPUR® analytical reagent	500 g	20172.260
Citric acid monohydrate AnalAR NORMAPUR® analytical reagent	250 g	20276.235
Hydrochloric acid fuming 37% AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	1 l	20252.290
Hydrochloric acid fuming 37% AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	2,5 l	20252.335
Hydrogen peroxide 30% (100 volumes) aqueous solution AnalAR NORMAPUR® analytical reagent	500 ml	23619.264
Hydrogen peroxide 30% (100 volumes) aqueous solution AnalAR NORMAPUR® analytical reagent	1 l	23619.297
L(+)-Ascorbic acid AnalAR NORMAPUR® analytical reagent	100 g	20150.184
L(+)-Ascorbic acid AnalAR NORMAPUR® analytical reagent	250 g	20150.231
ortho-Boric acid crystallized AnalAR NORMAPUR® analytical reagent	500 g	20185.260
Orthophosphoric acid 85% AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	1 l	20624.295
Salicylic acid AnalAR NORMAPUR® analytical reagent	250 g	20657.232
Sulphuric acid 95% AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	1 l	20700.298

Acids, general purpose



Description	Pk	Cat. No.
(±)-Malic acid TECHNICAL	1 kg	20365.290
Acetic acid 99% GPR RECTAPUR®	1 l	20103.295
Acetic acid 99% GPR RECTAPUR®	5 l	20103.364
Citric acid monohydrate crystallized TECHNICAL	1 kg	20278.298
Citric acid monohydrate crystallized TECHNICAL	5 kg	20278.367
Citric acid monohydrate powder GPR RECTAPUR®	1 kg	20275.298
DL-Lactic acid 90% GPR RECTAPUR® pure	1 l	20356.298
Formic acid 80% TECHNICAL	1 l	20315.297
Formic acid 98% GPR RECTAPUR®	1 l	20320.295
Hydrochloric acid 35% TECHNICAL	1 l	20246.298
Hydrochloric acid 35% TECHNICAL	5 l	20246.367
Hydrogen peroxide 33% aqueous solution TECHNICAL	1 l	23613.297
Hydrogen peroxide 33% aqueous solution TECHNICAL	5 l	23613.366
L(+)-Ascorbic acid TECHNICAL	250 g	20155.237
L(+)-Ascorbic acid TECHNICAL	1 kg	20155.294
L(+)-Tartaric acid crystallized GPR RECTAPUR®	1 kg	20715.290
Nitric acid 68% GPR RECTAPUR®	1 l	20413.296
Nitric acid 68% GPR RECTAPUR®	5 l	20413.365
o-Acetylsalicylic acid GPR RECTAPUR®	1 kg	20110.290
Oleic acid purified	1 l	20447.293

Description	Pk	Cat. No.
ortho-Boric acid crystallized TECHNICAL	1 kg	20177.290
Orthophosphoric acid 85% GPR RECTAPUR®	1 l	20621.295
Oxalic acid dihydrate GPR RECTAPUR®	1 kg	20558.296
Salicylic acid GPR RECTAPUR®	1 kg	20655.292
Sorbic acid TECHNICAL	1 kg	20664.293
Sulphuric acid 95% GPR RECTAPUR®	1 l	20690.293
Sulphuric acid 95% GPR RECTAPUR®	1 l	20690.247
Stearic acid powder TECHNICAL	1 kg	20666.290

Inorganics for analysis



Description	Pk	Cat. No.
Aluminum nitrate nonahydrate analytical reagent	1 kg	21050.298
Ammonium acetate AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	500 g	21200.264
Ammonium chloride AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	500 g	21236.267
Ammonium heptamolybdate tetrahydrate AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	100 g	21276.185
Ammonium metavanadate analytical reagent	100 g	21369.186
Barium nitrate AnalAR NORMAPUR® analytical reagent	1 kg	21740.293
Calcium sulphate dihydrate AnalAR NORMAPUR® analytical reagent	1 kg	22452.294
Copper (II) chloride dihydrate AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	1 kg	23093.290
Copper (II) sulphate pentahydrate AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	250 g	23174.233
di-Sodium tetraborate decahydrate AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	250 g	27727.231
EDTA disodium salt dihydrate AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	250 g	20302.236
Iodine AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent resublimed	100 g	24757.187
L(+)-Potassium hydrogen tartrate AnalAR NORMAPUR® analytical reagent	250 g	27058.238
L(+)-Potassium sodium tartrate tetrahydrate AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	250 g	27068.233
Potassium bromate AnalAR NORMAPUR® analytical reagent	250 g	26703.232
Potassium chlorate AnalAR NORMAPUR® analytical reagent	1 kg	26746.296
Potassium chloride AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	500 g	26764.260
Potassium chloride AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	1 kg	26764.298
Potassium chromate AnalAR NORMAPUR® analytical reagent	250 g	26774.236
Potassium dihydrogen phosphate AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	250 g	26936.236
Potassium iodate AnalAR NORMAPUR® analytical reagent	250 g	26840.235
Potassium iodide AnalAR NORMAPUR® analytical reagent	250 g	26846.235
Potassium iodide AnalAR NORMAPUR® analytical reagent	500 g	26846.268
Potassium periodate AnalAR NORMAPUR® analytical reagent	100 g	26900.186
Potassium permanganate AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	250 g	26910.237
Potassium thiocyanate AnalAR NORMAPUR® analytical reagent	250 g	27035.230
Sodium acetate trihydrate AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	1 kg	27652.298
Sodium azide AnalAR NORMAPUR® analytical reagent	100 g	103692K
Sodium carbonate decahydrate AnalAR NORMAPUR® analytical reagent	1 kg	27768.298
Sodium iodide AnalAR NORMAPUR® analytical reagent	250 g	27913.234
Sodium nitrate AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	250 g	27955.238
Sodium nitrite AnalAR NORMAPUR® analytical reagent	250 g	27960.236
Strontium chloride hexahydrate AnalAR NORMAPUR® analytical reagent	250 g	28321.268
Zinc sulphate heptahydrate AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	250 g	29253.236
Zinc sulphate heptahydrate AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	1 kg	29253.293

Inorganics, general purpose



Description	Pk	Cat. No.
Aluminum sulphate tetradecahydrate GPR RECTAPUR®	1 kg	21070.297
Aluminum potassium sulphate dodecahydrate TECHNICAL	1 kg	21098.293
Aluminum potassium sulphate dodecahydrate TECHNICAL	5 kg	21098.362
Ammonium dichromate TECHNICAL	1 kg	21242.292
Ammonium chloride GPR RECTAPUR®	1 kg	21235.297
Ammonium hydrogen carbonate GPR RECTAPUR®	1 kg	21218.298
Ammonium nitrate GPR RECTAPUR®	1 kg	21278.295
Ammonium sulphate GPR RECTAPUR®	1 kg	21332.293
Ammonium thiocyanate purified	1 kg	21342.297
Barium chloride dihydrate GPR RECTAPUR®	500 g	21715.263
Barium chloride dihydrate GPR RECTAPUR®	1 kg	21715.296
Barium sulphate GPR RECTAPUR®	1 kg	21766.292
Beeswax yellow TECHNICAL	500 g	22842.268
Calcium carbonate powder TECHNICAL	5 kg	22290.363
Calcium chloride granules 2-5 mm purified	500 g	22328.262
Calcium chloride TECHNICAL	5 kg	22313.363
Calcium nitrate tetrahydrate GPR RECTAPUR®	1 kg	22399.290
Calcium oxide powder TECHNICAL	500 g	22645.260
Calcium sulphate dihydrate GPR RECTAPUR® precipitated	5 kg	22451.360
Charcoal activated granulated for gas adsorption	1 kg	22631.293
Charcoal activated powder TECHNICAL vegetable	1 kg	22637.293
Cobalt (II) chloride hexahydrate TECHNICAL	1 kg	22892.294

Description	Pk	Cat. No.
Copper (II) chloride dihydrate TECHNICAL	500 g	23089.262
Copper (II) chloride dihydrate TECHNICAL	5 kg	23089.364
Copper (II) nitrate trihydrate GPR RECTAPUR®	1 kg	23123.294
Copper (II) oxide powder TECHNICAL	500 g	23144.263
Copper (II) sulphate anhydrous TECHNICAL	500 g	23168.265
Copper (II) sulphate pentahydrate TECHNICAL	1 kg	23165.298
Copper (II) sulphate pentahydrate TECHNICAL	5 kg	23165.367
Copper turnings AnalaR NORMAPUR® analytical reagent	250 g	23055.232
Copper turnings AnalaR NORMAPUR® analytical reagent	1 kg	23055.298
di-Silver oxide TECHNICAL	25 g	21584.134
di-Sodium tetraborate anhydrous TECHNICAL	1 kg	27716.290
EDTA disodium salt dihydrate TECHNICAL	1 kg	20296.291
Iodine GPR RECTAPUR® resublimed	100 g	24755.181
Iodine GPR RECTAPUR® resublimed	1 kg	24755.294
Iron 98% powder TECHNICAL	1 kg	24086.292
Iron (III) chloride anhydrous TECHNICAL	500 g	24216.268
Iron (III) nitrate nonahydrate TECHNICAL	1 kg	24174.296
Iron (III) oxide anhydrous GPR RECTAPUR®	1 kg	24193.292
Iron (II) sulphate heptahydrate TECHNICAL	1 kg	24237.294
Iron (III) sulphate hydrate GPR RECTAPUR®	1 kg	24248.292
Lead (II) nitrate GPR RECTAPUR®	500 g	26554.260
Lead (II) oxide yellow TECHNICAL	1 kg	26566.294
Lithium chloride purified	250 g	25009.236
Lithium nitrate purified	500 g	25029.268
L(+)-Potassium sodium tartrate tetrahydrate GPR RECTAPUR®	1 kg	27066.293
Magnesium chloride hexahydrate GPR RECTAPUR®	1 kg	25107.292
Magnesium chloride hexahydrate Ph.Eur., BP, USP	1 kg	87060.290
Magnesium 99.5% ribbon TECHNICAL	25 g	25072.132
Magnesium oxide light TECHNICAL	1 kg	25054.298
Manganese (II) sulphate monohydrate GPR RECTAPUR®	1 kg	25300.290
Oil of castor GPR RECTAPUR®	1 l	24667.290
Paraffin, liquid TECHNICAL	1 l	24677.294
Paraffin, solidification point 52-54°C pellets TECHNICAL	1 kg	26155.294
Potassium carbonate GPR RECTAPUR®	1 kg	26724.291
Potassium chloride TECHNICAL	5 kg	26752.366
Potassium dichromate TECHNICAL	1 kg	26776.290
Potassium dihydrogen phosphate powder GPR RECTAPUR®	1 kg	26925.295
Potassium hexacyanoferrate (III) TECHNICAL	1 kg	26807.297
Potassium hexacyanoferrate (II) trihydrate TECHNICAL	1 kg	26812.295
Potassium iodide GPR RECTAPUR®	250 g	26843.235
Potassium nitrate GPR RECTAPUR®	1 kg	26863.291
Potassium permanganate GPR RECTAPUR®	1 kg	26906.290
Potassium sulphate GPR RECTAPUR®	1 kg	26994.293
Potassium thiocyanate GPR RECTAPUR®	1 kg	27033.290
Sand, Fontainebleau TECHNICAL	1 kg	27460.295
Sand, Fontainebleau TECHNICAL	5 kg	27460.364
Silica gel granules Chameleon® C 2.5-6 mm drying agent	1 kg	83000.290
Silver nitrate GPR RECTAPUR®	25 g	21570.136
Silver nitrate GPR RECTAPUR®	100 g	21570.182
Sodium acetate GPR RECTAPUR®	1 kg	27650.292
Sodium benzoate purified	1 kg	27694.293
Sodium bromide GPR RECTAPUR®	1 kg	27742.290
Sodium carbonate GPR RECTAPUR®	1 kg	27766.292
Sodium chloride GPR RECTAPUR®	1 kg	27800.291
Sodium chloride TECHNICAL	5 kg	27788.366
Sodium hydrogen carbonate TECHNICAL	1 kg	27780.291
Sodium hydrogen carbonate TECHNICAL	5 kg	27780.360
Sodium hydrogen sulphite 50% aqueous solution TECHNICAL	1 l	28132.298
Sodium hypochlorite in aqueous solution, about 14% active chlorine GPR RECTAPUR®	1 l	27900.296
Sodium hypochlorite in aqueous solution, about 14% active chlorine GPR RECTAPUR®	20 l	27900.445
Sodium nitrate GPR RECTAPUR®	1 kg	27950.298
Sodium silicate in aqueous solution (density: 1.33 g/cm³) TECHNICAL	2,5 l	28079.320
Sodium silicate in aqueous solution (density: 1.33 g/cm³) TECHNICAL	5 l	28079.363
Sodium sulphite purified	1 kg	28126.297
Sodium thiosulphate pentahydrate GPR RECTAPUR®	1 kg	27909.296
Sulphur flower TECHNICAL	1 kg	28256.296
Tin (II) chloride dihydrate TECHNICAL	250 g	23738.232
tri-Sodium citrate dihydrate GPR RECTAPUR®	1 kg	27830.294
Zinc chloride TECHNICAL	1 kg	29126.294
Zinc fine powder TECHNICAL	1 kg	29063.296
Zinc oxide light TECHNICAL	1 kg	29199.295
Zinc wires (reeled) AnalaR NORMAPUR® analytical reagent, for the determination of arsenic	250 g	83920.230
Water GPR RECTAPUR®	5 l	83612.360

Volumetric solutions



Description	Pk	Cat. No.
Hydrochloric acid 0.1 mol/l (0.1 N) AVS TITRINORM® Reag.Ph.Eur. volumetric solution	1 l	31955.293
Iodine 0.05 mol/l (0.1 N) aqueous solution AVS TITRINORM® volumetric solution	1 l	30917.295
Oxalic acid 0.05 mol/l (0.1 N) aqueous solution AVS TITRINORM® volumetric solution	1 l	30093.297
Potassium chloride 3 mol/l (223.68 g/l, 3 N) aqueous solution AVS TITRINORM® electrolytic solution	500 ml	83605.260
Silver nitrate 0.1 mol aqueous solution, concentrated solution ConvoL NORMADOSE® volumetric solution	60 ml	32056.602
Sodium hydroxide 0.1 mol aqueous solution, concentrated solution ConvoL NORMADOSE® volumetric solution	60 ml	32067.600
Sodium hydroxide 0.1 mol/l (0.1 N) aqueous solution AVS TITRINORM® volumetric solution	1 l	31770.294
Sodium hydroxide 0.5 mol/l (0.5 N) aqueous solution AVS TITRINORM® Reag.Ph.Eur. volumetric solution	1 l	31951.290
Sodium hydroxide 1 mol/l (1 N) aqueous solution AVS TITRINORM® Reag.Ph.Eur. volumetric solution	1 l	31627.290
Sodium hydroxide 2 mol/l (2 N) aqueous solution AVS TITRINORM® volumetric solution	1 l	98108.290
Sodium hypochlorite 1 mol/l in 0.1 mol/l sodium hydroxide aqueous solution low in bromine	1 l	230395N
Sodium thiosulphate 0.01 mol/l (0.01 N) aqueous solution VOLUSOL® volumetric solution	1 l	309337.1000
Sodium thiosulphate 0.1 mol aqueous solution, concentrated solution ConvoL NORMADOSE® volumetric solution	60 ml	32065.603
Sodium thiosulphate 0.1 mol/l (0.1 N) aqueous solution AVS TITRINORM® volumetric solution	1 l	31553.294
Sodium thiosulphate 1 mol/l (1 N) aqueous solution AVS TITRINORM® volumetric solution	1 l	31547.293
Sulphuric acid 0.05 mol (4.904 g H ₂ SO ₄), concentrated solution ConvoL NORMADOSE® volumetric solution	60 ml	32054.605
Sulphuric acid 0.5 mol (49.039 g H ₂ SO ₄), concentrated solution ConvoL NORMADOSE® volumetric solution	170 ml	32053.602

Indicators and specialities



Description	Pk	Cat. No.
Bromophenol blue 0.04% in ethanol TECHNICAL	250 ml	34307.237
Bromothymol blue 0.04% in ethanol TECHNICAL	250 ml	34303.234
Eriochrome Black T TECHNICAL	100 g	26002.183
Fehling's reagent (kit, contains solution I and II) for qualitative determination of reducing sugars	1 l	31701.296
Fehling's reagent I (Copper (II) sulphate solution) for qualitative determination of reducing sugars	1 l	31963.291
Fehling's reagent II (L(+)-Potassium sodium tartrate in sodium hydroxide solution) for qualitative determination of reducing sugars	1 l	31964.294
Fehling's reagent II (L(+)-Potassium sodium tartrate in sodium hydroxide solution) for qualitative determination of reducing sugars	1 l	230245A
Indigo carmine analytical reagent	25 g	22537.138
Iotect® iodine indicator, analytical reagent	100 g	28610.187
Phenol red 0.04% in ethanol TECHNICAL	250 ml	34304.237
Phenolphthalein 0.2% in ethanol TECHNICAL	1 l	31724.295
Phenolphthalein 1% in ethanol 50% pH-indicator	1 l	210894R
Prolabo® Universal indicator ethanol solution TECHNICAL	1 l	34352.290

Compounds



Description	Pk	Cat. No.
1-Octanol purified	1 l	20850.296
3-(4,5-Dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide	5 g	L11939.06
Acetaldehyde TECHNICAL	500 ml	20877.265
Acetic anhydride GPR RECTAPUR®	1 l	21389.298
Aniline GPR RECTAPUR®	1 l	21422.294
D(-)-Fructose AnalaR NORMAPUR® analytical reagent	500 g	103674Y
D(+)-Glucose AnalaR NORMAPUR® analytical reagent	500 g	101174Y
D(+)-Glucose anhydrous GPR RECTAPUR®	1 kg	24379.294
D(+)-Glucose anhydrous Ph.Eur., USP	500 g	284504S
D(+)-Sucrose GPR RECTAPUR®	1 kg	27478.296
di-Potassium disulphite	100 g	43908.22
DL-Lactic acid 90% Ph.Eur.	1 l	20370.297
Glycine (H-Gly-OH) AnalaR NORMAPUR® analytical reagent	250 g	101194M
Hydrogen peroxide 30% (100 volumes) aqueous solution Ph.Eur.	500 ml	23622.260
Hydrogen peroxide 30% (100 volumes) aqueous solution Ph.Eur.	1 l	23622.298
L(+)-Lactic acid	25 g	L13242.14
N-Acetyl-L-cysteine	25 g	A15409.14
Riboflavin (Vitamin B2) TECHNICAL	25 g	27414.137
Paraffin, liquid GPR RECTAPUR®	1 l	24679.291
Polyvinyl alcohol 22,000, min. 98% hydrolyzed	500 g	305735B
Polyvinyl alcohol 115,000, min. 88% hydrolyzed	500 g	297914D
Potassium sorbate	250 g	A12844.30
Potassium sorbate granules Ph.Eur.	1 kg	26976.291
Saponin GPR RECTAPUR®	100 g	27534.187
Starch, soluble analytical reagent	100 g	21153.181
Starch, soluble from potatoes TECHNICAL	1 kg	21152.291
Starch, soluble from potatoes TECHNICAL	250 g	21152.234
Triethanolamine (Trolamine) TECHNICAL	1 l	28743.290
Tris(hydroxymethyl)aminomethane (TRIS, Trometamol) GPR RECTAPUR®	1 kg	28811.295
Urea GPR RECTAPUR®	1 kg	28876.298

Standards



Description	Pk	Cat. No.
Aluminum standard solution, 1,000 mg/l Al in dil. nitric acid AVS TITRINORM® standard for AAS	100 ml	86660.180
Arsenic standard solution, 1,000 mg/l As in dil. nitric acid SpectrosoL® standard for AAS	100 ml	86661.180
Barium standard solution, 1,000 mg/l Ba in dil. nitric acid AVS TITRINORM® standard for AAS	100 ml	86664.180
Boron standard solution, 1,000 mg/l B in water SpectrosoL® standard for AAS	100 ml	86663.180
Cadmium standard solution, 1,000 mg/l Cd in dil. nitric acid AVS TITRINORM® standard for AAS	100 ml	86668.180
Calcium standard solution, 1,000 mg/l Ca in dil. nitric acid AVS TITRINORM® standard for AAS	100 ml	86667.180
Chromium standard solution, 1,000 mg/l Cr in dil. nitric acid AVS TITRINORM® standard for AAS	100 ml	86671.180
Cobalt standard solution, 1,000 mg/l Co in dil. nitric acid AVS TITRINORM® standard for AAS	100 ml	86670.180
Copper standard solution, 1,000 mg/l Cu in dil. nitric acid AVS TITRINORM® standard for AAS	100 ml	86673.180
Iron standard solution, 1,000 mg/l Fe in 2% hydrochloric acid AVS TITRINORM® standard for AAS	100 ml	86677.180
Lead standard solution, 1,000 mg/l Pb in dil. nitric acid AVS TITRINORM® standard for AAS	100 ml	86699.180
Lithium standard solution, 1,000 mg/l Li in dil. nitric acid AVS TITRINORM® standard for AAS	100 ml	86688.180
Magnesium standard solution, 1,000 mg/l Mg in dil. nitric acid AVS TITRINORM® standard for AAS	100 ml	86690.180
Manganese standard solution, 1,000 mg/l Mn in dil. nitric acid SpectrosoL® standard for AAS	100 ml	86691.180
Mercury standard solution, 1,000 mg/l Hg in 10% nitric acid AVS TITRINORM® standard for AAS	100 ml	86682.180
Molybdenum standard solution, 1,000 mg/l Mo in water AVS TITRINORM® standard for AAS	100 ml	86692.180
Nickel standard solution, 1,000 mg/l Ni in dil. nitric acid AVS TITRINORM® standard for AAS	100 ml	86696.180
Potassium standard solution, 1,000 mg/l K in dil. nitric acid AVS TITRINORM® standard for AAS	100 ml	86686.180
Silver standard solution, 1,000 mg/l Ag in dil. nitric acid AVS TITRINORM® standard for AAS	100 ml	86659.180
Sodium standard solution, 1,000 mg/l Na in dil. nitric acid AVS TITRINORM® standard for AAS	100 ml	86693.180
Sulphur standard solution, 1,000 mg/l S in water	100 ml	86706.180
Tin standard solution, 1,000 mg/l Sn in 20% hydrochloric acid AVS TITRINORM® standard for AAS	100 ml	86712.180
Zinc standard solution, 1,000 mg/l Zn in dil. nitric acid AVS TITRINORM® standard for AAS	100 ml	86725.180

Microscopy reagents



Description	Pk	Cat. No.
Bromothymol blue 2% aqueous solution	125 ml	720-1101
Methylene blue N/A	25 g	3470.0025
Thymol blue	25 g	720-1042
Formaldehyde 36% AnalAR NORMAPUR® ACS, ISO, Reag.Ph.Eur. analytical reagent	1 l	20909.290
Formaldehyde 36% GPR RECTAPUR®	1 l	20910.294
Basic Fuchsin N/A	25 g	3525.0025
Phenolphthalein	25 g	720-1081
Phenolphthalein	100 g	720-1082

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