

# Cell Culture solutions from Avantor

**01. CELL CULTURE MEDIA** 

02. FOETAL BOVINE SERUM-SERADIGM **03. SYRINGE FILTERS** 

**04.** CO<sub>2</sub> INCUBATORS





## Welcome to Avantor Cell Culture solutions

Within the variety of life science techniques, cultivating cells probably has a unique position. Although a daily routine, being aware that a cell is the basic unit of life, you feel accountable almost as if your cells were your pets. No matter if you are seeding, expanding, harvesting, storing or analysing your cells, you will find the tools you need here.

The cell culture plastics, filtration and liquid handling chapters will help you maintain aseptic conditions all along the workflow, including single-use assemblies and bags for biopharmaceutical production. The 'Reagents' chapter provides you with access to a reliable supply of exceptional quality sera, media and supplements, while the 'Cryopreservation' chapter covers helpful storage solutions for storing cells in your lab - or maybe take advantage of our biobanking services? Check out the 'Equipment' chapter if you need a new microscope or  $CO_2$  incubator, and although not specific to cell culture, don't miss the 'General equipment' and 'Useful accessories' chapters – you will need some of these, for sure!

Although this catalogue covers a huge range of products, you might miss what you are looking for in this current selection. If this is the case, or if you have any question on the products and services displayed, don't hesitate to contact us for any consultancy needed.

We are proud to support you in your aim to explore new frontiers.

Your VWR Life Science Team



## Table of contents

## 01

#### **CELL CULTURE PLASTICS**

Flasks Scrapers and lifters Dishes, plates and inserts Sealing films Pages 4-18

Cell chambers and roller bottles Assay plates Pages 19-21

Media bottles and carboys Single-use assemblies and bags Pages 22-33



#### LIQUID HANDLING

Serological pipettes and controllers Pipettes and tips Centrifuge tubes Pages 61-76

#### **CELL CULTURE REAGENTS**

Foetal bovine serum Media Separation media Pages 34-39

Buffers Water Dissociation reagents Bovine serum albumin Pages 40-42

Antibiotics Salts Sugars Amino acids Pages 43-48



#### **CELL CULTURE EQUIPMENT**

Inverted microscopes Cell counters CO<sub>2</sub> incubators Pages 49-55



#### **FILTRATION**

Cell strainers Syringe filters Bottle-top filtration Pages 56-60

## 06

#### CRYOPRESERVATION

ULT freezers Cryovials, boxes and racks Storage plates Coolers Pages 77-91 07

#### **GENERAL EQUIPMENT**

Bead beaters and pestles Shakers, vortexers and stirrers Balances and accessories Pages 92-119

pH meters Timers and thermometers / loggers Autoclaves and bags Peristaltic pumps Centrifuges Pages 120-137

## 80

#### **USEFUL ACCESSORIES**

Bench protection Electroporation cuvettes Pages 138-139



Cell culture flasks, non treated or treated

#### **CELL CULTURE FLASKS NON TREATED OR TREATED, STERILE**

Cell and tissue culture flasks are perfect for cell growth.

- Available with five different growth areas
- Flask surface is flat and free from striations to maximise usable growth area
- Two different cap styles can be used in both open and closed systems
- Innovative angled neck design offers good pipette and cell scraper access
- Triangular top with wide base provides stability
- Easy stacking
- Frosted area near the neck for easy marking/writing
- Engraved graduations on multiple sides
- 100% integrity tested
- Sterilised by electron beam irradiation
- Free from DNase and RNase and non-pyrogenic

**Non-treated:** Cell and tissue culture flasks are ideal for applications where cell attachment is not desired.

TC treated: For optimal cell attachment and growth.

TC treated, extended (\*): Deeper flask for increased recommended working volume.

**Increased cell attachment surface:** This highly hydrophilic surface offers a significant advantage over the traditional cell culture surface. The surface treatment can improve cell spreading and attachment, and is suitable for cells that may adhere poorly due to cell phenotype or stressful culture conditions and for those which normally require additional biological coatings for attachment.

ISO 13485:2003 and ISO 9001:2008 certified.

Capacity (ml)	Surface	Growth area (cm²)	Working volume (ml)	Closure type	Packed	Pk	Cat. No.
Flasks for suspen	sion cells						
25	Non-treated	12,5	20	Plug seal screw cap	10 per bag/200 per case	200	734-2783
25	Non-treated	12.5	20	Vented cap	10 per bag/200 per case	200	734-2784
50	Non-treated	25,0	40	Plug seal screw cap	10 per bag/200 per case	200	734-2785
50	Non-treated	25,0	40	Vented cap	10 per bag/200 per case	200	734-2786
250	Non-treated	75,0	175	Plug seal screw cap	5 per bag/100 per case	100	734-2787
250	Non-treated	75,0	175	Vented cap	5 per bag/100 per case	100	734-2788
600	Non-treated	182,0	400	Plug seal screw cap	5 per bag/40 per case	40	734-2789
600	Non-treated	182,0	400	Vented cap	5 per bag/40 per case	40	734-2790
850	Non-treated	300,0	800	Plug seal screw cap	3 per bag/18 per case	18	734-2791
850	Non-treated	300,0	800	Vented cap	3 per bag/18 per case	18	734-2792
Flasks for adhere	nt cells						
25	TC-treated	12,5	2,5 – 3,75	Plug seal screw cap	10 per bag/200 per case	200	734-2310
25	TC-treated	12,5	2,5 - 3,75	Vented cap	10 per bag/200 per case	200	734-2309
25	Increased cell attachment	12,5	2,5 - 3,75	Plug seal screw cap	10 per bag/200 per case	200	734-2804
25	Increased cell attachment	12,5	2,5 - 3,75	Vented cap	10 per bag/200 per case	200	734-2805
50	TC-treated	25,0	5 - 7,5	Plug seal screw cap	10 per bag/200 per case	200	734-2312
50	TC-treated	25,0	5 - 7,5	Vented cap	10 per bag/200 per case	200	734-2311
50	Increased cell attachment	25,0	5 - 7,5	Plug seal screw cap	10 per bag/200 per case	200	734-2806
50	Increased cell attachment	25,0	5 - 7,5	Vented cap	10 per bag/200 per case	200	734-2807
250	TC-treated	75,0	15 – 22,5	Plug seal screw cap	5 per bag/100 per case	100	734-2314
250	TC-treated	75,0	15 – 22,5	Vented cap	5 per bag/100 per case	100	734-2313
250	Increased cell attachment	75,0	15 – 22,5	Plug seal screw cap	5 per bag/100 per case	100	734-2808
250	Increased cell attachment	75,0	15 – 22,5	Vented cap	5 per bag/100 per case	100	734-2809
600	TC-treated	182,0	36,4 - 54,6	Plug seal screw cap	5 per bag/40 per case	40	734-2316
600	TC-treated	182,0	36,4 - 54,6	Vented cap	5 per bag/40 per case	40	734-2315
600	Increased cell attachment	182,0	36,4 - 54,6	Plug seal screw cap	5 per bag/40 per case	40	734-2810
600	Increased cell attachment	182,0	36,4 - 54,6	Vented cap	5 per bag/40 per case	40	734-2811
850	TC-treated	300,0	60 - 90	Plug seal screw cap	3 per bag/18 per case	18	734-2601
850	TC-treated	300,0	60 - 90	Vented cap	3 per bag/18 per case	18	734-2600
850	Increased cell attachment	300,0	60 - 90	Plug seal screw cap	3 per bag/18 per case	18	734-2812
850	Increased cell attachment	300,0	60 - 90	Vented cap	3 per bag/18 per case	18	734-2813





#### **CELL SCRAPERS AND CELL LIFTERS**

Specifically designed to make collecting cells easier and more effective. Available with a choice of blade positions: scraper for use in flasks, or lifter for use in harvesting cells (especially stem cells) in dishes.

- Cross-ribbed handle in ABS provides greater rigidity and ensures better control while scraping cells
- Thin, flexible TPE blade prevents damage to cells
- Individually wrapped
- Sterilised by electron beam irradiation
- Free from DNase, RNase and non-pyrogenic



Description	Total length (mm)	Pk	Cat. No.
Cell scraper, blade width 20 mm	250	100	734-2602
Cell lifter, blade width 20 mm	250	100	734-2603
Cell scraper, blade width 30 mm	390	100	734-2604
Cell lifter, blade width 30 mm	390	100	734-2605



#### **CELL LIFTERS, VWR®**

Flat blade cell lifter for manual harvesting of cells, manufactured from high grade PE. Designed for removing cells from flasks or dishes.

- Bevelled edge blade on one end and narrow blade or J-hook on the other
- Sterilised by electron beam irradiation
- Free from DNase, RNase and non-pyrogenic

Description	Total length (mm)	Pk	Cat. No.
19 mm flat blade with 9 mm J-hook end	234	100	734-2978
19 mm flat blade with 2,5 mm narrow blade end	234	100	734-2979



#### **CELL CULTURE DISHES, VWR®**

VWR cell and tissue culture dishes are available with a choice of surface treatments.

- Flat bottom and uniform wall thickness ensures distortion-free viewing
- Optically clear, making them suitable for microscopy
- Dish surface is smooth and free from striations to maximise usable growth area
- Rim on the bottom side of the lid (except 35 or 150 mm dishes) mates with the dish brim for easy and secure stacking
- Sterilised by electron beam irradiation, DNase- and RNase-free and non pyrogenic

**Increased cell attachment surface:** This highly hydrophilic surface offers a significant advantage over the traditional cell culture surface. The surface treatment can improve cell spreading and attachment, and is suitable for cells that may adhere poorly due to cell phenotype, stressful culture conditions, or those which normally require additional biological coatings for attachment.

**TC-treated:** These dishes are vacuum-gas plasma-treated for consistent cell attachment and growth.

**Non-treated:** Non-treated cell and tissue culture dishes are ideal for applications where cell attachment is not desired.

Operating temperature range: -20 to +50 °C. Not autoclavable.

ISO 13485:2003 and ISO 9001:2008 certified.

Description	Ø (mm)	Height (mm)	Growth area (cm²)	Packed	Pk	Cat. No.
Increased cell attachment treated surface						
Cell culture dish, increased cell attachment surface	35	12,3	8,5	10/bag	240	734-2814
Cell culture dish, increased cell attachment surface, with gripping ring	60	18	21,2	10/bag	240	734-2815
Cell culture dish, increased cell attachment surface, with gripping ring	90	17	55,0	10/bag	240	734-2816
Cell culture dish, increased cell attachment surface, with gripping ring	100	22	60,8	10/bag	240	734-2817
Cell culture dish, increased cell attachment surface	150	22	143,0	5/bag	80	734-2818
TC-treated surface						
Cell culture dish, TC-treated	35	12,3	8,5	10/bag	960	734-2317
Cell culture dish, TC-treated, with gripping ring	60	18	21,2	10/bag	600	734-2318
Cell culture dish, TC-treated, with gripping ring	70	15	36,3	10/bag	600	734-2319
Cell culture dish, TC-treated, with gripping ring	90	17	55,0	10/bag	500	734-2320
Cell culture dish, TC-treated, with gripping ring	100	22	60,8	10/bag	300	734-2321
Cell culture dish, TC-treated	150	22	143,0	1/bag	120	734-2322
Non-treated surface						
Cell culture dish, non-treated	35	12,3	8,5	10/bag	960	734-2793
Cell culture dish, non-treated, with gripping ring	60	18	21,2	10/bag	600	734-2794
Cell culture dish, non-treated, with gripping ring	90	17	55,0	10/bag	500	734-2795
Cell culture dish, non-treated, with gripping ring	100	22	60,8	10/bag	300	734-2796
Cell culture dish, non-treated	150	22	143,0	1/bag	120	734-2797



#### **CONFOCAL DISHES FOR MICROSCOPY**

Confocal dishes are suitable for fluorescent, confocal and phase-contrast microscopy experiments. These dishes combine the convenience of standard 35 mm, PS cell culture dishes with the optical benefits of glass. Dishes are available with either Ø 15 or Ø 20 mm glass centre, with or without a tissue culture-treated surface.

- Made from homogenous borosilicate glass with low bubble and inclusion content
- Transparent, medical grade glue, achromatic
- Dish surface is smooth and free from striations to maximise usable area for growth
- Rim on upper side of the lid mates with the dish brim for easy and secure stacking
- Vented lids for effective gas exchange
- Suitable for all living cell examinations
- Sterilised by electron beam irradiation and non-pyrogenic

Glass thickness: 0,16 to 0,19 mm

ISO 13485:2003 and ISO 9001:2008 certified.

Description	Pk	Cat. No.
Glass bottom dish, Ø15 mm centre, TC-treated	40	734-2903
Glass bottom dish, Ø20 mm centre, TC-treated	40	734-2904
Glass bottom dish, Ø15 mm centre, non treated	40	734-2905
Glass bottom dish, Ø20 mm centre, non treated	40	734-2906



#### **CELL SLIDES IN CULTURE DISHES**

VWR® cell slides are made from medical grade, high transparency PET, which has high strength and is unbreakable. Only the surface of the cell slide has a hydrophilic treatment so adherent cells grow easily, whilst the surrounding culture dish surface is hydrophobic, making it difficult for adherent cells to grow.

- Cell slide transparency and light transmittance are good so cells can be clearly observed under a light or fluorescence microscope
- The use of multiple cell slides in one dish makes it possible to develop multi-factor, multi-index, multi-level in vitro studies under the same condition
  - Choice of Ø 8 or Ø 10 mm cell slides, with 12, 18, 32 or 45 cell slides per culture dish
- One cell culture can prepare multiple cell slides for different studies and objectives, increasing work efficiency
- Tab on the cell slide tilts at an angle, which is convenient for operators to directly clamp, and is engraved numerically, facilitating identification
- Free from DNase and RNase, non pyrogenic

The integrated cell slides are fixed in the culture dish. If further testing is necessary after cell culture, the cell slides can be taken out one by one and placed in a culture plate or other container with the necessary specifications.

Supplied individually and packed in 'peel to open' plastic blister packaging. Each box is matched with individually packed sterile metal tweezers. Both cell slides and tweezers are electron beam irradiated and should be used immediately after opening.

Description	Ø (mm)	Growth area (cm²)	Packed	Pk	Cat. No.
Culture dish, 60 mm, with 18 cell slides, cell growth area 0,50 cm <sup>2</sup> per cell slide	8	9,00	Individually wrapped	48	734-2973
Culture dish, 60 mm, with 12 cell slides, cell growth area 0,79 cm <sup>2</sup> per cell slide	10	9,42	Individually wrapped	48	734-2974
Culture dish, 100 mm, with 45 cell slides, cell growth area 0,50 cm <sup>2</sup> per cell slide	8	22,50	Individually wrapped	24	734-2975
Culture dish, 100 mm, with 32 cell slides, cell growth area 0,79 cm <sup>2</sup> per cell slide	10	25,12	Individually wrapped	24	734-2976



#### **CELL CULTURE DISHES, 3-D SCAFFOLD, VWR®**

VWR 3-D scaffold cell culture dishes, made of polystyrene (GPPS) with polystyrene polymer scaffold, are able to simulate the three-dimensional structure of cells in animals and the human body to maximum effect, providing an ideal environment for cell interaction, maximising culture area and improving yield.

- Highly consistent scaffold (mean fibre diameter of 500 with 260 µm pore spacing) with 3-D channels providing high connectivity, facilitating nutrient transmission, consistent metabolic activity, and the accuracy of culture results
- Cytokine and growth factor resistant surface assists cell secretion collection, saving time and reducing the need for additional separating steps
- Open pores with high connectivity facilitate nutrient absorption and metabolism
- Larger surface area than regular cell culture dishes for greater yields and maximum material efficiency
- Sterilised by electron beam irradiation
- Free from DNase and RNase, non pyrogenic

Applications include studies of the cell-cell interaction mechanism, cell immunotherapy, stem cell therapy, drug screening and the production of cell-based drugs.

ISO 13485:2003 and ISO 9001:2008 certified.

Description	Ø (mm)	Growth area (cm²)	Packed	Pk	Cat. No.
Standard dish, with 1× surface treated scaffold insert (32,0×1,6 mm)	35	43	Individually wrapped	40	734-2967
Standard dish, with 1× surface treated scaffold insert (51,0×1,6 mm)	60	109	Individually wrapped	30	734-2968
Standard dish, with 1× surface treated scaffold insert (67,5×1,6 mm)	70	191	Individually wrapped	30	734-2969



#### MULTIWELL CELL CULTURE PLATES

VWR multiwell cell culture plates are available with a choice of surface treatments.

- Uniform well volume ensures an equal growth surface area
- Well surface is smooth and free from striations to maximise usable growth area
- Raised rims on wells with uniform rings on the lid to reduce evaporation
- Single-position lid reduces the risk of cross-contamination and handling mistakes
- Wells are labelled with alphanumeric code for easy identification
- Suitable for use with all common instruments and automation
- Sterilised by electron beam irradiation
- Free from DNase and RNase, and non pyrogenic

**Increased cell attachment surface treatment:** This highly hydrophilic surface offers a significant advantage over the traditional cell culture surface. The surface treatment can improve cell spreading and attachment, and is suitable for cells that may adhere poorly due to cell phenotype, stressful culture conditions, or those which normally require additional biological coatings for attachment.

**TC-treated:** These plates are vacuum-gas plasma-treated for consistent cell attachment and growth.

**Non-treated:** Non-treated cell and tissue culture plates are ideal for applications where cell attachment is not desired.

Culture area =  $cm^2$  per well.

ISO 13485:2003, ISO 9001:2008

Individually wrapped in peel-to-open paper/plastic blister packs.

Description	Colour	Culture area (cm²)	Recommended working volume (ml)	Sterile	Packed	Pk	Cat. No.
4-well plates, flat bottom, TC-treated	Clear	1,96	1,0	+	1/bag	100	732-2905
4-well plates, flat bottom, non-treated	Clear	1,96	1,0	+	1/bag	100	732-2904
6-well plates, flat bottom, treated for increased cell attachment	Clear	9,6	1,9 – 2,9	+	1/bag	100	734-2798
6-well plates, flat bottom, TC-treated	Clear	9,6	1,9 - 2,9	+	1/bag	100	734-2323
6-well plates, flat bottom, non-treated	Clear	9,6	1,9 – 2,9	+	1/bag	100	734-2777
12-well plates, flat bottom, treated for increased cell attachment	Clear	3,85	0,76 - 1,14	+	1/bag	100	734-2799

#### **CELL CULTURE PLASTICS** DISHES, PLATES AND INSERTS

Description	Colour	Culture area (cm²)	Recommended working volume (ml)	Sterile	Packed	Pk	Cat. No.
12-well plates, flat bottom, TC-treated	Clear	3,85	0,76 – 1,14	+	1/bag	100	734-2324
12-well plates, flat bottom, non-treated	Clear	3,85	0,76 – 1,14	+	1/bag	100	734-2778
24-well plates, flat bottom, treated for increased cell attachment	Clear	1,93	0,38 - 0,57	+	1/bag	100	734-2800
24-well plates, flat bottom, TC-treated	Clear	1,93	0,38 - 0,57	+	1/bag	100	734-2325
24-well plates, flat bottom, non-treated	Clear	1,93	0,38 - 0,57	+	1/bag	100	734-2779
48-well plates, flat bottom, treated for increased cell attachment	Clear	0,83	0,19 - 0,29	+	1/bag	100	734-2801
48-well plates, flat bottom, TC-treated	Clear	0,83	0,19 - 0,29	+	1/bag	100	734-2326
48-well plates, flat bottom, non-treated	Clear	0,83	0,19 - 0,29	+	1/bag	100	734-2780
96-well plates, flat bottom, treated for increased cell attachment	Clear	0,33	0,075 - 0,20	+	1/bag	100	734-2802
96-well plates, flat bottom, TC-treated	Clear	0,33	0,075 - 0,20	+	1/bag	100	734-2327
96-well plates, flat bottom, non-treated	Clear	0,33	0,075 - 0,20	+	1/bag	100	734-2781
96-well plates, round bottom, treated for increased cell attachment	Clear	0,32	0,075 - 0,20	+	1/bag	100	734-2803
96-well plates, round bottom, TC-treated	Clear	0,32	0,075 - 0,20	+	1/bag	100	734-2328
96-well plates, round bottom, non-treated	Clear	0,32	0,075 – 0,20	+	1/bag	100	734-2782
384-well plates, flat bottom, TC-treated	Clear	0,1135	10 – 100 µl	+	1/bag	100	732-2907
384-well plates, flat bottom, non-treated	Clear	0,1135	10 – 100 µl	+	1/bag	100	732-2906



#### **CELL CULTURE INSERT PLATES, PET**

Polyester, sterile, with lid. These insert plates feature a thin, microscopically transparent polyester membrane that is tissue culture-treated for optimal cell attachment and growth.

- Provides excellent cell visibility under phase-contrast microscopy
- Allows assessment of cell viability and monolayer formation
- Can be assembled with 6-, 12- and 24-well plates
- Available in five pore sizes from 0,1 to 8,0  $\mu m$
- Non pyrogenic
- Sterilised by electron beam irradiation

Temperature range: -20 to +50 °C.

ISO 9001, ISO 13485.

Individually packed in recyclable PET.

Inserts are not autoclavable.

Description	Pore size (µm)	Culture area (cm²)	Recommended working volume (ml)	Membrane	Membrane Ø (mm)	Packed	Pk	Cat. No.
6-well insert plate	0,4	4,78	2,6	Translucent	24	6/box, 24/case	24	734-2723
6-well insert plate	1,0	4,78	2,6	Translucent	24	6/box, 24/case	24	734-2719
6-well insert plate	3,0	4,78	2,6	Transparent	24	6/box, 24/case	24	734-2724
6-well insert plate	8,0	4,78	2,6	Transparent	24	6/box, 24/case	24	734-2725
12-well insert plate	0,4	1,12	1,5	Translucent	12	12/box, 48/case	48	734-2734
12-well insert plate	1,0	1,12	1,5	Translucent	12	12/box, 48/case	48	734-2730
12-well insert plate	3,0	1,12	1,5	Transparent	12	12/box, 48/case	48	734-2735
12-well insert plate	8,0	1,12	1,5	Transparent	12	12/box, 48/case	48	734-2736
24-well insert plate	0,4	0,33	0,6	Translucent	6,5	12/box, 48/case	48	734-2746
24-well insert plate	1,0	0,33	0,6	Translucent	6,5	12/box, 48/case	48	734-2741
24-well insert plate	3,0	0,33	0,6	Transparent	6,5	12/box, 48/case	48	734-2747
24-well insert plate	8,0	0,33	0,6	Transparent	6,5	12/box, 48/case	48	734-2748





#### **CELL CULTURE INSERT PLATES, PC**

PC, sterile, with lid. These insert plates feature a thin, semi-transparent polycarbonate membrane with pore sizes from 0,1 to 12,0  $\mu m.$ 

- Treated for optimal cell attachment
- Assembled with well plates
- Resistant to most fixing and staining agents
- Non pyrogenic
- Sterilised by electron beam irradiation

Temperature range: -20 to +50 °C.

ISO 9001, ISO 13485.

Individually packed in recyclable PET.

Inserts are not autoclavable.

Description	Pore size (µm)	Culture area (cm²)	Recommended working volume (ml)	Membrane	Membrane Ø (mm)	Packed	Pk	Cat. No.
6-well insert plate	0,1	4,78	2,6	Translucent	24	6/plate, 4 plates/case	24	734-2715
6-well insert plate	0,4	4,78	2,6	Translucent	24	6/plate, 4 plates/case	24	734-2720
6-well insert plate	1,0	4,78	2,6	Translucent	24	6/plate, 4 plates/case	24	734-2716
6-well insert plate	3,0	4,78	2,6	Transparent	24	6/plate, 4 plates/case	24	734-2721
6-well insert plate	8,0	4,78	2,6	Transparent	24	6/plate, 4 plates/case	24	734-2722
6-well insert plate	12,0	4,78	2,6	Transparent	24	6/plate, 4 plates/case	24	734-2717
12-well insert plate	0,1	1,12	1,5	Translucent	12	12/plate, 4 plates/case	48	734-2726
12-well insert plate	0,4	1,12	1,5	Translucent	12	12/plate, 4 plates/case	48	734-2731
12-well insert plate	1,0	1,12	1,5	Translucent	12	12/plate, 4 plates/case	48	734-2727
12-well insert plate	3,0	1,12	1,5	Transparent	12	12/plate, 4 plates/case	48	734-2732
12-well insert plate	8,0	1,12	1,5	Transparent	12	12/plate, 4 plates/case	48	734-2733
12-well insert plate	12,0	1,12	1,5	Transparent	12	12/plate, 4 plates/case	48	734-2728
24-well insert plate	0,1	0,33	0,6	Translucent	6,5	12/plate, 4 plates/case	48	734-2737
24-well insert plate	0,4	0,33	0,6	Translucent	6,5	12/plate, 4 plates/case	48	734-2742
24-well insert plate	1,0	0,33	0,6	Translucent	6,5	12/plate, 4 plates/case	48	734-2738
24-well insert plate	3,0	0,33	0,6	Transparent	6,5	12/plate, 4 plates/case	48	734-2743
24-well insert plate	8,0	0,33	0,6	Transparent	6,5	12/plate, 4 plates/case	48	734-2744
24-well insert plate	5,0	0,33	0,6	Transparent	6,5	12/plate, 4 plates/case	48	734-2745
24-well insert plate	12,0	0,33	0,6	Transparent	6,5	12/plate, 4 plates/case	48	734-2739



#### PETRI DISHES, GLASS, VWR®

Made from borosilicate 3.3 glass and can, therefore, be sterilised and/or used for applications that require heat. These reusable glass Petri dishes are a green alternative to Petri dishes made from plastic, especially for smaller laboratories.

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

Version	Ø (mm)	Height (mm)	Sterility	Pk	Cat. No.
Without vents	60	20	Non sterile	10	391-0576
Without vents	80	20	Non sterile	10	391-0577
Without vents	100	15	Non sterile	10	391-0578
Without vents	100	20	Non sterile	10	391-0579
Without vents	120	20	Non sterile	5	391-0580
Without vents	150	25	Non sterile	2	391-0581



#### PETRI DISHES, GLASS, VWR®

Soda-lime glass, with lid. For use as disposables. These Petri dishes are a green alternative to disposable Petri dishes made from plastic.

- Good chemical resistance
- Heatable up to 60 °C
- Not suitable for applications related to strong heat or rapid temperature changes
- Ideal for bacterial culture production

Petri dishes, glass

Ø (mm)	Height (mm)	Sterility	Pk	Cat. No.
40	12	Non sterile	18	391-0650
60	15	Non sterile	18	391-0651
70	15	Non sterile	18	391-0652
90	15	Non sterile	18	391-0654
100	15	Non sterile	18	391-0655
100	20	Non sterile	18	391-0656
120	20	Non sterile	18	391-0657
150	25	Non sterile	18	391-0658
180	30	Non sterile	9	391-0659
200	30	Non sterile	10	391-0660
200	50	Non sterile	7	391-0661

#### **Avantor Services**

## *C* avantor™

## Accredited pipette calibration and repair service from Avantor Services

Complete calibration and servicing solutions for single and multi channel (electronic) pipettes and steppers, under ISO 17025 accreditation. In-house or on-site.

Click and ask for a quote.

avantorsciences.com



#### BREATHABLE RAYON FILM SEALS FOR BIOLOGICAL CULTURES

A 139,7  $\mu$ m thick hydrophobic porous film with medical grade adhesive for tissue culture plates, bio-blocks, and 96-well plates where gas exchange is necessary for cell or bacterial growth. These rayon films minimise cross-contamination, spillage and evaporation. They allow uniform air and CO<sub>2</sub> exchange for all wells, unlike plate lids which favour exchange for wells near plate edges. Sterile product is packed in tamper evident bags of 25.

- Non-cytotoxic, highly gas permeable
- Pierceable using pipette tip for sample recovery
- Recommended for temperatures from -20 to +80 °C

Each film L×D: 142,9×82,6 mm for standard size tissue culture plates.

Description	Optical property	Sterile	Thickness (µm)	Pk	Cat. No.
Rayon films	Light blocking	-	139,7	100	391-1261
Rayon films	Light blocking	+	139,7	50	391-1262



#### SEALING FILM FOR BIOLOGICAL CULTURES

Rayon film with medical grade adhesive. Hydrophobic, porous film in sheeted roll format for sealing tissue culture plates, bio-blocks, and 96-well plates where gas exchange is necessary for cell or bacterial growth.

- Recommended temperature range from -20 to +80 °C
- Total thickness 139,7 µm
- Pre-scored films separated by red colour bands for easy application
- Pierceable and breathable
- Pre-cut films on a roll

Each roll contains sufficient film to cover 50 plates.

Description	Optical property	Sterile	Thickness (μm)	Pk	Cat. No.
Starter kit including dispenser and 2 film rolls	Light blocking	-	139,7	1 KIT	731-0313
Starter kit including dispenser and 2 film rolls	Light blocking	+	139,7	1 KIT	731-0314
Replacement rolls	Light blocking	-	139,7	2 Roll	731-0315
Replacement rolls	Light blocking	+	139,7	2 Roll	731-0316



#### SEALING FILM FOR AUTOMATION

Adhesive sealing film rolls constructed on plastic cores, for use with high throughput automated microplate sealers.

- Continous rolls no splices
- Film does not extend beyond edge of plastic core
- Robust static-free packaging provides protection during shipment and facilitates accurate alignment and adhesion

#### Sealing film for cell and tissue culture

Breathable rayon films for cell and tissue culture.

- Non-cytotoxic
- Highly gas permeable
- Easily pierceable for sample recovery

Description	Optical property	Sterile	Temperature range (°C)	Thickness (µm)	Pk	Cat. No.
Sealing film, rayon	Light blocking	-	-20+80	139,7	1 Roll	731-0306



#### PIERCEABLE FILMS FOR ELISA AND GENERAL INCUBATION

Easily pierceable 94,1 µm thick PE films with acrylic adhesive allow direct sample recovery with singe- or multi-channel pipettes and robotic probes.

- Functional temperature range from -40 to +90 °C

Each film L×D: 142,9×82,6 mm



Description	Optical property	Sterile	Thickness (µm)	Pk	Cat. No.
PE films, plain	Transparent	-	94,1	100	391-1263
PE films, plain	Transparent	+	94,1	50	391-1277



#### POLYESTER FILMS WITH COLOUR-CODED MARKING AREAS

Identical to polyester films above, but include a colour dot and white writing area on each end tab for plate identification. End tabs with backing removed adhere to the ends of the plate and are perforated so they can be left in place even if the centre portion of the film is removed. Alternatively, one inscribed colour-coded end tab can be removed and pasted in a laboratory notebook while the other remains on the plate.

- Choice of five colours for easy plate identification
- Applications: Short-term storage, incubation, ELISA
- Recommended temperature range –40 to +120 °C

Description	Optical property	Sterile	Thickness (µm)	Pk	Cat. No.
Films with purple dot	Transparent	-	77,5	100	391-1267
Films with orange dot	Transparent	-	77,5	100	391-1268
Films with red dot	Transparent	-	77,5	100	391-1269
Films with blue dot	Transparent	-	77,5	100	391-1270
Films with assorted dots	Transparent	-	77,5	50	391-1271



#### POLYESTER FILMS FOR ELISA AND GENERAL INCUBATION

These 77,5 µm thick polyester films provide secure sealing around every well, not just a cover, thus minimising evaporation, preventing spillage and well-to-well contamination, and eliminating 'edge effects' in sensitive ELISA assays. Polyester films can also be used with cell culture plates for short-term storage, incubation, and containment of biohazards.

- Functional temperature range from -40 to +120 °C
- Available sterile and non-sterile
- Non-pierceable

Description	Optical property	Sterile	Thickness (µm)	L×W (mm)	Pk	Cat. No.
Sealing films, polyester, 1 tab	Transparent	-	77,5	123,4×79,4	100	391-0620
Sealing film, polyester, roll format, 1 tab	Transparent	-	77,5	121,5×79,4	500	391-0623
Sealing films, polyester, 2 tabs	Transparent	-	77,5	125,1×79,4	100	391-1250
Sealing films, polyester, 2 tabs	Transparent	+	77,5	125,1×79,4	100	391-1251
Sealing films, polyester, 2 tabs	Transparent	-	77,5	125,1×79,4	100	391-1279



Description	Optical property	Sterile	Thickness (μm)	Pk	Cat. No.
1×8 sealing strips	Transparent	-	74,9	400	391-0639
1×8 sealing strips	Transparent	+	74,9	400	391-0640



#### POLYESTER 2×8 PLATE STRIP FILMS

Polyester 2×8 strip films are identical to polyester films in material and adhesive, but designed for sealing only one or two 8-well rows at a time on either strip-well plates or standard plates whenever rows must be selectively protected or accessed. Sterile product is packed in tamper-evident bags of 50/bag.

- Seal selectively, one or two rows at a time
- Can use as secondary seal over previously pierced films
- Recommended temperature range –40 to +120 °C

Each film L×D: 103,2×19,1 mm, including two removable positioning tabs; long dimension with tabs removed is 82,6 mm.

Description	Optical property	Sterile	Thickness (µm)	Pk	Cat. No.
Polyester 2×8 films	Transparent	-	77,5	200	391-1252
Polyester 2×8 films	Transparent	+	77,5	200	391-1253



#### SEALING FILM FOR ELISA AND GENERAL INCUBATION

Polyester film with acrylic adhesive. These non pierceable films in sheeted-roll format are recommended for ELISA tests, general incubation and short-term storage.

- Recommended temperature range from -40 to +120 °C
- Total thickness 64,8 μm (film 38,1 μm, adhesive 26,7 μm)
- Pre-scored films separated by green colour bands for easy application
- Minimise evaporation and prevent contamination between wells
- Pre-cut films on a roll

Each roll contains sufficient film to cover 100 microplates.

Description	Optical property	Sterile	Thickness (µm)	Pk	Cat. No.
Starter kit including dispenser and 2 film rolls	Transparent	-	64,8	1 KIT	731-0309
Starter kit including dispenser and 2 film rolls	Transparent	+	64,8	1 KIT	731-0310
Replacement rolls	Transparent	-	64,8	2 Roll	731-0311
Replacement rolls	Transparent	+	64,8	2 Roll	731-0312



#### POLYESTER SEALING FILM

Polyester film, acrylic adhesive. These 49,5 µm thick polyester films minimise evaporation and prevent spillage and contamination between wells.

- Recommended temperature range from -40 to +120 °C

- Available sterile and non sterile
- Marginally pierceable by single-channel pipette
- Applications: Short-term storage, incubation, ELISA

Each film L×D: 141,0×79,4 mm

Description	Optical property	Sterile	Thickness (μm)	Pk	Cat. No.
Polyester sealing film	Transparent	-	49,5	100	731-0319
Polvester sealing film	Transparent	+	49.5	100	731-0320



Adhesive sealing strips for 8-strip PCR tubes

#### ADHESIVE SEALING STRIPS FOR 8-STRIP PCR TUBES

Easier to apply and remove as compared to standard moulded PCR strip caps.

- Ideal for PCR and storage
- Alternative to strip-caps; no sore thumbs and fingers guaranteed
- Seals a single 8-well row of a 96-well plate or a single PCR 8-tube strip
- Certified DNase- and RNase-free
- 2,0 mil transparent PE film
- Recommended temperature range from -20 to +120 °C

8 strips are pre-cut on a continuous liner for ease of use.

Description	Optical property	Sterile	Thickness (µm)	Pk	Cat. No.
1×8 sealing strips	Transparent	-	92,7	400	391-0638

-
and the second s

#### ADHESIVE PCR FILM SEALS

These heat resistant 74,9  $\mu$ m thick films are designed for thermal cycling applications. Polypropylene films are not pierceable. For PCR applications, where piercing with pipette tips or robotic probes is required for product recovery, use aluminium foil films. For Real-Time PCR applications, where maximum optical clarity is required, use optically-clear polyester films.

- Recommended for temperatures from -40 to +120 °C
- Certified free from DNase, RNase and nuclease

Each film L×D: 135,1×79,4 mm with sufficient sealing area for all PCR plates.

Length with end tabs removed: 123,1 mm

\* stronger, thicker adhesive and cut to fit raised rim plates

Description	Optical property	Sterile	Thickness (µm)	Pk	Cat. No.
Adhesive PCR film seals	Transparent	-	74,9	100	391-1254
Adhesive PCR film seals	Transparent	+	74,9	100	391-1255
Adhesive PCR film strips to seal 2×8 wells	Transparent	-	74,9	200	731-0321



#### SEALING FILMS, NON-TACKY, FOR QPCR, STORAGE AND CRYSTALLISATION

50 µm polyolefin films with 50 µm inert encapsulated silicone adhesive. Especially suited for qPCR, storage and protein crystallisation applications. The encapsulated silicone adhesive is non-tacky until pressed against the sealing surface, at which time adhesive is released only in sealing areas to form the strongest available heat resistant seal around each well on the plate.

- High optical clarity, minimal to no autofluorescence
- Chemically inert; no extractables except at extreme pH; DMSO resistant for HTS
- Heat resistant, recommended for temperatures from -80 to +105 °C
- Certified free from DNase, RNase, and nucleic acid

Sized to fit within the edges of raised rim 96-well plates (76,2×133,4 mm). Two end tabs assist in positioning the film on the plate.

Description	Optical property	Sterile	Thickness (µm)	Pk	Cat. No.
Sealing film	Optically clear	-	101,6	100	391-0189
Sealing film	Optically clear	+	101,6	50	391-0624
Sealing film	Optically clear	-	101,6	25	391-0644



Aluminium foil seals for long-term storage

#### ALUMINIUM FOIL SEALS FOR LONG-TERM STORAGE, CHEMICAL RESISTANT (DMSO)

Aluminum foils for use with 96-well or 384-well plates. Foils offer excellent chemical resistance (DMSO).

- Ideal for long-term storage
- Certified DNase- and RNase-free
- Temperature range is -80 to +120 °C
- Pierceable
- Light blocking
- No adhesive residue upon removal

391-0621 fits inside the rim of raised rim plates. 391-0642 fits all flat top plates.

Description	Optical property	Sterile	Thickness (µm)	Pk	Cat. No.
Sealing foil	Light blocking	-	78,8	100	391-0621
Sealing foil, large	Light blocking	-	78,8	100	391-0642



#### ALUMINIUM FOIL SEALS FOR COLD STORAGE

Aluminium foils with biologically inert adhesive. These foils are easily pierced by manual or automated pipette tips, for sample recovery without generation of aerosols or cross-contamination.

- Recommended for temperatures from -80 to +120 °C
- Not recommended for PCR

Each foil L×D: 133×82 mm

Description	Optical property	Sterile	Thickness (µm)	Pk	Cat. No.
Aluminium foils	Light blocking	-	101,6	100	391-1275
Aluminium foils	Light blocking	+	101,6	50	391-1296



#### BLACK FILM SEALS FOR FLUORESCENCE AND PHOTOPROTECTION

These films are 240  $\mu$ m thick black vinyl with adhesive for use with 96-well, 384-well, and 1536-well black microplates. They fit within the edges of raised rim plates and may be applied to either the plate top or bottom. The light blocking and absorbing properties of these films make them ideal for reducing stray light and crosstalk in fluorescence applications and for protecting light-sensitive samples in storage.

- Edge cut outs assist in positioning around ribs on the plate bottom
- Split backing aids in applying the film properly
- No end tabs
- Recommended temperature range -40 to +80 °C

Each film L×D: 114×76 mm

Description	Optical property	Sterile	Thickness (µm)	Pk	Cat. No.
Black vinyl films	Light blocking	-	240,0	50	391-1291



#### WHITE FILMS FOR LUMINESCENCE AND MICROSCOPY

These films are 240 µm thick white vinyl with adhesive, for use with white microplates. Light reflective properties of the film, when used to seal clear bottom plates, maximise the sensitivity of bioluminescence and chemiluminescence assays in bottom-reading Luminometers. White films have also been used as a backing matrix for microscopy of punch-out samples from filter plates.

- Backing split on the long dimension aids in application of film to plates
- Film can be applied to either top or bottom
- No end tabs
- Recommended temperature range –40 to +80 °C

Each film L×D: 116×76 mm.

Description	Optical property	Sterile	Thickness (µm)	Pk	Cat. No.
White vinyl films	Light blocking	-	240,0	50	391-1293



Aluminum sealing strips for 8-strip PCR tubes

#### **ALUMINUM SEALING STRIPS FOR 8-STRIP PCR TUBES**

Easier to apply and remove as compared to standard moulded PCR strip caps.

- Ideal for PCR
- User-friendly alternative to strip-caps; no sore thumbs and fingers guaranteed
- Seals a single 8-well row of a 96-well plate or a single PCR 8-tube strip
- Certified DNase- and RNase-free
- 2,0 mil pierceable foil
- Recommended temperature range from -20 to +120 °C

6 strips are pre-cut on a continuous liner for ease of use.

Description	Optical property	Sterile	Thickness (µm)	Pk	Cat. No.
1×8 sealing strips	Light blocking	-	87,6	300	391-0637



#### ALUMINIUM FOIL SEALS FOR PCR AND STORAGE (96- AND 384-WELL PLATES)

Aluminium foils, 75,7 µm thick, for use with 96- or 384-well plates. Fit inside the rim of raised rim plates. These foils have one partial-width end tab. Available non sterile only.

- Recommended for temperatures from -80 to +120 °C
- Certified free from DNase, RNase and nucleic acids

Each foil L×D: 127,0×77,8 mm, including single 9,5 mm end tab.

Description	Optical property	Sterile	Thickness (µm)	Pk	Cat. No.
Aluminium foils for 96-well plates	Light blocking	-	75,7	100	391-1282
Aluminium foils for 384-well plates	Light blocking	-	75,7	100	391-1281



#### **ALUMINIUM FOIL DISPENSERS, VWR®**

Pure aluminium 99,0 to 99,5%.

- Comes in a practical dispenser
- Available in various widths and thicknesses
- Roll length to suit various requirements

Ideal for packaging, covering and insulation.

Width (mm)	Length (m)	Thickness (µm)	Pk	Cat. No.
280	120	15	1	291-0044
430	120	15	1	291-0045
280	60	30	1	291-0046
430	60	30	1	291-0047



#### PIERCEABLE FILMS FOR ROBOTICS, CLEAR-ZONE

With a polyethylene top layer and inert white polypropylene and acrylic adhesive sublayer, this easy piercing sealing film allows direct sample recovery with single- or multi-channel pipettes and robotic probes.

- Clear zone above each well is free of adhesive
- Minimise sample exposure to adhesive
- Recommended temperature range -40 to +90 °C

The adhesive-free zone above each well prevents adhesive fouling of the pipette tip or robotic probe, minimising the amount of adhesive that comes into contact with the sample. Suitable for 96-well plates only.

Description	Optical property	Sterile	Thickness (µm)	Pk	Cat. No.
Clear-Zone films	Transparent	-	96,6	50	391-1264



#### PRECUT PIERCEABLE VINYL FILMS FOR ROBOTICS

These 106,7 µm thick vinyl films with 20 µm adhesive layer are designed for temporary protection of samples in 96-well plates from contamination and evaporation.

- Protect samples and limit evaporation short-term
- Pre-cut flaps bend inward without fouling probes or tips
- Flaps close for continued protection after sampling
- Recommended temperature range -40 to +90 °C

A pre-cut pattern over each well separates the film into four flaps that bend inward easily when pushed by a robotic probe or pipette tip, allowing access to the sample without coring or adhesive fouling. The resilient flaps regain their original position after sampling for continued sample protection. For long-term sample protection after sampling, a continuous film should be applied as a second layer. Suitable for sealing all standard 96-well plates.

Each film L×D: 145,5×79,4 mm

Description	Optical property	Sterile	Thickness (µm)	Pk	Cat. No.
Pre-cut vinyl films	Transparent	-	106,7	100	391-1286
Pre-cut vinyl films	Transparent	+	106,7	50	391-1287



Cell chamber

#### **CELL CHAMBERS, VWR®**

VWR cell chambers, made from medical grade, general purpose polystyrene (GPPS) and with vented cap, are ideal for large-scale cell culture.

- Available in 1-, 2-, 5- and 10-tray versions for easy scale-up
- Surface treated for optimal cell attachment and growth
- Hydrophobic membrane (pore size of 0,22 µm) avoids potential contamination during gas exchange
- Does not absorb cytokines and growth factors, and cell harvesting by conventional trypsin digestion method is possible
- Sterilised by irradiation
- Free from DNase and RNase, non pyrogenic

Туре	Recommended working volume (ml)	Growth area (cm²)	Pk	Cat. No.
1 level	130 – 200	656	8	734-2980
2 levels	260 – 400	1296	6	734-2981
5 levels	650 – 1000	3216	4	734-2982
10 levels	1300 – 2000	6416	2	734-2983



Roller bottle

#### **ROLLER BOTTLES, VWR®**

Roller bottles are optimal vessels for large scale cell growth and multiplication, that are suitable for both research and manufacturing applications, including the growth of mammalian cells for virus propagation and bioproduction.

- Caps feature large knurls for easy grip
- Two different cap styles can be used in both open and closed systems
- Every bottle features silk-printed graduations
- Non pyrogenic
- Temperature range: -20 to +50 °C
- Every case features a labelled lot number
- Sterilised by electron beam irradiation

These vessels suit automation and fit all common roller bottle instrumentation. Vessels are available with a large area surface area for cell growth of 490, 850 and 1900 cm<sup>2</sup> for adhesion cultures and 1 or 2 litre volume, for suspension cultures. The bottles are surface treated for optimal cell attachment. Bottles with smooth surface are free from striations, to maximise usable growth area; those with ribbed surface offer a larger surface area for cell growth.

#### ISO 9001, ISO 13485

Note: Bottles are not autoclavable

\*The product(s) on this page are outside the scope of the EU Directive 2019/904

Description	Capacity (ml)	Growth area (cm²)	Packed	Pk	Cat. No.
Treated surface, plug-seal cap	1000	490	2/bag, 40/case	40	734-2749
Treated surface, plug-seal cap	2000	850	20/bag, 20/case	20	734-2750
Treated surface, vented cap	2000	850	2/bag, 40/case	40	734-2752
Treated surface, plug-seal cap	2000	850	2/bag, 40/case	40	734-3368
Treated surface, ribbed, plug-seal cap	2000	1900	2/bag, 40/case	40	734-3369
Treated surface, plug-seal cap	5000	1700	1/bag, 12/case	12	734-3248
Treated surface, vented cap	5000	1700	1/bag, 12/case	12	734-3249
Treated surface, plug-seal cap	5000	4250	1/bag, 12/case	12	734-3250
Treated surface, vented cap	5000	4250	1/bag, 12/case	12	734-3251



#### J.T.BAKER® PLATE 96

J.T.Baker Plate 96 round well plates made from PS are ideal for ELISA applications.

- Alphanumeric coding assists with identification of samples
- Plate shape significantly reduces sample carry-over
- Standardised dimensions (128×85 mm) ensure compatibility with most common laboratory machines

J.T.Baker® Plate 96 - round wells, polystyrene, clear, U-bottom

Description	Colour	Sterile	Well volume (ml)	Pk	Cat. No.
PS plates, U-bottom	Clear	-	0,3	100	43001-0117
PS plates, V-bottom	Clear	-	0,24	100	43001-0118
PS plates, F-bottom	Clear	-	0,35	100	43001-0119
PP plates, U-bottom	Transparent	-	0,3	64	43001-0600



Polystyrene assay plates, 96-well, glass bottom, black

#### POLYSTYRENE ASSAY PLATES, 96- AND 384-WELL, VWR®

Manufactured from high quality crystal polystyrene. They are ideal for routine assays, mixing and storage.

- Flat bottom ideal for microscopic applications
- V-bottom minimising residual liquid
- U-bottom for optimising sample/cell collection

VWR assay plates are available in clear, white or black polystyrene, with solid or clear bottom.

The bottom of the clear bottom plates is just 0,4 mm thick and extremely flat (±0,1 mm tolerance), ensuring high measurement precision and elimination of reading errors when performing cell-based assays using fluorescent or luminescent imaging. The tissue culture-treated plates are supplied lidded and sterile, in individual bags.

The bottom of the glass bottom plates is 175  $\mu$ m thick, extremely flat with a tolerance of ±15  $\mu$ m. They offer a higher performance than standard polystyrene plates for fluorescence assays, luminescence detection, scintillation counting and high resolution microscopy using confocal imaging.

The solid bottom plates are suitable for absorbance, fluorescence, luminescence and scintillation applications.

Description	Colour	Well volume (µl)	No. of wells	Sterile	Pk	Cat. No.
Clear plates						
V-bottom	Clear	200	96	+	100	732-3725
V-bottom	Clear	200	96	-	100	732-3722
U-bottom	Clear	270	96	+	100	732-3723
U-bottom	Clear	270	96	-	100	732-3720
Flat bottom	Clear	350	96	+	100	732-3724
Flat bottom	Clear	350	96	-	100	732-3721
Flat bottom	Clear	120	384	-	100	732-3736
Solid bottom plates						
Flat bottom	White	350	96	-	100	732-3728
Flat bottom, with lid, TC-treated	White	350	96	-	50	732-3729
Flat bottom	Black	350	96	-	50	732-3730
Flat bottom, with lid, TC-treated	Black	350	96	-	50	732-3731
Flat bottom, with lid, TC-treated	Black	350	96	+	100	732-3732
Flat bottom, with lid, TC-treated	White	350	96	+	100	732-3733
Flat bottom	Black	120	384	-	50	732-3734
Flat bottom	White	120	384	-	50	732-3735
Clear bottom plates						
Flat bottom	Black	350	96	-	100	732-3738
Flat bottom, with lid, TC-treated	Black	350	96	+	100	732-3737
Flat bottom	White	350	96	-	100	732-3739
Flat bottom, with lid, TC-treated	White	350	96	+	100	732-3740
Flat bottom, with lid, TC-treated	White	120	384	+	100	732-3749
Flat bottom, with lid, TC-treated	Black	120	384	+	100	732-3750
Glass bottom plates						
Flat bottom, with lid	Black	350	96	-	10	732-3741
Flat bottom, with lid	Black	350	96	+	10	732-3743
Flat bottom, with lid	White	350	96	-	10	732-3742
Flat bottom, with lid	White	350	96	+	10	732-3744
Flat bottom, with lid	Black	120	384	-	10	732-3745
Flat bottom, with lid	Black	120	384	+	10	732-3746
Flat bottom, with lid	White	120	384	-	10	732-3747
Flat bottom, with lid	White	120	384	+	10	732-3748



Immunoassay microplates

#### IMMUNOASSAY MICROPLATES AND STRIPS, VWR®

Designed specifically for immunoassay applications.

- Available in 96-well or strip plate format
- Flat bottom for optimal detection
- High quality crystal polystyrene
- Medium binding: 100 to 200 ng IgG/cm<sup>2</sup>
- High binding: 400 to 500 ng IgG/cm<sup>2</sup>
- 96-well plate or 8-well strips in 12×8 frame

Highly pure polystyrene microplates designed and optimised specifically for affinity binding assays such as ELISA's. These plates are available with high-binding and medium-binding surfaces.

Case of 50.

Description	Colour	Well volume (µl)	Pk	Cat. No.
Microplates, 96-well				
96-well plate, high binding	Clear	400	50	732-3726
96-well plate, medium binding	Clear	400	50	732-3727
Strip plates				
Strip plate, 12×8, high binding	Clear	360	50	732-3751
Strip plate, 12×8, medium binding	Clear	360	50	732-3752

### **∧** avantor<sup>™</sup>

### From cell to theraphy

Whether for basic research or biopharmaceutical production, we have the right solutions for your entire workflow, allowing you to focus on innovation.







VWR® aquare/octagonal media bottles, polycarbonate

#### MEDIA BOTTLES WITH SCREW CAP

PC, autoclavable, narrow mouth bottles with standard PP caps.

- Ideal for steam sterilisation
- Safe and shatterproof
- Chemically inert

VWR media bottles are an ideal replacement for all borosilicate glass bottles. They are specifically designed for every laboratory application requiring terminal sterilisation (autoclaving), storage, transportation and production of laboratory biological fluids. These bottles are available in square and round shapes to accommodate various packaging needs.

The closure system is to be guaranteed leakproof, and the sealing ring allows convenient shrink-wrapping of the caps. Each bottle is carefully produced and quality controlled for uniform wall thickness, clarity, graduation and leakproof closure.

Optional septum cap or vented cap with PTFE membrane is also available.

\*The product(s) on this page are outside the scope of the EU Directive 2019/904

Description	Capacity (ml)	Thread	Pk	Cat. No.
Clear, octagonal	125	38-430	24	215-2203
Clear, octagonal	250	38-430	24	215-2204
Clear, octagonal	500	38-430	12	215-2205
Clear, octagonal	1000	38-430	12	215-2206
Clear, round	300	38-430	96	215-2924
Clear, round	500	38-430	12	215-2210
Clear, round	1000	38-430	12	215-2211

Description	Pk	Cat. No.
Accessories for media bottles with screw cap, VWR®		
Standard cap, blue, 38 - 430	96	215-2207
Septum cap, blue, 38 - 430	96	215-2212



Individually packed square PET media bottles, sterile

#### BOTTLES, PET, SQUARE, WITH SCREW CAP, VWR®

Square PET media bottles that are designed for packaging, storing, or transporting powder and liquid samples.

- Square design allows efficient use of storage space
- PET resin is lightweight, break-resistant and transparent
- Bottles feature moulded-in graduations
- EB Sterilisation Sterility Assurance Level (SAL) of 10<sup>-6</sup> (ISO 11137)
- Non pyrogenic

VWR square PET media bottles are manufactured in a Class 100 000 cleanroom environment. Manufactured under EN ISO 13485:2016.

Bottles meet the requirements of BSE/TSE, the BPA statement and heavy metals ROHS.

Bottles are available individually wrapped, or in tray packs (individually wrapped within two outer packs per case).

Capacity (ml)	Ø ext. (mm)	Height (mm)	Colour	Cap colour	Version	Pk	Cat. No.
250	59,3 ±0,8	139,5 ±1	Transparent	White	Sterile, individually packed	100	391-0626
500	77,2 ±0,8	172,4 ±1,2	Transparent	White	Sterile, individually packed	100	391-0627
1000	93 ±1,5	212,3 ±1,5	Transparent	White	Sterile, individually packed	48	391-0628
250	59,3 ±0,8	139,5 ±1	Transparent	White	Sterile, tray packed (24/tray, 2 trays/case)	48	391-0629
500	77,2 ±0,8	172,4 ±1,2	Transparent	White	Sterile, tray packed (24/tray, 2 trays/case)	48	391-0630
1000	93 ±1,5	212,3 ±1,5	Transparent	White	Sterile, tray packed (12/tray, 2 trays/case)	24	391-0631



WR

#### LABORATORY BOTTLES, NARROW NECK, WITH SCREW CAP

Borosilicate 3.3 glass, with PP screw cap and pouring ring.

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

Economical alternative for a wide range of laboratory applications. Round, with graduations, DIN GL 32 or GL 45 thread.

ISO 4796

Capacity (ml)	Thread	Ø ext. (mm)	Height (mm)	Pk	Cat. No.
50	GL 32	46	91	10	215-3261
100	GL 45	56	100	10	215-1592
250	GL 45	70	138	10	215-1593
500	GL 45	86	176	10	215-1594
1000	GL 45	101	225	10	215-1595
2000	GL 45	136	260	1	215-1596
5000	GL 45	181	330	1	215-0057
10000	GL 45	227	410	1	215-0058
20000	GL 45	288	505	1	215-0059

#### BOTTLES, NARROW NECK, WITH SCREW CAP, VWR®

Amber borosilicate 3.3 glass with PP screw cap and pouring ring.

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

The economical alternative for a wide range of laboratory applications. Round, with graduations, DIN GL 45 thread, pouring ring, and blue PP screw cap. Amber coloured to protect light-sensitive materials.

Purely external application of the colour ensures unchanged glass properties on the inner surface of the bottles.

ISO 4796

Capacity (ml)	Thread	Ø ext. (mm)	Height (mm)	Pk	Cat. No.
50	GL 32	46	91	1	215-3275
100	GL 45	56	105	1	215-2325
250	GL 45	70	143	1	215-2326
500	GL 45	86	181	1	215-2327
1000	GL 45	101	230	1	215-2328
2000	GL 45	136	265	1	215-2329
5000	GL 45	181	336	1	215-2330
10000	GL 45	227	416	1	215-2337
20000	GL 45	288	512	1	215-2338



#### LABORATORY BOTTLES, WIDE NECK

Bottles constructed of borosilicate 3.3 glass, in clear or amber colour.

- Excellent chemical resistance, high temperature resistance
- 80 mm opening allows easy cleaning
- Minimal thermal expansion giving relatively high resistance to temperature changes

The large opening can even accommodate large volume funnels, giving easy access to scoops or spatulas.

Amber to protect light-sensitive materials.

In compliance with DIN ISO 4796-1 standards.

Supplied with screw cap and pouring ring.

The bottles are packed in shrinked-wrapped modules.

Capacity (ml)	Thread	W×D×H (mm)	Description	Pk	Cat. No.
Clear glass					
500	GL 80	94×94×139	With PP screw cap	1	215-3743
1000	GL 80	105×105×185	With PP screw cap	1	215-3744
2000	GL 80	115×115×258	With PP screw cap	1	215-3745
5000	GL 80	160×160×357	With PP screw cap	1	215-3746
Amber glass					
500	GL 80	94×94×139	With LDPE screw cap	1	215-3747
1000	GL 80	105×105×185	With LDPE screw cap	1	215-3748
2000	GL 80	115×115×258	With LDPE screw cap	1	215-3749
5000	GL 80	160×160×357	With LDPE screw cap	1	215-3773



#### LABORATORY BOTTLES, COATED

Made from clear borosilicate 3.3 glass, with transparent, long life plastic coating. The coating protects the bottle from scratches, splinters and leaking liquids.

- Very good chemical resistance
- High temperature resistance and high resistance to temperature changes
- Autoclavable at 121 or 134 °C
- Delivered with mounted pouring ring and blue PP screw cap

Laboratory bottle, clear

Capacity (ml)	Thread	Ø ext. (mm)	Height (mm)	Pk	Cat. No.
100	GL 45	56	100	1	215-4261
250	GL 45	70	138	1	215-4262
500	GL 45	86	176	1	215-4263
1000	GL 45	101	225	1	215-4264
2000	GL 45	136	260	1	215-4265
5000	GL 45	181	330	1	215-4266



Amber-coated laboratory bottle

#### LABORATORY BOTTLES, COATED

Made from amber borosilicate 3.3 glass, with transparent, long life plastic coating. The coating protects the bottle from scratches, splinters and leaking liquids.

- Very good chemical resistance
- High temperature resistance and high resistance to temperature changes
- Amber coloured, especially for use with light-sensitive liquids
- Autoclavable at 121 or 134 °C
- Delivered with mounted pouring ring and blue PP screw cap

The economical alternative for a wide range of laboratory applications. Purely external application of the colour ensures unchanged glass properties on the inner surface of the bottles.

Capacity (ml)	Thread	Ø ext. (mm)	Height (mm)	Pk	Cat. No.
100	GL 45	56	100	1	215-4267
250	GL 45	70	138	1	215-4268
500	GL 45	86	176	1	215-4269
1000	GL 45	101	225	1	215-4270
2000	GL 45	136	260	1	215-4271
5000	GL 45	181	330	1	215-4272



Flask, 4 baffles, 250 ml

#### **ERLENMEYER FLASKS WITH FOUR BAFFLES, VWR®**

Borosilicate glass 3.3, with 4 baffles, GL 45 thread and blue GL 45 screw cap made from PP.

- High chemical and thermal resistance
- Four equi-distant baffles providing consistent agitation when used with orbital shakers
- Ideal for bacterial culture production
- Complete with blue PP GL 45 screw cap
- Autoclavable at 121 °C

VWR baffled flasks are delivered with a standard GL 45 screw cap which can be replaced with the GL 45 membrane screw cap, with 0,2 µm PTFE membrane from DWK (Cat. No. SCOT291182809) to ensure optimal gas exchange for optimal bacteria growth.

Capacity (ml)	Height (mm)	Ø ext. (mm)	Thread	Pk	Cat. No.
250	130	82	GL 45	1	214-0436
500	165	101	GL 45	1	214-0437
1000	205	129	GL 45	1	214-0438
2000	265	161	GL 45	1	214-0439

### VWR Volumetric flasks

Volumetric flasks for precise measurement in solution preparation and dilution are available at VWR. Select models of borosilicate glass, nalgene, or other plastics that conform to Class A or Class B requirements.

Purchase volumetric flasks individually or by the case.

For more info visit vwr.com







#### CARBOYS, NARROW NECK, ROUND, WITH SCREW CAPS, VWR®

LDPE, HDPE or PP, translucent with purple screw caps. Use for storing and dispensing solutions and media. Round carboys feature an integrated shoulder handle. Graduated to identify the volume dispensed.

#### LDPE carboys

- Ideal for high purity applications as they have high resistance to chemicals (widely used in ophthalmic product range, like eye droppers and nasal sprays).
- Ideal resin for cold storage (down to -80 °C), working temperature -80 to +80 °C
   Resistant to physical impact (will not break even if it falls accidentally, wheras PP
- carboys may lead to cracking at negative temperatures)
- LDPE products will bounce back to its original shape, as it is a highly flexible material
  Widely used in pharma industries

#### **HDPE carboys**

- High density polyethylene (HDPE), disposable carboys are ideal for storing and transfer of fluids and pharmaceutical/biotech reagents.
- Good for cold storage (down to –80 °C), working temperature of –80 to +120 °C
- High impact strength even at negative temperatures
- Widely used for long storage periods due to high chemical resistance
- Widely used in food and milk industries

#### **PP carboys**

- Ideal for sterile water storage, polypropylene (PP) carboys can be autoclaved before refilling to stop recurring bacterial growth.
- Excellent chemical resistance
- Working temperature: 0 to +135 °C
- Autoclavable

**Note:** Polypropylene carboys are autoclavable. LDPE and HDPE carboys are not autoclavable. Always remove cap from carboy before autoclaving.

#### Resin meets US FDA 21 CFR, U SP Class VI.

Capacity	Туре	Neck I-Ø (mm)	Thread (mm)	Pk	Cat. No.
LDPE carboys					
10 L	Non sterile	65	83	1	216-1704
15 L	Non sterile	65	83	1	216-1918
20 L	Non sterile	65	83	1	216-1706
25 L	Non sterile	65	83	1	216-1908
50 L	Non sterile	65	83	1	216-1738
HDPE carboys					
10 L	Non sterile	65	83	1	216-1736
20 L	Non sterile	65	83	1	216-1737
20 L	Sterile	65	83	1	216-1729
PP carboys					
10 L	Non sterile	65	83	1	216-1703
20 L	Non sterile	65	83	1	216-1701
50 L	Non sterile	65	83	1	216-1702

Description	Pk	Cat. No.
Spare caps for VWR® carboys		
Cap for narrow mouth VWR carboys	1	216-1840



#### CARBOYS, NARROW NECK, HEAVY-DUTY, ROUND, WITH SCREW CAP

PP, translucent, with purple screw cap.

- Excellent chemical resistance
- Suitable for use from 0 to +135 °C
- Graduated to identify the volume dispensed
- Carboys feature an integrated shoulder handle

Use for storing and dispensing solutions and media. Ideal for sterile water storage, polypropylene carboys can be autoclaved before refilling to stop recurring bacterial growth.

Note: Always remove the cap from the carboy before autoclaving.

Resin meets US FDA 21 CFR, USP Class VI.

Capacity	Neck I-Ø (mm)	Thread (mm)	Pk	Cat. No.
10 L	65	83	1	216-1709
20 L	65	83	1	216-1707
Description			Pk	Cat. No.
Spare caps for VWR <sup>®</sup> carboys				
Cap for narrow mouth VWR carboys			1	216-1840



#### CARBOYS, WIDE NECK, RECTANGULAR, WITH STOPCOCK, VWR®

HDPE or PP translucent, with purple screw caps.

Use for storing and dispensing solutions and media. Rectangular carboys feature a heavy-duty stainless steel handle for easy carrying and pouring. Carboys are leakproof on standard test conditions. Graduated to identify the volume dispensed. Stopcocks are tied to the handle and require hand assembly for use. No tools are necessary.

#### **HDPE carboys**

- These high-density polyethylene (HDPE), disposable carboys are ideal for storing and transfer of sterile fluids and pharmaceutical/biotech reagents
- Good for cold storage (down to -80  $^{\circ}$ C), working temperature of -80 to +120  $^{\circ}$ C
- High impact strength, even at negative temperatures
- Widely used for long storage due to high chemical resistance property
- Widely used in food and milk industries

#### **PP carboys**

- Ideal for sterile water storage, polypropylene carboys can be autoclaved before refilling to stop recurring bacterial growth.
- Excellent chemical resistance
- Working temperature: 0 to +135 °C
- Autoclavable

**Note:** Polypropylene carboys are autoclavable. HDPE carboys are not autoclavable. Always remove stopcock and cap from the carboy before autoclaving.

Resin meets US FDA 21 CFR, USP Class VI.

Capacity	Neck I-Ø (mm)	Thread (mm)	Pk	Cat. No.
HDPE				
10 L	85	100	1	216-1719
20 L	83	100	1	216-1700
PP				
10 L	85	100	1	216-1735
20 L	85	100	1	216-1732

Description	Pk	Cat. No.
Stopcock for VWR® carboys		
Stopcock, with adapter for tubing connection and stopper for long storage for VWR carboys	1	216-1745
Spare caps for VWR <sup>e</sup> carboys		
Cap for wide mouth VWR carboys	1	216-1841



#### CARBOYS, WIDE NECK, ROUND, WITH SCREW CAPS, VWR®

LDPE or PP, translucent with purple screw caps.

Use for storing and dispensing solutions and media. Round carboys feature an integrated shoulder handle. Graduated to identify the volume dispensed.

#### LDPE carboys

- Ideal for high-purity applications, as they have high resistance to chemicals (widely used in ophthalmic products like eye droppers and nasal sprays).
- Preferred resin for cold storage (down to -80 °C), working temperature -80 to +80 °C
- Resistant to physical impacts (will not break even if it falls down accidentally,
- whereas PP carboys may lead to cracking at negative temperatures)
- LDPE product, will bounce back to their original shape as highly flexible material
- Widely used in pharma industries

#### **PP carboys**

- For sterile water storage, polypropylene (PP) carboys can be autoclaved before refilling to stop recurring bacterial growth.
- Excellent chemical resistance
- Working temperature 0 to +135 °C
- Autoclavable

Resin meets US FDA 21 CFR, U SP Class VI.

Polypropylene carboys are autoclavable. LDPE carboys are not autoclavable. Always remove the spigot and cap from the carboy before autoclaving.

Neck I-Ø (mm)	Thread (mm)	Pk	Cat. No.
85	100	1	216-1708
85	100	1	216-1919
83	100	1	216-1730
83	100	1	216-1733
	Neck I-Ø (mm) 85 85 83 83	Neck I-Ø (mm)         Thread (mm)           85         100           85         100           85         100           83         100           83         100	Neck I-Ø (mm)         Thread (mm)         Pk           85         100         1           85         100         1           85         100         1           83         100         1           83         100         1

Description	Pk	Cat. No.
Stopcock for VWR® carboys		
Stopcock, with adapter for tubing connection and stopper for long storage for VWR carboys	1	216-1745
Spare caps for VWR® carboys		
Cap for wide mouth VWR carboys	1	216-1841



### VWR<sup>®</sup> Carboys Maximize storage & save space

- Large handles on top and molded handles on the base provide a secure grip top make lifting, carrying, and pouring easy
- Versatile caps offer the ultimate in connection flexibility

For more info visit vwr.com







Round carboys with spigot

#### CARBOYS, NARROW NECK, ROUND, WITH STOPCOCK AND SCREW CAP, VWR®

LDPE/HDPE or PP, translucent with purple screw caps. Use for storing and dispensing solutions and media. Round carboys feature an integrated shoulder handle. Graduated to identify the volume dispensed.

#### LDPE carboys

- Ideal for high-purity applications as they have high resistance to chemicals (e.g. widely used in ophthalmic product range, like eye droppers and nasal sprays)
- Ideal resin for cold storage (down to -80 °C), working temperature -80 to +80 °C
   Resistant to physical impact (will not break even if it falls down accidentally,
- whereas PP carboys may lead to cracking at negative temperatures)
  LDPE products will bounce back to their original form as LDPE is a highly flexible
- material
- Widely used in pharma industries

#### **HDPE carboys**

- High-density polyethylene (HDPE), disposable carboys are ideal for storing and transfer of sterile fluids and pharmaceutical/biotech reagents.
- Good for cold storage (down to -80 °C), working temperature -80 to +120 °C
- High impact strength, even at negative temperatures
- Widely used for long storage due to high chemical resistance
- Widely used in food and milk industries

#### **PP carboys**

- Ideal for sterile water storage, polypropylene (PP) carboys can be autoclaved before refilling to stop recurring bacterial growth.
- Excellent chemical resistance
- Working temperature: 0 to +135 °C
- Autoclavable

**Note:** Polypropylene carboys are autoclavable. LDPE carboys are not autoclavable. Always remove the stopcock and cap from the carboy before autoclaving.

#### Resin meets US FDA 21 CFR, U SP Class VI.

Capacity	Thread (mm)	Pk	Cat. No.
LDPE carboys			
10 L	83	1	216-1731
20 L	83	1	216-1717
25 L	83	1	216-1899
50 L	83	1	216-1734
HDPE carboys			
25 L	83	1	216-1928
PP carboys			
10 L	83	1	216-1710
20 L	83	1	216-1705
50 L	83	1	216-1718

Description	Pk	Cat. No.
Stopcock for VWR <sup>e</sup> carboys		
Stopcock, with adapter for tubing connection and stopper for long storage for VWR carboys	1	216-1745
Spare caps for VWR® carboys		
Cap for narrow mouth VWR carboys	1	216-1840



#### CARBOYS, ROUND, SANITARY NECK, PP

Ideal for bioprocessing applications. Features a sanitary flange (76 mm) that accepts standard TC fittings.

- Convenient shoulder handles
- Very good chemical resistance
- Autoclavable

Resin meets US FDA 21 CFR, USP Class VI.

Sanitary neck carboy 20 L

Capacity	Neck-Ø (mm)	Pk	Cat. No.
20 L	76	1	216-1897



#### CARBOYS, WIDE NECK, RECTANGULAR, VWR®

These carboys are useful for storing and dispensing solutions and media.

- High chemical resistance
- Ideal for sterile water storage
- Graduated to identify the volume dispensed

PP carboys can be autoclaved before refilling to stop recurring bacterial growth. HDPE carboys are for use from –100 to +100  $^\circ \rm C.$ 

Note: Always remove the cap from the carboy before autoclaving.

Resin meets US FDA 21 CFR, USP Class VI.

Capacity	Neck-Ø (mm)	Pk	Cat. No.
HDPE carboys			
20 L	100	1	216-1927
PP carboys			
10 L	100	1	216-1898
20 L	100	1	216-1907
Description		Pk	Cat. No.
Spare caps for VWR <sup>®</sup> carboys			
Cap for wide mouth VWR carboys		1	216-1841



Reinforced silicone hose

#### SINGLE-USE HIGH PRESSURE TRANSFER HOSE WITH STERILENZ<sup>™</sup> CONNECTIONS, AVANTOR®

Avantor's high pressure single-use transfer hose with Avantor SterilEnz<sup>™</sup> connections maintain the durability of high pressure hose products while providing the benefits and flexibility of single-use assemblies.

- Suitable for elevated temperatures and pressures up to 120 psi 25,4 mm inner diameter for high flow rate applications
- Gamma irradiated with SAL 10<sup>-6</sup> \_
- Offered at 1,524 and 3,048 m lengths
- Gasket affixed to TC face even when disconnected to prevent misalignment

Designed for applications where pressures would exceed normal biopharmaceutical processes. Suitable for elevated temperatures and pressures up to 150 bar.

Avantor single-use transfer hose with SterilEnz<sup>™</sup> connections are pre-sterilised and gamma irradiated with SAL 10<sup>-6</sup>, then packed in a double-polybag as an added convenience for customers when working with the product. The inner diameter supports high flow rates, while the different lengths meet the requirements for many bioprocessing applications, with custom lengths available upon request.

USP Class VI, ACDF, Sterile, Pressure rating up to 120 psi.

Ø int. (mm)	Length (m)	Description	Pk	Cat. No.
25,4	1,524	Reinforced silicone hose	1	734-3323
25,4	3,048	Reinforced silicone hose	1	734-3324



Single-use bioprocessing bag, 2 ports

#### SINGLE-USE BIOPROCESSING BAGS, AVANTOR®

Avantor single-use bioprocessing bags are designed to transfer and store your products throughout the drug manufacturing process. Made from proprietary FlexFilm<sup>™</sup> material - a thick, co-extruded film featuring polyethylene inner and outer layers that provide extra resistance to a wide range of chemicals - Avantor single-use bags are supplied in a range of standard sizes to meet the needs of many bioprocessing applications.

- Bag film made from proprietary ULDPE with high clarity and flexibility
- Standard 2D bag assemblies provided at volumes ranging from 50 ml to 50 L
- Standard 3D bag chambers of 100 L, 200 L, and 500 L for faster custom assembly deliveries
- Custom 3D bag chamber volumes up to 3000 L for large volume processes
- Bag assemblies provided irradiated with SAL 10<sup>-6</sup> and USP Class VI certification

Avantor's standard 2D bag assemblies are available with C-Flex tubing with plugged ends for welding and silicone tubing with either luer or MPC connectors for easy operator connections. The custom bag assemblies, both 2D and 3D, allow for user-specified tubing materials and connection types including a range of sterile connectors from all major manufacturers.

2D bag assemblies are designed for hanging which allows ease of use and complete fluid recovery. Standard 3D bag chambers available in 100 L, 200 L, and 500 L are top-ported for easy use in a variety of totes and container configurations.

P1 and P2 are supplied with clamps.

Description	Capacity	Pk	Cat. No.
Pillow bag, 2 ports welding	50	25	734-3315
Pillow bag, 2 ports Luer	50	25	734-3316
Pillow bag, 2 ports MPC	50	25	734-3317
Pillow bag, 2 ports welding	500	20	734-3318
Pillow bag, 2 ports Luer	500	20	734-3319
Pillow bag, 2 ports MPC	500	20	734-3320
Pillow bag, 2 ports welding	1L	15	734-3304
Pillow bag, 2 ports Luer	1L	15	734-3305
Pillow bag, 2 ports MPC	1L	15	734-3306
Pillow bag, 3 ports welding	5 L	12	734-3311
Pillow bag, 3 ports MPC	5 L	12	734-3312
Pillow bag, 3 ports welding	10 L	10	734-3307
Pillow bag, 3 ports MPC	10 L	10	734-3308
Pillow bag, 2 ports welding	20 L	6	734-3309
Pillow bag, 3 ports MPC	20 L	6	734-3310
Pillow bag, 2 ports welding	50 L	4	734-3313
Pillow bag, 3 ports MPC	50 L	4	734-3314



#### BOTTLE ASSEMBLIES, PETG, STERILE, SINGLE-USE, VWR®

Sterile PETG containers, with weldable tubings, provide the maximum amount of flexibility and reliability. These vessels are assembled in an ISO Class 7 cleanroom and are manufactured from USP Class VI materials. They come in a comprehensive size selection with tubing that is completely weldable/sealable.

- Sterile bottles come individually bagged and process ready
- Multiple bottle sizes allow for process-specific flexibility
- When used with sterile VWR tube sets, custom possibilities are endless
- Gamma irradiated to Sterility Assurance Level (SAL) 10<sup>-6</sup>

Assemblies have been designed with a broad spectrum of applications in mind, including life sciences and general lab use, environmental assays, also production and cleanroom applications. All product contact materials are animal-free or processed in accordance to EMEA/410/01. The assemblies are able to withstand temperatures from -20 to +65 °C without losing integrity. All assemblies are individually double-bagged with product label located on the inner bag. Gamma irradiated to Sterility Assurance Level (SAL)  $10^{-6}$ .

\*The product(s) on this page are outside the scope of the EU Directive 2019/904

Capacity (ml)	Cap size	Tubing connection	Tubing length	Tubing material	Tubing size	Pk	Cat. No.
125	38-430	Port 1: PP Tube Plug Port 2: 25 mm Hydrphobic PE Vent Filter	Port 1: 24" Port 2: 3"	C-Flex	Port 1: 1/8 x 1/4" Port 2: 1/8 x 1/4"	6	734-2844
250	38-430	Port 1: PP Tube Plug Port 2: 25 mm Hydrphobic PE Vent Filter	Port 1: 24" Port 2: 3"	C-Flex	Port 1: 1/8 x 1/4" Port 2: 1/8 x 1/4"	6	734-2845
500	38-430	Port 1: PP Tube Plug Port 2: 25 mm Hydrophobic PE Vent Filter	Port 1: 24" Port 2: 3"	C-Flex	Port 1: 1/8 x 1/4" Port 2: 1/8 x 1/4"	6	734-2846
1000	38-430	Port 1: PP Tube Plug Port 2: 25 mm Hydrophobic PE Vent Filter	Port 1: 24" Port 2: 3"	C-Flex	Port 1: 1/8 x 1/4" Port 2: 1/8 x 1/4"	3	734-2850
2000	53B	Port 1: PP Tube Plug Port 2: 50 mm PTFE Vent Filter Port 3: PP Tube Plug	Port 1: 12" Port 2: 3" Port 3: 12"	C-Flex	Port 1: 3/8 x 1/2" Port 2: 1/4 x 3/8" Port 3: 3/8 x 1/2"	2	734-2851
2000	53B	Port 1: PP Tube Plug Port 2: 50 mm PTFE Vent Filter	Port 1: 24" Port 2: 3"	C-Flex	Port 1: 1/8 x 1/4" Port 2: 1/4" x 3/8"	2	734-2894



Pre-sterilised single use sample tube

#### OMNITOP SAMPLE TUBES® ASSEMBLIES, PRE-STERILISED, SINGLE-USE, AVANTOR®

OmniTop Sample Tubes<sup>®</sup> are a convenient device that can be used to obtain fluid samples. Each OmniTop tube comes with a pre-attached 0,2 µm vent filter and 18» of tubing (C-Flex<sup>®</sup>, TYGON<sup>®</sup>, silicone or PharMed<sup>®</sup>).

- Customisable cap system
- Unique cap design allows for complete customisation
- Ability to use different ID and OD tubing diameters
- Wide selection of tubing materials
- Easily configured with virtually any type of tubing
- Single-use
- Cost effective
- Reduced assembly and installation time
- Eliminate cleaning validation
- Flexible manufacturing
- Design allows quick delivery on small lots
- Closure system can be used with various glass bottles
- Available individually packed or configured in manifold

These tubes are available with or without internal dip-tubes to facilitate removal of the fluid inside.

OmniTop Sample Tubes can be aseptically connected to your bioreactor or other device using standard tubing welders, such as the Terumo SCD-IIB. Sample Tubes can also be aseptically sealed and removed (wet or dry) using tubing sealers such as the Genesis SE340 or handheld battery powered version SE640.

Use OmniTop for the transfer of biopharmaceutical products and reagents in a closed system, gas exchange transfer, sampling of biopharmaceutical products and reagents in a closed system, storage of biopharmaceutical products and reagents. For use with bench top, pilot plant, and production bioreactors. Also for use with sterile connecting devices and thermal or RF tubing sealers.

OmniTop Sample Tubes<sup>®</sup> are available in a wide variety of standard configurations or they can be customised to suit your specific applications.

Capacity (ml)	Description	Material	Pk	Cat. No.
OmniTop 15 ml sample tubes				
15	OmniTop assembly, C-Flex <sup>®</sup> , Gamma	PP	10	734-2985
15	OmniTop assembly, C-Flex®, silicone dip tube, Gamma	PP	10	734-2986
15	OmniTop Assembly, C-Flex®, seal and trim, Gamma	PP	10	734-2987
15	OmniTop Assembly, C-Flex®, silicone dip tube, seal and trim, Gamma	PP	10	734-2988
15	OmniTop assembly, C-Flex®, Gamma	Polystyrene	10	734-2989
15	OmniTop assembly, C-Flex®, seal and trim, Gamma	Polystyrene	10	734-2991
15 ml	OmniTop assembly, C-Flex®, silicone dip tube, seal and trim, Gamma	Polystyrene	10	734-2992
OmniTop 50 ml sample tubes				
50	OmniTop assembly, C-Flex®, Gamma	PP	10	734-2993
50	OmniTop assembly, C-Flex®, seal and trim, Gamma	PP	10	734-2994
50	OmniTop assembly, C-Flex®, silicone dip tube, Gamma	PP	10	734-2995
50	OmniTop assembly, C-Flex®, silicone dip tube, seal and trim, Gamma	PP	10	734-3212



Seradigm ultimate grade foetal bovine serum (FBS)

#### FOETAL BOVINE SERUM (FBS), US ORIGIN, AVANTOR®

Ultimate grade FBS offers the ultimate in product quality and viral safety, undergoing additional BVD virus testing using qPCR technology. Premium grade FBS is widely used by cell culturists requiring high quality, high performance FBS for a wide variety of applications.

- 100% US origin
- Triple 0,1 µm sterile filtration
- Preservation of native, growth-promoting factors and minimisation of growthinhibiting factors
- Independently tested by third party laboratories
- Fully traceable

**Ultimate grade FBS** (endotoxin ≤10 EU/ml; haemogloblin ≤25 mg/dl) offers the ultimate in product quality and viral safety, undergoing additional BVD virus testing using qPCR technology. Proprietary collection and production techniques provide additional features that elevate product quality, enhance traceability and improve regulatory compliance. This product is used by cell culturists who work with primary cell lines, in production environments and applications where regulatory or traceability concerns are paramount.

**Premium grade FBS** (endotoxin ≤20 EU/ml; haemogloblin ≤25 mg/dl) offers quality features, such as complete testing by independent third party laboratories and raw material traceability that elevates it above comparable products. This product is used by cell culturists who require a high quality, high performance product for a wide variety of applications.

International Serum Industry Association (ISIA) certified supply chain for traceability.

Endotoxin	≤10 EU/ml	≤20 EU/ml
Grade	Ultimate	Premium
Haemoglobin	globin ≤25 mg/dl	

Description	Pk	Cat. No.
Ultimate grade		
FBS, Ultimate grade, US origin	50 ml	89510-198
FBS, Ultimate grade, US origin	500 ml	97068-101
FBS, Ultimate grade, heat inactivated, US origin	50 ml	89510-200
FBS, Ultimate grade, heat inactivated, US origin	500 ml	97068-107
FBS, Ultimate grade, gamma irradiated, US origin	500 ml	97068-102
FBS, Ultimate grade, gamma irradiated and heat inactivated, US origin	500 ml	97068-104
Premium grade		
FBS, Premium grade, US origin	50 ml	89510-194
FBS, Premium grade, US origin	500 ml	97068-085
FBS, Premium grade, heat inactivated, US origin	50 ml	89510-196
FBS, Premium grade, heat inactivated, US origin	500 ml	97068-091
FBS, Premium grade, gamma irradiated, US origin	500 ml	97068-086
FBS, Premium grade, gamma irradiated, heat inactivated, US origin	500 ml	97068-088



#### FB ESSENCE, US ORIGIN, AVANTOR®

FB Essence is a US origin foetal bovine serum (FBS) alternative that can be used in place of FBS in many cell culture applications. It contains foetal bovine serum, bovine calf serum and equine serum, plus a proprietary blend of supplements including vitamins, minerals and various growth factors.

- 100% US origin
- Cost effective alternative to FBS
- Effective across a broad range of cell types

Endotoxin	≤20 EU/ml
Haemoglobin	≤25 mg/dl

#### Seradigm FB essence

Description	Serum format	Sterility	Pk	Cat. No.
FB Essence	Frozen	Sterile filtered	50 ml	10805-184
FB Essence	Frozen	Sterile filtered	500 ml	10803-034
FB Essence, gamma irradiated	Frozen	Sterile filtered	500 ml	10805-180
FB Essence, heat inactivated	Frozen	Sterile filtered	50 ml	10799-384
FB Essence, heat inactivated	Frozen	Sterile filtered	500 ml	10799-390
FB Essence, gamma irradiated, heat inactivated	Frozen	Sterile filtered	500 ml	10805-182



#### FOETAL BOVINE SERUM (FBS), ULTRA-LOW IGG, US ORIGIN, AVANTOR®

Ultra-low IgG foetal bovine serum (FBS) is purified of immunoglobulin (IgG) using a chromatographic process that delivers significantly reduced levels of IgG ( $\leq 5 \mu g/ml$ ).

- 100% US origin
- Triple 0,1 µm sterile filtration
- Preservation of native, growth-promoting factors and minimisation of growthinhibiting factors
- Independently tested by third party laboratories
- Fully traceable

Frozen

Ultra-low IgG FBS is ideal for cell culture and protein purification applications where naturally occurring levels of IgG are too high.

International Serum Industry Association (ISIA) certified supply chain for traceability.

Seradigm ultra-low IgG fetal bovine serum (FBS)

irradiated and heat inactivated

Endotoxin		≤20 EU/ml		
Haemoglobin		≤25 mg/dl		
Description	Serum format	Sterility	Pk	Cat. No.
Ultra-low IgG foetal bovine serum (FBS)	Frozen	Sterile filtered	50 ml	10018-828
Ultra-low IgG foetal bovine serum (FBS)	Frozen	Sterile filtered	500 ml *	10018-826
Ultra-low IgG foetal bovine serum (FBS), heat inactivated	Frozen	Sterile filtered	50 ml	10018-832
Ultra-low IgG foetal bovine serum (FBS), heat inactivated	Frozen	Sterile filtered	500 ml 1	10018-830
Ultra-low IgG foetal bovine serum (FBS), gamma irradiated	Frozen	Sterile filtered	500 ml 1	0836-696
Ultra-low IaG foetal bovine serum (FBS), aamma				



Australia Origin foetal bovine serum (FBS), 500 ml

#### AUSTRALIA ORIGIN FOETAL BOVINE SERUM (FBS), AVANTOR®

Sterile filtered

Australia Origin FBS is widely considered the gold standard for safety and regulatory compliance by cell culturists around the world. Avantor Seradigm Australia Origin FBS combines outstanding performance and quality with ease of regulatory access globally, suitable for a wide variety of applications.

- 100% Australian origin
- Australian disease-free status
- Preservation of native, growth-promoting factors
- Single-use sterile filtration technology
- Proven performance and consistency

Avantor Seradigm is a fully integrated supplier of animal sera that provides the cell culture community with access to the most reliable supply of high performance, exceptional quality Foetal Bovine Serum (FBS) and cost-effective FBS alternatives.

The approach to sourcing and manufacturing, and the proprietary collection and production techniques provide additional features that elevate product quality, enhance traceability and improve regulatory compliance.

Endotoxin	≤10 EU/ml
Haemoglobin	≤25 mg/dl
Origin	Australia
Storage temperature	Frozen

Description	Pk	Cat. No.
Australia Origin foetal bovine serum (FBS)	50 ml	76294-120
Australia Origin foetal bovine serum (FBS), gamma irradiated	500 ml	76294-122
Australia Origin foetal bovine serum (FBS), gamma irradiated, heat inactivated	500 ml	76294-124
Australia Origin foetal bovine serum (FBS), heat inactivated	50 ml	76294-178
Australia Origin foetal bovine serum (FBS)	500 ml	76294-180
Australia Origin foetal bovine serum (FBS), heat inactivated	500 ml	76294-182

500 ml

10836-698



#### CELL CULTURE MEDIA, DULBECCO'S MODIFIED EAGLES MEDIUM (DMEM)

Dulbecco's Modified Eagle Medium (DMEM) is designed to preserve and maintain the growth of a broad spectrum of mammalian cell types.

- Suitable for most cell types
- Available in a broad variety of formulations
- Also available with stable glutamine (L-Alanyl-L-Glutamine) for a better shelf life

The DMEM low glucose has been developed for the culture of mouse embryonic cells.

DMEM with 1 g/L glucose, with L-glutamine, with sodium pyruvate

Cat. No.	VWRC 392-0413	VWRC 392-0414	VWRC 392-0415	VWRC 392-0416	VWRC 392-0417	VWRC 392-0407	VWRC 392-0408	VWRC 392-0409	VWRC 392-0410	VWRC 392-0411	VWRC 392-0412
Calcium	Yes										
Glucose level	High				Low Wit			hout			
Hepes	No Yes										
L-Glutamine	No	Yes	No	Yes	No	Yes	No			Yes	
Magnesium											
Phenol red	Yes										
Sodium	162										
bicarbonate											
Sodium pyruvate	No		Yes								
Stable glutamine			Yes	Νο					Yes	No	

Description	Pk	Cat. No.
DMEM high glucose		
DMEM with 4,5 g/L glucose, without L-Glutamine, without sodium pyruvate	500 ml	392-0413
DMEM with 4,5 g/L glucose, with L-Glutamine, without sodium pyruvate	500 ml	392-0414
DMEM with 4,5 g/L glucose, with stable glutamine, with sodium pyruvate	500 ml	392-0415
DMEM with 4,5 g/L glucose, with L-Glutamine, with sodium pyruvate	500 ml	392-0416
DMEM with 4,5 g/L glucose, without L-Glutamine, with sodium pyruvate	500 ml	392-0417
DMEM low glucose		
DMEM with 1 g/L glucose, with L-Glutamine, with sodium pyruvate	500 ml	392-0407
DMEM with 1 g/L glucose, without L-Glutamine, with sodium pyruvate	500 ml	392-0408
DMEM F12		
DMEM F-12, without L-Glutamine, without HEPES	500 ml	392-0409
DMEM F-12, without L-Glutamine, without HEPES, without glucose	500 ml	392-0410
DMEM F-12, with stable glutamine, with 15 mM HEPES	500 ml	392-0411
DMEM F-12, with L-Glutamine, with 15 mM HEPES	500 ml	392-0412



#### CELL CULTURE MEDIA, HAM'S F12, VWR®

Ham's F12 was developed for growth of primary rat hepatocytes and rat prostate epithelial cells. Also used in a clonal toxicity assay using CHO cells. It is frequently used with supplements for serum-free cultures to support the growth of cells of rodent origin, or as a cloning medium for the culture of myeloma and hybrid cells.

Ham's F12 with L-Glutamine

Calcium	Yes			
Hepes	No			
L-Glutamine	Y.			
Magnesium	Yes			
Media Base	Ham's F12 Nutrient Mixture			
Phenol red				
Sodium bicarbonate	Yes			
Sodium pyruvate				
Stable glutamine	No			
Description	Pk Cat. No.			
Ham's F12 with L-Glutamine	500 ml <b>392-0418</b>			


#### CELL CULTURE MEDIA, SCHNEIDER'S DROSOPHILA MEDIUM, VWR®

Schneider's Drosophila medium promotes rapid growth of both primary and existing cell cultures derived from *Drosophila spp* and several other dipterans when supplemented with 5 to 20% heat-inactivated foetal bovine serum.

Schneider's Drosophila medium

Calcium	Yes			
Hepes	No			
L-Glutamine	V			
Magnesium	tes			
Media Base	Schneider's Insect Medium			
Phenol red	No			
Sodium bicarbonate	Yes			
Sodium pyruvate	Na			
Stable glutamine	NO			
Description	Pk Cat. No.			
Schneider's Drosophila medium	500 ml <b>392-0419</b>			



#### CELL CULTURE MEDIA, MCCOY'S 5A MEDIUM, VWR®

McCoy's media were originally formulated for growth and support of lymphocytes. This final modification produced a medium identical to RPMI 1629. McCoy's 5A media supports the indefinite proliferation of Walker 256 carcinoma cells. In addition, it is excellent for the propagation of leukocytes, biopsy tissues, a broad range of human and rat normal or transformed cell types, the most current primary and continuous cell lines.

#### McCoy's 5A with L-Glutamine

Calcium	Yes
Hepes	No
L-Glutamine	Y
Magnesium	Yes
Media Base	McCoy's 5A Medium
Phenol red	Vez
Sodium bicarbonate	tes
Sodium pyruvate	
Stable glutamine	INO

Description		Cat. No.
McCoy's 5A with L-Glutamine 500	ml	392-0420



Medium 199, with Hanks' salts, with L-Glutamine

#### **CELL CULTURE MEDIA, MEDIUM 199, VWR®**

Medium 199 was developed specifically for nutritional research of chicken fibroblasts. Today, 199 media are widely used for the maintenance of non transformed cells, vaccine and virus production and primary explants of epithelial cells. The media formulated with the Hanks salts are buffered with saline solutions designed for balancing in ambient conditions, and their use in a CO<sub>2</sub> incubator results in a rapid drop in pH of the culture medium.

Calcium	Yes			
Hepes	No			
L-Glutamine				
Magnesium	Yes			
Media Base	Medium 199 (M199) Medium			
Phenol red				
Sodium bicarbonate	Yes			
Sodium pyruvate				
Stable glutamine	No			
Description	Pk	Cat. No.		
Medium 199, with Hanks' salts, with L-Glutamine	500 ml	392-0421		

Medium 199, with Hanks' salts, with L-Glutamine



#### CELL CULTURE MEDIA, MINIMUM ESSENTIAL MEDIUM (MEM), VWR®

Minimum Essential Medium (MEM) with Earle's Balanced Salts is a modification of Eagle's earlier Basal Medium (BME) which contains a higher concentration of essential nutrients. These media promote the growth of a variety of normal and transformed cells. Since they contain Earle's Balanced Salts, they are suitable for use in atmospheres charged with  $CO_2$  gas.

Cell culture m	edia Minimum	Essential Me	dium (MEM
Cell culture m	edia, Minimun	i Essentiai Me	aium mei*

Cat. No.	392-0422	392-0423	392-0424		
Calcium		Yes			
Hepes	Νο				
L-Glutamine	Yes	Yes No			
Magnesium		Yes			
Media Base	MEM/EBSS - Minimum Essential Medium with Earle's Balanced Salts				
Phenol red		v.			
Sodium bicarbonate		Yes			
Sodium pyruvate		N			
Stable glutamine		No			

Description	Pk	Cat. No.
MEM with Earle's salts with L-Glutamine	500 ml	392-0422
MEM with Earle's salts without L-Glutamine with NEAA	500 ml	392-0423
MEM with Earle's salts without L-Glutamine	500 ml	392-0424



#### **CELL CULTURE MEDIA, RPMI 1640**

RPMI are general purpose enriched media. Originally formulated for suspension cultures and monolayer cultures of human leukemic cells.

- RPMI media are 'multipurpose' enriched media, providing extensive applications for a broad spectrum of mammalian and hybridoma cells including:
- Human myeloma
- Mouse hybridoma
- Human leukocytes
- B and T lymphocytes

RPMI 1640 without L-Glutamine with 25 mM Hepes

Cat. No.	392-0425	392-0426	392-0427	392-0428	392-0429	392-0430	
Calcium	Yes						
Hepes	Yes No						
L-Glutamine	No	Yes	No	Yes	No		
Magnesium	Yes						
Media Base	RPMI 1640 - Roswell Park Memorial Institute Medium						
Phenol red	Yes No				No		
Sodium bicarbonate	Yes						
Sodium pyruvate	No						
Stable glutamine	Ν	lo	Yes		No		

Description	Pk	Cat. No.
RPMI 1640 without L-Glutamine with 25 mM Hepes	500 ml	392-0425
RPMI 1640 with L-Glutamine with 25 mM Hepes	500 ml	392-0426
RPMI 1640 with stable Glutamine	500 ml	392-0427
RPMI 1640 with L-Glutamine	500 ml	392-0428
RPMI 1640 without L-Glutamine	500 ml	392-0429
RPMI 1640 without L-Glutamine without PheNol Red	500 ml	392-0430



Lymphocyte separation media

#### LYMPHOCYTE SEPARATION MEDIA

Lymphocyte separation media is a density gradient medium for the isolation of mononuclear cells from peripheral blood, cord blood and bone marrow.

- Like Ficoll<sup>™</sup>, VWR lymphocyte separation media has:
- An optimised density of 1,077 g/ml
- Granulocytes and erythrocytes will sediment under the media layer
- Mononuclear cells will be isolated to top of the layer

Designed for a simple, rapid isolation by centrifugation of lymphocytes from whole blood, once diluted and treated with anti-coagulant or defibrinating agent.

Description	Pk	Cat. No.
Lymphocyte separation media	100 ml	392-0431
Lymphocyte separation media	500 ml	392-0432



#### CELL CULTURE SALT SOLUTIONS, DULBECCO'S PHOSPHATE BUFFERED SALINE (DPBS), VWR<sup>®</sup>

DPBS is commonly used salt solution in cell enumeration as a diluent, for rinsing cells and as a buffer in many chromatographic procedures. DPBS is also used in FACS (Fluorescence-Activated Cell Sorting) process to wash and re-suspend cells during the dissociation process, as well as for many analytical methods or biochemical treatments.

For applications where Ca<sup>2+</sup> and Mg<sup>2+</sup> ions interfere with enzyme activity (e.g, Trypsin), DPBS is:

- Without calcium
- Without magnesium

Dulbecco's phosphate buffered saline, without calcium, without magnesium (liquid)

Description	pH value	Pk Info	Pk	Cat. No.
Dulbecco's phosphate buffered saline, without calcium, without magnesium (liquid)	7,3	1× 500 ml	500 ml	392-0434
Dulbecco's phosphate buffered saline, without calcium, without magnesium (liquid)	7,3	1×1000 ml	1.000 ml	392-0433
Dulbecco's phosphate buffered saline, 10X, without calcium, without magnesium (liquid)	6,8	1×500 ml	500 ml	392-0440



#### PHOSPHATE BUFFERED SALINE (PBS), pH 7,4

Phosphate Buffered Saline (PBS) is a buffer solution containing sodium chloride, sodium phosphate and potassium chloride. PBS helps to maintain a constant pH, is isotonic and non toxic to cells, and provide cells with water and essential inorganic ions. This formulation does not contain calcium and magnesium.

- PBS is used in a variety of laboratory applications:
- Washing cells prior to DNA/RNA extraction
- Reagent preparation/dilution
- Transporting cells
- Diluent of human biological samples

Note: Please refer to the technical data sheet for recommended use.

VWR PBS buffer

Formulation	Potassium Phosphate monobasic 144 mg/L; Sodium Chloride 9000 mg/L; Sodium Phosphate dibasic 795mg/L		
Description	pH value	Pk	Cat. No.
PBS without calcium and magnesium X1	7,4	500 ml	392-0442

#### TBS WASH BUFFERS, ULTRA PURE GRADE, VWR®

Wash buffers ideal for use in applications such as Western blotting and ELISA. Prevents high background by effectively removing unbound reagents.

Description	Pk	Cat. No.
TBS, 20X liquid concentrate, prepares 80 L of 1X buffer, Ultra Pure Grade	4 L	J640-4L

#### HEPES (2-[4-(2-HYDROXYETHYL)-1-PIPERAZINYL]ETHANESULPHONIC ACID) ≥99.5%

Hepes is a widely used buffer in biological studies. In cell culture media, it is employed as a substitute for the bicarbonate buffer at a concentration of 25 mM or as a supplement to the bicarbonate buffer (concentration 10 to 15 mM).

Description	Pack type	Pk	Cat. No.
Hepes (2-[4-(2-hydroxyethyl)-1-piperazinyl]ethanesulphonic acid) ≥99.5%	Plastic bottle	1 kg	441476L

#### HEPES (2-[4-(2-HYDROXYETHYL)-1-PIPERAZINYL]ETHANESULPHONIC ACID) ≥99.5% FOR BIOCHEMISTRY

Pack type	Pk	Cat. No.
Plastic bottle for solids	250 g	441485H
Plastic bottle for solids	1 kg	441487M
Bucket (plastic)	5 kg	44148BC
	Pack type Plastic bottle for solids Plastic bottle for solids Bucket (plastic)	Pack type Pk   Plastic bottle for solids 250 g   Plastic bottle for solids 1 kg   Bucket (plastic) 5 kg



#### WATER, CELL CULTURE GRADE PYROGEN-FREE

Cell culture water is high quality water suitable for use as a solvent in the preparation of cell culture media and laboratory reagents.

- Pyrogen-free

Suitable for dissolving dry powder cell culture media in accordance with the technical data sheet.

The product is intended to be used in vitro, in laboratory only. Do not use it in therapy, human or veterinary applications.

Description	Pack type	Pk	Cat. No.
Water, Cell Culture Grade pyrogen-free	Plastic bottle	500 ml	392-0439
Water, Cell Culture Grade pyrogen-free	Plastic bottle	1.000 ml	392-0438



Trypsin-EDTA solution

#### **TRYPSIN-EDTA SOLUTIONS, VWR®**

VWR Trypsin-EDTA solutions are used in cell culture to remove adherent cells from a culture surface. Trypsin is a porcine pancreas-derived enzyme that is commonly used for the dissociation and disaggregation of anchorage-dependent mammalian cells and tissues. The concentration of trypsin necessary to separate cells from their substrate is dependent primarily on the cell type and the age of the culture. EDTA, a chelating agent, enhances enzymatic activity by removing calcium and magnesium ions. These ions obscure the peptide bonds on which trypsin acts as well as enhancing cell to cell adhesion.

- Trypsin EDTA solutions exist in different buffers and concentrations
- Trypsin 0,25% EDTA in HBSS without calcium, without magnesium, with phenol red
- Trypsin EDTA 1X in PBS without calcium, without magnesium without phenol red
- Trypsin EDTA 1X without calcium, without magnesium with phenol red
- Trypsin-EDTA 10X

After treatment, trypsin activity can be stopped by adding a serum media mixture or a trypsin inhibitor.

Calcium		No		
Magnesium	Nõ			
Phenol red	Yes		No	
Sterility		Sterile		
Description			Pk	Cat. No.
Trypsin-EDTA 1X in solution without Ca,	/Mg with Phenol Red		100 ml	392-0435
Trypsin 0,25% - EDTA in HBSS without	Ca/Mg with Phenol Red		100 ml	392-0436
Trypsin-EDTA 1X in PBS without Ca/Mg	without Phenol Red		100 ml	392-0437
Trypsin-EDTA 10X			100 ml	392-0459



Bovine serum albumin (BSA)

#### **BOVINE SERUM ALBUMIN (BSA), VWR®**

VWR Bovine Serum Albumin (BSA) is used in many applications as a stabilisation agent. Albumin is used to solubilise lipids, and is also used as a blocking agent in Western blots or ELISA applications. It is commonly used in cell culture protocols mainly for protein supplementation. It can also be added to viral transport media for stabilisation.

- VWR BSA exists in different grades and formats
- Classic BSA Lyophilised: For agarose gel electrophoresis or standards in protein calibration studies
- Protease-free BSA for Immuno-Assay and ELISA applications
- Liquid BSA 30% sterile for cell culture applications

All bovine proteins are obtained from Bovine Spongiform Encephalopathy (BSE) free countries or are declared BSE-free by the European authorities.

Sterility	Non sterile	Sterile	
Description		Pk	Cat. No.
Bovine serum albumin (BSA), lyophilised, pH ~7		100 g	392-0443
Bovine serum albumin (BSA), lyophilised, pH ~7		500 g	392-0444
Bovine serum albumin (BSA), lyophilised, pH ~7		1 kg	392-0445
Bovine serum albumin (BSA), protease-free lyophilised		100 g	392-0446
Bovine serum albumin (BSA), protease-free lyophilised		500 g	392-0447
Bovine serum albumin (BSA), protease-free lyophilised		1 kg	392-0448
Bovine serum albumin (BSA), 30%		100 ml	392-0449
Bovine serum albumin (BSA), 30%		500 ml	392-0450
Bovine serum albumin (BSA), 30%		1L	392-0451



Penicillin-Streptomycin solution (100X)

#### PENICILLIN-STREPTOMYCIN SOLUTION (100X), VWR®

VWR penicillin-streptomycin solution (100X) is a large spectrum antibiotic designed to control and destroy gram-negative and gram-positive bacteria.

- With 10000 units penicillin and 10 mg/ml streptomycin in 0,9% NaCl
- Sterile: 0,1 µm filtered
- Use in cell culture applications at 10 ml/L for tissue culture media containing serum
- Endotoxin level at 10 ml/L of solution: <0,1 EU/ml

Antibiotics, combined with good sterile technique of manipulation of cell culture, help prevent microbiological contamination.

Sterility	Sterile	
Description	Pk Pk	Cat. No.
Penicillin-Streptomycin solution (100X)	100 ml	392-0406

#### CYCLOHEXIMIDE ≥90.0%

#### Inhibits DNA and protein synthesis.

Description	Pack type	Pk	Cat. No.
Cycloheximide ≥90.0%	Glass bottle	1 g	441892A
Cycloheximide ≥90.0%	Glass bottle	10 g	441894C

#### CITRIC ACID MONOHYDRATE 99.5-100.5% (BY ANHYDROUS BASIS), GRANULAR USP, MULTI-COMPENDIAL, J.T.BAKER®

Must be subjected to further processing during the preparation of injectable dosage forms.

Description	Pack type	Pk	Cat. No.
Citric acid monohydrate 99.5-100.5% (by anhydrous basis), granular USP, Multi- Compendial, J.T.Baker®	Glass bottle for solids	2,5 kg	0115-05

#### DISODIUM HYDROGEN PHOSPHATE HEPTAHYDRATE 98.0-100.5% (DRIED BASIS) USP, J.T.BAKER®

Description	Pack type	Pk Info	Pk	Cat. No.
Disodium hydrogen phosphate heptahydrate 98.0- 100.5% (dried basis) USP, J.T.Baker®	Bottle, wide mouth amber glass, black tamper- evident cap	1× 500 g	500 g	3803-01

#### SODIUM CARBONATE, ANHYDROUS 99.5-100.5% (BY ANHYDROUS BASIS), GRANULAR NF, FCC, J.T.BAKER®

pH adjusters are used to adjust the pH of formulations.

- Food GMP manufactured product

Description	Pack type	Pk	Cat. No.
Sodium carbonate, anhydrous 99.5-100.5% (by anhydrous basis), granular NF, FCC, JT.Baker®	Bottle, WMA glass, blk tamper evident cap	500 g	3605-01

#### SODIUM CHLORIDE 99.0-100.5% (DRY BASIS), GRANULAR FCC, USP, J.T.BAKER®

Must be subjected to further processing during the preparation of injectable dosage forms. Meets USP and FCC requirements. GMP manufactured product.

- Preserve in tightly sealed containers.

Description	Pack type	Pk	Cat. No.
Sodium chloride 99.0-100.5% (dry basis), granular FCC, USP, J.T.Baker®	Bottle, WMA glass, black tamper-evident cap	500 g	3628-01

#### SODIUM CHLORIDE 99.0-100.5% (DRIED BASIS), GRANULAR USP, MULTI-COMPENDIAL, J.T.BAKER®

Management of Change (MOC) category = R

- GMP manufactured product

Description	Pack type	Pk	Cat. No.
Sodium chloride 99.0-100.5% (dried basis), granular USP, Multi-Compendial, J.T.Baker®	Wide mouth amber glass bottle, black tamper-evident cap	500 g	3627-01

#### POTASSIUM IODIDE 99.0-101.5%, GENAR<sup>®</sup> USP, MACRON FINE CHEMICALS<sup>™</sup>

Description	Pack type	Pk	Cat. No.
Potassium iodide 99.0-101.5%, GenAR® USP, Macron Fine Chemicals™	Mall Polystormor <sup>®</sup> poly/plastic bottle	500 g	1115-04

#### DISODIUM HYDROGEN PHOSPHATE 98.0-100.5% (DRIED BASIS) USP, J.T.BAKER®

- Food GMP manufactured product

Description	Pack type	Pk	Cat. No.
Disodium hydrogen phosphate 98.0-100.5% (dried basis) USP, J.T.Baker®	Bottle, wide mouth amber glass, black tamper-evident cap	500 g	3827-01

#### DISODIUM HYDROGEN PHOSPHATE, ANHYDROUS 98.0-100.5% (DRIED BASIS) USP, MULTI-COMPENDIAL, J.T.BAKER®

- GMP manufactured product

Description	Pack type	Pk	Cat. No.
Disodium hydrogen phosphate, anhydrous 98.0-100.5% (dried basis) USP, Multi- Compendial, J.T.Baker®	Bottle, wide mouth amber glass, black tamper-evident cap	500 g	3804-01

#### DI-POTASSIUM HYDROGEN PHOSPHATE 98.0-100.5% (DRIED BASIS) USP, MULTI-COMPENDIAL ENDOTOXIN-FREE, J.T.BAKER®

#### - GMP manufactured product

Description	Pack type	Pk	Cat. No.
di-Potassium hydrogen phosphate 98.0-100.5% (dried basis) USP, Multi- Compendial endotoxin-free, J.T.Baker®	White poly bottle with blue tamper-evident cap	500 g	3250-01

#### POTASSIUM DIHYDROGEN PHOSPHATE 98.0-100.5% (DRIED BASIS), CRYSTALS NF, MULTI-COMPENDIAL, J.T.BAKER®

Maximise the stability of your pharmaceutical formulations and get predictable pH control with reliable, proven buffering agents from Avantor<sup>™</sup> Performance Materials.

- GMP manufactured product

No Class 1,2,3 or other solvents are used or produced in the manufacturing or purification of the product.

Meets NF requirements and EP and BP chemical specifications.

Description	Pack type	Pk	Cat. No.
Potassium dihydrogen phosphate 98.0-100.5% (dried basis), crystals NF, Multi- Compendial, J.T.Baker®	Wide mouth amber glass bottle, blue tamper-evident cap, bulk	500 g	3248-01

## IPTG (ISOPROPYL-B-D-THIOGALACTOPYRANOSIDE) ≥98% (BY HPLC ON DRIED BASIS), BIOTECH REAGENT, CGMP-MANUFACTURED, J.T.BAKER®

Reduce risk in your bioprocessing applications with Avantor J.T.Baker brand cGMP manufactured IPTG.

- cGMP manufactured under ICHQ7
- High purity (>98% by HPLC)
- Low microbial, trace metals and endotoxin content
- Consistent lot-to-lot protein induction performance
- TSE/BSE-free
- 1,4-Dioxane-free

J.T.Baker brand cGMP manufactured IPTG is performance tested to assure consistent lot-to-lot biological induction, and processed to remove and control product/process related impurities, with minimal lot-to-lot variability for improved protein expression.

Fully validated and documented through Batch Process Records (BPR) including analytical test data, stability protocol and impurity profile.

#### Packed in moisture permeation resistant controlled packaging.

Description	Pack type	Pk	Cat. No.
IPTG (isopropyl-β-D-thiogalactopyranoside) ≥98% (by HPLC on dried basis), Biotech Reagent, cGMP-manufactured, J.T.Baker®	Wide mouth polyethylene bottle	10 g	V264-01
IPTG (isopropyl-β-D-thiogalactopyranoside) ≥98% (by HPLC on dried basis), Biotech Reagent, cGMP-manufactured, J.T.Baker®	Wide mouth polyethylene bottle	100 g	V264-02
IPTG (isopropyl-β-D-thiogalactopyranoside) ≥98% (by HPLC on dried basis), Biotech Reagent, cGMP-manufactured, J.T.Baker®	Polyethylene pail, screw top	1 kg	V264-05

#### SODIUM DIHYDROGEN PHOSPHATE MONOHYDRATE 98.0-103.0% (BY ANHYDROUS BASIS), CRYSTALS USP, FCC, J.T.BAKER®

#### - Food GMP manufactured product

Description	Pack type	Pk	Cat. No.
Sodium dihydrogen phosphate monohydrate 98.0-103.0% (by anhydrous basis), crystals USP, FCC, J.T.Baker®	Bottle, wide mouth amber glass, black tamper-evident cap	500 g	3820-01

#### ACETIC ACID GLACIAL 99.5-100.05% USP, MULTI-COMPENDIAL, J.T.BAKER®

Description	Pack type	Pk	Cat. No.
Acetic acid glacial 99.5-100.05% USP, Multi-Compendial, J.T.Baker®	Clear glass bottle in single shipper	500 ml	9526-01

#### SODIUM HYDROXIDE SOLUTION 10 N, BIOTECH REAGENT, J.T.BAKER®

Made from water for injection U.S.P. and sodium hydroxide pellets, N.F. (Multi-Compendial) which meets BP, Ph. Eur. and JP chemical specifications

Filtered through a 0,2 micron filter.

Description	Pack type	Pk	Cat. No
Sodium hydroxide solution 10 N, Biotech Reagent, J.T.Baker®	Polyethylene pail, screw top	1 L	0312-02
Sodium hydroxide solution 10 N, Biotech Reagent, J.I.Baker®	Polyethylene pail, screw top	1L	

#### SULPHURIC ACID 95.0-98.0% NF, MULTI-COMPENDIAL, J.T.BAKER®

Description	Pack type	Pk	Cat. No.
Sulphuric acid 95.0-98.0% NF, Multi-Compendial, J.T.Baker®	Clear glass bottle (in single shipper)	500 ml	9671-02

#### D-(+)-GALACTOSE ≥99% (BY HPLC), MULTI-COMPENDIAL LOW IN ENDOTOXINS, J.T.BAKER®

Description	Pack type	Pk	Cat. No.
D-(+)-Galactose ≥99% (by HPLC), Multi-Compendial low in endotoxins, J.T.Baker®	Polyethylene pail, screw top.	1 kg	6322-05

#### D-(+)-SUCROSE (BEET-DERIVED) NF, HPLE, MULTI-COMPENDIAL PARENTERAL GRADE LOW IN ENDOTOXINS, J.T.BAKER®

Suitable for use in the manufacture of parenteral dosage forms.

- High purity
- Low endotoxin
- Beet-derived

Description	Pack type	Pk	Cat. No.
D-(+)-Sucrose (beet-derived) NF, HPLE, multi-compendial parenteral grade low in endotoxins, J.T.Baker^ $$	Polyethylene pail, screw top	1 kg	6321-05

#### D-(-)-MANNITOL 97.0-102.0% (DRY BASIS), POWDER USP, MULTI-COMPENDIAL GMP MANUFACTURED PRODUCT, J.T.BAKER®

Description	Pack type	Pk	Cat. No.
US Produced			
D-(-)-Mannitol 97.0-102.0% (dry basis), powder USP, Multi-Compendial GMP Manufactured Product, J.T.Baker®	White poly bottle, blue tamper-evident cap	500 g	2553-01

#### D-(+)-SUCROSE, CRYSTALS NF, MULTI-COMPENDIAL, J.T.BAKER®

Description	Pack type	Pk	Cat. No.
D-(+)-Sucrose, crystals NF, Multi-Compendial, J.T.Baker®	White poly bottle, blue tamper-evident cap	500 g	4074-01

#### DEXTROSE, ANHYDROUS 97.5-102.0% (BY ANHYDROUS BASIS) USP, J.T.BAKER®

- GMP manufactured product

Description	Pack type	Pk	Cat. No.
Dextrose, anhydrous 97.5-102.0% (by anhydrous basis) USP, J.T.Baker®	White poly bottle, blue T/E cap	500 g	1919-01

#### D-(+)-TREHALOSE DIHYDRATE 97.0-102.0% (BY HPLC) NF, HPLE, MULTI-COMPENDIAL PARENTERAL GRADE, J.T.BAKER®

- High purity

- Low endotoxin

For manufacturing, processing or repackaging.

Description	Pack type	Pk	Cat. No.
D-(+)-Trehalose dihydrate 97.0-102.0% (by HPLC) NF, HPLE, multi-compendial parenteral grade, J.T.Baker®	Polyethylene pail, screw top	1 kg	6324-05

#### D-(-)-MANNITOL ANALYTICAL REAGENT

Description	Pack type	Pk	Cat. No.
D-(-)-Mannitol analytical reagent	Plastic bottle for solids	500 g	25314.264

#### D-(+)-SUCROSE, GPR RECTAPUR®

Description	Pack type	Pk	Cat. No.
D-(+)-Sucrose, GPR RECTAPUR®	Plastic bottle for solids	1 kg	27478.296
D-(+)-Sucrose, GPR RECTAPUR®	Plastic bottle for solids	5 kg	27478.365

#### D-(+)-SUCROSE, ANALAR NORMAPUR® ANALYTICAL REAGENT

Description	Pack type	Pk	Cat. No.
D-(+)-Sucrose, AnalaR NORMAPUR® analytical reagent	Plastic bottle for solids	1 kg	27480.294
D-(+)-Sucrose, AnalaR NORMAPUR® analytical reagent	Plastic bottle for solids	5 kg	27480.360

#### D-(-)-FRUCTOSE ≥99.0%, ANALAR NORMAPUR® ANALYTICAL REAGENT

Description	Pack type	Pk	Cat. No.
D-(-)-Fructose ≥99.0%, AnalaR NORMAPUR® analytical reagent	Plastic bottle for solids	500 g	103674Y

#### D-(-)-FRUCTOSE, GPR RECTAPUR®

Description	Pack type	Pk	Cat. No.
D-(-)-Fructose, GPR RECTAPUR®	Plastic bottle for solids	1 kg	24975.294

#### D-(+)-GLUCOSE, ANALAR NORMAPUR® ANALYTICAL REAGENT

Description	Pack type	Pk	Cat. No.
D-(+)-Glucose, AnalaR NORMAPUR® analytical reagent	Plastic bottle for solids	500 g	101174Y
D-(+)-Glucose, AnalaR NORMAPUR® analytical reagent	Plastic bottle for solids	1 kg	101175P
D-(+)-Glucose, AnalaR NORMAPUR® analytical reagent	Plastic bottle for solids	2,5 kg	101176K

#### D-(+)-GLUCOSE, ANHYDROUS, GPR RECTAPUR®

Description	Pack type	Pk	Cat. No.
D-(+)-Glucose, anhydrous, GPR RECTAPUR®	Plastic bottle for solids	1 kg	24379.294
D-(+)-Glucose, anhydrous, GPR RECTAPUR®	Bucket (plastic)	5 kg	24379.363

#### D-(+)-GLUCOSE MONOHYDRATE FOR BIOCHEMISTRY

Description	Pack type	Pk	Cat. No.
D-(+)-Glucose monohydrate for biochemistry	Plastic bottle for solids	1 kg	24371.297
D-(+)-Glucose monohydrate for biochemistry	Bucket (plastic)	5 kg	24371.366

#### D-(+)-MALTOSE MONOHYDRATE ≥95%, GPR RECTAPUR®

Description	Pack type	Pk	Cat. No.
D-(+)-Maltose monohydrate ≥95%, GPR RECTAPUR®	Plastic bottle for solids	100 g	25188.187
D-(+)-Maltose monohydrate ≥95%, GPR RECTAPUR®	Plastic bottle for solids	1 kg	25188.291

#### L(+)-GLUTAMINE, TECHNICAL

Description	Pack type	Pk	Cat. No.
L(+)-Glutamine, TECHNICAL	Plastic bottle for solids	100 g	24378.187

#### CELL CULTURE REAGENTS AMINO ACIDS



#### **L-GLUTAMINE**

L-Glutamine is an essential amino acid required by virtually all mammalian and insect cells grown in culture. It is a crucial component of many cell culture media and serves as a major energy source for cells in culture.

L-Glutamine, 100X, 200 mM

Description	Pk	Cat. No.
L-Glutamine, 100X, 200 mM	100 ml	392-0441

#### L(+)-GLUTAMINE 98.5-101.5% (DRY BASIS) USP, MULTI-COMPENDIAL, J.T.BAKER®

Description	Pack type	Pk	Cat. No.
L(+)-Glutamine 98.5-101.5% (dry basis) USP, Multi-Compendial, J.T.Baker®	Plastic bottle for solids	1 kg	2078-06

#### L(+)-HISTIDINE USP, MULTI-COMPENDIAL, J.T.BAKER®

Description	Pack type	Pk	Cat. No.
L(+)-Histidine USP, Multi-Compendial, J.T.Baker®	White poly bottle, blue T/E cap	100 g	2080-05

#### L(+)-HISTIDINE MONOHYDROCHLORIDE MONOHYDRATE, MULTI-COMPENDIAL, J.T.BAKER®

Description	Pack type	Pk	Cat. No.
L(+)-Histidine monohydrochloride monohydrate, Multi-Compendial, J.T.Baker®	White poly bottle, blue tamper-evident cap	1 kg	2081-06

#### L(+)-HISTIDINE MONOHYDROCHLORIDE MONOHYDRATE 98.5-101.5% (DRIED BASIS), MULTI-COMPENDIAL, MACRON FINE CHEMICALS<sup>™</sup>

Description	Pack type	Pk	Cat. No.
L(+)-Histidine monohydrochloride monohydrate 98.5-101.5% (dried basis), Multi- Compendial, Macron Fine Chemicals <sup>™</sup>	White poly bottle, blue tamper-evident cap	1 kg	4942-06

#### L(+)-ARGININE 98.5-101.5% USP, MULTI-COMPENDIAL, J.T.BAKER®

Description	Pack type	Pk	Cat. No.
L(+)-Arginine 98.5-101.5% USP, Multi-Compendial, J.T.Baker®	Plastic bottle	1 kg	2066-06

#### L(+)-ARGININE 98.5-101.5% (DRIED BASIS) USP, FCC, MULTI-COMPENDIAL, MACRON FINE CHEMICALS<sup>™</sup>

Description	Pack type	Pk	Cat. No.
L(+)-Arginine 98.5-101.5% (dried basis) USP, FCC, Multi-Compendial, Macron Fine Chemicals <sup>®</sup>	White poly bottle, blue tamper-evident cap	1 kg	4932-06

#### L(+)-ARGININE HYDROCHLORIDE 98.5-101.5% (DRIED BASIS) USP, FCC, MULTI-COMPENDIAL, MACRON FINE CHEMICALS<sup>™</sup>

Description	Pack type	Pk	Cat. No.
L(+)-Arginine hydrochloride 98.5-101.5% (dried basis) USP, FCC, Multi- Compendial, Macron Fine Chemicals <sup>™</sup>	White poly bottle, blue tamper-evident cap	1 kg	4930-06

#### **GLYCINE USP, FCC, J.T.BAKER®**

Description	Pack type	Pk	Cat. No.
Glycine USP, FCC, J.T.Baker®	Glass bottle for solids	500 g	0581-01

#### GLYCINE ≥99.5%, ANALAR<sup>®</sup> NORMAPUR<sup>®</sup> ANALYTICAL REAGENT

Description	Pack type	Pk	Cat. No.
Glycine ≥99.5%, AnalaR® NORMAPUR® analytical reagent	Plastic bottle for solids	250 g	101194M
Glycine ≥99.5%, AnalaR® NORMAPUR® analytical reagent	Plastic bottle for solids	1 kg	101196X
Glycine ≥99.5%, AnalaR® NORMAPUR® analytical reagent	Plastic bottle for solids	5 kg	10119CU

#### L(+)-CYSTEINE HYDROCHLORIDE MONOHYDRATE 98.5-101.5% (DRY BASIS) USP, MULTI-COMPENDIAL, J.T.BAKER®

Description	Pack type	Pk	Cat. No.
L(+)-Cysteine hydrochloride monohydrate 98.5-101.5% (dry basis) USP, Multi- Compendial, J.T.Baker®	Plastic bottle for solids	100 g	2071-05

#### L(+)-VALINE 98.5-101.5% (DRIED BASIS) USP, FCC, MULTI-COMPENDIAL, MACRON FINE CHEMICALS<sup>™</sup>

Description	Pack type	Pk	Cat. No.
L(+)-Valine 98.5-101.5% (dried basis) USP, FCC, Multi-Compendial, Macron Fine Chemicals"	White poly bottle, blue tamper-evident cap	1 kg	4936-06

#### L(+)-SERINE 98.5-101.5% (DRIED BASIS) USP, MULTI-COMPENDIAL, J.T.BAKER®

#### - Food GMP manufactured product

Description	Pack type	Pk	Cat. No.
L(+)-Serine 98.5-101.5% (dried basis) USP, Multi-Compendial, J.T.Baker®	White poly bottle, blue tamper-evident cap	1 kg	2088-06

#### L-PHENYLALANINE 98.5-101.5% (DRIED BASIS) USP, MULTI-COMPENDIAL, J.T.BAKER®

#### - Food GMP manufactured product

Description	Pack type	Pk	Cat. No.
L-Phenylalanine 98.5-101.5% (dried basis) USP, Multi-Compendial, J.T.Baker®	White poly bottle, blue tamper-evident cap	1 kg	2086-06

#### L-THREONINE 98.5-101.5% (DRIED BASIS) USP, MULTI-COMPENDIAL, J.T.BAKER®

#### - Food GMP manufactured product

Description	Pack type	Pk	Cat. No.
L-Threonine 98.5-101.5% (dried basis) USP, Multi-Compendial, J.T.Baker®	White poly bottle, blue tamper-evident cap	1 kg	2089-06

#### L-TYROSINE DISODIUM SALT DIHYDRATE ≥98%, BAKER ANALYZED®, BIOCHEMICAL REAGENT, J.T.BAKER®

Description	Pack type	Pk	Cat. No.
L-Tyrosine disodium salt dihydrate ≥98%, BAKER ANALYZED®, Biochemical Reagent, J.T.Baker®	White poly bottle, blue tamper-evident cap	100 g	2094-05

#### L(+)-GLUTAMIC ACID 98.5-100.5% PH. EUR.

Description	Pack type	Pk	Cat. No.
L(+)-Glutamic acid 98.5-100.5% Ph. Eur.	Plastic bottle for solids	250 g	20350.232



TL824 (BF)

#### UPRIGHT MICROSCOPES, VISISCOPE® 800, VWR®

VisiScope 800 laboratory microscopes are designed for research projects.

- Die-cast frame with high stability and ergonomics
- Transmitted light observations
- High-efficiency pure white LED
- IOS objectives with anti-fungus treatment

A full range of accessories are available. Please contact your local Avantor sales office for further details.

Supplied ready to use with eyepieces, objectives, dust cover and power supply.

Model	TL824 (BF)	TL824 (PH)				
Observation method	Brightfield Brightfield, phase contrast and darkfield					
Head	30° inclined, 360° rotating					
Eyepieces	WF	WF 10×/22 mm				
Nosepiece		Sextuple				
Objectives	IOS W-plan achromatic 4×, 10×, 20×, 40×, 60×, 100× (i)	IOS W-Ph plan achromatic 10×, 20×, 40×, 100× (i)				
Stage	243×160 mm (r	243×160 mm (movement: 100×60 mm)				
Condenser	Swing-out type, N.A. 0,9 with centring system Phase contrast condenser 10×, 20×, 40×, 100×, B					
Focusing system	Coaxial coarse and fine knobs					
Illumination	LED	LED (white, 3,6 W)				
W×D×H	250×	250×394×460 mm				
Weight		10 kg				
Description	Туре	odel Pk Cat. No.				
Brightfield microscope	Trinocular TI	.824 (BF) 1 <b>630-1940</b>				
Phase contrast microscope	Trinocular TI	.824 (PH) 1 <b>630-1941</b>				
Description	Magnification	Pk Cat. No.				
Eyepieces						
Widefield micrometer eveniece with 01 mm division	10×/22 mm	1 630-1968				



#### **INVERTED MICROSCOPE, VISISCOPE® IT415 PH**

This brightfield, phase contrast microscope is the ideal solution for fast and reliable routine inspections, especially in *in vivo* cell culture applications.

- High-efficiency LED illumination with brightness control: Ideal for all transmitted light observations
- Condenser can be removed to extend the working distance up to 150 mm
- Fixed specimen stage for fatigue-free operation
- Two-stage insert (glass and metal) with hole for small dimension specimens
- Plan achromatic LWD objectives (IOS) with anti-fungus treatment

Supplied ready to use with eyepieces, objectives, dust cover, green filters (IF550) and multi-plug power supply.

Model	IT415 PH
Observation method	Brightfield and phase contrast
Head	45° inclined
Eyepieces	WF 10×/22 mm
Nosepiece	Quintuple
Objectives	IOS LWD W-Ph plan achromatic 10×, 20×, 40×
Working distance	72 - 150 mm
Stage	Fixed, 250×160 mm
Condenser	N.A. 0,30, pre-centred
Focusing system	Coaxial coarse and fine knobs
Illumination	LED (white, 8 W)
W×D×H	230×540×495 mm
Weight	9 kg

#### **CELL CULTURE EQUIPMENT** INVERTED MICROSCOPE

Description	Туре	Model	Pk	Cat. No.
Inverted microscope	Trinocular	IT415 PH	1	630-2729
Complete set IT415PH-1, including Inverted microscope VisiScope IT415 PH with Camera VisiCam P6 and adapter	Trinocular	IT415 PH	1 SET	630-3098
Description		Magnification	Pk	Cat. No.
Accessories				
Micrometric slide, 26×76 mm, with 2 scales (1 mm/100 division for biological micro division for stereo microscopes)	scopes and 10 mm/10	00	1	630-1650
Eyepieces				
Widefield micrometer eyepiece with 0,1 mm division		10×/22 mm	1	630-1968
IOS LWD W-Plan objectives				
IOS LWD W-Plan objective		4×/0,13	1	630-2164
IOS LWD W-Plan objective		60×/0,70	1	630-2168
IOS LWD W-Plan PH objectives (phase contrast)				
IOS LWD W-Plan PH objective		4×/0,13	1	630-2719
IOS LWD W-Plan PH objective		10×/0,25	1	630-2165
IOS LWD W-Plan PH objective		20×/0,40	1	630-2166
IOS LWD W-Plan PH objective		40×/0,60	1	630-2167
CCD camera adapters, VisiScope®				
C-mount Adapter for Visiscope TL524; focusable C-mount adapter (on upright an	d inverted microscop	bes)	1	630-1749
Holders				
Holder for Petri dishes, Ø: 38 mm (for 630-2698)			1	630-2697
Holder for Terasaki and Petri dishes, Ø: 65 mm			1	630-2698
Holder for slide and Petri dish, Ø: 54 mm			1	630-2699
Holder for 2+2 slides			1	630-2700
Holder for Utermöhl chamber (for 630-2699)			1	630-2701
Extension				
Load-bearing side extension for VisiScope® IT405 and IT415 (order 2 for each side	of the stage)		1	630-2702
Spare parts				
TNT dust cover, large, L×H: 700×550 mm (for models SZB360 OH, SZT360 OH and	l IT400 series)		1	630-2824



630-2164

#### IOS OBJECTIVES FOR INVERTED MICROSCOPES

These objectives are designed to be used with inverted microscopes.

- High resolution and contrast
- Ensure field flatness up to F.N. 22, based on infinity-corrected optical system
- Long Working Distance provides a wider working space between the lens surface and the object

Ideal for the observation of culture specimens, clinical examinations and cell testing.

Description	Magnification	Pk	Cat. No.
IOS LWD W-Plan objectives			
IOS LWD W-Plan objective	4×/0,13	1	630-2164
IOS LWD W-Plan objective	40×/0,60	1	630-1764
IOS LWD W-Plan objective	60×/0,70	1	630-2168
IOS LWD W-Plan PH objectives (phase contrast)			
IOS LWD W-Plan PH objective	4×/0,13	1	630-2719
IOS LWD W-Plan PH objective	10×/0,25	1	630-2165
IOS LWD W-Plan PH objective	20×/0,40	1	630-2166
IOS LWD W-Plan PH objective	40×/0,60	1	630-2167

#### **IOS LWD U-PLAN OBJECTIVES FOR FLUORESCENCE APPLICATIONS, F SERIES**

These objectives are designed for use with inverted microscopes. They were specifically developed for high class performance and contrast required by the most demanding users.

- Very high resolution and contrast: Ideal for UV fluorescence applications
- Designed to ensure field flatness up to F.N. 25.
- Long Working Distance provides a wider working space between the lens surface and the object
- Plan-Fluorite (or Semi-Apochromatic) design ensures additional spherical aberration correction for superior resolution and greater numerical apertures

Description	Magnification	Pk	Cat. No.
IOS LWD U-Plan F objective	10×/0,30	1	630-2706
IOS LWD U-Plan F objective	20×/0,45	1	630-2707
IOS LWD U-Plan F objective	40×/0,65	1	630-2708
IOS LWD U-Plan F objective	60×/0,75	1	630-2709



IT406 FL2 BG

#### **INVERTED TRINOCULAR FLUORESCENCE MICROSCOPES, VISISCOPE® IT406 FL**

Routine inverted fluorescence microscopes for transmitted brightfield, phase contrast (optional for IT406 FL4 and IT406 FLD4 FLD) and fluorescence observations with IOS LWD W-Plan PH or U-Plan F objectives. Ideal for tissue culture research in clinical and biotechnology laboratories.

- High efficiency LED illumination with brightness control
- Interchangeable LED filter sets and LED cubes
- Condenser can be removed to extend the working distance up to 150 mm
- Fixed specimen stage for fatigue-free operation
- Two-stage insert (glass and metal) with hole for small dimension specimens
- Plan achromatic objectives (IOS) with anti-fungus treatment

The extremely powerful LED fluorescence illuminators are combined with corresponding excitation filter sets for the visualisation of most fluorochromes. LED fluorescence ensures unparalleled convenience eliminating warm-up/cool-down times and all the inconveniences related to lamp replacement and adjustment. Transmitted light through the exclusive X-LED to ensure great looking, rich, high quality specimen view.

The LED fluorescence attachment is a revolutionary solution. It consists of an up to four-position selector for the use of four fluorescent illuminators, called LED fluorescence cubes. Each cube is composed of a filter set mounted on a filter block and a high power LED with emission corresponding to the filters installed. For various analysis a selection of nine LED fluorescence filter cubes are available.

Supplied ready to use with eyepieces, objectives, multi-plug power supply and dust cover and without LED fluorescence cubes (IT406 FL2 BG is supplied with blue and green LED cube). The digital model IT406 FLD4 FLD is also supplied with wireless mouse and keyboard, as well as software.

Model	IT406 FL2 BG	IT406 FL4	IT406 FLD4 FLD		
Observation method	Brightfield, phase contrast and fluorescence	Brightfield and fluorescence			
Head		45° inclined			
Eyepieces		WF 10×/22 mm			
Nosepiece		Quintuple			
Objectives	IOS LWD W-Plan PH 10×, 20× and 40×	IOS LWD U-Plan F	10×, 20× and 40×		
Stage	Fixed, 250×160 mm	Fixed (250×160 mm) and attachable mechanica	al stage (250×290 mm, movement: 120×80 mm)		
Condenser	Abbe, N.A.	Abbe, N.A. 0,30, slider for PH, WD = 72 mm, pre-centred, with diaphragm			
Focusing system		Coaxial coarse and fine knobs			
Illumination	Transmitted: LED (white, 8 W), with brightness control Epi-illumination: LED fluorescence cubes, with brightness control; 3-position filter holder	ness Transmitted: LED (white, 8 W), with brightness control with Epi-illumination: LED fluorescence cubes, with brightness control; 4-position filter hold er			
Camera	6 MP USB 3.0 camera with 12" r (1920×1080)				
Sensor	CMOS				
W×D×H	230×540×495 mm	365×540×495 mm	365×540×625 mm		
Weight	10,5 kg	12 kg	13,5 kg		

#### **CELL CULTURE EQUIPMENT** INVERTED MICROSCOPE

Description	Туре	Model	Magnification	Additional features	Pk	Cat. No.
Microscopes						
Inverted microscope with IOS LWD W-Plan PH objectives	Trinocular	IT406 FL2 BG	10×, 20×, 40×	3-position filter holder, incl. blue + green LED fluorescence cubes	1	630-3254
Inverted microscope with IOS LWD U-Plan F objectives	Trinocular	IT406 FL4	10×, 20×, 40×	4-position filter holder (empty)	1	630-3255
Inverted digital microscope with IOS LWD U-Plan F objectives	Trinocular	IT406 FLD4 FLD	10×, 20×, 40×	6 MP camera; 4-position filter holder (empty)	1	630-3256

Description	Optical foatures	Magnification	Pk	Cat No.
	Opticul leditiles	Magnification	FK	Cut. No.
LED hubrescence cubes	LED emission 460 mm			
	LED emission 460 nm, Excitation filter 455-495 nm			
Blue LED fluorescence cube for IT406	Dichroic mirror cut-off 500 nm,		1	630-3257
	Emission filter 510 LP nm			
	LED emission 523 nm,			
Green LED fluorescence cube for IT406	Excitation filter 510-550 nm,		1	630-3258
	Dichroic mirror cut-off 570 nm,			
	Emission filter 575 LP nm			
	Excitation filter 390 - 420 nm.			
Violet LED fluorescence cube for IT406	Dichroic mirror cut-off 440 nm,		1	630-3259
	Emission filter 450 LP nm			
	LED emission 365 nm,			
UV LED fluorescence cube for IT406	Excitation filter 325 - 375 nm,		1	630-3260
	Dichroic mirror cut-off 415 nm, Emission filter 425 LB nm			
	LED emission 622 pm			
	Excitation filter 590 - 650 nm.			
Red 1 LED fluorescence cube for IT406	Dichroic mirror cut-off 660 nm,		1	630-3261
	Emission filter 665 LP nm			
	LED emission 623 nm,			
Red 2 LED fluorescence cube for IT406	Excitation filter 595-645 nm,		1	630-3262
	Dichroic mirror cut-off 655 nm,			
	LED emission 660 pm			
	Excitation filter 623 - 678 nm.			
Deep red LED fluorescence cube for IT406	Dichroic mirror cut-off 685 nm,		1	630-3263
	Emission filter 690 - 750 nm			
	LED emission 740 nm,			
Far red LED fluorescence cube for IT406	Excitation filter 720 - 760 nm,		1	630-3264
	Dichroic mirror cut-off 770 nm,			
	Emission filter 780 LP film			
	LED emission 590 nm, Excitation filter 582 - 603 nm			
Amber LED fluorescence cube for IT406	Dichroic mirror cut-off 610 nm,		1	630-3265
	Emission filter 615 - 645 nm			
Accessories				
Mechanical stage for IT406 FL2 BG			1	630-3266
Eyepieces				
Widefield micrometer eyepiece with 0,1 mm division		10×/22 mm	1	630-1968
IOS LWD W-Plan objectives				
IOS LWD W-Plan objective		4×/0,13	1	630-2164
IOS LWD W-Plan objective		60×/0,70	1	630-2168
IOS LWD W-Plan PH objectives (phase contrast)				
IOS LWD W-Plan PH objective		4×/0,13	1	630-2719
IOS LWD W-Plan PH objective		10×/0,25	1	630-2165
IOS LWD W-Plan PH objective		20×/0,40	1	630-2166
IOS LWD W-Plan PH objective		40×/0,60	1	630-2167
IOS LWD U-Plan objectives for fluorescence applications, F series				
IOS LWD U-Plan F objective		10×/0,30	1	630-2706
IOS LWD U-Plan F objective		20×/0,45	1	630-2707
IOS LWD U-Plan F objective		40×/0,65	1	630-2708
IOS LWD U-Plan F objective		60×/0.75	1	630-2709
CCD camera adapters. VisiScope®				
CCD camera adapter, 1/3" sensor, for 500 series, 0,35x			1	630-1748
C-mount Adapter for Visiscope TL524; focusable C-mount adapter (on upriaht and inverted				
microscopes)			1	630-1749
Holders				
Holder for Petri dishes, Ø: 38 mm (for 630-2698)			1	630-2697
Holder for Terasaki and Petri dishes, Ø: 65 mm			1	630-2698
Holder for slide and Petri dish, Ø: 54 mm			1	630-2699
Holder for 2+2 slides			1	630-2700
Holder for Utermöhl chamber (for 630-2699)			1	630-2701
Spare parts				
TNT dust cover, large, LxH: 700x550 mm (for models SZB360 OH, SZT360 OH and IT400 series)			1	630-2824



IT600 FLD

#### FLUORESCENCE MICROSCOPE, INVERTED TRINOCULAR, VISISCOPE® IT600 FLD

Routine inverted fluorescence microscope for transmitted brightfield, darkfield, phase contrast and fluorescence observations. Ideal for tissue culture research in clinical and biotechnology laboratories.

- No warm-up, cool-down times for 60-minute time saving
- High-efficiency LED illumination with brightness control
- Interchangeable LED filter sets
- Condenser can be removed/rotated to extend the working distance up to 220 mm
- Full range of objectives to choose, for highest flexibility

The extremely powerful LED Fluorescence Illuminators are combined with corresponding excitation filter sets for the visualisation of most fluorochromes. LED fluorescence ensures unparalleled convenience eliminating warm-up/cool-down times and all the inconveniences related lamp replacement and adjustment. Transmitted light through the exclusive X-LED to ensure great looking, rich and high quality specimen view.

The 4-position epi-fluorescence attachment is powered by extremely powerful 5 W LEDs fluorescence illuminator and combined with blue, green and UV excitation filters for the visualisation of the following fluorochromes: Acridine Yellow, Acridine Orange, Auramine, DiO, DTAF, FITC, GFP, YFP (blue filter) plus Rhodamine, Texas Red and TRITC (green filter) plus Alexa Fluor® 350, 7- Amino-4-methylcoumarin, 6-Aminoquinoline, Calcofluor® White, Dansyl cadaverine, DAPI, Dapoxyl, DIDS, Europium (III) Chloride, Fluoro-Gold®, Fluoro-Gold®, Fua-2, Hoechst 33342 & 33258, 1,5 IAEDANS, Indo-1, Marina Blue®, 4-Methylumbelliferone, PBF1, Pyrene, SBFI, Y66F, Y66H (UV filter) amongst others.

High power 5 W LEDs with brightness control, motorised LED selection with centrable field diaphragm, 4-position filter holder; blue (EX 450-490, DM 495, EM 500-550), green (EX 540-580, DM 585, EM 608-682) and UV (EX 340-390, DM 400, EM 420LP) excitation filters included.

Objectives are sold separately.

Supplied ready to use with eyepieces, multi-plug power supply, dust cover and LEDs fluorescence illuminator, combined with blue, green and UV excitation filters.

Model	IT600 FLD
Observation method	Brightfield, darkfield, phase contrast and fluorescence
Head	45° inclined
Eyepieces	WF 10×/24 mm
Nosepiece	Quintuple, reversed
Stage	Fixed, 215×250 mm; attachable mechanical stage, 290×250 mm (movement: 120×80 mm)
Condenser	Abbe N.A. 0.50, removable, with iris diaphragm and slider for phase contrast
Focusing system	Coaxial coarse and fine knobs
Illumination	Transmitted: LED (white, 8 W) with brightness control; Epi-illumination: High-power 5 W LEDs with brightness control, 4-position filter holder; blue, green and UV excitation filters included
W×D×H	290×720×545 mm
Weight	13 kg

Туре	Model	Additional features	Pk	Cat. No.
Microscope				
Trinocular	IT600 FLD	4-position filter holder, blue, green and UV filter included	1	630-3267

Description	Magnification	Pk	Cat. No.
Eyepieces			
Widefield micrometer eyepiece with 0,1 mm division	10×/22 mm	1	630-1968
IOS LWD W-Plan objectives			
IOS LWD W-Plan objective	4×/0,13	1	630-2164
IOS LWD W-Plan objective	40×/0,60	1	630-1764
IOS LWD W-Plan objective	60×/0,70	1	630-2168
IOS LWD W-Plan PH objectives (phase contrast)			
IOS LWD W-Plan PH objective	4×/0,13	1	630-2719
IOS LWD W-Plan PH objective	10×/0,25	1	630-2165
IOS LWD W-Plan PH objective	20×/0,40	1	630-2166
IOS LWD W-Plan PH objective	40×/0,60	1	630-2167
IOS LWD U-Plan objectives for fluorescence applications, F series			
IOS LWD U-Plan F objective	10×/0,30	1	630-2706
IOS LWD U-Plan F objective	20×/0,45	1	630-2707
IOS LWD U-Plan F objective	40×/0,65	1	630-2708

Description	Magnification	Pk	Cat. No.
Eyepieces			
IOS LWD U-Plan F objective	60×/0,75	1	630-2709
CCD camera adapters, VisiScope®			
CCD camera adapter, 1/3" sensor, for 500 series, 0,35x		1	630-1748
C-mount Adapter for Visiscope TL524; focusable C-mount adapter (on upright and inverted microscopes)		1	630-1749
Holders			
Holder for Petri dishes, Ø: 38 mm (for 630-2698)		1	630-2697
Holder for Terasaki and Petri dishes, Ø: 65 mm		1	630-2698
Holder for slide and Petri dish, Ø: 54 mm		1	630-2699
Holder for 2+2 slides		1	630-2700
Holder for Utermöhl chamber (for 630-2699)		1	630-2701
Spare parts			
TNT dust cover, large, L×H: 700×550 mm (for models SZB360 OH, SZT360 OH and IT400 series)		1	630-2824



Cell counter

#### **VWR®, AUTOMATED CELL COUNTERS**

Save time and reduce variability with VWR® automated cell counter and VWR® automated cell counter Fluo. Intelligent image recognition and advanced optical imaging technology to achieve accurate and automatic cell analysis, cell concentration and cell size determination.

- Wide application: cell counting, cell viability, AO/PI staining, cell transfection efficiency, cell expression
- All-in-one machine with a compact design
- Dual channel option in VWR® automated cell counter Fluo
- 3 interchangeable fluorescent cubes (green, blue, red)
- Cell counting slide consumables with 2 chambers
- Accurate cell identification in only 9 seconds
- User friendly UI with easy operation
- Adjustable parameters (focus, brightness, cell size range, roundness range)
- Data recording system can save more than 10000 counting reports

VWR<sup>®</sup> automated cell counter Fluo dual channel: detachable building block design enables easy installation and replacement of the fluorescent cubes. Fluorescent cubes sold separately. FL Cube blue for DAPI, Hoechst, BFP FLcube green for acridine orange(AO), Calcein-AM, Alexa fluor 488, SYBR green, FITC, GFP FL cube red for propidium iodide(PI), DsRed, dTomato, RFP.

CE and UKCA marked.

Model	Display	Light source
Cell counters		
Automated cell counter		Brightfield
Automated cell counter Fluo	/" capacitive touch screen	Brightfield, fluorescent
Fluo cubes		

Description	Pk	Cat. No.
Cell counters		
VWR <sup>e</sup> automated cell counter	1	49862-2000
VWR <sup>e</sup> automated cell counter Fluo	1	49893-2000
Fluo cubes		
VWR <sup>®</sup> Fluo cube for DAPI, blue	1	49893-4950
VWR® Fluo cube for GFP and AO, green	1	49893-4951
VWR® Fluo cube for PI, red	1	49893-4952
Accessories		
VWR® cell counting slide (2 samples/slide)	50	10228-0050



VWR CO2 incubator, ILCO 180

#### CO2 INCUBATOR, INCU-LINE® ILCO 180 PREMIUM, VWR®

The ILCO 180 Premium offers optimal growth conditions for cell cultures and meets demanding requirements for best possible cell growth and maximum sample safety. This CO<sub>2</sub> incubator comes with a built-in, drift-free infrared CO<sub>2</sub> sensor that can be sterilised. Reliable decontamination is provided by the standard-compliant 180 °C hot air sterilisation routine which completely eliminates contaminants and ensures the inner chamber is completely sterilised. This model has an intuitive menu and user friendly software, also USB port for data download to USB stick and for uploading programs. It can be connected to Ethernet or Wi-Fi networks for remote control from any computer, and users can receive notifications about alarms/events via e-mail.

- Multi-functional microprocessor controller with 7" full colour touch screen, gives overview of set and current parameters while running
- Access control via password login and administrator function to manage five user accounts
- 40 user-program memory, quick and easy change of parameters during a running program
- Multi-segment temperature/time profile (up to 100) with adjustable ramps
- Timer from 1 minute up to 366 days or continuous operation
- Adjustable start delay feature and loop function
- Adjustable over-temperature safety thermostat Class 3.1 (DIN 12880) protects samples and the incubator

This incubator has a solid, powder-coated sheet steel outer door, an internal glass door and a fanless inner chamber made of high-grade stainless steel (DIN 1.4301). It is equipped with a rack for shelves, a removeable water pan, two 30 mm access ports (left and rear) and door lock. It can be stacked using an optional stacking adapter to save space. The optional base on castors will avoid contamination of the chamber caused by soil pollution.

Safety features include audible and visible temperature alarms, power failure control system, open door alarm, temperature sensor fail alarm and auto-diagnostic function.

Unit features Premium Control Software that aids GLP compliance with password protection settings, events registry and an internal memory which stores up to 10000 data records for each user (stored for a maximum of 12 months). Users can overview the values on the display or a PC in tabular or graphic form.

Unit is supplied with three stainless steel perforated shelves, keys to the lock (2 pcs), 3 metre pressure gas hose, hose clamp, manufacturer test certificate at 37 °C, Ethernet cable, multilingual instruction manual and Premium Control Software (can be downloaded from internal memory onto USB stick).

Model	ILCO 180 Premium
Temperature range (°C)	Ambient +550
Temperature fluctuation (time) (°C)	<±0,1 °C at 37 °C
Temperature variation (spatial) (°C)	<±0,3 °C at 37 °C
Recovery time after 30 second door opening at 37 °C	6 min
Capacity	182 L
Usable volume	135 L
Convection type	Natural convection
CO <sub>2</sub> range	0 - 20%
CO2 recovery time after 30 second door opening at 5 Vol.% CO2	10 min
Max. load per shelf (kg)	10
Max. chamber capacity	30 kg
Int. W×D×H	560×500×650 mm
Ext. W×D×H	700×780×920 mm
Energy consumption	66 Wh/h at 37 °C
Nominal power consumption (W)	1700
Sound level	42 dB(A)
CO <sub>2</sub> sensor	IR
Electrical	230 V, 50 - 60 Hz
Humidity	90 - 95% RH

Туре	Shelves supplied (max.)	Weight (kg)	Pk	Cat. No.
ILCO 180 Premium	3 (6)	96	1	390-1544



#### **CELL STRAINERS**

Manufactured from a strong nylon mesh with evenly spaced mesh pores, these cell strainers are sterile, easy to use devices for quickly isolating primary cells to consistently obtain a uniform single-cell suspension from tissues. Designed to protect valuable flow cytometry and cell sorting instrumentation by reliably removing clumps and debris from cell suspensions and clinical samples prior to analysis.

- Available in three mesh sizes with different colours for easy identification
- Extended lip on the strainer enables aseptic handling with forceps
- Ready to use, sterilised by electron beam irradiation
- Individually wrapped
- Fit into most 50 ml conical tubes
- Free from DNase and RNase, non pyrogenic

ISO 9001, ISO 13485

Description	Pk	Cat. No.
Cell strainers, 40 µm pore size, blue frame	50	732-2757
Cell strainers, 70 µm pore size, white frame	50	732-2758
Cell strainers, 100 µm pore size, yellow frame	50	732-2759

**∧** avantor<sup>™</sup>

# VWR for cell culture

- Cell culture plastics
- Liquid handling and filtration products
- Sera and reagents
- Cryopreservation
- Handy consumables and useful equipment

For more info visit vwr.com



Syringe filter

#### **SYRINGE FILTERS**

Typical applications are clarification, sterile filtration, sample preparation and sterile venting.

- Sterile blister packed filters are ideal for sterile filtration
- Non sterile syringe filters are excellent for HPLC applications
- Biosafe is according to Class VI plastics tests
- Available with nylon, PES, PTFE, PVDF, CA, RC membrane, and GF (Glass Fibre)
- Available with hydrophilic or hydrophobic PTFE
- Each filter has a female Luer lock inlet and a male slip Luer outlet

Nylon and PTFE membranes are ideal for sample preparation and small volume chemical filtration.

Syringe filters with CA (cellulose acetate) or PES (polyether sulfone) membranes are ideal for sterile filtration of buffers, tissue culture media or additives, and other biologicals. The PES membrane offers high flow rates.

RC and PTFE hydrophilic type offer the best chemical resistence for both aqueous solutions and solvents.

Manufactured under ISO 9001:2015 quality management. Hydrophobic PTFE is not intended for use with aqueous solutions.

Ø (mm)	Pore size (µm)	Membrane	Housing material	Sterility	Pk	Cat. No.
Nylon membrane						
30	0,45	Nylon	PP	Sterile	50	514-1265
30	0,22	Nylon	PP	Sterile	50	514-1266
25	0,45	Nylon	PP	Non sterile	100	514-1267
25	0,22	Nylon	PP	Non sterile	100	514-1268
13	0,45	Nylon	PP	Non sterile	100	514-1279
13	0,22	Nylon	PP	Non sterile	100	514-1280
PES filters						
25	0,45	CA		Sterile	50	514-0063
25	0,45	CA		Non sterile	100	514-0062
25	0,45	PES		Sterile	50	514-0075
25	0,45	PES		Non sterile	100	514-0074
25	0,20	CA		Sterile	50	514-0061
25	0,20	CA		Non sterile	100	514-0060
25	0,20	PES		Sterile	50	514-0073
25	0,20	PES		Non sterile	100	514-0072
PTFE membrane						
25	0,45	Hydrophobic PTFE	PP	Non sterile	100	514-1253
25	0,22	Hydrophobic PTFE	PP	Non sterile	100	514-1254
13	0,45	Hydrophobic PTFE	PP	Non sterile	100	514-1255
13	0,22	Hydrophobic PTFE	PP	Non sterile	100	514-1256
13	0,22	Hydrophilic PTFE	PP	Non sterile	100	514-1275
13	0,45	Hydrophilic PTFE	PP	Non sterile	100	514-1276
25	0,22	Hydrophilic PTFE	PP	Non sterile	100	514-1277
25	0,45	Hydrophilic PTFE	PP	Non sterile	100	514-1278
PVDF membrane						
30	0,45	PVDF	PP	Sterile	50	514-1245
30	0,45	PVDF	PP	Non sterile	100	514-1246
30	0,22	PVDF	PP	Sterile	50	514-1247
30	0,22	PVDF	PP	Non sterile	100	514-1248
13	0,45	PVDF	PP	Sterile	50	514-1249
13	0,45	PVDF	PP	Non sterile	100	514-1250
13	0,22	PVDF	PP	Sterile	50	514-1251
13	0,22	PVDF	PP	Non sterile	100	514-1252
CA membrane						
25	0,45	CA	PP	Sterile	50	514-1271
25	0,45	CA	PP	Non sterile	100	514-1272
25	0,22	CA	PP	Sterile	50	514-1273
25	0,22	CA	PP	Non sterile	100	514-1274
RC membrane						
30	0,45	RC	PP	Non sterile	100	514-1240
30	0,22	RC	PP	Non sterile	100	514-1241
13	0,45	RC	PP	Non sterile	100	514-1243
13	0,22	RC	PP	Non sterile	100	514-1244
GF membrane						
25	1,00	Glass fibre	PP	Non sterile	100	514-1269
13	1,00	Glass fibre	PP	Non sterile	100	514-1270
30	1,00	Glass fibre	PP	Non sterile	100	514-1281



Bottle-top filtration

#### BOTTLE-TOP VACUUM FILTRATION SYSTEMS, PES, VWR®

PS funnel and collection reservoir. Systems for vacuum filtration of aqueous solutions including cell culture media, buffers or other biological fluids.

- Each individual unit is lot numbered for traceability
- Once filtration is complete, solution can be stored in the collection reservoir until needed
- Non pyrogenic, non cytotoxic

PES membrane: Low protein binding and low extractables. Ideal for tissue culture applications.

0,2 µm: Ideal for sterilisation applications and media preparation.

0,45 µm: Ideal for buffer clarification.

ISO 10993-5:1999

Full unit includes the filtration funnel with either 0,2, or 0,45  $\mu m$  PES membrane, vacuum port, lid, collection reservoir and cap for storage.

Individually packed in easy peel-to-open bags, receiver bottle cap is individually wrapped.

Complete filtration units     150     0,2     50     12     514-0328       Complete filtration unit     250     0,2     50     12     514-0328       Complete filtration unit     250     0,2     50     12     514-0328       Complete filtration unit     250     0,45     50     12     514-0329       Complete filtration unit     500     0,2     75     12     514-0332       Complete filtration unit     500     0,2     75     12     514-0332       Complete filtration unit     1000     0,2     91     12     514-0332       Complete filtration unit     1000     0,2     91     12     514-0332       Complete filtration unit     1000     0,45     91     12     514-0332       Complete filtration unit     1000     0,45     91     12     514-0332       Filtration cup     50     0,45     50     24     514-0332       Filtration cup     50     0,45     50     24     514-0334       Filtrat	Description	Capacity (ml)	Pore size (µm)	Membrane Ø (mm)	Pk	Cat. No.
Complete filtration unit1500,25012514-0328Complete filtration unit1500,455012514-0330Complete filtration unit2500,455012514-0331Complete filtration unit5000,27512514-0331Complete filtration unit5000,457512514-0332Complete filtration unit5000,457512514-0333Complete filtration unit10000,29112514-0334Complete filtration unit10000,29112514-0334Complete filtration unit10000,29112514-0334Filtration cups only1500,25024514-0334Filtration cup1500,25024514-0334Filtration cup2500,455024514-0334Filtration cup5000,457524514-0334Filtration cup5000,457524514-0347Filtration cup5000,457524514-0347Filtration cup10000,29124514-0347Filtration cup10000,29124514-0347Filtration cup10000,29124514-0347Filtration cup10000,29124514-0347Filtration cup10000,29124514-0347Filtration cup <td>Complete filtration units</td> <td></td> <td></td> <td></td> <td></td> <td></td>	Complete filtration units					
Complete filtration unit1500,455012514-0329Complete filtration unit2500,455012514-0331Complete filtration unit5000,27512514-0332Complete filtration unit5000,457512514-0332Complete filtration unit10000,29112514-0332Complete filtration unit10000,457512514-0332Complete filtration unit10000,459112514-0332Complete filtration unit10000,455024514-0332Filtration cup1500,25024514-0332Filtration cup1500,25024514-0332Filtration cup500,455024514-0332Filtration cup500,455024514-0332Filtration cup500,455024514-0332Filtration cup500,455024514-0342Filtration cup500,457524514-0342Filtration cup1000,29124514-0342Filtration cup1000,29124514-0342Filtration cup1000,457524514-0342Filtration cup1000,457524514-0342Filtration cup1000,29124514-0342Filtration cup1000,2	Complete filtration unit	150	0,2	50	12	514-0328
Complete filtration unit2500,25012514-0330Complete filtration unit5000,27512514-0331Complete filtration unit5000,457512514-0332Complete filtration unit0000,457512514-0334Complete filtration unit10000,29112514-0334Complete filtration unit10000,459112514-0334Complete filtration unit10000,459112514-0334Filtration cups only150,455024514-0336Filtration cup1500,455024514-0334Filtration cup2500,25024514-0334Filtration cup5000,27524514-0334Filtration cup5000,27524514-0346Filtration cup5000,27524514-0346Filtration cup5000,27524514-0346Filtration cup5000,27524514-0346Filtration cup10000,459124514-0346Filtration cup10000,459124514-0346Filtration cup5024514-0346514-0346514-0346Filtration cup10000,459124514-0346Filtration cup5024514-0346514-0346514-0346Filtration cup<	Complete filtration unit	150	0,45	50	12	514-0329
Complete filtration unit2500,455012514-0331Complete filtration unit5000,457512514-0332Complete filtration unit5000,457512514-0333Complete filtration unit10000,209112514-0334Complete filtration unit10000,459112514-0334Filtration cups onlyFiltration cups only1500,25024514-0334Filtration cup1500,25024514-0334Filtration cup2500,25024514-0334Filtration cup2500,27524514-0349Filtration cup5000,455024514-0349Filtration cup5000,455024514-0349Filtration cup10000,27524514-0349Filtration cup5000,459124514-0349Filtration cup10000,29124514-0347Filtration cup10000,29124514-0347Filtration cup10000,459124514-0347Filtration cup15024514-0347514-0344Filtration cup10000,459124514-0347Filtration cup5024514-0347514-0347Filtration cup1000,459124514-0347Filtration cup	Complete filtration unit	250	0,2	50	12	514-0330
Complete filtration unit5000,27512514-0332Complete filtration unit5000,457512514-0333Complete filtration unit10000,29112514-0334Complete filtration unit10000,459112514-0334Complete filtration unit10000,459112514-0334Filtration cup1500,25024514-0334Filtration cup1500,25024514-0334Filtration cup2500,25024514-0334Filtration cup2500,455024514-0334Filtration cup5000,27524514-0334Filtration cup5000,27524514-0344Filtration cup10000,29124514-0344Filtration cup10000,29124514-0344Filtration cup10000,459124514-0344Filtration cup10000,459124514-0344Filtration cup15014141-0344514-0344514-0344Filtration cup15014141-0344141-0344141-0344Filtration cup15014141-0344141-0344141-0344Reservoir bottle with cap15014141-0344141-0344Reservoir bottle with cap15014141-0344141-0344Reservoir bottle with ca	Complete filtration unit	250	0,45	50	12	514-0331
Complete filtration unit5000,457512514-0333Complete filtration unit1000,29112514-0334Complete filtration unit1000,459112514-0335Filtration cups onlyFiltration cup1500,25024514-0336Filtration cup1500,455024514-0336Filtration cup2500,455024514-0336Filtration cup2500,455024514-0336Filtration cup500,455024514-0346Filtration cup500,455024514-0346Filtration cup5000,27524514-0346Filtration cup10000,29124514-0346Filtration cup10000,29124514-0346Filtration cup10000,29124514-0346Filtration cup1500,459124514-0346Filtration cup1500,459124514-0346Filtration cup150124514-0346Reservoir bottle with cop150124514-0346Reservoir bottle with cop50124514-0346Reservoir bottle with cop50124514-0346Reservoir bottle with cop50124514-0346Reservoir bottle with cop50124514-0346 </td <td>Complete filtration unit</td> <td>500</td> <td>0,2</td> <td>75</td> <td>12</td> <td>514-0332</td>	Complete filtration unit	500	0,2	75	12	514-0332
Complete filtration unit1000,29112514-0334Complete filtration unit1000,459112514-0334Filtration cups onlyFiltration cup5024514-0336Filtration cup5024514-0336Filtration cup5024514-0336Filtration cup2500,25024Filtration cup5000,25024Filtration cup5000,25024Filtration cup5000,25024Filtration cup5000,27524Filtration cup5000,29124Filtration cup5000,29124Filtration cup5000,29124Filtration cup5000,29124Filtration cup5000,29124Filtration cup50024514-034Filtration cup50024514-034Filtrat	Complete filtration unit	500	0,45	75	12	514-0333
Complete filtration unit1000,459112514-0335Filtration cups only1500,25024514-0336Filtration cup1500,455024514-0336Filtration cup2500,25024514-0338Filtration cup2500,25024514-0336Filtration cup5000,25024514-0336Filtration cup5000,27524514-0340Filtration cup5000,29124514-0342Filtration cup5000,29124514-0342Filtration cup1000,29124514-0342Filtration cup5000,459124514-0342Filtration cup50024514-0342514-0342Filtration cup50024514-0345514-0345Filtration cup50024514-0345514-0345Filtration cup5002524514-0345Reservoir bottle with cap5002524514-0345Reservoir bottle with cap5002624514-0345Reservoir bottle with cap500262624514-0345Reservoir bottle with cap5002624514-0345Reservoir bottle with cap500262624514-0345Reservoir bottle with cap500262626Reservoir bottle with cap50	Complete filtration unit	1000	0,2	91	12	514-0334
Filtration cups onlyFiltration cup1500,25024514-0336Filtration cup1500,455024514-0338Filtration cup2500,25024514-0339Filtration cup5000,27524514-0340Filtration cup5000,27524514-0340Filtration cup5000,27524514-0340Filtration cup5000,29124514-0342Filtration cup10000,29124514-0342Filtration cup10000,459124514-0342Filtration cup1501524514-0342Filtration cup1501524514-0342Reservoir bottle with cap5001524514-0342Reservoir bottle with cap5001524514-0342Reservoir bottle with cap5001524514-0342Reservoir bottle with cap5001524514-0342Reservoir bottle with cap500161616Reservoir bottle with cap5001624514-0342Reservoir bottle with cap5001624514-0342Reservoir bottle with cap5001624514-0342Reservoir bottle with cap5001624514-0342Reservoir bottle with cap1000161624161616 </td <td>Complete filtration unit</td> <td>1000</td> <td>0,45</td> <td>91</td> <td>12</td> <td>514-0335</td>	Complete filtration unit	1000	0,45	91	12	514-0335
Filtration cup   150   0,2   50   24   514-0336     Filtration cup   150   0,45   50   24   514-0337     Filtration cup   250   0,2   50   24   514-0338     Filtration cup   250   0,45   50   24   514-0339     Filtration cup   500   0,45   50   24   514-0339     Filtration cup   500   0,20   75   24   514-0340     Filtration cup   500   0,45   75   24   514-0340     Filtration cup   1000   0,20   91   24   514-0340     Filtration cup   1000   0,45   91   24   514-0340     Filtration cup   1000   0,45   91   24   514-0340     Perservoir bottle with cap   150   24   514-0344   514-0344     Reservoir bottle with cap   50   24   514-0344   514-0344     Reservoir bottle with cap   50   24   514-0344   514-0344     Reservoir bottle with cap   1000   50   24   514	Filtration cups only					
Filtration cup   150   0,45   50   24   514-0337     Filtration cup   250   0,2   50   24   514-0338     Filtration cup   250   0,45   50   24   514-0339     Filtration cup   500   0,2   75   24   514-0340     Filtration cup   500   0,45   75   24   514-0340     Filtration cup   500   0,45   75   24   514-0342     Filtration cup   1000   0,20   91   24   514-0342     Filtration cup   1000   0,45   91   24   514-0342     Perservoir bottles (caps included)   24   514-0344   514-0344   514-0344     Reservoir bottle with cap   150   24   514-0344   514-0344     Reservoir bottle with cap   500   24   514-0344   514-0344     Reservoir bottle with cap   500   24   514-0346   514-0346     Reservoir bottle with cap   1000   200   24   514-0346     Reservoir bottle with cap   1000   24   514-0347	Filtration cup	150	0,2	50	24	514-0336
Filtration cup   250   0,2   50   24   514-0338     Filtration cup   500   0,45   50   24   514-0339     Filtration cup   500   0,2   75   24   514-0340     Filtration cup   500   0,45   75   24   514-0340     Filtration cup   1000   0,20   91   24   514-0342     Filtration cup   1000   0,45   91   24   514-0342     Filtration cup   1000   0,45   91   24   514-0342     Filtration cup   1000   0,45   91   24   514-0342     Perservoir bottles (caps included)   25   24   514-0344   514-0344     Reservoir bottle with cap   500   24   514-0344   514-0344     Reservoir bottle with cap   500   24   514-0346   514-0346     Reservoir bottle with cap   500   24   514-0346   514-0346     Reservoir bottle with cap   1000   24   514-0347   514-0347	Filtration cup	150	0,45	50	24	514-0337
Filtration cup   250   0,45   50   24   514-0339     Filtration cup   500   0,2   75   24   514-0340     Filtration cup   500   0,45   75   24   514-0340     Filtration cup   1000   0,2   91   24   514-0342     Filtration cup   1000   0,45   91   24   514-0342     Filtration cup   1000   0,45   91   24   514-0342     PS reservoir bottles (caps included)   25   24   514-0344     Reservoir bottle with cap   250   24   514-0345     Reservoir bottle with cap   500   24   514-0346     Reservoir bottle with cap   500   24   514-0346     Reservoir bottle with cap   500   24   514-0346     Reservoir bottle with cap   1000   24   514-0346     Reservoir bottle with cap   500   24   514-0346     Reservoir bottle with cap   1000   24   514-0347	Filtration cup	250	0,2	50	24	514-0338
Filtration cup   500   0,2   75   24   514-0340     Filtration cup   500   0,45   75   24   514-0342     Filtration cup   1000   0,2   91   24   514-0342     Filtration cup   1000   0,45   91   24   514-0342     Filtration cup   1000   0,45   91   24   514-0342     PS reservoir bottles (caps included)   250   24   514-0344     Reservoir bottle with cap   500   24   514-0346     Reservoir bottle with cap   500   24   514-0346     Reservoir bottle with cap   500   24   514-0346     Reservoir bottle with cap   1000   24   514-0346     Reservoir bottle with cap   500   24   514-0346     Reservoir bottle with cap   1000   24   514-0346	Filtration cup	250	0,45	50	24	514-0339
Filtration cup   500   0,45   75   24   514-0341     Filtration cup   1000   0,2   91   24   514-0342     Filtration cup   1000   0,45   91   24   514-0342     PS reservoir bottles (caps included)   24   514-0344   514-0344     Reservoir bottle with cap   150   24   514-0344     Reservoir bottle with cap   250   24   514-0346     Reservoir bottle with cap   500   24   514-0346     Reservoir bottle with cap   1000   24   514-0347	Filtration cup	500	0,2	75	24	514-0340
Filtration cup     1000     0,2     91     24     514-0342       Filtration cup     1000     0,45     91     24     514-0343       PS reservoir bottles (caps included)     24     514-0344     24     514-0344       Reservoir bottle with cap     150     24     514-0345       Reservoir bottle with cap     250     24     514-0346       Reservoir bottle with cap     500     24     514-0346       Reservoir bottle with cap     1000     24     514-0347	Filtration cup	500	0,45	75	24	514-0341
Filtration cup     1000     0,45     91     24     514-0343       PS reservoir bottles (caps included)     24     514-0344     24     514-0344       Reservoir bottle with cap     150     24     514-0344     24     514-0344       Reservoir bottle with cap     250     24     514-0346     24     514-0346       Reservoir bottle with cap     500     24     514-0347     24     514-0347       Reservoir bottle with cap     1000     24     514-0347     24     514-0347	Filtration cup	1000	0,2	91	24	514-0342
PS reservoir bottles (caps included)   150   24   514-0344     Reservoir bottle with cap   250   24   514-0345     Reservoir bottle with cap   500   24   514-0346     Reservoir bottle with cap   1000   24   514-0347	Filtration cup	1000	0,45	91	24	514-0343
Reservoir bottle with cap     150     24     514-0344       Reservoir bottle with cap     250     24     514-0345       Reservoir bottle with cap     500     24     514-0346       Reservoir bottle with cap     1000     24     514-0347	PS reservoir bottles (caps included)					
Reservoir bottle with cap     250     24     514-0345       Reservoir bottle with cap     500     24     514-0346       Reservoir bottle with cap     1000     24     514-0347	Reservoir bottle with cap	150			24	514-0344
Reservoir bottle with cap     500     24     514-0346       Reservoir bottle with cap     1000     24     514-0347	Reservoir bottle with cap	250			24	514-0345
Reservoir bottle with cap 1000 24 <b>514-0347</b>	Reservoir bottle with cap	500			24	514-0346
	Reservoir bottle with cap	1000			24	514-0347



Filter unit, 150 ml, nylon, 0,22 µm, ST

#### BOTTLE-TOP VACUUM FILTRATION SYSTEMS, PVDF, SFCA, NYLON

These vacuum filter units are very useful in large volume samples separation and purification.

- Large knurls on the reservoir bottle cap
- Wide and easy access bottle mouth for efficient and stable pouring
- Engraved graduation
- Ergonomically designed side walls and collar
- Hose connector can fit multiple hose diameters
- Electron beam sterilised
- Non pyrogenic

PVDF membrane: Extremely low protein binding; for filtration of non aggressive aqueous and mild organic solutions, or where maximising protein recovery is important.

Nylon membrane: Provides a broad range of chemical compatibility for the filtration of either aqueous or organic solvents; hydrophobic; can be used in a broad pH range.

Each individual unit is lot numbered for easy identification and tracking.

Packed in easy peel-to-open plastic bags. Receiver bottle cap is individually wrapped.

Description	Membrane	Capacity (ml)	Pore size (µm)	Membrane Ø (mm)	Pk	Cat. No.
Complete filtration units						
Complete filtration unit	PVDF	150	0,10	50	12	514-1040
Complete filtration unit	PVDF	150	0,22	50	12	514-1041
Complete filtration unit	PVDF	150	0,45	50	12	514-1042
Complete filtration unit	PVDF	250	0,10	50	12	514-1043
Complete filtration unit	PVDF	250	0,22	50	12	514-1044
Complete filtration unit	PVDF	250	0,45	50	12	514-1045
Complete filtration unit	PVDF	500	0,10	75	12	514-1046
Complete filtration unit	PVDF	500	0,22	75	12	514-1047
Complete filtration unit	PVDF	500	0,45	75	12	514-1048
Complete filtration unit	PVDF	1000	0,10	91	12	514-1049
Complete filtration unit	PVDF	1000	0,22	91	12	514-1050
Complete filtration unit	PVDF	1000	0,45	91	12	514-1051
Complete filtration unit	SFCA	150	0,22	50	12	514-1052
Complete filtration unit	SFCA	150	0,45	50	12	514-1053
Complete filtration unit	SFCA	250	0,22	50	12	514-1054
Complete filtration unit	SFCA	250	0,45	50	12	514-1055
Complete filtration unit	SFCA	500	0,22	75	12	514-1056
Complete filtration unit	SFCA	500	0,45	75	12	514-1057
Complete filtration unit	SFCA	1000	0,22	91	12	514-1058
Complete filtration unit	SFCA	1000	0,45	91	12	514-1059
Complete filtration unit	Nylon	150	0.22	50	12	514-1060
Complete filtration unit	Nylon	150	0.45	50	12	514-1061
Complete filtration unit	Nylon	250	0.22	50	12	514-1062
Complete filtration unit	Nylon	250	0.45	50	12	514-1063
Complete filtration unit	Nylon	500	0.22	75	12	514-1064
Complete filtration unit	Nylon	500	0.45	75	12	514-1065
Complete filtration unit	Nylon	1000	0.22	91	12	514-1066
Complete filtration unit	Nylon	1000	0.45	91	12	514-1067
Filtration cups only			0,10			
Filtration cup	PVDE	150	0.10	50	24	514-1012
Filtration cup	PVDE	150	0.22	50	24	514-1013
Filtration cup	PVDE	150	0.45	50	24	514-1014
Filtration cup	PVDE	250	010	50	24	514-1015
Filtration cup	PVDE	250	0.22	50	24	514-1015
Filtration cup	PVDE	250	0.45	50	24	514-1017
Filtration cup	PVDE	500	010	75	24	514-1018
Filtration cup	PVDE	500	0.22	75	24	514-1019
Filtration cup	PVDE	500	0.45	75	24	514-1020
Filtration cup	PVDE	1000	0,43	91	24	514-1020
Filtration cup	PVDF	1000	0,10	91	24	514-1021
Filtration cup	PVDE	1000	0,45	91	24	514-1022
Filtration cup	SECA	150	0,43	50	24	514-1023
Filtration cup	SECA	150	0,22	50	24	514-1032
Filtration cup	SECA	250	0.22	50	24	514-1033
Filtration cup	SECA	250	0,22	50	24	514-1034
Filtration cup	SECA	230	0,45	75	24	514-1035
Filtration cup	SECA	500	0,22	75	24	514-1030
Filtration cup	SECA	1000	0,45	75	24	514-1037
Filtration cup	SECA	1000	0,22	91	24	514-1036
Filtration cup	Nules	150	0,45	50	24	514-1039
Fillutation cup	Nulon	150	0,22	50	24	514-1024
	Nular	250	0,45	50	24	514-1025
Filtration cup	Nulsa	250	0,22	50	24	514-1026
Filtration cup	INVION	200	0,45	20	24	514-1027
Filtration cup	Nyion	500	0,22	/5	24	514-1028
Filtration cup	INVION	500	0,45	/5	24	514-1029
Filtration cup	INVION	1000	0,22	91	24	514-1030
Filtration cup	Nyion	1000	0,45	91	24	514-1031



#### **FILTRATION APPARATUS, VWR®**

Borosilicate 3.3 glass.

- Very good chemical resistance
- Very good temperature resistance
- Available with 1000 or 2000 ml flask
- Funnel with 300 or 500 ml capacity

All-glass filtration apparatus, with funnel, fritted base, cap, 47 mm Ø spring clamp and ground joint flask. This unit is recommended for general filtration. Applications include filtering corrosive solutions, particulate removal from HPLC solvents and filtration analysis with solid phase extraction discs. Support base has a sealed-in, coarse porosity, fritted disc.

Capacity (ml)	Description	Pk	Cat. No.
300	With 1000 ml flask	1	511-0265
500	With 2000 ml flask	1	511-0266



# VWR for filtration

Whatever your application, we have a solution!

For more info visit vwr.com



#### **ASPIRATING PIPETTES**

PS pipettes, non plugged, non graduated, disposable, sterile.

- Use at -20 to +50 °C
- Sterilised by gamma irradiation SAL 10<sup>-6</sup> (ISO 11137)
- Shelf life of 4 years after month of production
- Free of detectable DNase and RNase
- Non pyrogenic, non cytotoxic

For aseptically aspirating liquid by using vacuum suction.

Products are manufactured under the ISO 13485 standard. Meet the requirements of BSE/TSE.

Aspirating pipettes

Capacity (ml)	Pk	Cat. No.
1	200	612-5883
2	200	612-5884
5	200	612-5885
10	200	612-5886
25	200	612-5887



#### PIPETTE FILLER, SAFETYPETTE, VWR®

Pipette filler for glass and plastic pipettes from 1 to 100 ml.

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

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

Supplied with three separate nose cones in three different colours.

Description	Pk	Cat. No.
Pipette filler Safetypette	1	612-4548
Description	Pk	Cat. No.
Accessories		
Replacement filter set 0,45 µm	5	612-3678
Replacement filter set 0,2 µm	5	612-3681
Replacement silicone pipette holder	1	612-3679



#### **PIPETTE FILLER, SMOOTHIE<sup>™</sup>, VWR®**

Pipette filler for glass and plastic pipettes from 1 to 25 ml.

- Comfortable and simple to use
- Smooth, controllable thumb action
- Silicone adapter for leakproof positioning of each pipette

The Smoothie<sup>™</sup> pipette filler is a simple manual pipetting aid for convenient single handed operation. The unique range control allows selection from a choice of two dispense resolutions. One range setting delivers fast filling with optimal accuracy when used with 10 to 25 ml pipettes, the other setting is for use with pipettes from 1 to 10 ml where accuracy of fill can sometimes be difficult to control.

Description	Pk	Cat. No.
Pipette filler Smoothie"	1	612-4546



#### **PIPETTE CONTROLLER, POWERPETTE** *PRO*, **VWR**<sup>®</sup>

Pipette controller for glass and plastic pipettes from 1 to 100 ml.

- Lightweight, UV-resistant body (180 g) and nose cones
- Fills a 25 ml pipette in under 3 seconds on its fastest setting
- Autoclavable silicone pipette holder
- Replaceable hydrophobic membrane filter protects the unit against liquid influx and samples against contamination
- Environmentally friendly, rechargeable NiMH battery allows continuous usage for 4 hours; low battery light; rechargeable during use

The Powerpette *Pro* pipette controller delivers efficient performance with a powerful but quiet motor to speed up large volume pipetting. The mode selection switch enables selection of high or low modes, both allowing variable aspirate and dispense speeds (with blow out). In any mode setting the speed of suction and dispensing is controlled through the concave finger triggers, designed to provide a comfortable and positive grip requiring minimum effort. An additional gravity dispense mode is designed for use with 'To Deliver' (TD) pipettes. The Powerpette *Pro* is now supplied with additional coloured nose cones to allow laboratory, application or user colour coding to minimise the risk of cross-contamination.

Supplied with charger, two spare hydrophobic filters (1×0,45  $\mu m$ , 1×0,2  $\mu m$ ), bench stand/wall bracket and a coloured nose cone set.

Description	Pk	Cat. No.
Pipette controller Powerpette Pro, universal charger	1	612-4552
Description	Pk	Cat. No.
Accessories		
Multi regional charger for Powerpette Plus and Powerpette Pro	1	613-5849
Replacement filter set 0,45 µm	5	612-3678
Replacement filter set 0,2 µm	5	612-3681
Replacement silicone pipette holder	1	612-3679



#### PIPETTE CONTROLLER, POWERPETTE PLUS, VWR®

Pipette controller for glass and plastic pipettes from 1 to 100 ml.

- Speed of suction and dispensing controlled through the finger triggers
- Three aspirate and dispense modes
- High and low settings both have variable speed
- Fully charged has approximately 8 hours of continuous use available
- Low battery light illuminates when 1 hour's power remains

Offers a unique combination of features to give precision fingertip control in a classic streamlined design, suitable for users with large or small hands. Gravity dispense mode is designed for use with 'To Deliver' (TD) pipettes.

Supplied with 0,45 and 0,2 µm hydrophobic filters, as standard, for effective protection against airborne contamination; 2×1,2 V nickel metal hydride batteries and universal charger.

Colour code	Pk	Cat. No.
Turquoise	1	612-3686
Grey	1	613-4442
Yellow	1	613-4445
Pink	1	613-4446
Purple	1	613-4447
Green	1	613-4448
	Colour code     Turquoise     Grey     Yellow     Pink     Purple     Green	Colour codePkTurquoise1Grey1Yellow1Pink1Purple1Green1

Description	Pk	Cat. No.
Accessories		
Multi regional charger for Powerpette Plus and Powerpette Pro	1	613-5849
Replacement bench stand	1	612-3683
Replacement filter set 0,45 µm	5	612-3678
Replacement filter set 0,2 µm	5	612-3681
Replacement nose cone (grey)*	1	612-3680
Replacement silicone pipette holder	1	612-3679
Replacement sterile filter 0,2 µm	1	JENC266-090
Spare NiMH 1,2 V battery set	2	612-3685
Wall bracket with fixing screws and adhesive pad	1	612-3684



#### SEROLOGICAL PIPETTE, STANDARD, VWR®

100% high-clarity polystyrene, graduated, sterile.

- Graduations are calibrated for accurate dispensing to within ±3%
- Colour coded stripes for quick volume identification
- Non pyrogenic
- Filter plug

Individually wrapped in paper-plastic bags or bulk packed in bags.

Capacity (ml)	Division (ml)	Colour code	Packed	Pk	Cat. No.
Individually wrapped					
1	0,01	Yellow	Individually wrapped, 100 per bag, 10 bags per carton	1.000	612-3707
2	0,01	Green	Individually wrapped, 100 per bag, 8 bags per carton	800	612-3704
5	0,10	Blue	Individually wrapped, 50 per bag, 6 bags per carton	300	612-3702
10	0,10	Red	Individually wrapped, 50 per bag, 4 bags per carton	200	612-3700
25	0,20	Dark red	Individually wrapped, 50 per bag, 4 bags per carton	200	612-3698
50	1,00	Black	Individually wrapped, 25 per bag, 4 bags per carton	100	612-3696
Bulk packed					
1	0,01	Yellow	25 per bag, 40 bags per carton	1.000	612-3705
2	0,01	Green	25 per bag, 28 bags per carton	700	612-3703
5	0,10	Blue	50 per bag, 10 bags per carton	500	612-3701
10	0,10	Red	25 per bag, 14 bags per carton	350	612-3699
25	0,20	Dark red	25 per bag, 14 bags per carton	350	612-3697
50	1,00	Black	25 per bag, 10 bags per carton	250	612-3695



#### SEROLOGICAL PIPETTES, PREMIUM LINE, VWR®

PS, transparent, graduated, non sterile or sterile. These disposable pipettes for liquid transfers are made of GPPS (general polystyrene), in compliance with USP Class VI.

- DNase-/RNase-free, non pyrogenic, non cytotoxic, non haemolytic
- Meet the requirement of BST/TSE; latex-free
- Graduations are calibrated for accurate dispensing to within ±2%
- Pipettes are colour coded according to their volume
- Sterile pipettes: Sterilised by irradiation
- Printed with a batch number for traceability

Manufactured in a Class 100 000 cleanroom environment. Manufactured under EN ISO 13485:2003 and ISO 9001:2008 quality management systems.

\*stretched \*\*short form \*\*\*wide tip

Sterile pipettes are available either individually packed in peel-to-open wrap or plastic-plastic wrap or plastic packed in vacuum PE bag with zip lock (10/25/50 pipettes/bag). Non sterile pipettes are vacuum bulk packed in PE bags.

Capacity (ml)	Division (ml)	Sterile	Length (mm)	Colour code	Packed	Pk	Cat. No.
Sterile, individually packe	d in peel-to-open wraps pla	istic/paper					
1*	0,01	+	268	Yellow	Individually	500	612-5504
2*	0,01	+	272	Green	Individually	500	612-5507
5	0,1	+	234**	Blue	Individually	400	612-5523
5*	0,1	+	341	Blue	Individually	400	612-5826
10	0,2	+	234**	Orange	Individually	150	612-5827
10*	0,1	+	303	Orange	Individually	400	612-5541
25	0,5	+	234**	Red	Individually	100	612-5828
25	0,2	+	308	Red	Individually	150	612-5544
50	0,5	+	346	Purple	Individually	100	612-5546
100	1	+	346	Pink	Individually	50	612-5547
Sterile, 10/25 or 50 pipette	es per PE bag with zip lock						
1*	0,01	+	268	Yellow	25/bag	1.000	612-5505
2*	0,01	+	272	Green	25/bag	1.000	612-5521
5	0,1	+	234**	Blue	25/bag	500	612-5539
10*	0,1	+	303	Orange	25/bag	400	612-5542
25	0,2	+	308	Red	10/bag	150	612-5545
100	1	+	346	Pink	10/bag	60	612-5548
Non sterile, bulk packed in	n PE bags						
1*	0,01	-	268	Yellow	Bulk	2.000	612-5506
2*	0,01	-	272	Green	Bulk	1.000	612-5522
5	0,1	-	234**	Blue	Bulk	500	612-5540
10*	0.1	-	303	Orange	Bulk	400	612-5543



#### SEROLOGICAL PIPETTES, TRIPLE BAGGED, VWR®

Pipettes are individually packed in plastic/plastic and then put in double-bags.

- Polyolefin filter
- Latex-, DNase- and RNase-free, non pyrogenic, non cytotoxic
- Sterility Assurance Level (SAL) of 10<sup>-6</sup>
- Dispenser box: Easy opening

Colour coding for easy identification.

Manufactured in a Class 100 000 cleanroom environment. Meets BSE/TSE requirement. GPPS compliant USP Class VI.

Serological pipette, green strip

Capacity (ml)	Division (ml)	Colour code	Pk	Cat. No.
1	0,01	Yellow	500	612-5890
2	0,01	Green	500	612-5891
5	0,1	Blue	400	612-5892
10	0,1	Orange	400	612-5893
25	0,1	Red	150	612-5894
50	0,1	Purple	100	612-5895
100	1	Pink	50	612-5896



#### SINGLE-CHANNEL PIPETTES, MECHANICAL, VARIABLE VOLUME, ERGONOMIC HIGH PERFORMANCE (EHP), VWR®

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

- Significantly reduced plunger forces vs prior model
- 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
- UV-resistant and fully autoclavable

Volume (μl)	Accuracy (%)	Imprecision (%)	Pk	Cat. No.
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
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

Description	Pk	Cat. No.
Starter kits		
3 Pack, incl. 3 pipettes (0,5 - 10 / 10 - 100 / 100 - 1000 μl) and 4 pipette linear stand	1	613-6963
3 Pack, incl. 3 pipettes (2 - 20 / 20 - 200 / 100 - 1000 µl) and 4 pipette linear stand	1	613-6962
4 Pack, incl. 4 pipettes (0,5 - 10 / 2 - 20 / 20 - 200 / 100 - 1000 μl) and 4 pipette linear stand	1	613-6964

Description	Pk	Cat. No.
Accessories		
Linear stand for 4 pipettes	1	613-5471
Fixed position circular stand for up to 8 pipettes	1	613-5472
Shelf clip for 3 pipettes	1	613-0090
Linear stand for 6 pipettes	1	613-0086
Carousel stand for 6 pipettes	1	613-0085



### MULTI-CHANNEL PIPETTES, MECHANICAL, VARIABLE VOLUME, ERGONOMIC HIGH PERFORMANCE (EHP)

The Ergonomic High Performance pipettes from VWR provide accuracy and precision you can rely on. The 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
- Fully autoclavable

Accuracy (%)	Imprecision (%)	Pk	Cat. No.
8-Channel			
±10,0 - ±2,0	<8,0 - <1,2	1	613-5250
±4,0 - ±1,6	<4,0 - <1,6	1	613-5251
±2,0 - ±1,0	<1,5 - <0,8	1	613-5252
±1,6 - ±1,0	<1,5 - <0,8	1	613-5253
12-Channel			
±10,0 - ±2,0	<8,0 - <1,2	1	613-5254
±4,0 - ±1,6	<4,0 - <1,6	1	613-5255
±2,0 - ±1,0	<1,5 - <0,8	1	613-5256
±1,6 - ±1,0	<1,5 - <0,8	1	613-5257

Description	Pk	Cat. No.
Accessories		
Linear stand for 4 pipettes	1	613-5471
Fixed position circular stand for up to 8 pipettes	1	613-5472



#### VWR UHP 5 Pack

## SINGLE-CHANNEL PIPETTES, MECHANICAL, VARIABLE VOLUME, ULTRA-HIGH PERFORMANCE (UHP), VWR®

VWR Ultra-High Performance pipettes offer superior accuracy and precision, with a proven ergonomic design which are both lightweight and durable.

- Very low plunger forces
- Universal tip capability
- Automatic locking volume adjustment wheel
- Levered tip ejection and colour coded for volume identification
- Easy in-house calibration and maintenance
- Fully autoclavable

Volume (µl)	Accuracy (%)	Imprecision (%)	Pk	Cat. No.
0,1 - 2	±40,0 - ±1,5	<6,0 - <0,7	1	613-1488
0,5 - 10	±4,0 - ±0,5	<2,8 - <0,4	1	613-1489
2 - 20	±3,0 - ±0,8	<1,5 - <0,3	1	613-1490
5 - 50	±3,0 - ±0,8	<2,0 - <0,4	1	613-1628
10 - 100	±1,6 - ±0,8	<1,5 - <0,3	1	613-1491
20 - 200	±1,2 - ±0,6	<0,8 - <0,2	1	613-1492
100 - 1000	±0,9 - ±0,6	<0,6 - <0,2	1	613-1493

Description	Pk	Cat. No.
Starter Kit		
5 Pack incl. 5 pipettes (0,1 - 2 / 0,5 - 10 / 2 - 20 / 20 - 200 / 100 - 1000 µl) and 8 pipette multiple stand	1	613-6968
4 Pack incl. 4 pipettes (0,5 - 10 / 2 - 20 / 20 - 200 / 100 - 1000 μl) and 8 pipette multiple stand	1	613-6967
3 Pack incl. 3 pipettes (0,5 - 10 / 10 - 100 / 100 - 1000 μl) and 8 pipette multiple stand	1	613-6966
3 Pack incl. 3 pipettes (2 - 20 / 20 - 200 / 100 - 1000 μl) and 8 pipette multiple stand	1	613-6965
Description	Pk	Cat. No.
Accessories		
Linear stand for 4 pipettes	1	613-5471
Fixed position circular stand for up to 8 pipettes	1	613-5472



## MULTI-CHANNEL PIPETTES, MECHANICAL, VARIABLE VOLUME, ULTRA-HIGH PERFORMANCE (UHP)

VWR Ultra-High Performance pipettes offer superior accuracy and precision, with proven ergonomic, lightweight and durable design.

- Low plunger forces
- Universal tip capability
- Automatic locking volume adjustment wheel
- Levered tip ejection and colour-coded for volume identification
- Easy in-house calibration and maintenance
- Fully autoclavable

Accuracy (%)	Imprecision (%)	Pk	Cat. No.
8-Channel			
±10,0 - ±2,0	<8,0 - <1,2	1	613-1494
±4,0 - ±1,6	<2,5 - <0,6	1	613-1495
±3,0 - ±1,0	<1,5 - <0,6	1	613-1496
±1,6 - ±1,0	<1,5 - <0,6	1	613-1497
12-Channel			
±10,0 - ±2,0	<8,0 - <1,2	1	613-1498
±4,0 - ±1,6	<2,5 - <0,6	1	613-1499
±3,0 - ±1,0	<1,5 - <0,6	1	613-1500
±1,6 - ±1,0	<1,5 - <0,6	1	613-1506

Description	Pk	Cat. No.
Accessories		
Linear stand for 1 pipette	1	613-5470
Linear stand for 4 pipettes	1	613-5471
Fixed position circular stand for up to 8 pipettes	1	613-5472



#### SINGLE-CHANNEL PIPETTES, ELECTRONIC, VARIABLE VOLUME, VWR®

These pipettes combine superior accuracy, precision and robustness with advanced ergonomic design.

- Ease of use: Only two buttons and five pipetting modes; enables an easy one-handed programming and a quick pipetting cycle start
- CUSTOM mode: Users can quickly and easily create specific protocols thanks to VWR<sup>®</sup> Protocol Builder software
- Advanced ergonomics: Lightweight and perfectly balanced, it requires virtually no force to significantly reduce RSI
- Fits comfortably in either the left or right hand and allows a 360° rotating manifold
- Fully motorised piston drive: For even and regular sample delivery across each channel
- Tip holders are designed for a secure tip fit and easy ejection thanks to a curved ejector bar
- Pipettes can be used while charging without compromising performance

VWR electronic pipettes offer outstanding performance in all pipetting modes. They require virtually no force to aspirate and dispense samples, and significantly reduce RSI (Repetitive Strain Injury) associated with routine work.

Pipetting modes: PIPET (standard mode), REVERSE, REPETITIVE, MIX and CUSTOM.

Each pipette is supplied with with one Lithium-ion battery, USB power supply (5 V), tip ejector extension (for 10  $\mu$ l models only), lubricant (except for 10  $\mu$ l models), certificate of conformity and a Quick start guide. Accessory stands are sold separately.

Increment	Accuracy (%)	Imprecision (%)	Colour code	Pk	Cat. No.
0,01 µl	±2,75 - ±0,88	≤1,32 - ≤0,28	Red	1	613-5415
0,01 µl	±4,13 - ±0,83	≤1,38 - ≤0,28	Pale yellow	1	613-5416
0,1 µl	±7,70 - ±0,44	≤2,20 - ≤0,17	Light pink	1	613-5781
0,1 µl	±2,57 - ±0,39	≤0,73 - ≤0,11	Green	1	613-5417
1 µl	±2,20 - ±0,55	≤0,37 - ≤0,11	Blue	1	613-5418
	Increment       0,01 µl       0,01 µl       0,1 µl       0,1 µl       1 µl	Increment     Accuracy (%)       0,01 µl     ±2,75 - ±0,88       0,01 µl     ±4,13 - ±0,83       0,1 µl     ±7,70 - ±0,44       0,1 µl     ±2,57 - ±0,39       1 µl     ±2,20 - ±0,55	Increment     Accuracy (%)     Imprecision (%)       0,01 µl     ±2,75 - ±0,88     ≤1,32 - ≤0,28       0,01 µl     ±4,13 - ±0,83     ≤1,38 - ≤0,28       0,1 µl     ±7,70 - ±0,44     ≤2,20 - ≤0,17       0,1 µl     ±2,57 - ±0,39     ≤0,73 - ≤0,11       1 µl     ±2,20 - ±0,55     ≤0,37 - ≤0,11	Increment     Accuracy (%)     Imprecision (%)     Colour code       0,01 µl     ±2,75 - ±0,88     ≤1,32 - ≤0,28     Red       0,01 µl     ±4,13 - ±0,83     ≤1,38 - ≤0,28     Pale yellow       0,1 µl     ±7,70 - ±0,44     ≤2,20 - ≤0,17     Light pink       0,1 µl     ±2,57 - ±0,39     ≤0,73 - ≤0,11     Green       1 µl     ±2,20 - ±0,55     ≤0,37 - ≤0,11     Blue	Increment     Accuracy (%)     Imprecision (%)     Colour code     Pk       0,01 µl     ±2,75 - ±0,88     ≤1,32 - ≤0,28     Red     1       0,01 µl     ±4,13 - ±0,83     ≤1,38 - ≤0,28     Pale yellow     1       0,1 µl     ±7,70 - ±0,44     ≤2,20 - ≤0,17     Light pink     1       0,1 µl     ±2,57 - ±0,39     ≤0,73 - ≤0,11     Green     1       1 µl     ±2,20 - ±0,55     ≤0,37 - ≤0,11     Blue     1

Description	Pk	Cat. No.
Accessories for electronic pipettes		
Carousel pipette stand, 7-place	1	613-5427
Charging stand adapter for carousel pipette stand	1	613-5428



#### **MULTI-CHANNEL PIPETTES, ELECTRONIC, VARIABLE VOLUME**

These pipettes combine superior accuracy, precision and robustness with advanced ergonomic design.

- Ease of use: Only two buttons and five pipetting modes; enables an easy one-handed programming and a quick pipetting cycle start
- CUSTOM mode: Users can quickly and easily create specific protocols thanks to VWR® Protocol Builder software
- Advanced ergonomics: Lightweight and perfectly balanced, it requires virtually no force to significantly reduce RSI
- Fits comfortably in either the left or right hand and allows a 360° rotating manifold
- Fully motorised piston drive: For even and regular sample delivery across each channel
- Tip holders are designed for a secure tip fit and easy ejection thanks to a curved ejector bar
- Pipettes can be used while charging without compromising performance

VWR electronic pipettes offer outstanding performance in all pipetting modes. They require virtually no force to aspirate and dispense samples, and significantly reduce RSI (Repetitive Strain Injury) associated with routine work.

Pipetting modes: PIPET (standard mode), REVERSE, REPETITIVE, MIX and CUSTOM.

Each pipette is supplied with with one Lithium-ion battery, USB power supply (5 V), tip ejector extension (for 10 µl models only), certificate of conformity and a Quick start guide. Accessory stands are sold separately.

Accuracy (%)	Imprecision (%)	Colour code	Pk	Cat. No.
8-channel				
±4,4 - ±1,1	≤2,2 - ≤0,66	Red	1	613-5419
±8,8 - ±1,38	≤5,5 - ≤0,66	Pale yellow	1	613-5420
±2,75 - ±0,88	≤1,54 - ≤0,28	Light pink	1	613-5782
±3,67 - ±0,88	≤0,66 - ≤0,17	Green	1	613-5421
±3,67 - ±0,88	≤0,64 - ≤0,17	Blue	1	613-5422
12-channel				
±4,4 - ±1,1	≤2,2 - ≤0,66	Red	1	613-5423
±8,8 - ±1,38	≤5,5 - ≤0,66	Pale yellow	1	613-5424
±2,75 - ±0,88	≤1,54 - ≤0,28	Light pink	1	613-5783
±3,67 - ±0,88	≤0,66 - ≤0,17	Green	1	613-5425
±3,67 - ±0,88	≤0,64 - ≤0,17	Blue	1	613-5426
Description			Pk	Cat. No.
Accessories for electronic pipettes				
Carousel pipette stand. 7-place			1	613-5427

Charging stand adapter for carousel pipette stand



#### STANDS FOR VWR® PIPETTES, VWR®

White pipette stands for single- and multi-channel pipettes.

Stand 613-5471: Compatible with all single- and multi-channel pipettes (EHP, UHP and Standard Line)

Stand 613-5472: Compatible with all single- and multi-channel pipettes (EHP, UHP and Standard Line)

613-5473

Description	Pk	Cat. No.
Linear stand for 1 pipette	1	613-5470
inear stand for 4 pipettes	1	613-5471
Fixed position circular stand for up to 8 pipettes	1	613-5472

613-5428



#### **UNIVERSAL FILTER TIPS, VWR®**

VWR Universal low retention filter tips repel liquid by creating a hydrophobic surface on the inside of the tip increasing your accuracy and data quality.

- Compatible with the widest range of pipette
- Maximises sample recovery with low binding resin and a fine point design
- Improves ergonomics by reducing the force required to attach and eject a tip
- Autoclavable at 1 bar, 122 °C for 15 minutes
- Manufactured under an ISO 9001 quality management system

VWR tips use a low retention resin that is up to 10 times more hydrophobic than other polypropylene pipette tips, enabling viscous samples like protein and DNA solutions to dispense easily without collecting inside the tip.

Certified RNase-, DNase-, endotoxin-, metal-, and human DNA-free.

Tip style	Volume (µl)	Sterile	Filter	Length (mm)	Packed	Pk	Cat. No.
Universal, low retention	2	+	+	31,24	10 racks, 96 each	960	732-3709
Universal, low retention	10	+	+	31,24	10 racks, 96 each	960	732-3630
Universal, extended, low retention	10	+	+	45,84	10 racks, 96 each	960	732-3631
Universal, low retention	20	+	+	50,75	10 racks, 96 each	960	732-3632
Universal, low retention	100	+	+	50,75	10 racks, 96 each	960	732-3633
Universal, low retention	200	+	+	59,54	10 racks, 96 each	960	732-3634
Universal, low retention	300	+	+	59,54	10 racks, 96 each	960	732-3636
Universal, low retention	1000	+	+	81,82	10 racks, 96 each	960	732-3637
Universal, low retention	1250	+	+	98,40	10 racks, 96 each	960	732-3638

## J.T.Baker <sup>®</sup> Robotic Tips and Plates

The quality you want for the trusted results you need. Introducing J.T.Baker premium robotic tips and plates for automated liquid-handling systems, manufactured and tested to deliver the reliable results you need to move science forward.

**Click to requests J.T.Baker Robotic Tips Samples** 



Precise results. Less downtime.



VWR Universal, low retention pipette tips

#### **UNIVERSAL PIPETTE TIPS, VWR®**

VWR Universal low retention pipette tips repel liquid by creating a hydrophobic surface on the inside of the tip increasing your accuracy and data quality.

- Compatible with the widest range of pipette
- Maximises sample recovery with low binding resin and a fine point design
- Improves ergonomics by reducing the force required to attach and eject a tip
- Autoclavable at 15 psi, 122 °C for 15 minutes
- Manufactured under an ISO 9001 quality management system

VWR tips use a low retention resin that is up to ten times more hydrophobic than other polypropylene pipette tips, enabling viscous samples like protein and DNA solutions to dispense easily without collecting inside the tip.

Certified RNase-, DNase-, endotoxin-, metal-, and human DNA-free.

Reloads will only fit into empty racks 613-6445 or 613-6446, respectively.

Volume (µl)	Sterile	Tip colour	Packed	Pk	Cat. No.
10 µl					
10	+	Natural	10 racks, 96 each	960	613-6462
10	-	Natural	10 racks, 96 each	960	613-6453
10	+	Natural	10 reloads, 96 each	960	613-6440
10	-	Natural	10 reloads, 96 each	960	613-6433
10 µl extended					
10	+	Natural	10 racks, 96 each	960	613-6463
10	-	Natural	10 racks, 96 each	960	613-6454
10	+	Natural	10 reloads, 96 each	960	613-6441
10	-	Natural	10 reloads, 96 each	960	613-6434
200 µl					
200	+	Natural	10 racks, 96 each	960	613-6465
200	-	Natural	10 racks, 96 each	960	613-6456
200	+	Natural	10 reloads, 96 each	960	613-6442
200	-	Natural	10 reloads, 96 each	960	613-6435
250 µl					
250	+	Natural	10 racks, 96 each	960	613-6468
250	-	Natural	10 racks, 96 each	960	613-6458
250	-	Natural	10 reloads, 96 each	960	613-6436
300 µl					
300	+	Natural	10 racks, 96 each	960	613-6469
300	-	Natural	10 racks, 96 each	960	613-6459
300	+	Natural	10 reloads, 96 each	960	613-6443
300	-	Natural	10 reloads, 96 each	960	613-6437
1000 µl					
1000	+	Natural	10 racks, 96 each	960	613-6470
1000	-	Natural	10 racks, 96 each	960	613-6460
1000	-	Natural	10 reloads, 96 each	960	613-6438
1250 µl					
1250	+	Natural	10 racks, 96 each	960	613-6471
1250	-	Natural	10 racks, 96 each	960	613-6461
1250	+	Natural	10 reloads, 96 each	960	613-6444
1250	-	Natural	10 reloads, 96 each	960	613-6439

Description	Pk	Cat. No.
Empty racks for VWR Universal and VWR LTS® compatible pipette tip reloads		
Empty racks for 10 $\mu$ l to 300 $\mu$ l tip reloads, universal and LTS° compatible	10	613-6445
Empty racks for 1000 µl and 1250 µl tip reloads, universal and LTS® compatible	10	613-6446



Centrifuge tubes

#### CENTRIFUGE TUBES, HIGH PERFORMANCE, FLAT OR PLUG CAP, PP

These leakproof disposable conical bottom and free-standing tubes feature black graduations and smooth inner walls for easy filling and sample preparation.

- Easy to read black graduations in ±2% increments
- White printed writing area for permanent coding
- RNase-, DNase- and endotoxin-free
- Autoclavable at 121 °C and freezable to –80 °C
- Can be centrifuged up to 12500 ×g
- Tubes are sterilised by irradiation

Caps are available in two styles: Flat, with a smooth surface for additional labelling options, and plug style for a secure seal when using shakers and horizontal incubators. All caps are made of green high density polyethylene. Racks are available separately.

Rack-packed tubes are packed in freezable, recyclable, autoclavable, washable plastic racks. The racks are marked with numbers (1 to 25) for identification, they are angled at one end to stack up easily. The interlocking design of each polypropylene rack makes them ideal for bench top organisation.

Manufactured in a Class 100 000 cleanroom environment. Manufactured under ISO 13485:2016 and ISO 9001:2015 quality management systems. Meet the requirements of RoHS.

Free-standing tubes do not require racks. Bulk packed items are supplied with tubes, caps are packed separately.

Capacity (ml)	Closure type	Туре	Packed	Pk	Cat. No.
Conical bottom centrifuge tubes with fl	at cap				
15	Flat cap	Non sterile	Bulk	500	525-1066
15	Flat cap	Sterile	50/bag, 10 bags/case	500	525-1068
15	Flat cap	Sterile	25 tubes/rack, 2 racks/pack, 10 packs/case	500	525-1069
50	Flat cap	Non sterile	Bulk	500	525-1072
50	Flat cap	Sterile	25 tubes/rack, 2 racks/pack, 10 packs/case	500	525-1074
50	Flat cap	Sterile	50/bag, 10 bags/case	500	525-1075
Conical bottom centrifuge tubes with p	lug cap				
15	Plug type cap	Non sterile	Bulk	500	525-1067
15	Plug type cap	Sterile	50/bag, 10 bags/case	500	525-1070
15	Plug type cap	Sterile	25 tubes/rack, 2 racks/pack, 10 packs/case	500	525-1071
50	Plug type cap	Non sterile	Bulk	500	525-1073
50	Plug type cap	Sterile	25 tubes/rack, 2 racks/pack, 10 packs/case	500	525-1076
50	Plug type cap	Sterile	50/bag, 10 bags/case	500	525-1077
Free-standing centrifuge tubes with plu	g cap				
50	Plug type cap	Non sterile	50/bag, 10 bags/case	500	525-1079
50	Plug type cap	Non sterile	Bulk	500	525-1080
50	Plug type cap	Sterile	50/bag, 10 bags/case	500	525-1078



VWR flip-cap centrifuge tubes

**CENTRIFUGE TUBES, CONICAL BOTTOM, FLIP CAP, VWR®** 

Centrifuge tubes are ideal for use in centrifuging samples or storage in many research areas.

- Manufactured from high grade polypropylene
- Easy flip-open caps enable single-handed access
- Autoclavable at 121 °C, and freezable to -80 °C
- Sterilised by electron beam irradiation, DNase-free, RNase-free and non pyrogenic

Tubes feature black printed graduations and writing area can withstand chloroform.

ISO 13485:2003 and ISO 9001:2008.

Racked tubes are packed in environmentally responsible (fully recyclable) chipboard racks. Bagged tubes are packed in durable, re-sealed (zip closure) bags. Inner packaging is individually labelled for lot-to-lot traceability.

Capacity (ml)	Closure type	Version	RCF max.	Cap colour	Packed	Pk	Cat. No.
15	Flip cap	Sterile	12500×g	White	25/bag, 500/case	500	525-1045
15	Flip cap	Sterile	12500×g	White	25/rack, 500/case	500	525-1046
50	Flip cap	Sterile	12500×g	White	25/bag, 500/case	500	525-1047
50	Flip cap	Sterile	12500×g	White	25/rack, 500/case	500	525-1048



Centrifuge tubes

#### **CENTRIFUGE TUBES, METAL-FREE, STERILE**

These leakproof centrifuge tubes are ideal for environmental uses, such as water analysis and other applications wherein tubes have the potential to contaminate samples.

- Easy to read black graduations in ±2% increments
- Contains a large, white frosted writing area
- RNase-, DNase- and endotoxin-free
- Autoclavable at 121 °C and freezable to -80 °C
- Can be centrifuged up to 12500×g
- Sterile tubes are sterilised by irradiation

The tubes are certified free of major critical trace metals to less than 1 ppb. Conical centrifuge tubes are available in two sizes with white flat caps for easy labelling. The polypropylene tubes and polyethylene caps are made of USP VI resins.

Manufactured in a Class 100 000 cleanroom environment. Manufactured under ISO 13485:2016 and ISO 9001:2015 quality management system. Centrifuge tubes are certified to meet ROHS requirements and are certified free of major critical trace metals.

Capacity (ml)	Closure type	Туре	Packed	Pk	Cat. No.
15	Flat cap	Sterile	50/bag, 10 bags/case	500	525-1121
15	Flat cap	Sterile	25/rack, 2 racks/pack, 10 packs/case	500	525-1123
50	Flat cap	Sterile	50/bag, 10 bags/case	500	525-1124
50	Flat cap	Sterile	25/rack, 2 racks/pack, 10 packs/case	500	525-1125



Conical bottom centrifuge tubes, PP

#### **CENTRIFUGE TUBES, CONICAL BOTTOM, PP**

Conical bottom centrifuge tubes are made from high grade, gamma resistant polypropylene.

- Easy to read engraved graduations
- Autoclavable at 121 °C and freezable to -196 °C
- Leakproof and latex-free
- 3 year shelf life
- Manufactured in a Class 100 000 cleanroom environment

The tubes feature a flat seal cap made from polyethylene. Sterilised by gamma irradiation to SAL  $10^{-6}$  (ISO 11137).

#### Meets the requirements of BSE/TSE. Certified DNase-/RNase-free and non pyrogenic.

Capacity (ml)	Closure type	RCF max.	Material	Colour	Pk	Cat. No.
225	Plug type cap	7500×g	PP	Clear	48	525-1300
250	Plug type cap	7500×g	PP	Clear	48	525-1597
500	Plug type cap	6000×g	PP	Clear	36	525-1598



Centrifuge tubes

#### **CENTRIFUGE TUBES, ULTRA-HIGH PERFORMANCE, VWR®**

These leakproof, conical bottom centrifuge tubes prevent breakage and leakage during high speed centrifugation, and are made of non cytotoxic, medical grade resin that allows users to easily see sample volume and colour.

- Easy-to-read black graduations in ±2% increments
- Contains a large, white frosted writing area
- RNase-, DNase- and endotoxin-free
- Autoclavable at 121 °C and freezable to -80 °C
- Sterile tubes are sterilised by irradiation

The HDPE caps are available in two styles. Flat caps are leak resistant and feature a moulded-in elastomeric sealing ring that keeps the sealed tubes completely secure. These caps are ideal for vortexing chemicals and long rocker incubations. Plug caps feature a deep sealing area offering a secure seal for extended storage.

Manufactured in a Class 100000 room environment. Manufactured under ISO 13485:2016 and ISO 9001:2015 quality management system. Meet the requirements of RoHS.

Bulk packed items are supplied with tubes, caps are packed separately.

Caps must be loosely attached to tubes when autoclaving.

Capacity (ml)	Closure type	Туре	Material	Packed	Pk	Cat. No.
Centrifuge tubes, 15 ml, 17000×g	g, flat cap with sealing ring					
15	Flat cap	Non sterile	РР	25/rack, 2 racks/pack, 10 packs/ case	500	525-1081
15	Flat cap	Non sterile	PP	50/bag, 10 bags/case	500	525-1082
15	Flat cap	Non sterile	РР	Bulk (tubes and caps in separate bags)	500	525-1083
15	Flat cap	Sterile	РР	25/rack, 2 racks/pack, 10 packs/ case	500	525-1084
15	Flat cap	Sterile	PP	50/bag, 10 bags/case	500	525-1085
Centrifuge tubes, 15 ml, 20000×	g, flat cap with sealing ring					
15	Flat cap	Sterile	РР	25/rack, 2 racks/pack, 10 packs/ case	500	525-1091
15	Flat cap	Sterile	PP	50/bag, 10 bags/case	500	525-1092
Centrifuge tubes, 15 ml, 17000×g	g, plug cap					
15	Plug type cap	Non sterile	РР	25/rack, 2 racks/pack, 10 packs/ case	500	525-1086
15	Plug type cap	Non sterile	PP	50/bag, 10 bags/case	500	525-1087
15	Plug type cap	Non sterile	PP	Bulk	500	525-1088
15	Plug type cap	Sterile	PP	25/rack, 2 racks/pack, 10 packs/ case	500	525-1089
15	Plug type cap	Sterile	PP	50/bag, 10 bags/case	500	525-1090
Centrifuge tubes, 50 ml, 20000>	g, plug cap					
50	Plug type cap	Non sterile	РР	25/rack, 2 racks/pack, 10 packs/ case	500	525-1101
50	Plug type cap	Non sterile	PP	50/bag, 10 bags/case	500	525-1103
50	Plug type cap	Non sterile	PP	Bulk	500	525-1105
50	Plug type cap	Sterile	РР	25/rack, 2 racks/pack, 10 packs/ case	500	525-1111
50	Plug type cap	Sterile	PP	50/bag, 10 bags/case	500	525-1113
Centrifuge tubes, 50 ml, 20000>	g, flat cap with sealing ring					
50	Flat cap	Non sterile	РР	25/rack, 2 racks/pack, 10 packs/ case	500	525-1098
50	Flat cap	Non sterile	PP	50/bag, 10 bags/case	500	525-1099
50	Flat cap	Non sterile	PP	Bulk	500	525-1100
50	Flat cap	Sterile	РР	25/rack, 2 racks/pack, 10 packs/ case	500	525-1107
50	Flat cap	Sterile	PP	50/bag, 10 bags/case	500	525-1109
Centrifuge tubes, 50 ml, 10000×	g, free-standing, flat cap with se	aling ring				
50	Flat cap	Non sterile	PP	Bulk	500	525-1096
50	Flat cap	Sterile	PP	50/bag, 10 bags/case	500	525-1097
Centrifuge tubes, 15 ml, 3000×g	, PS, with moulded graduations a	ind flat caps				
15	Flat cap	Non sterile	PS	Bulk	1.000	525-1095
15	Flat cap	Sterile	PS	25/rack, 2 racks/pack, 10 packs/ case	500	525-1093
15	Flat cap	Sterile	PS	50/bag, 10 bags/case	500	525-1094


Centrifuge tubes

#### **CENTRIFUGE TUBES, ULTRA-HIGH PERFORMANCE, LIGHT-SENSITIVE**

These leakproof centrifuge tubes are manufactured from dark amber PP, providing protection for light-sensitive samples by blocking UV light.

- Easy to read black graduations in ±2% increments
- Contains a large, white frosted writing area
- RNase-, DNase- and endotoxin-free
- Autoclavable at 121  $^\circ\text{C}$  and freezable to –80  $^\circ\text{C}$
- Can be centrifuged up to 12500×g
- Sterile tubes are sterilised by irradiation

These sterile tubes feature a printed labelling area for quick and convenient sample identification. Green high-density polyethylene caps are included. Tubes are available in 15 or 50 ml sizes and are offered in a variety of packaging formats. All tubes and caps are autoclavable.

Manufactured in a Class 100 000 cleanroom environment. Manufactured under ISO 13485:2016 and ISO 9001:2015 quality management systems. Meet the requirements of RoHS.

Bulk packed items are supplied with tubes. Caps are packed separately.

Capacity (ml)	Closure type	Version	Colour	Packed	Pk	Cat. No.
15	Plug type cap	Non sterile	Amber	Bulk	500	525-1115
15	Plug type cap	Sterile	Amber	25/rack, 2 racks/pack, 10 packs/ case	500	525-1116
15	Plug type cap	Sterile	Amber	50/bag, 10 bags/case	500	525-1117
50	Plug type cap	Non sterile	Amber	Bulk	500	525-1118
50	Plug type cap	Sterile	Amber	25/rack, 2 racks/pack, 10 packs/ case	500	525-1119
50	Plug type cap	Sterile	Amber	50/bag, 10 bags/case	500	525-1120



#### RACKS FOR 15 ML CONICAL BOTTOM CENTRIFUGE TUBES, VWR®

PP.

- Autoclavable at 121 °C and freezable to -80 °C
- Angular at one end to stack and handle easily
- DNase-/RNase-free and non pyrogenic

Suitable for VWR centrifuge tubes with conical bottom. Each well has an identification number (1 to 25).

Sterilised by electron beam irradiation.

Assorted colour pack includes one blue, green, orange, red and yellow rack.

5 racks per bag. For larger orders: 5 racks/bag and 10 bags per case.

Colour	No. of holes	For tubes (ml)	W×D×H (mm)	Pk	Cat. No.
Natural	25	15	154×128×32	5	525-0613
White	25	15	154×128×32	5	525-0614
Yellow	25	15	154×128×32	5	525-0615
Orange	25	15	154×128×32	5	525-0616
Red	25	15	154×128×32	5	525-0617
Blue	25	15	154×128×32	5	525-0618
Green	25	15	154×128×32	5	525-0619
Assorted colours	25	15	154×128×32	5	525-0620



#### RACKS FOR 50 ML CONICAL BOTTOM CENTRIFUGE TUBES, VWR®

PP.

- Autoclavable (121 °C) and freezable (-80 °C)
- Angular at one end to stack and handle easily
- DNase-/RNase-free and non pyrogenic

Suitable for VWR centrifuge tubes with conical bottom. Each well has an identification number (1 to 25).

Sterilised by electron beam irradiation.

Assorted colour pack includes one blue, green, orange, red and yellow rack.

5 racks per bag. For larger orders: 5 racks/bag and 10 bags per case.

Colour	No. of holes	For tubes (ml)	W×D×H (mm)	Pk	Cat. No.
Natural	25	50	232,5×192.5×32	5	525-0621
White	25	50	232,5×192.5×32	5	525-0622
Yellow	25	50	232,5×192.5×32	5	525-0623
Orange	25	50	232,5×192.5×32	5	525-0624
Red	25	50	232,5×192.5×32	5	525-0625
Blue	25	50	232,5×192.5×32	5	525-0626
Green	25	50	232,5×192.5×32	5	525-0627
Assorted colours	25	50	232,5×192.5×32	5	525-0628



#### MICROCENTRIFUGE TUBES AND SCREW CAPS

Made from high grade gamma resistance PP.

- Autoclavable at 121 °C and freezable to -80 °C
- Tubes can be centrifuged to 20000×g
- DNase/RNase free and non pyrogenic
- Caps accept colour coded inserts, and easily write on the frosted side of insert
- O-rings made from silicone to insure a leakproof seal
- 1,5 and 2,0 ml tubes provide easy and legible frosted area
- Sustainable design based on virgin resins

Manufactured in a Class 100 000 room environment.

ISO 13485:2003 and ISO 9001:2008.

Capacity (ml)	Туре	Colour	Version	Pk	Cat. No.
Tubes without screw caps, non sterile					
0,5	With thread, without screw cap	Clear	Conical bottom, non sterile	500	525-0641
0,5	With thread, without screw cap	Clear	Skirted, non sterile	500	525-0643
1,5	With thread, without screw cap	Clear	Conical bottom, non sterile	500	525-0645
1,5	With thread, without screw cap	Clear	Skirted, non sterile	500	525-0647
2,0	With thread, without screw cap	Clear	Conical bottom, non sterile	500	525-0649
2,0	With thread, without screw cap	Clear	Skirted, non sterile	500	525-0651
Screw caps, non sterile					
		Natural	Non sterile	500	525-0653
		White	Non sterile	500	525-0654
		Blue	Non sterile	500	525-0655
		Green	Non sterile	500	525-0656
Cap inserts, non sterile					
		White	Non sterile	500	525-0657
		Blue	Non sterile	500	525-0658
		Green	Non sterile	500	525-0659



Microcentrifuge tubes

## MICROCENTRIFUGE TUBES WITH FLAT SCREW CAPS

These tubes are made from ultra-clear USP Class VI PP that allows easy viewing of contents.

- RNase-, DNase- and endotoxin-free
- Engraved graduations ensure accuracy
- Fit most common rotors
- Smooth surface for applying labels
- Sterile tubes are sterilised by irradiation

These tubes feature universal screw threads for use with most popular brand screw caps. Low profile caps include an ethylene propylene rubber O-ring, ensuring a leakproof seal.

Tubes and caps are autoclavable at 121 °C and freezable to -80 °C.

Manufactured in a Class 100 000 cleanroom environment.

Manufactured under ISO 13485:2016 and ISO 9001:2015 quality management systems.

Certificate available for every lot.

Tubes are packed 500 per bag. Assorted pack of caps (525-1187) contains equal quantities of red, orange, yellow, blue and green.

Capacity (ml)	Туре	Colour	Version	RCF max.	Pk	Cat. No.
Non sterile microcentrifuge tu	bes with natural colour caps in se	parate resealable bags				
0,5	With natural screw cap	Natural	Graduated, conical bottom, non sterile	20000×g	500	525-1144
0,5	With natural screw cap	Natural	Graduated, free-standing, non sterile	20000×g	500	525-1157
1,5	With natural screw cap	Natural	Graduated, conical bottom, non sterile	20000×g	500	525-1145
1,5	With natural screw cap	Natural	Graduated, free-standing, non sterile	20000×g	500	525-1158
2,0	With natural screw cap	Natural	Graduated, conical bottom, non sterile	20000×g	500	525-1146
2,0	With natural screw cap	Natural	Graduated, free-standing, non sterile	20000×g	500	525-1160
Sterile microcentrifuge tubes	with natural colour caps attached	l				
0,5	With natural screw cap	Natural	Graduated, conical bottom, sterile	20000×g	500	525-1140
0,5	With natural screw cap	Natural	Graduated, free-standing, sterile	20000×g	500	525-1155
1,5	With natural screw cap	Natural	Graduated, conical bottom, sterile	20000×g	500	525-1141
1,5	With natural screw cap	Natural	Graduated, free-standing, sterile	20000×g	500	525-1159
2,0	With natural screw cap	Natural	Graduated, conical bottom, sterile	20000×g	500	525-1143
2,0	With natural screw cap	Natural	Graduated, free-standing, sterile	20000×g	500	525-1156
Microcentrifuge tubes only						
0,5	Without cap	Natural	Graduated, conical bottom, non sterile	20000×g	500	525-1137
0,5	Without cap	Natural	Graduated, free-standing, non sterile	20000×g	500	525-1147
1,5	Without cap	Natural	Graduated, conical bottom, non sterile	20000×g	500	525-1138
1,5	Without cap	Natural	Graduated, free-standing, non sterile	20000×g	500	525-1148
2,0	Without cap	Natural	Graduated, conical bottom, non sterile	20000×g	500	525-1139
2,0	Without cap	Natural	Graduated, free-standing, non	20000×g	500	525-1149



## MICROCENTRIFUGE TUBES WITH SOCKET SCREW CAPS

These clear, high grade PP tubes are ideal for sample processing applications.

- RNase-, DNase- and endotoxin-free
- Sterile tubes are sterilised by irradiation

Excellent for freezer storage or secure sample handling. Screw caps incorporate silicone O-rings for a leakproof seal and accept colour coded inserts. Inserts snap into the top of the cap to create a flush surface. Tubes are available with standard or loop caps, which tether the cap to the tube.

Caps and tubes are steam autoclavable at 121 °C and freezable to -80 °C.

Manufactured in a Class 100 000 cleanroom environment.

Manufactured under ISO 13485:2016 and ISO 9001:2015 quality management systems.

Capacity (ml)	Туре	Colour	Version	RCF max.	Pk	Cat. No.
Tubes with green colour caps	in separate resealable bags					
0,5	With green screw cap	Natural	Non graduated, conical bottom, non sterile	20000×g	500	525-1231
0,5	With green screw cap	Natural	Non graduated, free-standing, non sterile	20000×g	500	525-1233
1,5	With green screw cap	Natural	Graduated, conical bottom, non sterile	20000×g	500	525-1236
1,5	With green screw cap	Natural	Graduated, free-standing, non sterile	20000×g	500	525-1237
2,0	With green screw cap	Natural	Graduated, conical bottom, non sterile	20000×g	500	525-1240
2,0	With green screw cap	Natural	Graduated, free-standing, non sterile	20000×g	500	525-1241
Sterile tubes with attached no	itural colour caps					
0,5	With natural screw cap	Natural	Non graduated, conical bottom, sterile	20000×g	500	525-0642
0,5	With natural screw cap	Natural	Non graduated, free-standing, sterile	20000×g	500	525-0644
1,5	With natural screw cap	Natural	Graduated, conical bottom, sterile	20000×g	500	525-0646
1,5	With natural screw cap	Natural	Graduated, free-standing, sterile	20000×g	500	525-0648
2,0	With natural screw cap	Natural	Graduated, conical bottom, sterile	20000×g	500	525-0650
2,0	With natural screw cap	Natural	Graduated, free-standing, sterile	20000×g	500	525-0652
Tubes with green colour loop	style caps					
0,5	With green loop style screw cap	Natural	Non graduated, conical bottom, non sterile	20000×g	500	525-1234
0,5	With green loop style screw cap	Natural	Non graduated, free-standing, non sterile	20000×g	500	525-1235
1,5	With green loop style screw cap	Natural	Graduated, conical bottom, non sterile	20000×g	500	525-1238
1,5	With green loop style screw cap	Natural	Graduated, free-standing, non sterile	20000×g	500	525-1239
2,0	With green loop style screw cap	Natural	Graduated, free-standing, non sterile	20000×g	500	525-1243
2,0	With green loop style screw	Natural	Graduated, conical bottom, non sterile	20000×g	500	525-1244

Microcentrifuge tubes with socket screw cap



#### **ULT FREEZERS, ECO PREMIUM, VWR®**

VWR ULT Eco Premium freezers are designed for safe and reliable storage of sensitive samples. They feature ergonomic control and low energy consumption.

- Maximum 2» box capacity: 352/528
- Energy star certified
- Temperatures between -86 and -50 °C
- Long warm up time (warm up time from -86 and -50 °C: 360 min)
- Highly efficient VIP insulation and long lasting rust proof sample chamber
- Green refrigerants
- USB and Ethernet interface for data transfer

VWR ULT Eco Premium freezers have a stainless steel inner chamber, flexible rack configuration and are further characterised by low energy consumption and electricity costs. They have individually adaptable chamber compartments and samples remain frozen for >30 hours during power outage or system failure. The climate friendly refrigerants used help to protect the environment.

#### UL, cUL, UKCA.

VWR ULT freezer

A variety of accessories are available, these must be ordered separately.

VWR ULT Freezer 352 Eco Premium	VWR ULT Freezer 528 Eco Premium				
2					
Yes, with key lock					
2 outer doors, 4 inner compartments					
230 V, 5	230 V, 50 Hz				
47 db	47 db(A)				
3 adjustable shelves					
247 kg	288 kg				
	VWR ULT Freezer 352 Eco Premium 2 Yes, with 4 2 outer doors, 4 inno 230 V, 5 47 db 3 adjustabl 247 kg				

Description	Pk	Cat. No.
VWR ULT freezer 352 Eco Premium	1	471-1252
VWR ULT freezer 528 Eco Premium	1	471-1253

Description	Pk	Cat. No.
Sliding tray racks for cryoboxes, height 50 mm, VWR®		
Sliding tray rack for cryoboxes	1	479-2254
Drawer rack for cryoboxes, height 50 mm, VWR®		
Drawer rack for cryoboxes	1	479-2261
Side access rack for cryoboxes, height 50 mm, VWR*		
Side access rack for cryoboxes	1	479-2268
Eco Side access rack for cryoboxes, height 50 mm, VWR®		
Eco side access rack for cryoboxes	1	479-2275
Sliding tray racks for cryoboxes, height 50 mm, VWR®		
Sliding tray rack for cryoboxes	1	479-2256
Drawer rack for cryoboxes, height 50 mm, VWR®		
Drawer rack for cryoboxes	1	479-2263
Side access rack for cryoboxes, height 50 mm, VWR®		
Side access rack for cryoboxes	1	479-2270
Eco Side access rack for cryoboxes, height 50 mm, VWR®		
Eco side access rack for cryoboxes	1	479-2277



#### **VWR®, CRYOBOXES**

Cryoboxes are suitable to store up to -186 °C.

- Suitable for storage temperatures down to -186°C
- Available in a variety of color options
- Grid option for coding on lid
- Clear lid materialn

Made with PC material.

Boxes are stackable. Designed for 25, 81, or 100 places to store both internal and external threaded vials (1 - 5 ml).

Base made with color options red, blue, green, white, and yellow. Lid has grid option for coding and made with clear material.

Cryo tube picker is included.

Compartments	Colour	For Tubes (ml)	W×D×H ext. (mm)	Pk	Cat. No.
25	Assorted	1 - 2	75,6×75,6×51,8	5	479-2388
25	Blue	1 - 2	75,6×75,6×51,8	5	479-2389
25	Green	1 - 2	75,6×75,6×51,8	5	479-2390
25	Red	1 - 2	75,6×75,6×51,8	5	479-2391
25	White	1 - 2	75,6×75,6×51,8	5	479-2392
25	Yellow	1 - 2	75,6×75,6×51,8	5	479-2393
81	Assorted	1 - 2	132,0×132,0×53,0	5	479-2394
81	Blue	1 - 2	132,0×132,0×53,0	5	479-2395
81	Green	1 - 2	132,0×132,0×53,0	5	479-2396
81	Red	1 - 2	132,0×132,0×53,0	5	479-2397
81	White	1 - 2	132,0×132,0×53,0	5	479-2398
81	Yellow	1 - 2	132,0×132,0×53,0	5	479-2399
81	Assorted	3	132,0×132,0×81,1	5	479-2400
81	Blue	3	132,0×132,0×81,1	5	479-2401
81	Green	3	132,0×132,0×81,1	5	479-2402
81	Red	3	132,0×132,0×81,1	5	479-2403
81	White	3	132,0×132,0×81,1	5	479-2404
81	Yellow	3	132,0×132,0×81,1	5	479-2405
100	Assorted	1 - 2	132,0×132,0×53,0	5	479-2406
100	Blue	1 - 2	132,0×132,0×53,0	5	479-2407
100	Green	1 - 2	132,0×132,0×53,0	5	479-2408
100	Red	1 - 2	132,0×132,0×53,0	5	479-2409
100	White	1 - 2	132,0×132,0×53,0	5	479-2410
100	Yellow	1 - 2	132,0×132,0×53,0	5	479-2411
81	Assorted	4 - 5	132,0×132,0×94,3	5	479-2412
81	Blue	4 - 5	132,0×132,0×94,3	5	479-2414
81	Green	4 - 5	132,0×132,0×94,3	5	479-2415
81	Red	4 - 5	132,0×132,0×94,3	5	479-2416
81	White	4 - 5	132,0×132,0×94,3	5	479-2417
81	Yellow	4 - 5	132,0×132,0×94,3	5	479-2418



### **CRYOBOXES FOR CENTRIFUGE TUBES**

PP, autoclavable.

- Labelled zone and numerical grid references
- Clear cover
- Autoclavable (121 °C), temperature resistant to -90 °C
- Sustainable design based on virgin resins

For long-term storage of samples.

Environmentally preferable attribute		Low Manufacturing Impo	ict, Sustainable Packaging	
Description	For tubes (ml)	W×D×H ext. (mm)	Pk	Cat. No.
For 16 tubes with lid	50	138×138×126	2	479-0079



## **CRYOBOXES, FOR LIGHT-SENSITIVE SPECIMENS**

PP, black.

- Reinforced seal, triple-hinges and locking clasp keeps samples secure while the box is closed
- Each box features an alphanumeric grid on the exterior and interior and stacking rings
- Matt surface suitable for printing and labelling

Ideal for light-sensitive specimens, this all-black storage box is suitable for use with 0,5/1,5/2,0 ml microcentrifuge tubes, as well as most other brands of cryogenic vials. These boxes stand a few millimetres taller than other available types of storage boxes and can accommodate several sizes of cryogenic vials, or tubes of similar Ø.

Compartments	For	Colour	W×D×H ext. (mm)	Pk	Cat. No.
100	Microcentrifuge tubes 0,5/1,0 and 2,0 ml	Black	140×140×60	1	211-0255



## CRYOBOXES, CARDBOARD, 133×133 MM, VWR®

Cardboard, coated.

- Waterproof coating
- Various combinations possible with different dividers (to be ordered separately)
- Available in different heights and colours

For storage of cryovials at low temperatures.

Freezable to -140 °C.

Compartments	Colour	For tubes	Height	W×D×H ext. (mm)	Pk	Cat. No.
Cryoboxes 32 mm high						
-	White	-		133×133×32	1	479-1407
-	Blue	-		133×133×32	1	479-1408
-	Red	-		133×133×32	1	479-1409
-	Green	-		133×133×32	1	479-1410
-	Yellow	-		133×133×32	1	479-1411
Cryoboxes 50 mm high						
-	White	-		133×133×50	1	479-1417
-	Blue	-		133×133×50	1	479-1418
-	Red	-		133×133×50	1	479-1419
-	Green	-		133×133×50	1	479-1420
-	Yellow	-		133×133×50	1	479-1421
Cryoboxes 75 mm high						
-	White	-		133×133×75	1	479-1427
-	Blue	-		133×133×75	1	479-1428
-	Red	-		133×133×75	1	479-1429
-	Green	-		133×133×75	1	479-1430
-	Yellow	-		133×133×75	1	479-1431
Cryoboxes 100 mm high						
-	White	-		133×133×100	1	479-1387
-	Blue	-		133×133×100	1	479-1388
-	Red	-		133×133×100	1	479-1389
-	Green	-		133×133×100	1	479-1390
-	Yellow	-		133×133×100	1	479-1391
Cryoboxes 130 mm high						
-	White	-		133×133×130	1	479-1397
-	Blue	-		133×133×130	1	479-1398
-	Red	-		133×133×130	1	479-1399
-	Green	-		133×133×130	1	479-1400
-	Yellow	-		133×133×130	1	479-1401
Grid dividers for cryoboxes 32	mm height					
16×16	_	Up to 7,4 mm Ø	25	-	1	479-1490
14×14	_	Up to 8,5 mm Ø	25	-	1	479-1489
13×13		Up to 9,2 mm Ø	25	-	1	479-1488
12×12	_	Up to 10,0 mm Ø	25	-	1	479-1487
10×10	_	Up to 12,0 mm Ø	25	-	1	479-1486
9×9	_	Up to 13,3 mm Ø	25	-	1	479-1485
8×8	_	Up to 15,1 mm Ø	25	-	1	479-1484
7×7	_	Up to 17,3 mm Ø	25	-	1	479-1483

## CRYOPRESERVATION CRYOVIALS, BOXES AND RACKS

Compartments	Colour	For tubes	Height	W×D×H ext. (mm)	Pk	Cat. No.		
Cryoboxes 32 mm high								
Grid dividers for cryoboxes 50 mm height								
16×16	_	Up to 7,4 mm Ø	30	-	1	479-1470		
14×14	—	Up to 8,5 mm Ø	30	-	1	479-1469		
13×13	—	Up to 9,2 mm Ø	30	-	1	479-1468		
12×12	_	Up to 10,0 mm Ø	30	-	1	479-1467		
10×10	—	Up to 12,0 mm Ø	30	-	1	479-1466		
9×9	_	Up to 13,3 mm Ø	30	-	1	479-1465		
8×8	—	Up to 15,1 mm Ø	30	-	1	479-1464		
7×7	—	Up to 17,3 mm Ø	30	-	1	479-1463		
6×6	_	Up to 20,3 mm Ø	30	-	1	479-1462		
5×5	—	Up to 24,3 mm Ø	30	-	1	479-1461		
4×4	—	Up to 30,5 mm Ø	30	-	1	479-1460		
3×3	—	Up to 41,0 mm Ø	30	-	1	479-1459		
Grid dividers for cryoboxes 75 r	nm height							
12×12	_	Up to 10,0 mm Ø	40	-	1	479-1626		
10×10	_	Up to 12,0 mm Ø	40	-	1	479-1625		
9×9	—	Up to 13,3 mm Ø	40	-	1	479-1624		
8×8	_	Up to 15,1 mm Ø	40	-	1	479-1623		
7×7	_	Up to 17,3 mm Ø	40	-	1	479-1622		
6×6	_	Up to 20,3 mm Ø	40	-	1	479-1621		
5×5		Up to 24,3 mm Ø	40	-	1	479-1620		
4×4	_	Up to 30,5 mm Ø	40	-	1	479-1619		
3×3	_	Up to 41,0 mm Ø	40	-	1	479-1499		
Grid dividers for cryoboxes 100	/130 mm height							
10×10	_	Bis zu 12,0 mm Ø	65	-	1	479-1450		
9×9	_	Bis zu 13,3 mm Ø	65	-	1	479-1449		
8×8	—	Bis zu 15,1 mm Ø	65	-	1	479-1448		
7×7	_	Bis zu 17,3 mm Ø	65	-	1	479-1447		
6×6	_	Bis zu 20,3 mm Ø	65	-	1	479-1446		
5×5	_	Bis zu 24,3 mm Ø	65	-	1	479-1445		
4×4	_	Bis zu 30,5 mm Ø	65	-	1	479-1444		
3×3	_	Bis zu 41,0 mm Ø	65	-	1	479-1443		



## CRYOBOXES, CARDBOARD, 136X136 MM, VWR®

## Cardboard.

- Waterproof coating
- Various combinations possible with different dividers (to be ordered separately)
- Available in different heights and five colours

For storage of cryovials at low temperatures.

Freezable to -140 °C

Colour	For tubes	Height (mm)	W×D×H ext. (mm)	Pk	Cat. No.
White	-	32	136×136×32	1	479-1412
Blue	-	32	136×136×32	1	479-1413
Red	-	32	136×136×32	1	479-1414
Green	-	32	136×136×32	1	479-1415
Yellow	-	32	136×136×32	1	479-1416
White	-	50	136×136×50	1	479-1422
Blue	-	50	136×136×50	1	479-1423
Red	-	50	136×136×50	1	479-1424
Green	-	50	136×136×50	1	479-1425
Yellow	-	50	136×136×50	1	479-1426
White	-	75	136×136×75	1	479-1432
Blue	-	75	136×136×75	1	479-1433
Red	-	75	136×136×75	1	479-1434
Green	-	75	136×136×75	1	479-1435
Yellow	-	75	136×136×75	1	479-1436
White	-	100	136×136×100	1	479-1392
Blue	-	100	136×136×100	1	479-1393
Red	-	100	136×136×100	1	479-1394
Green	-	100	136×136×100	1	479-1395
Yellow	-	100	136×136×100	1	479-1396
	Colour White Blue Red Green Yellow Yellow Yhite Blue Red Green Yellow	ColourFor tubesWhite-Blue-Red-Green-Yellow-White-Blue-Red-Green-White-Blue-Red-Green-White-Green-Yellow-White-Blue-Green-Yellow-White-Blue-Green-Yellow-Yellow-Yellou-Yellou-Yellow-Yellow-Yellow-Yellow-Yellow-	ColourFor tubesHeight (mm)White-32Blue-32Red-32Green-32Yellow-32White-50Blue-50Blue-50Green-50Blue-50Blue-50Blue-50Green-50Green-50White-50Green-50Green-50Green-50White-75Blue-75Green-75White-100Blue-100Blue-100Blue-100State-100Blue-100Blue-100Blue-100Blue-100Blue-100Blue-100Blue-100Blue-100Blue-100Blue-100Blue-100Blue-100Blue-100Blue-100Blue-100Blue-100Blue-100Blue-100Blue-100 <t< td=""><td>Colour         For tubes         Height (mm)         Wxb×H ext. (mm)           White         -         32         36x136x32           Blue         -         32         36x136x32           Red         -         32         136x136x32           Green         -         32         136x136x32           Green         -         32         136x136x32           Vellow         -         50         136x136x50           Blue         -         50         136x136x50           Green         -         50         136x136x50           Vellow         -         50         136x136x75           Blue         -         75         136x136x75           Blue         -         75         136x136x75           Green         -         75         136x136x10           Vellow         -         75         136x136x10           Vellow         -</td><td>ColourFor tubesHeight (mm)WxDxH ext. (mm)PkWhite-32136x136x321Blue-32136x136x321Red-32136x136x321Green-32136x136x321Yellow-32136x136x321White-32136x136x521Blue-50136x136x501Blue-50136x136x501Creen-50136x136x501Red-50136x136x501Red-50136x136x501Red-50136x136x501Pellow-50136x136x501Creen-50136x136x501Blue-75136x136x751Blue-75136x136x751Red-75136x136x751Red-75136x136x751Stream-75136x136x751Yellow-100136x136x1001Red-100136x136x1001Red-100136x136x1001Stream-100136x136x1001Stream-100136x136x1001Red-100136x136x1001Red-100136x136x1001Stream-100136</td></t<>	Colour         For tubes         Height (mm)         Wxb×H ext. (mm)           White         -         32         36x136x32           Blue         -         32         36x136x32           Red         -         32         136x136x32           Green         -         32         136x136x32           Green         -         32         136x136x32           Vellow         -         50         136x136x50           Blue         -         50         136x136x50           Green         -         50         136x136x50           Vellow         -         50         136x136x75           Blue         -         75         136x136x75           Blue         -         75         136x136x75           Green         -         75         136x136x10           Vellow         -         75         136x136x10           Vellow         -	ColourFor tubesHeight (mm)WxDxH ext. (mm)PkWhite-32136x136x321Blue-32136x136x321Red-32136x136x321Green-32136x136x321Yellow-32136x136x321White-32136x136x521Blue-50136x136x501Blue-50136x136x501Creen-50136x136x501Red-50136x136x501Red-50136x136x501Red-50136x136x501Pellow-50136x136x501Creen-50136x136x501Blue-75136x136x751Blue-75136x136x751Red-75136x136x751Red-75136x136x751Stream-75136x136x751Yellow-100136x136x1001Red-100136x136x1001Red-100136x136x1001Stream-100136x136x1001Stream-100136x136x1001Red-100136x136x1001Red-100136x136x1001Stream-100136

## CRYOPRESERVATION CRYOVIALS, BOXES AND RACKS

Compartments	Colour	For tubes	Height (mm)	W×D×H ext. (mm)	Pk	Cat. No.
Cryoboxes 32 mm high				i de la companya de l		
Cryoboxes 130 mm high						
-	White	-	130	136×136×130	1	479-1402
-	Blue	-	130	136×136×130	1	479-1403
-	Red	-	130	136×136×130	1	479-1404
-	Green	-	130	136×136×130	1	479-1405
-	Yellow	-	130	136×136×130	1	479-1406
Grid dividers for cryoboxes 32 n	nm height					
16×16	_	Up to 7,5 mm Ø	25	-	1	479-1498
14×14	_	Up to 8,7 mm Ø	25	-	1	479-1497
13×13	_	Up to 9,4 mm Ø	25	-	1	479-1496
12×12	_	Up to 10,2 mm Ø	25	-	1	479-1495
10×10	_	Up to 12,3 mm Ø	25	-	1	479-1494
9×9	_	Up to 13,7 mm Ø	25	-	1	479-1493
8×8	_	Up to 15,4 mm Ø	25	-	1	479-1492
7×7	_	Up to 17,7 mm Ø	25	-	1	479-1491
Grid dividers for cryoboxes 50 r	nm height					
16×16	_	Up to 7,5 mm Ø	30	-	1	479-1482
14×14	_	Up to 8,7 mm Ø	30	-	1	479-1481
13×13	_	Up to 9,4 mm Ø	30	-	1	479-1480
12×12	_	Up to 10,2 mm Ø	30	-	1	479-1479
10×10	_	Up to 12,3 mm Ø	30	-	1	479-1478
9×9	_	Up to 13,7 mm Ø	30	-	1	479-1477
8×8	_	Up to 15,4 mm Ø	30	-	1	479-1476
7×7	_	Up to 17,7 mm Ø	30	-	1	479-1475
6×6	_	Up to 20,7 mm Ø	30	-	1	479-1474
5×5	_	Up to 24,9 mm Ø	30	-	1	479-1473
4×4	_	Up to 31,3 mm Ø	30	-	1	479-1472
3×3	_	Up to 41,9 mm Ø	30	-	1	479-1471
Grid dividers for cryoboxes 75 n	nm height					
12×12	_	Up to 10,2 mm Ø	40	-	1	479-1635
10×10	_	Up to 12,3 mm Ø	40	-	1	479-1634
9×9	_	Up to 13,7 mm Ø	40	-	1	479-1633
8×8		Up to 15,4 mm Ø	40	-	1	479-1632
7×7		Up to 17,7 mm Ø	40	-	1	479-1631
6×6	_	Up to 20,7 mm Ø	40	-	1	479-1630
5×5	_	Up to 24,9 mm Ø	40	-	1	479-1629
4×4		Up to 31,3 mm Ø	40	-	1	479-1628
3×3	—	Up to 41,9 mm Ø	40	-	1	479-1627
Grid dividers for cryoboxes 100,	/130 mm height					
10×10	-	Bis zu 12,3 mm Ø	65	-	1	479-1458
9×9	_	Bis zu 13,7 mm Ø	65	-	1	479-1457
8×8	-	Bis zu 15,4 mm Ø	65	-	1	479-1456
7×7	-	Bis zu 17,7 mm Ø	65	-	1	479-1455
6×6	-	Bis zu 20,7 mm Ø	65	-	1	479-1454
5×5	_	Bis zu 24,9 mm Ø	65	-	1	479-1453
4×4	_	Bis zu 31,3 mm Ø	65	-	1	479-1452
3×3	-	Bis zu 41,9 mm Ø	65	-	1	479-1451

## **CRYOBOXES WITH DIVIDERS, VWR®**

Boxes, made of cardboard, white. For storage of cryovials at low temperatures.

- Resistant to temperatures down to -140 °C
- Standard waterproof coating



479-1392

Compartments	W×D×H ext. (mm)	Pk	Cat. No.
81 (9×9)	133×133×32	1	479-1437
81 (9×9)	133×133×50	1	479-1438
81 (9×9)	133×133×75	1	479-1440
81 (9×9)	133×133×100	1	479-1441
81 (9×9)	133×133×130	1	479-1442
100 (10×10)	133×133×50	1	479-1439



#### **CRYOBOXES, HALF SIZE, CARDBOARD, VWR®**

Cardboard, coated.

- Waterproof coating
- Freezable to -140 °C
- Dividers available separately
- Available in five colours

For storage of cryovials at low temperatures.

Compartments	Colour	W×D×H ext. (mm)	Pk	Cat. No.
Cryoboxes, half size, with dividers				
5×10	White	136×66,5×50	1	479-2238
5×10	Blue	136×66,5×50	1	479-2239
5×10	Red	136×66,5×50	1	479-2240
5×10	Green	136×66,5×50	1	479-2241
5×10	Yellow	136×66,5×50	1	479-2242
Dividers				
5×10	White	136×66,5×50	10	479-7005



## MICROTUBE STORAGE BOXES, VWR®

PP.

- Highly transparent, with bold identifying colours and a distinctive wave design
- Uniform wells with location ID; capacity indicated on the outside of the box
- Black light-tight version available for light-sensitive samples
- Frosted labelling patch

Compact footprint for microtube and cryogenic vial storage. Store 1,5/2,0 ml microtubes or cryogenic vials. Complete with an easy open, friction-fit lid. Will fit into most standard freezer racking.

Assorted pack contains one of each colour blue, green, pink, yellow and orange.

Compartments	Colour	W×D×H ext. (mm)	Pk	Cat. No.
50-well boxes, hinged lid with snap-clasp				
50	Assorted colours	142×92×56	5	525-0933
50	Natural	142×92×56	5	525-0932
81-well boxes, friction fit lid				
81	Assorted colours	130×130×47	5	525-0940
81	Natural	130×130×47	5	525-0934
81	Blue	130×130×47	5	525-0935
81	Green	130×130×47	5	525-0936
81	Pink	130×130×47	5	525-0937
81	Yellow	130×130×47	5	525-0938
81	Orange	130×130×47	5	525-0939
81	Black	130×130×47	5	525-0941
100-well boxes, hinged lid with snap-clasp				
100	Assorted colours	141×151×47	5	525-0925
100	Natural	141×151×47	5	525-0926
100	Blue	141×151×47	5	525-0928
100	Green	141×151×47	5	525-0929
100	Yellow	141×151×47	5	525-0930
100	Orange	141×151×47	5	525-0931
100	Black	141×151×47	5	525-0927



### CRYOBOXES, WITHOUT OR WITH DIVIDERS, VWR®

Made of white cardboard.

- Inexpensive to buy, inexpensive to ship, space saving in the laboratory
- Available in the most sold size with a height of 51 mm
- Square, size of bottom 129×129 mm, size of top 134×134 mm
- Fits into all storage rack systems

Consists of a lid and a base which are delivered flat. Simply by following the instructions on the lid, 1-2-3 and you have a stable, high quality cryobox.

Compartments	Pk	Cat. No.
-	100	479-1386
49 (7×7)	100	479-1385
64 (8×8)	100	479-1384
81 (9×9)	100	479-1383
100 (10×10)	100	479-1382



479-4004

## **CRYOBOXES, PP, FLAT-PACKED**

Made of corrugated or thin film PP.

- Easy self-assembly boxes shipped flat-packed
- More durable than cardboard boxes as they are not susceptible to moisture
- Significantly reduces the chance of mould
- Dividers included with the boxes
- Store down to temperatures of -80 °C

Designed with sustainability in mind, they are made from either specially formulated corrugated or thin film polypropylene. With superior durability, polypropylene outlasts the cardboard box alternative that is susceptible to softening and producing dust, and can be frozen and thawed multiple times without a problem. These cryoboxes are supplied 'flat-packed', which eliminates the hassle of stacking, and reduces the amount of space needed for storage.

Compartments	Colour	For tubes (ml)	Well Ø (mm)	W×D×H ext. (mm)	Pk	Cat. No.
Boxes, thin film PP						
81	White	1,5/2,0	12,1	125×125×49	10	479-4006
Boxes, corrugated PP						
144	Natural	0,2	7,9	133×130×30	10	479-4001
81	Natural	0,5	12,0	133×130×42	10	479-4002
25	Natural	5	22,6	133×130×75	10	479-4003
36	Natural	15	19,8	145×147×120	10	479-4004
16	Natural	50	31,6	145×147×120	10	479-4005



## CRYOBOXES, DOUBLE SIZE, 133X257 MM, VWR®

Corrugated cardboard box.

- Waterproof coating
- Freezable to -140 °C
- Available with and without dividers
- In different heights and five colours

For storage of cryovials at low temperatures.

Compartments	Colour	W×D×H ext. (mm)	Pk	Cat. No.
Cryoboxes, double size, without dividers				
-	White	133×257×50	1	479-7006
-	Blue	133×257×50	1	479-7007
-	Red	133×257×50	1	479-7008
-	Green	133×257×50	1	479-7009
-	Yellow	133×257×50	1	479-7010

## CRYOPRESERVATION CRYOVIALS, BOXES AND RACKS

Compartments	Colour	W×D×H ext. (mm)	Pk	Cat. No.
Cryoboxes, double size, without dividers				
Cryoboxes, double size, with dividers				
10×20	White	133×257×50	1	479-7011
10×20	Blue	133×257×50	1	479-7012
10×20	Red	133×257×50	1	479-7013
10×20	Green	133×257×50	1	479-7014
10×20	Yellow	133×257×50	1	479-7015
Dividers for cryoboxes double size				
8×16	_	-	1	479-7018
9×18	_		1	479-7017
10×20	_	-	1	479-7016



## CRYOBOXES, CARDBOARD, 136×136 MM, WITH FULL LABELLING, VWR®

Cardboard, coated.

- Waterproof coating
- Freezable to -140 °C
- Available with or without dividers
- In different heights and five colours

For storage of cryovials at low temperatures.

Description	Compartments	Colour	W×D×H ext. (mm)	Pk	Cat. No.
Boxes, without dividers					
		White	136×136×55	1	479-7019
		Blue	136×136×55	1	479-7020
		Red	136×136×55	1	479-7021
		Green	136×136×55	1	479-7022
		Yellow	136×136×55	1	479-7023
		White	136×136×75	1	479-7024
		White	136×136×95	1	479-7025
Boxes, with dividers					
	10×10	White	136×136×55	1	479-7026
	10×10	Blue	136×136×55	1	479-7027
	10×10	Red	136×136×55	1	479-7028
	10×10	Green	136×136×55	1	479-7029
	10×10	Yellow	136×136×55	1	479-7030
	10×10	White	136×136×75	1	479-7031
	10×10	White	136×136×95	1	479-7032
Dividers for cryoboxes					
For cryoboxes 55 mm height	10×10			1	479-7033
For cryoboxes 75 mm height	10×10			1	479-7034
For cryoboxes 95 mm height	10×10			1	479-7035



#### **RACKS FOR 15 OR 50 ML TUBES, VWR®**

PP, with clear lid.

- Deep grid wells securely hold tubes upright
- Locate tubes easily with keyed lid, imprinted grid and first tube orientation
- View tube storage through clear lid and transparent sides

Robust, rugged construction for repeated storage. Snap in one of the two included grids, either 15 or 50 ml.

	Pk	Cat. No.
<sup>J</sup> urple	5	211-0370



#### **CENTRIFUGE TUBE STANDS, VWR®**

#### PP, purple.

- Free from DNase and RNase and non pyrogenic
- Autoclavable at 121  $^\circ\text{C}$  and freezable to –80  $^\circ\text{C}$
- Very good chemical resistance

Suitable for 1,5/2,0 ml microcentrifuge tubes and 15/50 ml conical centrifuge tubes.

Description	Colour	No. of holes	Pk	Cat. No.
For 1,5/2,0 ml microcentrifuge tubes and 15/50 ml	Purple	7	5	525-1003



Sliding tray rack

#### SLIDING TRAY RACKS FOR CRYOBOXES, HEIGHT 50 MM, VWR®

Freezer racks as storage and inventory systems for upright ULT freezers makes it easier organise your samples.

- Different height and depth dimensions are available and can be used in all freezer brands
- Racks for standard 2» cryoboxes (133×133×51 mm)
- Made from corrosion resistant Stainless steel with smoothed edges

These racks ensure an ergonomic operating process as the trays are placed in the rack. With a pull-out design it makes it easy to get samples without taking the whole rack out from the freezer. The tray has an easy access handle.

Measure the inside height and depth in the compartment of your freezer before choosing the right racks. In 'Related information' tab you will find additional information to support you in the selection.

Delivered without cryoboxes.

Description	Compartments	W×D×H ext. (mm)	Pk	Cat. No.
Sliding tray rack for cryoboxes	20 (5×4)	140×568×280	1	479-2254
Sliding tray rack for cryoboxes	24 (6×4)	140×568×321	1	479-2256



Drawer rack

## DRAWER RACK FOR CRYOBOXES, HEIGHT 50 MM, VWR®

Freezer racks as storage and inventory systems for upright ULT freezers makes it easier organise your samples.

- Different height and depth dimensions are available and can be used in all freezer brands
- Racks for standard 2» cryoboxes (133×133×51 mm)
- Made from corrosion resistant stainless steel with smoothed edges

These racks ensure an ergonomic operating process as the drawers are placed in the rack. With a pull-out design it makes it easy to get samples without taking the whole rack out from the freezer. The tray has an easy access handle.

Measure the inside height and depth in the compartment of your freezer before choosing the right racks. In 'Related information' tab you will find additional information to support you in the selection.

Delivered without cryoboxes.

Description	Compartments	W×D×H ext. (mm)	Pk	Cat. No.
Drawer rack for cryoboxes	20 (5×4)	140×566×279	1	479-2261
Drawer rack for cryoboxes	24 (6×4)	140×566×321	1	479-2263



Side access rack

#### SIDE ACCESS RACK FOR CRYOBOXES, HEIGHT 50 MM, VWR®

Freezer racks as storage and inventory systems for upright ULT freezers makes it easier organise your samples.

- Different height and depth dimensions are available and can be used in all freezer brands
- Racks for standard 2» cryoboxes (133×133×51 mm)
- Made from corrosion resistant stainless steel with smoothed edges
- Organise and find your samples quickly

These racks are made from corrosion resistant stainless steel with smoothed edges. Side access racks are a cost-effective freezer rack that will fit into any freezer.

Measure the inside height and depth in the compartment of your freezer before choosing the right racks. In 'Related information' tab you will find additional information to support you in the selection.

Delivered without cryoboxes.

Description	Compartments	W×D×H ext. (mm)	Pk	Cat. No.
Side access rack for cryoboxes	20 (5×4)	140×564×280	1	479-2268
Side access rack for cryoboxes	24 (6×4)	140×564×321	1	479-2270



Eco side access rack

## ECO SIDE ACCESS RACK FOR CRYOBOXES, HEIGHT 50 MM, VWR®

Freezer racks as storage and inventory systems for upright ULT freezers makes it easier organise your samples.

- Different height and depth dimensions are available and can be used in all freezer brands
- Racks for standard 2» cryoboxes (133×133×51 mm)
- Made from corrosion resistant stainless steel with smoothed edges
- Organise and find your samples quickly
- Lower weight compared with side access racks

These racks are made from corrosion resistant stainless steel with smoothed edges. Eco Side access racks are a cost-effective freezer rack that will fit into any freezer.

Measure the inside height and depth in the compartment of your freezer before choosing the right racks. In 'Related information' tab you will find additional information to support you in the selection.

Delivered without cryoboxes.

Description	Compartments	W×D×H ext. (mm)	Pk	Cat. No.
Eco side access rack for cryoboxes	20 (5×4)	140×562×280	1	479-2275
Eco side access rack for cryoboxes	24 (6×4)	140×562×321	1	479-2277



#### **RACK FOR CRYOGENIC VIALS, VWR®**

PC.

- Numeric hole index
- Moulded tabs in the bottom of each well to secure vials in place for easier opening and closing
- Ribbed grips make handling with gloves easier

Withstands both cryogenic freezing and autoclaving.

For	No. of holes	W×D×H (mm)	Colour	Pk	Cat. No.
(Ø 12,5 mm) 1 - 5 ml	50 (5×10)	199×104×24,5	Blue	1	211-0139

Search **vwr.com** for 'CryoHolder' to find a suitable vial transfer tool.



Cryovials

#### **VWR®, CRYOVIALS**

Designed for freezing samples in all cryopreservation applications, these vials feature an internal thread with washer or external thread. The caps and vials are made from the same batch of materials to ensure equal dilation coefficient, resulting in optimum sealing characteristics.

- Manufactured from polypropylene to withstand temperatures down to -196 °C
- Manufactured in cleanroom environment (Class 10,000)
- Free of RNase, DNase and pyrogens
- Blue graduations, write on area on vial for easy marking
- Internal vials have a washer for a secure seal
- 2D coded vial available in 2 ml self-standing
- Vials may be colour coded with inserts
- Sterile (gamma irradiated)

Self standing/starfoot/round bottom vial option for user to choose based on the application.

Cryocoder/cap inserts are available in multiple colour options: Violet, white, blue, orange, lilac, red, tan, yellow, green, grey, pink, assorted (five colours).

US FDA 21CRF, USP CLASS VI compliant Resin.

Store cryogenic vials only in the vapour phase above the liquefied gas. Always use appropriate safety equipment when removing vials from cryogenic storage. Packed in unique tamper-proof, resealable, safety-lock bags of 100.

Description	Capacity (ml)	Base	Ø×H (mm)	Colour	Pk	Cat. No.
External threaded vials						
Cryovial	1,00/1,20	Star foot	12×35	Natural	1.000	210-000001
Cryovial	1,00/1,20	Self standing	12,1×41,2	Natural	1.000	210-000002
Cryovial	1,80/2,00	Star foot	12×46,9	Natural	1.000	210-000003
Cryovial	1,80/2,00	Self standing	12×48	Natural	1.000	210-000004
Cryovial	1,80/2,00	Round bottom	12,1×46	Natural	1.000	210-000005
Cryovial	3,00	Self standing	12,1×70,7	Natural	1.000	210-000006
Cryovial	3,00	Star foot	12×69,6	Natural	1.000	210-000007
Cryovial	3,60/4,00	Star foot	12,1×74,1	Natural	500	210-00008
Cryovial	3,60/4,00	Self standing	12,1×75,2	Natural	500	210-000009
Cryovial	4,50/5,00	Self standing	12×91	Natural	500	210-000010
Cryovial	4,50/5,00	Star foot	12×89,9	Natural	500	210-000011
Internal threaded vials						
Cryovial	1,00/1,20	Star foot	12,4×41,5	Natural	1.000	210-000012
Cryovial	1,80/2,00	Star foot	12,4×47,8	Natural	1.000	210-000013
Cryovial	1,80/2,00	Self standing	12,4×48,9	Natural	1.000	210-000014
Cryovial	1,80/2,00	Round bottom	12,4×49,2	Natural	1.000	210-000015
Cryovial	3,60/4,00	Self standing	12,4×78,6	Natural	500	210-000016
Cryovial	3,60/4,00	Star foot	12,4×77,5	Natural	500	210-000017
Cryovial	3,60/4,00	Round bottom	12,4×77	Natural	500	210-000018
Cryovial	4,50/5,00	Star foot	12,4×90,3	Natural	500	210-000019
Cryovial	4,50/5,00	Self standing	12,4×92,8	Natural	500	210-000020
Cryovial	4,50/5,00	Round bottom	12,4×91	Natural	500	210-000021
2D coded vials						
Cryovial 2D, external thread, with cap	2,00	Self standing	12×48	Natural	1.000	210-000026
Cryovial 2D in 81 place rack, blue	2,00	Self standing	12×48	Natural	50	210-000027
Cryovial 2D in 81 place rack, green	2,00	Self standing	12×48	Natural	50	210-000028
Cryovial 2D in 81 place rack, red	2,00	Self standing	12×48	Natural	50	210-000029
Cryovial 2D in 81 place rack, yellow	2,00	Self standing	12×48	Natural	50	210-000030

	Pk	Cat. No.
VWR®, Cryo coder cap inserts		
Cap insert	500	210-000033
Cap insert	500	210-000034
Cap insert	500	210-000040
Cap insert	500	210-000041
Cap insert	500	210-000036
Cap insert	500	210-000035
Cap insert	500	210-000042
Cap insert	500	210-000037
Cap insert	500	210-000038
Cap insert	500	210-000031
Cap insert	500	210-000032
Capinsert	500	210-000039



J.T.Baker plate square well - 2 ml / 96 wells

## PLATES, SQUARE WELL, J.T.BAKER®

These deep square well plates, made from virgin PP, are designed to make the interchanging of plates simpler in automated systems. They are also ideal for housing both cell and bacterial culture.

- Chemical resistant
- V-bottom shape for 24- and 48-wells maximises liquid removal and aids resuspension
- U-bottom shape for 96 wells
- No inner edges to interfere with magnetic bead collection
- Raised well rims to improve heat sealing
- Conical base aids sample concentration, reconstitution and centrifugation

#### For a maximum capacity utilisation.

Description	Colour	Sterile	Well volume (ml)	Pk	Cat. No.
96-well plate	Transparent	-	2,0	20	43001-0020
48-well plate	Transparent	-	5,0	20	43001-0062
24-well plate	Transparent	-	10,0	20	43001-0066
24-well plate	Transparent	-	10,0	20	43001

Description	РК	Cdt. No.
Capmats for J.T.Baker® Plate Square Well		
Capmat for J.T.Baker plate square well 96	20	43001-0022
Capmat for J.T.Baker plate square well 48	20	43001-0069
Capmat for J.T.Baker plate square well 24	20	43001-0070



#### CAPMATS FOR J.T.BAKER® PLATE SQUARE WELL

Capmat for J.T.Baker plate, square well, 96

Description	Optical property	Material	Sterile	Packed	Pk	Cat. No.
Capmat for J.T.Baker plate square well 96	Transparent	EVA	-	1 bag of 20	20	43001-0022
Capmat for J.T.Baker plate square well 48	Transparent	EVA	-	1 bag of 20	20	43001-0069
Capmat for J.T.Baker plate square well 24	Transparent	EVA	-	1 bag of 20	20	43001-0070



#### J.T.BAKER<sup>®</sup> PLATE MEDIO

PP, 96-well storage plate with conical wells.

- Due to the tangency of J.T.Baker Plate Medio plates, less than 50% stacking space is needed
- Alphanumeric code to assist identification and registration of single samples
- Higher well rims allow an airtight seal
- Conical wells aid sample mixing
- J.T.Baker Plate Medio is perfectly made for limited storage areas (fridge).

#### J.T.Baker Plate Medio - 2 ml

Colour	Recommended working volume (µl)	Sterile	Well volume (ml)	Pk	Cat. No.
Transparent	50 - 1000	-	1,2	32	43001-0101
Transparent	20 - 500	-	0,65	40	43001-0102
Transparent	50 - 2000	-	2,3	20	43001-0103



J.T.Baker Plate 384 - square wells, 120 µl

#### PLATE 384, J.T.BAKER®

Available in PP for automated screening and storage systems.

- Alphanumeric code to assist sample identification
- Square wells for increased volume
- V-bottom for high sample recovery
- High frame (3 mm) for stable and slip-free stacking
- Higher well rims avoid cross-contamination and allow better closure with adhesive films

J.T.Baker Plate 384 is ideal for small sample volumes.

Description	Colour	Recommended working volume (µl)	Sterile	Well volume (µl)	Pk	Cat. No.
PP plates	Transparent	5 - 110	-	120	60	43004-0120
PP plates	Transparent	5 - 180	-	200	40	43004-0200



J.T.Baker Plate Round Well - 1 ml

#### PLATE, ROUND WELL, J.T.BAKER®

Made of virgin PP to minimise extractables.

- Raised rim to prevent cross contamination and enable a better heat-welded seal
- Also available rimless to allow insertion of vials, or when adhesive seals are used
- Round bottom for optimal mixing and recovery
- Suitable for use with automated sample handling systems
- Can be stored at -80 °C

J.T.Baker Plate Round Well Plus with air escapes and raised rims for unfreezing samples.

Description	Colour	Sterile	Well volume (ml)	Pk	Cat. No.
PS plates	Clear	-	1,0	20	43001-0010
PP plates	Transparent	-	1,0	20	43001-0016
PP plates plus, raised well rims	Transparent	-	1,0	20	43001-0116
Description				Pk	Cat. No.
Capmats for J.T.Baker® Plate Round	Well				

Capmat for J.T.Baker Plate Round Well

CAPMATS FOR J.T.BAKER® PLATE ROUND WELL

Suitable to use with J.T.Baker Plate Round Well 43001-0010, 43001-0016 or 43001-0116.

Capmats for J.T.Baker Plate Round Well

Description Op	ptical property	Material	Sterile	Packed	Pk	Cat. No.
Capmat for J.T.Baker Plate Tro Round Well	ransparent	EVA	-	1 bag of 20	20	43001-0017

Description Packed	Pk	Cat. No.
Capmats for J.T.Baker® Plate Round Well		
Capmat for J.T.Baker Plate Round Well 1 bag of 20	20	43001-0017

20

43001-0017



#### MICROTUBE RACKS, J.T.BAKER®

Safe sample storage system.

- V bottom for optimal sample recovery
- Individual tubes or strips of eight tubes available
- 96-well capmat and strips of eight plug caps available
- Refillable alphanumeric marked rack
- Non sterile

Microtube racks are supplied with tubes included. Rack can be also filled with individual tubes available separately. They have a footprint in accordance to SBS standard and it is compatible with all current robotic systems.

Description	Capacity (ml)	Colour	Pk	Cat. No.
Microtube racks				
Microtube rack with 96 individual tubes	1,2	Clear/blue	10	45000-0000
Microtube rack with strips of 8 tubes	1,2	Clear/blue	10	45005-0000
Tubes only				
Individual tubes	1,2	Clear	960	45003-0000
Strip of 8 tubes	1,2	Clear	120	45000-0008

# Introducing the J.T.Baker<sup>®</sup> BAKERBOND<sup>®</sup> PROchievA<sup>™</sup> recombinant protein A affinity chromatography resin



Designed and manufactured by Avantor to the high standards established for our J.T.Baker® brand chemicals, reagents and chromatography products, the J.T.Baker® BAKERBOND® PROchievA™ resin offers high performance in the critical affinity chromatography step of mAbs manufacturing, and has demonstrated higher protein purity levels in more complex biopharmaceuticals such as Fc fusion proteins and bispecific antibodies.

- Proprietary protein A derived ligand developed by Avantor demonstrates excellent dynamic binding capacity for mAbs and improved protein purification capability in cutting-edge products
- Traditional particle size allows for use of established column packing procedures and operating protocols
- Conveniently packed in a non hazardous and non flammable storage buffer, eliminating burdensome shipping, handling and storage requirements
- Available in pre-packed, 1 and 5 ml columns and 25 ml to 5 L bulk sizes

Learn more at vwr.com/ prochieva



#### **CRYO 1 °C FREEZING CONTAINER, VWR®**

Container PC, closure and vial holder HDPE, foam insert.

- Floating rigid insert prevents vials from contamination
- Withstands repeated use; labelled with step-by-step instructions
- Holds up to 18 cryogenic vials (1; 1,2; 1,5 and 2 ml)

Non mechanical device that uses isopropyl alcohol and a mechanical freezer to provide cooling rate of -1 °C per minute. Ideal for successful cell cryopreservation and recovery.

Description	No. of holes	Pk	Cat. No.
Cryo 1 °C freezing container	18	1	479-0640



479-0642

#### LABTOP COOLERS, VWR®

#### -20 °C mini labtop cooler PC, non toxic gel

The -20 °C mini labtop cooler holds  $12 \times 0.5$  or 1.5 ml microcentrifuge tubes at below -20 °C for over 1 hour. Ideal for bench top use or transport. Filled with non toxic gel. Prior to use, place in -25 °C freezer for at least 24 hours, store at -25 °C between use.

#### -20 °C maxi labtop cooler PC, non toxic gel

The -20 °C maxi labtop cooler, holds  $32 \times 0.5$  or 1.5 ml microcentrifuge tubes at below -20 °C for over 1 hour. Suitable for bench top use or transport. Wire handle secures top while carrying. Cooler and lid filled with non toxic gel. Store at -25 °C between use.

## -20 °C labtop cooler PC, non toxic gel

The -20 °C labtop cooler maintains temperatures between -20 and -15 °C for up to 4 hours. Holds 20× 1,5 or 2,0 ml microcentrifuge tubes or cryovials. Inserts included hold 0,2 to 0,5 ml microcentrifuge tubes. Printed grid, keyed lid, locking handle and non skid feet. Store at -25 °C between use.

Description	No. of holes	Pk	Cat. No.
-20 °C mini labtop cooler	12	1	479-0642
-20 °C labtop cooler	20	1	479-0643
-20 °C maxi labtop cooler	32	1	479-0641



#### ICE BUCKETS, RECTANGULAR, WITH LID

Polyurethane foam.

- Resistant to temperatures from -76 to +70 °C
- Extremely robust, leakproof, stackable, lightweight
- Available in two sizes and four colours
- Stacking option for saving space on working bench
- Pouring lip design, for easy draining of liquid
- With lid to reduce the evaporation level of dry ice, water ice with salt slurry

Ideal for storing samples, these buckets maintain hot or cold temperatures of bottles, test tubes, solutions, and cultures. Suitable for use with dry ice, water ice, salt solution. For freezer storage only.

Capacity	Colour	Height (mm)	Pk	Cat. No.
2,5 L	Black	120	1	216-1510
2,5 L	Blue	120	1	216-1513
2,5 L	Green	120	1	216-1514
2,5 L	Red	120	1	216-1515
4,5 L	Black	187	1	216-1516
4,5 L	Blue	187	1	216-1517
4,5 L	Green	187	1	216-1518
4,5 L	Red	187	1	216-1519



Mini Bead Mill

#### 4-PLACE MINI BEAD MILL HOMOGENISER, VWR®

The VWR 4-place Mini Bead Mill homogeniser is compact and powerful.

- Specifically designed for grinding, lysing and the homogenisation of biological samples prior to molecular extraction
- Ideal solution for releasing DNA, RNA proteins and enzymes from tough samples, while still retaining molecular integrity
- Offers a broad performance range

Using sample tubes pre-filled with a variety of lysing beads, the mill vigorously and uniformly shakes the tubes providing an efficient, consistent high yield and quality homogenisation in less than 60 seconds. The VWR 4-place Mini Bead Mill homogeniser supports simultaneous processing of samples in 4×0,5, 4×1,5, 4×2 or 1×7 ml tubes. It does not require a cool down period between runs, allowing non stop use and high throughput. The unit features a convenient front loading design and safety lid closure.

Drive unit is supplied with integrated 0,5, 1,5, and 2 ml tube carriage, interchangeable 1×7 ml tube carriage, user manual and 2 year warranty. VWR disposable bead tubes must be ordered separately.

Model	4-place Mini Bead Mill
W×D×H (mm)	215×292×254
Weight (kg)	7,48
Application	Sample preparation, DNA, RNA, protein extraction
Capacity	Max. 4 tubes: 4×0,5 ml / 4×1,5 ml / 4×2 ml / 4×7 ml
Electrical	100 - 230 V, 50/60 Hz
Run time	1 s - 5 min
Sample volume	25 µl - 5 ml
Speed range	1 - 5 m/s

Description				PK	Cat. No.
4-place Mini Bead Mill homogeniser, 230 V				1	432-0366
Description	Туре	Volume	For	Pk	Cat. No.
Grinding mix					
1,5 ml snap cap tubes pre-filled with 2,4 mm metal beads	Snap cap tubes	1,5	Dry grinding, dense biological material, hair, bone, seeds	50	432-0368
2 ml screw cap reinforced tubes pre-filled with 2,4 mm metal beads	Reinforced screw cap tubes	2	Dry grinding, dense biological material, hair, bone, seeds	50	432-0374
7 ml screw cap reinforced tubes pre-filled with 2,4 mm metal beads	Reinforced screw cap tubes	7	Dry grinding, dense biological material, hair, bone, seeds	50	432-0397
Homogenising mix					
2 ml screw cap reinforced tubes pre-filled with 2,8 mm ceramic beads. 50 per pack	Reinforced screw cap tubes	2	Hard tissue such as heart, muscle, skin and plant material	50	432-0373
7 ml screw cap reinforced tubes pre-filled with 2,8 mm ceramic beads	Reinforced screw cap tubes	7	Hard tissue such as heart, muscle, skin and plant material	50	432-0399
1,5 ml snap cap tubes pre-filled with 1,4 mm ceramic beads	Snap cap tubes	1,5	Soft tissues such as brain, liver, kidney, spleen and soft plant material	50	432-0369
1,5 ml snap cap reinforced tubes pre-filled with 2,8 mm ceramic beads	Snap cap tubes	1,5	Hard tissue such as heart, muscle, skin and plant material	50	432-0370
2 ml screw cap tubes pre-filled with 1,4 mm ceramic beads. 50 per pack	Screw cap tubes	2	Soft tissues such as brain, liver, kidney, spleen and soft plant material	50	432-0372
7 ml screw cap reinforced tubes pre-filled with 1,4 mm ceramic beads	Reinforced screw cap tubes	7	Soft tissues such as brain, liver, kidney, spleen and soft plant material	50	432-0398
Lysing mix					
2 ml screw cap tubes pre-filled with 0,5 mm glass beads	Screw cap tubes	2	Bacteria/cultured cells, spores, yeast, fungi, algae, plankton	50	432-0371
Beads					
1,4 mm ceramic beads, bulk packaged. Certified DNase- and RNase-free			Soft tissues such as brain, liver, kidney, spleen and soft plant material	325 g	432-0377
2,8 mm ceramic beads, bulk packaged. Certified DNase- and RNase-free			Hard tissue such as heart, muscle, skin and plant material	325 g	432-0378
2,4 mm stainless steel beads, bulk packaged. Certified DNase- and RNase-free			Dry grinding, dense biological material, hair, bone, seeds, roots	500 g	432-0376
Tubes					
2 ml tubes with screw caps and O-rings, bulk packaged. Reinforced polypropylene to withstand high impact forces. O-ring in silicone. Certified DNase- and RNase-free. For use with VWR Bead Mill MAX, VWR Bead Mill, VWR Bead Mill 4 and all other commercial bead mills	Reinforced screw cap tubes	2		1.000	432-0379
7 ml screw cap reinforced tubes, bulk packaged for use with VWR Bead Mill MAX, VWR Bead Mill, and VWR Bead Mill 4	Reinforced screw cap tubes	7		500	432-0400
7 ml screw cap reinforced tubes, bulk packaged. For use with VWR Bead Mill MAX, VWR Bead Mill, and VWR Bead Mill 4	Reinforced screw cap tubes	7		1.000	432-0401



Bead Mill homogeniser

#### **BEAD MILL HOMOGENISER, VWR®**

The VWR Bead Mill homogeniser is a part of the newest generation of Bead Mill homogenisers. This economical system is specifically designed for grinding, lysing and homogenisation of up to 16 samples. Using sample tubes pre-filled with a variety of lysing beads, the VWR Bead Mill vigorously and uniformly shakes the tubes providing an efficient, consistent high yield and quality homogenisation usually in less than 40 seconds.

- Capacity for 16 samples (12×2 ml tubes plus 4×7 ml tubes, 16 in total)
- Run time: 1 second to 10 minutes
- 0,8 to 6 m/s
- Up to 99 programs

The VWR Bead Mill simultaneous homogenises 12×0,5, 4×1,5, 12×2 or 4×7 ml samples.

The VWR Bead Mill is an ideal solution for releasing DNA, RNA proteins and enzymes from tough samples while still retaining molecular integrity.

It does not require a cool down period between runs, allowing non stop use and high throughput. The unit features a convenient front loading design with snap-in tube carriage.

Drive unit is supplied with tube carriage, user manual and 2 year warranty. VWR disposable bead tubes must be ordered separately.

Model	Bead Mill homogeniser
W×D×H (mm)	305×432×368
Application	Sample preparation, DNA, RNA, Protein extraction
Capacity	Max. 16 tubes: 12×2 ml tubes + 4×7 ml tubes
No. of cycles	1 - 10
Run time	1 s - 10 min
Sample volume	25 µl - 5 ml
Speed range	0,8 to 6 m/s
Weight	24 kg

#### Description

Bead Mill homogeniser, 230 V

Description	Туре	Volume	For	Pk	Cat. No.
Grinding mix					
2 ml screw cap reinforced tubes pre-filled with 2,4 mm metal beads	Reinforced screw cap tubes	2	Dry grinding, dense biological material, hair, bone, seeds	50	432-0374
7 ml screw cap reinforced tubes pre-filled with 2,4 mm metal beads	Reinforced screw cap tubes	7	Dry grinding, dense biological material, hair, bone, seeds	50	432-0397
30 ml screw cap tubes pre-filled with 2,4 mm metal beads	Screw cap tubes	30	Dry grinding, dense biological material, hair, bone, seeds	50	432-0402
Homogenising mix					
2 ml screw cap reinforced tubes pre-filled with 2,8 mm ceramic beads. 50 per pack	Reinforced screw cap tubes	2	Hard tissue such as heart, muscle, skin and plant material	50	432-0373
7 ml screw cap reinforced tubes pre-filled with 2,8 mm ceramic beads	Reinforced screw cap tubes	7	Hard tissue such as heart, muscle, skin and plant material	50	432-0399
2 ml screw cap tubes pre-filled with 1,4 mm ceramic beads. 50 per pack	Screw cap tubes	2	Soft tissues such as brain, liver, kidney, spleen and soft plant material	50	432-0372
7 ml screw cap reinforced tubes pre-filled with 1,4 mm ceramic beads	Reinforced screw cap tubes	7	Soft tissues such as brain, liver, kidney, spleen and soft plant material	50	432-0398
Lysing mix					
2 ml screw cap tubes pre-filled with 0,5 mm glass beads	Screw cap tubes	2	Bacteria/cultured cells, spores, yeast, fungi, algae, plankton	50	432-0371
Beads					
1,4 mm ceramic beads, bulk packaged. Certified DNase- and RNase-free			Soft tissues such as brain, liver, kidney, spleen and soft plant material	325 g	432-0377
2,8 mm ceramic beads, bulk packaged. Certified DNase- and RNase-free			Hard tissue such as heart, muscle, skin and plant material	325 g	432-0378
2,4 mm stainless steel beads, bulk packaged. Certified DNase- and RNase-free			Dry grinding, dense biological material, hair, bone, seeds, roots	500 g	432-0376
Tubes					
2 ml tubes with screw caps and O-rings, bulk packaged. Reinforced polypropylene to withstand high impact forces. O-ring in silicone. Certified DNase- and RNase-free. For use with VWR Bead Mill MAX, VWR Bead Mill, VWR Bead Mill 4 and all other commercial bead mills	Reinforced screw cap tubes	2		1.000	432-0379
7 ml screw cap reinforced tubes, bulk packaged for use with VWR Bead Mill MAX, VWR Bead Mill, and VWR Bead Mill 4	Reinforced screw cap tubes	7		500	432-0400
7 ml screw cap reinforced tubes, bulk packaged. For use with VWR Bead Mill MAX, VWR Bead Mill, and VWR Bead Mill 4	Reinforced screw cap tubes	7		1.000	432-0401

Cat. No

432-0367



Bead Mill MAX

#### HOMOGENISER BEAD MILL MAX, VWR®

VWR Bead Mill MAX is the premier model in the VWR Bead Mill homogeniser range. VWR Bead Mill MAX is designed to grind, lyse or homogenise the most difficult samples with repeatable results. The unique tube carriage motion ensures the intra-tube bead movement reduces swirling, and creates the highest bead impact force of any bead mill on the market.

- Optional cryo cooling unit for preventing increase in sample temperature during homogenisation (requires compressed air, liquid nitrogen or dry ice in ethanol) can be ordered separately
- User friendly, multi-lingual touch screen interface
- No cool down period required between runs: Process hundreds of samples per day
- Unlimited programmable memory setting for shared protocols
- Convenient front loading design features an integrated lid lock that engages during operation

Using sample tubes pre-filled with a variety of bead media, the mill vigorously and uniformly shakes the tubes providing an efficient, consistent high yield and quality homogenisation usually in less than 30 seconds. The Bead Mill MAX is ideal for sample preparation when extracting DNA, RNA, proteins and small molecules.

Cat. No

432-0380

Drive unit is supplied with 2 ml tube carriage, user manual and 2 year warranty. VWR disposable bead tubes must be ordered separately.

Model	Bead Mill MAX
W×D×H (mm)	305×432×368
Weight (kg)	29,5
Application	Sample preparation, DNA, RNA, Protein extraction
Capacity	Max. 24 tubes: (24×0,5 ml / 24×1,5 ml / 24×2 ml / 12×7 ml / 6×30 ml)
No. of cycles	1 - 10
Sample volume	0,5 - 30 ml
Speed range	0,8 - 6,5 m/s

Description

Bead mill MAX homogeniser, 230 V

Description	Туре	Volume	For	Pk	Cat. No.
Grinding mix					
1,5 ml snap cap tubes pre-filled with 2,4 mm metal beads	Snap cap tubes	1,5	Dry grinding, dense biological material, hair, bone, seeds	50	432-0368
2 ml screw cap reinforced tubes pre-filled with 2,4 mm metal beads	Reinforced screw cap tubes	2	Dry grinding, dense biological material, hair, bone, seeds	50	432-0374
7 ml screw cap reinforced tubes pre-filled with 2,4 mm metal beads	Reinforced screw cap tubes	7	Dry grinding, dense biological material, hair, bone, seeds	50	432-0397
30 ml screw cap tubes pre-filled with 2,4 mm metal beads	Screw cap tubes	30	Dry grinding, dense biological material, hair, bone, seeds	50	432-0402
Homogenising mix					
2 ml screw cap reinforced tubes pre-filled with 2,8 mm ceramic beads. 50 per pack	Reinforced screw cap tubes	2	Hard tissue such as heart, muscle, skin and plant material	50	432-0373
7 ml screw cap reinforced tubes pre-filled with 2,8 mm ceramic beads	Reinforced screw cap tubes	7	Hard tissue such as heart, muscle, skin and plant material	50	432-0399
30 ml screw cap tubes pre-filled with 2,8 mm ceramic beads	Screw cap tubes	30	Hard tissue such as heart, muscle, skin and plant material	50	432-0404
0.5 ml screw cap tubes pre-filled with 1,4 mm ceramic beads	Screw cap tubes	0,5	Soft tissues such as brain, liver, kidney, spleen and soft plant material	50	432-0375
1,5 ml snap cap tubes pre-filled with 1,4 mm ceramic beads	Snap cap tubes	1,5	Soft tissues such as brain, liver, kidney, spleen and soft plant material	50	432-0369
1,5 ml snap cap reinforced tubes pre-filled with 2,8 mm ceramic beads	Snap cap tubes	1,5	Hard tissue such as heart, muscle, skin and plant material	50	432-0370
2 ml screw cap tubes pre-filled with 1,4 mm ceramic beads. 50 per pack	Screw cap tubes	2	Soft tissues such as brain, liver, kidney, spleen and soft plant material	50	432-0372
7 ml screw cap reinforced tubes pre-filled with 1,4 mm ceramic beads	Reinforced screw cap tubes	7	Soft tissues such as brain, liver, kidney, spleen and soft plant material	50	432-0398
30 ml screw cap tubes pre-filled with 1,4 mm ceramic beads	Screw cap tubes	30	Soft tissues such as brain, liver, kidney, spleen and soft plant material	50	432-0403
Lysing mix					
2 ml screw cap tubes pre-filled with 0,5 mm glass beads	Screw cap tubes	2	Bacteria/cultured cells, spores, yeast, fungi, algae, plankton	50	432-0371
Beads					
1,4 mm ceramic beads, bulk packaged. Certified DNase- and RNase-free			Soft tissues such as brain, liver, kidney, spleen and soft plant material	325 g	432-0377
2,8 mm ceramic beads, bulk packaged. Certified DNase- and RNase-free			Hard tissue such as heart, muscle, skin and plant material	325 g	432-0378
2,4 mm stainless steel beads, bulk packaged. Certified DNase- and RNase-free			Dry grinding, dense biological material, hair, bone, seeds, roots	500 g	432-0376

## **GENERAL EQUIPMENT** BEAD BEATERS & PESTLES

Description	Туре	Volume	For	Pk	Cat. No.
Grinding mix					
Tubes					
2 ml tubes with screw caps and O-rings, bulk packaged. Reinforced polypropylene to withstand high impact forces. O-ring in silicone. Certified DNase- and RNase- free. For use with VWR Bead Mill MAX, VWR Bead Mill, VWR Bead Mill 4 and all other commercial bead mills	Reinforced screw cap tubes	2		1.000	432-0379
7 ml screw cap reinforced tubes, bulk packaged for use with VWR Bead Mill MAX, VWR Bead Mill, and VWR Bead Mill 4	Reinforced screw cap tubes	7		500	432-0400
7 ml screw cap reinforced tubes, bulk packaged. For use with VWR Bead Mill MAX, VWR Bead Mill, and VWR Bead Mill 4	Reinforced screw cap tubes	7		1.000	432-0401
30 ml tubes with screw caps, bulk packaged. 100 per package. For use with VWR Bead Mill MAX	Screw cap tubes	30		100	432-0405
30 ml tubes with screw caps, bulk packaged. For use with VWR Bead Mill $\ensuremath{MAX}$	Screw cap tubes	30		500	432-0406
Accessories					
The cryo cooling unit is designed to prevent the increase of sample temperature during homogenisation. Compatible with the Bead Mill MAX 2 ml and 7 ml tube carriages			Sample preparation, DNA, RNA, protein extraction	1	432-0394
Bead Mill MAX 7 ml tube carriage kit. Holds 12×7 ml screw cap tubes			Sample preparation, DNA, RNA, protein extraction	1	432-0395
Bead Mill MAX 30 ml tube carriage kit. Holds 6×30 ml screw cap tubes			Sample preparation, DNA, RNA, protein extraction	1	432-0396



## From sample to sequence

From manual to automated processes

Icrease your throughput and gain more insight while saving costs and time.

For more info visit vwr.com



#### **MIXER MILL, BEATER**

A ball mill for disintregration of small sample volumes that can also be used to shake/mix microtubes and microplates. Wide range of applications in different scientific fields from geology to biotechnology.

- Easy to use simple knob and keypad to control frequency and timer
- Easy to maintain brushless DC motor
- Large range of grinding jars and tube holders to suit the sample requirements

DL

1

412-0167

Grinding time setting - 5 s to 60 min

Vibrational frequency: 3 to 30 Hz

Model	Beater
Speed display	LED
W×D×H (mm)	365×405×225
Weight (kg)	42
Capacity	2×50 ml
Power	200 VA

#### Description

Beater

Description	Material	Capacity (ml)	Ø (mm)	Sample volume (ml)	Max. feed size (mm)	Pk	Cat. No.
Grinding jars							
	Stainless steel	1,5		0,5	1	2	412-0168
	Stainless steel	5		2	2	2	412-0169
	Stainless steel	10		4	4	2	412-0170
	Stainless steel	25		10	6	2	412-0171
	Stainless steel	35		15	6	2	412-0172
	Stainless steel	50		20	8	2	412-0173
	Steel, hardened	1,5		0,5	1	2	412-0174
	Steel, hardened	5		2	2	2	412-0175
	Steel, hardened	10		4	4	2	412-0176
	Steel, hardened	25		10	6	2	412-0177
	Steel, hardened	35		15	6	2	412-0178
	Steel, hardened	50		20	8	2	412-0179
	PTFE	50		20	8	2	412-0260
	Tungsten carbide	25		10	6	2	412-0261
	Stainless steel, forensic applications	25		10	6	2	412-0264
Grinding balls for bead b	eater						
Grinding ball	Stainless steel		5			20	412-0190
Grinding ball	Stainless steel		25			5	412-0193
Grinding ball	Stainless steel		3			20	412-0201
Grinding ball	Stainless steel		7			20	412-0202
Grinding ball	Stainless steel		20			5	412-0265
Grinding ball	Steel, hardened		3			20	412-0266
Grinding ball	Steel, hardened		7			20	412-0267
Grinding ball	Tungsten carbide		3			20	412-0268
Grinding ball	Tungsten carbide		5			20	412-0269
Grinding ball	Tungsten carbide		7			20	412-0270
Grinding ball	Steel, hardened		5			20	412-0273
Grinding ball	Steel, hardened		10			10	412-0274
Grinding ball	Steel, hardened		12			10	412-0275
Grindina ball	Steel, hardened		25			5	412-0276
Grinding ball	Stainless steel		10			10	412-0277
Grinding ball	Stainless steel		12			10	412-0278
Accessories							
Set of spanners						1 SET	412-0180
Tube holder, PTFE for rec	ction vials, 12×0,2 ml tubes o	n each arm				1	412-0181
Tube holder, PTFE for rec	ction vials, 12×2 ml tubes on	each arm				2	412-0182
Tube holder, PTFE for rec	ction vials, 6×2 ml tubes on e	each arm				2	412-0183
Tube holder, PTFE for rec	ction vials, 6×2 ml tubes (scr	ew cap) on each arm				2	412-0184
Holder, PTFE, for up to 3	microplates or 1 deep well pl	ates on each arm				2	412-0185
Rack, PTFE, for 24x1,5/2,0	ml tubes (with or without sc	rew cap)				2	412-0199
Dummy plate, PTFE, for r	eplacing 1 microtitre plate in	the rack				2	412-0200
Adapter, stainless steel, f	or 5×50 ml conical tubes					2	412-0212
Holder for 15 ml falcon tu	bes					2	412-0263
Holder staipless steel for	DNA kit for 1 deep well plat	e or 3 standard micropl	ates on each arm			2	412-0272





#### DISPOSABLE PESTLES, MICROTUBES AND CORDLESS MOTOR FOR PELLET MIXING

Pestles and microtubes manufactured from polybutylene terephthalate (PBTP) in a Class 10 000, ISO Class 7, M5.5 cleanroom. Designed for homogenising cells and plant tissue or for re-suspending protein and DNA pellets. An optional battery powered motor can be used with the pestles and microtubes. Pestles are 75 mm in length.

- Free from DNase, RNase and non pyrogenic
- Grooved grip makes pestle handle easy to turn without slipping, even when wearing gloves
- Lightweight motor reduces hand fatigue
- High speed vortexing action of the motor completely homogenises cell tissue or pellets within seconds

Pestles and microtubes are individually wrapped. Optional motor is supplied with a pestle adapter and two AA batteries.

Description	Capacity (ml)	Pk	Cat. No.
Pestle	0,5	100	431-0095
Pestle (autoclavable)	1,5	100	431-0094
Microtube	0,5	100	431-0097
Microtube (autoclavable)	1,5	100	431-0096
Pestle and microtube	0,5	100	431-0099
Pestle and microtube (autoclavable)	1,5	100	431-0098

Description	Pk	Cat. No.
Accessories		
Pestle motor	1	431-0100
Replacement pestle adapter	1	431-0101

## **ELECTRODE CLEANING SOLUTIONS**

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

Description	Pk	Cat. No.
Electrode cleaning solution pepsin/hydrochloric acid for removal of proteins	100 ml	83603.180





#### **ORBITAL MINI SHAKER, VWR®**

General purpose shaker with microprocessor control which is ideal for a range of mixing applications. Variable speed control provides consistent, uniform shaking action. The speed is adjustable in 10 min<sup>-1</sup> increments up to 500 min<sup>-1</sup>, and increments of 25 min<sup>-1</sup> up to 1200 min<sup>-1</sup>. The ramping feature slowly increases speed to the set point for added safety.

- Two independent LED displays show speed and time
- Integral timer, 1 s to 160 h, shows elapsed time or counts down and enables automatic switch off and audible alarm when program is complete
- Range of interchangeable attachments
- Can be used at -10 to +60 °C (max. 80% relative humidity), in an incubator, dry CO<sub>2</sub> incubator or cold room

Shaker accommodates a maximum of two of the racks detailed and 35×10, 20×25, 15×50, 12×125, 6×250 or 4×500 ml flasks and 3×500 ml media bottles.

Supplied with perforated tray, non slip rubber mat but without attachments. Accessories must be ordered separately.

Model		Orbital mini shaker	
Environmentally preferable attribute	Waste Reducing		
Max. load		3,6 kg	
Orbit (mm)		3	
Platform W×D		222×298 mm	
Power		25 W	
Shaking motion		Orbital	
Speed (min <sup>-1</sup> )		100 - 1200	
Speed accuracy		±2%	
Weight (kg)		10	
W×D×H (mm)		280×430×100	

Description	Pk	Cat. No.
Orbital mini shaker, EU-plug	1	444-0268
Orbital mini shaker, CH-plug	1	444-0269
Orbital mini shaker, UK-plug	1	444-7093

Description	For	Pk	Cat. No.
Accessories			
Stainless steel dilution cap tray, W×D: 175×254 mm	24×28 mm dilution vials	1	444-0514
Centrifuge tube rack, PVC coated steel	15 ml tubes, holds 35 tubes	1	444-0283
Centrifuge tube rack, PVC coated steel	50 ml tubes, holds 12 tubes	1	444-0284
Stainless steel media bottle clamps			
Clamps for media bottles, stainless steel	500 ml	1	444-7035
Clamps for media bottles, stainless steel	1000 ml	1	444-7036
Accessories			
Feet (suction cup), clear lid	Incubating microplate shaker (1000 MP) and orbital shaker(1000-3)	1	444-7081
Stainless steel Erlenmeyer flask clamps			
Flask clamps, stainless steel	10 ml flasks	1	444-7040
Flask clamps, stainless steel	25 ml flasks	1	444-7041
Flask clamps, stainless steel	50 ml flasks	1	444-7042
Flask clamps, stainless steel	125 ml flasks	1	444-7043
Flask clamps, stainless steel	250 ml flasks	1	444-7044
Flask clamps, stainless steel	500 ml flasks	1	444-7045
Accessories			
Microtube rack, PVC coated steel	1,5/2,0 ml tubes, holds 70 tubes	1	444-0276
Roller bar platform, which has 2 adjustable cushioned rollers to hold glassware securely, 297×218 mm, bar size 218 mm	-	1	444-0282
Test tube rack, PVC coated steel	10 - 13 mm Ø tubes, holds 63 tubes	1	444-0278
Test tube rack, PVC coated steel	14 - 16 mm Ø tubes, holds 48 tubes	1	444-0279
Test tube rack, PVC coated steel	18 - 20 mm Ø tubes, holds 35 tubes	1	444-0280
Test tube rack, PVC coated steel	22 - 25 mm Ø tubes, holds 24 tubes	1	444-0281



## **ORBITAL SHAKER, STANDARD 3500, VWR®**

General purpose shaker with microprocessor control which is ideal for basic mixing applications, bacterial suspensions, staining and destaining. Variable speed control provides consistent, uniform shaking action. The speed is adjustable via knob with 1 to 10 dial settings and the ramping feature slowly increases speed to the set point for added safety.

- Continuous operation or timer operation from 1 to 120 min
- Range of interchangeable attachments available
- Can be used at 0 to +40 °C (max. 80% relative humidity, non condensing), in an incubator,  $CO_2$  incubator or cold room

Supplied with non slip rubber mat but without attachments, accessories must be ordered separately.

Description		FK	Cut. NO.
Tier braces			
Set of 4 tier braces for stacking 2 platforms, clearance is 254 mm		1	444-2965
Description	For	Pk	Cat. No.
Test tube racks, pivoting stainless steel, VWR®			
Pivoting stainless steel test tube rack		1	444-2955
Replacement rubber mats for VWR standard and advanced shakers, VWR®			
Rubber mat	Standard/Advanced 3500, Incubating 3500, Advanced 3750 shakers	1	444-2966
Accessories			
Centrifuge tube rack, PVC coated steel	15 ml tubes, holds 35 tubes	1	444-0283
Test tube racks, pivoting stainless steel, VWR®			
Pivoting stainless steel test tube rack		1	444-2956
Accessories			
Centrifuge tube rack, PVC coated steel	50 ml tubes, holds 12 tubes	1	444-0284
Test tube racks, pivoting stainless steel, VWR®			
Pivoting stainless steel test tube rack		1	444-2957
Pivoting stainless steel test tube rack		1	444-2958
Stainless steel media bottle clamps			
Clamps for media bottles, stainless steel	500 ml	1	444-7035
Test tube racks, pivoting stainless steel, VWR®			
Pivoting stainless steel test tube rack		1	444-2959
Stainless steel media bottle clamps			
Clamps for media bottles, stainless steel	1000 ml	1	444-7036
Stainless steel Erlenmeyer flask clamps			
Flask clamps, stainless steel	10 ml flasks	1	444-7040
Flask clamps, stainless steel	25 ml flasks	1	444-7041
Flask clamps, stainless steel	50 ml flasks	1	444-7042
Flask clamps, stainless steel	125 ml flasks	1	444-7043
Flask clamps, stainless steel	250 ml flasks	1	444-7044
Flask clamps, stainless steel	500 ml flasks	1	444-7045
Accessories			
Microtube rack, PVC coated steel	1,5/2,0 ml tubes, holds 70 tubes	1	444-0276
Roller bar platform, which has 2 adjustable cushioned rollers to hold glassware securely, 297×218 mm, bar size 218 mm	-	1	444-0282
Test tube rack. PVC coated steel	10 - 13 mm Ø tubes, holds 63 tubes	1	444-0278
Test tube rack. PVC coated steel	14 - 16 mm Ø tubes, holds 48 tubes	1	444-0279
Test tube rack. PVC coated steel	18 - 20 mm Ø tubes, holds 35 tubes	1	444-0280
Test tube rack, PVC coated steel	22 - 25 mm Ø tubes, holds 24 tubes	1	444-0281
Universal platform, 330×330 mm	Standard/Advanced 3500, Advanced 3750 shakers	1	444-2930
Universal platform, 457×457 mm*	Standard/Advanced 3500, Advanced 3750** shakers	1	444-2931
Universal platform 330×279 mm	Standard/Advanced 3500, Incubating 3500, Advanced 3750, Professional 3500 shakers, mounting Erlenmeyer flask clamps and test tube racks	1	444-7087
Universal platform, 610×457 mm*	Standard/Advanced 3500, Advanced 3750**. Standard/Advanced 5000** shakers	1	444-2932
Culture platform, 457×457 mm*	Standard/Advanced 3500. Advanced 3750** shakers	1	444-2936
Culture platform, 610×457 mm*	Standard/Advanced 3500. Advanced 3750**. Standard/Advanced 5000 shakers	1	444-2937
Dedicated platform with 16×125 ml flask clamps, 330×330 mm	Standard/Advanced 3500, Advanced 3750 shakers	1	444-2945
Dedicated platform with 12×250 ml flask clamps, 330×330 mm	Standard/Advanced 3500, Advanced 3750 shakers	1	444-2946
Dedicated platform with 8×500 ml flask clamps, 330×330 mm	Standard/Advanced 3500, Advanced 3750 shakers	1	444-2947
Dedicated platform with 4×1 L flask clamps, 330×330 mm	Standard/Advanced 3500, Advanced 3750 shakers	1	444-2948
Dedicated platform with 27×125 ml flask clamps. 457×457 mm*	Standard/Advanced 3500, Advanced 3750** shakers	1	444-2949
Dedicated platform with 20×250 ml flask clamps, 457×457 mm*	Standard/Advanced 3500, Advanced 3750** shakers	1	444-2950
Dedicated platform with 13×500 ml flask clamps. 457×457 mm*	Standard/Advanced 3500, Advanced 3750** shakers	1	444-2951
Dedicated platform with 9×1 L flask clamps. 457×457 mm	Standard/Advanced 3500, Advanced 3750** shakers	1	444-2952
Platform for separating funnels, 457×457 mm	Standard/Advanced 3500, Advanced 3750 shakers	1	444-2953
Clamp for separating funnels	Use with platforms 444-2931/444-2953	1	444-2970
Microplate clamp			
Microplate clamp, holds 1 standard microplate or 1 deep-well plate, 89x129 mm	Standard/Advanced 3500, 5000, 10000, 15000 shakers	1	444-2954

## GENERAL EQUIPMENT SHAKERS, VORTEXERS & STIRRERS

Description	For	Pk	Cat. No.
Test tube racks, pivoting stainless steel, VWR®			
Autoclavable PVC Erlenmeyer flask clamps			
Autoclavable PVC flask clamp, 125 ml	125 ml Erlenmeyer	1	444-2960
Autoclavable PVC flask clamp, 250 ml	250 ml Erlenmeyer	1	444-2961
Autoclavable PVC flask clamp, 500 ml	500 ml Erlenmeyer	1	444-2962
Autoclavable PVC flask clamp, 1000 ml	1000 ml Erlenmeyer	1	444-2963
Autoclavable PVC flask clamp, 2000 ml	2000 ml Erlenmeyer	1	444-2964
Flask clamps, stainless steel, VWR®			
Flask clamps, stainless steel	1000 ml	1	444-7030
Flask clamps, stainless steel	2000 ml	1	444-7031
Flask clamps, stainless steel (for Fernbach flasks)	2800 ml	1	444-7032
Flask clamps, stainless steel	4000 ml	1	444-7033
Flask clamps, stainless steel	6000 ml	1	444-7034
Test tube racks, PVC coated steel, VWR®			
PVC coated test tube rack		1	444-7037
PVC coated test tube rack		1	444-7038
PVC coated test tube rack		1	444-7039



## **ORBITAL SHAKER, ADVANCED 5000, VWR®**

Digital shaker with microprocessor control which is ideal for mixing applications with heavy loads, e.g., cell cultures, solubility studies and extraction procedures. Variable speed control provides consistent, uniform shaking action. The Accu-drive shaking system delivers exceptional speed control, accuracy, safety and durability, the system continuously monitors shaking speed and will maintain set point even under changing loads.

- Two independent LED displays show speed and time
- Integral timer, 1 s to 160 h, shows elapsed time or counts down, automatic switch off and audible alarm when program is complete
- Can be used at -10 to +60  $^{\circ}\text{C}$  (max. 80% relative humidity, non condensing), in an incubator, CO2 incubator or cold room
- 5 year warranty on motor and drive mechanism

Displayed speed is accurate to 1% of set speed (when speed is above 100 min<sup>-1</sup>). The ramping feature slowly increases speed to the set point for added safety. Built-in load sensor can detect an unbalanced condition and will automatically reduce the min<sup>-1</sup> to a safe speed to prevent spills and protect samples. Speed calibration mode allows the user to recalibrate the speed display and RS232 serial port provides two-way communication for data logging and unit control.

Supplied with non slip rubber mat but without attachments. Accessories must be ordered separately. Please see entry 'Accessories for VWR® Standard and Advanced series orbital shakers' for details on other platforms and accessories.

Model	Advanced 5000
Max. load	22,7 kg
Orbit (mm)	25
Platform W×D	610×457 mm
Power	75 W
Shaking motion	Orbital
Speed (min <sup>-1</sup> )	20 - 500
Speed accuracy	±1 min <sup>-1</sup> below 100
Weight (kg)	45
W×D×H (mm)	676×597×155

Description		Pk	Cat. No.
Advanced 5000 orbital shaker, EU-plug		1	444-2915
Advanced 5000 orbital shaker, UK-plug		1	444-2916
Advanced 5000 orbital shaker, CH-plug		1	444-2917
Description	For	Pk	Cat. No.
Test tube racks, pivoting stainless steel, VWR®			
Pivoting stainless steel test tube rack		1	444-2955
Accessories			
Centrifuge tube rack, PVC coated steel	15 ml tubes, holds 35 tubes	1	444-0283
Test tube racks, pivoting stainless steel, VWR®			
Pivoting staipless steel test tube rack		1	444-2956

## **GENERAL EQUIPMENT** SHAKERS, VORTEXERS & STIRRERS

Text berker, hybring standard and advanced fables. WWPReplacement ubber mot for WR advanced fables. WWReplacement ubber mot for WR advanced fables. See See See See See See See See See Se	Description	For	Pk	Cat. No.
Reprint when when Subserve we stand with a stand with a weak stand we stan	Test tube racks, pivoting stainless steel, VWR®			
Repair and the method of the second of th	Replacement rubber mats for VWR standard and advanced shakers, VWR®			
Accession	Replacement rubber mat	Standard/Advanced 5000 shakers	1	444-2967
Chardner of Proceedings of the State State	Accessories			
Pixeling atomics atel list like rack\$00 ml\$00 mlClamps for media bottle, stamics steel VW\$00 ml\$00 mlTeat tack\$00 ml\$00 mlPixeling statel lists like rack\$00 ml\$00 mlPixeling statel lists like rack\$00 ml\$00 mlStatisse steel indice steel for state steel statel media\$00 ml\$00 mlStatisse steel indice steel for state steel steel indice steel\$00 ml\$00 mlStatisse steel indices for stacking 2 platform, clampane is 254 mm\$00 ml\$00 mlStatisse steel indices for stacking 2 platform, clampane is 254 mm\$00 ml\$00 mlStatisse steel indices for stacking 2 platform, clampane is 254 mm\$00 ml\$00 ml\$00 mlField comp, staniones steel\$00 ml\$00 ml\$00 ml\$00 ml\$00 mlField comp, staniones steel\$00 ml\$00 ml\$00 ml\$00 ml\$00 ml\$00 mlField comp, staniones steel\$00 ml\$00 ml <t< td=""><td>Centrifuge tube rack, PVC coated steel</td><td>50 ml tubes, holds 12 tubes</td><td>1</td><td>444-0284</td></t<>	Centrifuge tube rack, PVC coated steel	50 ml tubes, holds 12 tubes	1	444-0284
Product provides during the result of the	Test tube racks, pivoting stainless steel, VWR®			
Products start late use orch1 444285Claims at start late late late late late late late lat	Pivoting stainless steel test tube rack		1	444-2957
SpanneSpa	Pivoting stainless steel test tube rack		1	444-2958
Clamba formedia balas stale andSolind4.44035Text before stale and state and	Stainless steel media bottle clamps			
Test bare acks, pivoring statistics steel. VURPProding statistics steel inselia bottle clamps000 nl4442959Clamps for media bottles fabrilise, steel000 nl4442050The braces34442050Statistics steel0 nl flacks14442050Producing, statistics steel0 nl flacks14447000Pick clamps, statistics steel25 nl flacks14447000Pick clamps, statistics steel25 nl flacks14447000Pick clamps, statistics steel25 nl flacks14447002Pick clamps, statistics steel25 nl flacks14447002Pick clamps, statistics steel25 nl flacks14447002Pick clamps, statistics steel20 nl flacks14447002Pick clamps, statistics steel20 nl flacks14447002Pick clamps, statistics steel144470024447002Pick clamps, statistics steel144470024447020Pick clamps, statistics steel144470204447020Pick clamps, statistics steel144470204447020Pick clamps, statistics steel144470204447020Pick clamps, statistics steel144470204447020 <t< td=""><td>Clamps for media bottles, stainless steel</td><td>500 ml</td><td>1</td><td>444-7035</td></t<>	Clamps for media bottles, stainless steel	500 ml	1	444-7035
Ponding statelling tube mack1444.2399Clamps for media battles, staleles stell1000 nl444.2301The trace444.2301Starl for theores for stacking 2 polations, elevance is 254 mm1444.2301Starl for theores for stacking 2 polations, elevance is 254 mm1444.2301Flask chang, staleles stell1444.2301Flask chang, staleles stell1444.2301Flask chang, staleles stell250 mflask1444.2301Flask chang, staleles stell1244.2301444.2301Flask chang,	Test tube racks, pivoting stainless steel, VWR®			
Standard states0000 ml14447020Camps for medio battes, standares steel0000 ml14447020Starl dar backes for stacing 2 platform; clearance it 254 ml10 ml flasks14447020Flask clamps, stanless steel25 ml flasks14447020Flask clamps, stanless steel20 ml flasks14447020Flask clamps, stanless steel10 Th mo flasks14447020Flask table rock, PVC coated steel10 Th mo flasks flask flasks14447020Flast table rock, PVC coated steel10 Th mo flasks, holds 30 tubes14447020Test table rock, PVC coated steel12 Th mo flasks, holds 30 tubes14447020Test table rock, PVC coated steel12 Standard/Advanced 3000, Advanced 3750", Standard/Advanced 5000 "hiskes14447020Universol platform, flosk57 mm <sup>2</sup> Standard/Advanced 3000, Advanced 3750", Standard/Advanced 5000 whiskes14447020Universol platform, flosk51 mm <sup>2</sup> Standard/Advanced 3000, Advanced 3750", Standard/Advanced 5000 whiskes14447020Attaciotable PVC flask clamp, 250 mlStandard/Advanced 3000,	Pivoting stainless steel test tube rack		1	444-2959
Clamps for madia bettles, stanlands steel1000 ml4447036Terrerors7Sold A Ler fraces for stacking 2 platforms, clierance is 254 mm74447036Starles steel Firemmeyr flack clores74447030Flack clores, stanless steel014447030Flack clores, stanless steel25 ml flacks14447030Flack clores, stanless steel014447030Flack clores, stanless steel25 ml flacks14447030Flack clores, stanless steel25 ml flacks14447030Flack clores, stanless steel25 ml flacks14447030Flack clores, stanless steel144470304447030Flack clores, stanless steel25 ml flacks14447030Flack clores, stanless steel144470304447030Flack clores, stanless steel144470304447030Flack clores, stanless steel14447030Flack tores, stanless steel1 <td>Stainless steel media bottle clamps</td> <td></td> <td></td> <td></td>	Stainless steel media bottle clamps			
Ide indexes for stacking 2 platforms, clearance is 254 mmIde indexesIde indexesStail et a fiel braces for stacking 2 platforms, clearance is 254 mm10 ml flask14 444704Flack clamps, stainless steal10 ml flask14 444704Flack clamps, stainless steal250 ml flask14444704Flack clamps, stainless steal250 ml flask14444704Flack clamps, stainless steal250 ml flask14444704Flack clamps, stainless steal250 ml flask1444704Flack clamps, stainless steal10 ml Ruse, holds 70 tubes1444704Flack clamps, stainless steal1.52.0 ml tubes, holds 70 tubes1444703Flack tuber ack, PVC coated steal1.52.0 ml Ruse, holds 70 tubes1444703Test tuber ack, PVC coated steal1.9 mm Ø tubes, holds 30 tubes1444703Test tuber ack, PVC coated steal1.9 arm Ø tubes, holds 34 tubes1444703Test tuber ack, PVC coated steal2.2 mm Ø tubes, holds 34 tubes1444703Universol platform, 610-457 mm <sup>2</sup> Standar/Advanced 300, Advanced 370, Standar/Advanced 500 sholes1444723Universol platform, 610-457 mm <sup>2</sup> Standar/Advanced 300, Advanced 370, Standar/Advanced 500 sholes1444723Auderdoale PVC flask clamp, 200 ml20 met Promeyer14447236Auderdoale PVC flask clamp, 200 ml20 met Promeyer14447236Auderdoale PVC flask clamp, 200 ml20 ml Flemmyer14447236Auderdoale PVC flask clamp, 200 ml <t< td=""><td>Clamps for media bottles, stainless steel</td><td>1000 ml</td><td>1</td><td>444-7036</td></t<>	Clamps for media bottles, stainless steel	1000 ml	1	444-7036
Set of his broces for stocking 2 jothforms, clearance is 254 mm1444 2085Stockings, stolines steel10 ml flasks10 ml flask444 7000Flask clamps, stolines steel25 ml flasks26 ml flask1444 7000Flask clamps, stolines steel25 ml flasks20 ml flask1444 7000Flask clamps, stolines steel25 ml flasks20 ml flasks1444 7000Flask clamps, stolines steel25 ml flasks20 ml flasks1444 7000Flask clamps, stolines steel25 ml flasks20 ml flasks1444 7000Flask clamps, stolines steel20 ml flasks20 ml flasks20 ml flasksFlask clamps, stolines steel20 ml flasks20 ml flasks20 ml flasks20 ml flasksFlask tlamp clamp1444 7020444 7020444 7020444 7020Test tube rack, PVC coated steel120 ml flask20 ml flasks20 ml flask444 7020Test tube rack, PVC coated steel20 ml flasks20 ml flasks20 ml flasks20 ml flasks444 7020Test tube rack, PVC coated steel20 ml flask20 ml flasks20 ml flasks20 ml flasks20 ml flasksTest tube rack, PVC coated steel120 ml flasks20 ml flasks20 ml flasks20 ml flasksTest tube rack, PVC coated	Tier braces			
Stables steel Fidemaps, totiless steel1444-700Flock cloops, stainless steel25 ml flocks1444-7004Flock cloops, stainless steel50 ml flocks1444-7004Flock cloops, stainless steel25 ml flocks1444-7004Flock cloops, stainless steel25 ml flocks1444-7004Flock cloops, stainless steel250 ml flocks1444-7004Flock cloops, stainless steel250 ml flocks1444-7004Flock cloops, stainless steel00 ml flocks1444-7004Flock cloops, stainless steel10 - 13 mm Ø tubes, holds 63 tubes1444-7026Flock tube rack, PVC coated steel10 - 13 mm Ø tubes, holds 63 tubes1444-7026Flock tube rack, PVC coated steel2-20 mm Ø tubes, holds 63 tubes1444-7028Universal platform, flock47 mm*5tandard/Advanced 3500, Advanced 3750*, Standard/Advanced 5000** sholes1444-7028Universal platform, flock47 mm*Standard/Advanced 3500, Advanced 3750*, Standard/Advanced 5000 sholes1444-7028Universal platform, flock47 mm*Standard/Advanced 3500, Advanced 3750*, Standard/Advanced 5000 sholes1444-7028Universal platform, flock47 mm*Standard/Advanced 3500, Advanced 3750*, Standard/Advanced 500 sholes1444-7028Universal platform, flock45 mm*Standard/Advanced 3500, Advanced 3750*, Standard/Advanced 500 sholes1444-7028Universal platform, flock45 mm*Standard/Advanced 3500, Advanced 3750*, Standard/Advanced 500 sholes1444-7028 <td>Set of 4 tier braces for stacking 2 platforms, clearance is 254 mm</td> <td></td> <td>1</td> <td>444-2965</td>	Set of 4 tier braces for stacking 2 platforms, clearance is 254 mm		1	444-2965
Plask clamps, stainless steel10 ml flasks4447040Flask clamps, stainless steel25 ml flasks4447041Flask clamps, stainless steel10 flasks4447043Flask clamps, stainless steel25 ml flasks14447043Flask clamps, stainless steel250 ml flasks14447043Flask clamps, stainless steel300 ml flasks14447043Flask clamps, stainless steel300 ml flasks14447043Flask clamps, stainless steel15/20 ml tlasks holds 70 tlases14447028Microtube rack, PVC coated steel15/20 ml tlasks holds 70 tlases14447028Test tube rack, PVC coated steel16 - 00 m Ø tlasks holds 35 tlases14447028Test tube rack, PVC coated steel22 - 25 mm Ø tlasks, holds 24 tlases14447028Universal platform, förds 71 mm²Standard/Advanced 3500, Advanced 3750**, Standard/Advanced 5000 shakers14447928Universal platform, förds 71 mm²Standard/Advanced 3500, Standard/Advanced 5000 shakers14447928Autoclavable PVC Flask clamp, förds 71 mm²Standard/Advanced 3500, Standard/Advanced 5000 shakers14447928Autoclavable PVC Flask clamp, förds 71 mm²Standard/Advanced 3500, Shakers14447928 <td>Stainless steel Erlenmeyer flask clamps</td> <td></td> <td></td> <td></td>	Stainless steel Erlenmeyer flask clamps			
Flask clamps, stainless steel25 ml flasks14447041Flask clamps, stainless steel50 ml flasks14447042Flask clamps, stainless steel250 ml flasks14447042Flask clamps, stainless steel250 ml flasks14447048Flask clamps, stainless steel500 ml flasks14447026Flask clamps, stainless steel15/20 ml tlasks14447026Flask clamps, stainless steel1.5/20 ml tlasks, flask stables14447026Flask tlanes, FlvC coated steel1.5/20 ml tlasks, holds 35 tlases14447028Test tlane rack, PVC coated steel2.2 smm 2 flasks, holds 35 tlases14447028Test tlane rack, PVC coated steel2.2 smm 2 flasks, holds 24 tlases14447028Universal platform, flo457 mm'Standard/Advanced 3500, Advanced 3750°, Standard/Advanced 5000 shakers14447028Universal platform, flo457 mm'Standard/Advanced 3500, Advanced 3750°, Standard/Advanced 5000 shakers14447028Universal platform, flo457 mm'Standard/Advanced 3500, Advanced 3750°, Standard/Advanced 5000 shakers14447028Attactoxebis PVC flosk clamp, 125 mlStandard/Advanced 3500, Natored Stables14447028Attactoxebis PVC flosk clamp, 250 mlStandard/Advanced 3500, Natored Stables14447028Attactoxebis PVC flosk clamp, 250 mlStandard/Advanced 3500, Natored Stables14447028Attactoxebis PVC flosk clamp, 250 mlStandard/Advanced 3500, Natored Stables14447028Attactoxebis PVC flos	Flask clamps, stainless steel	10 ml flasks	1	444-7040
Flak damp, stainless stell50 ml fasks14447042Flak damp, stainless stell15 ml fasks14447043Flak damp, stainless stell50 ml fasks14447043Accessorie14447028Microtube rack, PVC coded stell15/20 ml tubes, holds 70 tubes14447028Test tube rack, PVC coded stell10-13 mo P tubes, holds 70 tubes14447028Test tube rack, PVC coded stell10-13 mo P tubes, holds 70 tubes14447028Test tube rack, PVC coded stell12-25 mo P tubes, holds 70 tubes14447028Test tube rack, PVC coded stell2-25 mo P tubes, holds 70 tubes14447028Universal platform, 610-457 mm <sup>2</sup> 5tondard/Advanced 3500, Advanced 3750", Stondard/Advanced 500 sholers14447028Universal platform, 610-457 mm <sup>3</sup> 5tondard/Advanced 3500, Advanced 3750", Stondard/Advanced 500 sholers14447028Microplate carb, platford microplate or 1 deep-well plate, 89×129 m.Stondard/Advanced 3500, Advanced 3750", Stondard/Advanced 500 sholers14447028Autochouble PVC fisk clamp, Stond Taben, Stondard250 ml Finemeyer144470284447028Autochouble PVC fisk clamp, Stondard Marchouples or 1 deep-well plate, 89×129 m.Stondard/Advanced 3500, Stondard, Sto	Flask clamps, stainless steel	25 ml flasks	1	444-7041
Flask clamps, stainless steel125 ml flasks444-7043Flask clamps, stainless steel50 ml flasks1444-7043Flask clamps, stainless steel50 ml flasks1444-7043Accessarie1444-7028Brits theor ack, PVC coated steel1-1 mm 0 tubes, holds 30 tubes1Test tube rack, PVC coated steel1-1 am 0 tubes, holds 30 tubes1Test tube rack, PVC coated steel1-1 am 0 tubes, holds 30 tubes1Test tube rack, PVC coated steel1-2 2m 07 tubes, holds 30 tubes1Test tube rack, PVC coated steel2-2 Sm 07 tubes, holds 30 tubes1Universal platform, 762-463 rm5 tandard/Advanced 3500, Advanced 3750*, Standard/Advanced 5000* shakes1Universal platform, 762-463 rmStandard/Advanced 3500, Advanced 3750*, Standard/Advanced 500 shakers1Universal platform, 762-463 rmStandard/Advanced 3500, shakers1Universal platform, 762-463 rmStandard/Advanced 3500, shakers1Universal platform, 762-463 rmStandard/Advanced 3500, shakers1Attacloscobe PVC flask clamp, 15 mlStandard/Advanced 3500, shakers1Attacloscobe PVC flask clamp, 250 mlStandard/Advanced 3500, shakers1Attacloscobe PVC flask clamp	Flask clamps, stainless steel	50 ml flasks	1	444-7042
Flask clomps, stoinless stell250 m flasks1444-7044Flask clomps, stoinless stell00 m flasks1444-7044Flosk clomps, stoinless stell15/20 ml tubes, holds flask1444-7026Test tube rack, PVC cooted stell10 - 13 m Ø tubes, holds flas tubes1444-7027Test tube rack, PVC cooted stell14 - 16 m Ø tubes, holds flas tubes1444-7027Test tube rack, PVC cooted stell14 - 16 m Ø tubes, holds flas tubes1444-7027Test tube rack, PVC cooted stell12 - 25 m Ø tubes, holds flas tubes1444-7028Universal platform, flovA57 m*Standar/Advanced 5000 shakers1444-7928Universal platform, flovA57 m*Standar/Advanced 5000, flovO, flovO, flovAf, advanced 5000, flovO, flovAf, advanced 5000, flovO, flovAf, advanced 5000, flovAf, advan	Flask clamps, stainless steel	125 ml flasks	1	444-7043
Flask damps, stainless steel500 ml flasks14444-7045AccessrieInterpret AccessingInterpret AccessingInterpret AccessingInterpret AccessingTest tube rack, PVC coated steel10 - 13 mm Ø tubes, holds 63 tubes1444-0278Test tube rack, PVC coated steel18 - 20 mm Ø tubes, holds 48 tubes1444-0279Test tube rack, PVC coated steel18 - 20 mm Ø tubes, holds 48 tubes1444-0281Test tube rack, PVC coated steel12 - 25 mm Ø tubes, holds 24 tubes1444-0281Universal platform, flosk-457 mm*Standard/Advanced 3500, Advanced 3750*, Standard/Advanced 5000 shokers1444-2932Universal platform, flosk-457 mm*Standard/Advanced 3500, Advanced 3750*, Standard/Advanced 5000 shokers1444-2934Culture platform, flosk-457 mm*Standard/Advanced 3500, Standard/Advanced 5000 shokers1444-2934Microplate clemp, holds 1 standard micropleto r1 feep-well plate, 89 and flord/advanced 5000, shokers1444-2934Autoclavable PVC flask clamp, 25 mlSton I feinmeyer1444-2934Autoclavable PVC flask clamp, 250 mlSton I feinmeyer1444-2936Autoclavable PVC flask clamp, 200 mlSton I feinmeyer1444-2934Autoclavable PVC flask clamp, 200 mlSton I feinmeyer1444-2936Autoclavable PVC flask clamp, 200 mlSton I feinmeyer1444-2936Autoclavable PVC flask clamp, 200 mlSton I feinmeyer1444-2936Flask clamp, stainless steelGon I on I feinmeyer1444-2	Flask clamps, stainless steel	250 ml flasks	1	444-7044
AccessoriesMicrobse rock, PVC cooted steel10-13 mm 0 tubes, holds 63 tubes1Test tube rock, PVC cooted steel10-13 mm 0 tubes, holds 63 tubes1Test tube rock, PVC cooted steel14-16 mm 0 tubes, holds 35 tubes1Test tube rock, PVC cooted steel12-25 mm 0 tubes, holds 35 tubes1Test tube rock, PVC cooted steel2-25 mm 0 tubes, holds 24 tubes1Universal platform, 610-457 mm*Standard/Advanced 3500, Advanced 3750*, Standard/Advanced 5000* shakers1Universal platform, 610-457 mm*Standard/Advanced 3500, Advanced 3750*, Standard/Advanced 5000 shakers1Culture platform, 610-457 mm*Standard/Advanced 3500, Advanced 3750*, Standard/Advanced 5000 shakers1Culture platform, 610-457 mm*Standard/Advanced 3500, Advanced 3750*, Standard/Advanced 5000 shakers1Culture platform, 610-457 mm*Standard/Advanced 3500, Stol0, 10000, 15000 shakers1Culture platform, 610-457 mm*Standard/Advanced 3500, Stol0, 10000, 15000 shakers1At44-2926Autoclavoble PVC flask clamp, 250 ml250 ml Erlemneyer1Autoclavoble PVC flask clamp, 250 ml250 ml Erlemneyer1Autoclavoble PVC flask clamp, 200 ml1444-2926Autoclavoble PVC flask clamp, 200 ml1444-2926Flask clamp, stainless steel000 nl1444-2926Flask clamp, st	Flask clamps, stainless steel	500 ml flasks	1	444-7045
Microtube rack, PVC coated steel1,5/2,0 ml tubes, holds 70 tubes1444-026Test tube rack, PVC coated steel10 - 13 mm Ø tubes, holds 63 tubes1444-0278Test tube rack, PVC coated steel18 - 20 mm Ø tubes, holds 43 tubes1444-0280Test tube rack, PVC coated steel22 - 25 mm Ø tubes, holds 43 tubes1444-0281Universal platform, 610/457 mm*Standard/Advanced 3500, Advanced 3750**, Standard/Advanced 5000 shokers1444-2932Universal platform, 610/457 mm*Standard/Advanced 3500, Advanced 3750**, Standard/Advanced 5000 shokers1444-2937Microplate clamp, holds 1 standard microplate or 1 deep-well plate, 89×10Standard/Advanced 3500, Shokers1444-2937Microplate clamp, holds 1 standard microplate or 1 deep-well plate, 89×10Standard/Advanced 3500, Shokers1444-2937Autoclavable PVC flask clamp, 125 mlStandard/Advanced 3500, Shokers1444-2951Autoclavable PVC flask clamp, 250 mlStandard/Advanced 3500, Shokers1444-2951Autoclavable PVC flask clamp, 500 mlStandard/Advanced 3500, Shokers1444-2961Autoclavable PVC flask clamp, 500 mlStandard/Advanced 3500, Malers1444-2961Autoclavable PVC flask clamp, 500 mlStandard/Advanced 3500, Malers <td>Accessories</td> <td></td> <td></td> <td></td>	Accessories			
Test tube rack, PVC coated steel10 - 13 mm Ø tubes, holds 63 tubes1444-0278Test tube rack, PVC coated steel14 - 16 mm Ø tubes, holds 48 tubes1444-0280Test tube rack, PVC coated steel18 - 20 mm Ø tubes, holds 32 tubes1444-0280Data tube rack, PVC coated steel2-25 mm Ø tubes, holds 32 tubes1444-0280Universal platform, fold-457 mm*Standard/Advanced 3500, Advanced 3750**, Standard/Advanced 5000 shokers1444-2932Universal platform, fold-457 mm*Standard/Advanced 3500, Advanced 3750**, Standard/Advanced 5000 shokers1444-2936Outure platform, fold-457 mm*Standard/Advanced 3500, 5000, 10000, 15000 shokers1444-2936Microplate clamp, holds 1 standard microplate or 1 deep-well plate, 89429 mStandard/Advanced 3500, 5000, 10000, 15000 shokers1444-2936Autoclavable PVC flask clamp, 250 ml25 ml Erlenmeyer1444-2936Autoclavable PVC flask clamp, 250 ml250 ml Erlenmeyer1444-2936Autoclavable PVC flask clamp, 500 ml100 ml Frenmeyer1444-2936Autoclavable PVC flask clamp, 500 ml1000 ml1444-2936Flask clamps, stainless steel000 ml1444-2931Flask clamps, stainless steel (for Fernbach flasks)8000 ml1444-2931Flask clamps, stainless steel (for Fernbach flasks)6000 ml1444-7931Flask clamps, stainless steel (for Fernbach flasks)6000 ml1444-7931Flask clamps, stainless steel (for Fernbach flasks)6000 ml1	Microtube rack, PVC coated steel	1,5/2,0 ml tubes, holds 70 tubes	1	444-0276
Test tube rack, PVC coated steel14-16 mm Ø tubes, holds 34 tubes1444-0290Test tube rack, PVC coated steel18-20 mm Ø tubes, holds 35 tubes1444-0280Test tube rack, PVC coated steel22-25 mm Ø tubes, holds 24 tubes1444-0280Universal platform, flovA57 mm*Standard/Advanced 3500, "Advanced 3500", "Standard/Advanced 5000" shakers1444-2923Universal platform, flovA57 mm*Standard/Advanced 3500, Advanced 3750", "Standard/Advanced 5000 shakers1444-2924Microplate clamp, holds 11 standard microplate or 1 deep-well plat, 89/120Standard/Advanced 3500, Advanced 3500, "Standard/Advanced 5000 shakers1444-2926Microplate clamp, holds 11 standard microplate or 1 deep-well plat, 89/120Standard/Advanced 3500, "Standard/Advanced 5000 shakers1444-2926Autoclavable PVC flask clamp, 125 mlStandard/Advanced 3500, "Standard/Advanced 5000 shakers1444-2926Autoclavable PVC flask clamp, 120 mlStandard/Advanced 3500, "Standard/Advanced 500 shakers1444-2926Autoclavable PVC flask clamp, 120 mlStandard/Advanced 3500, "Standard/Advanced 500 shakers1444-2926Autoclavable PVC flask clamp, 120 mlStandard/Advanced 350, "Standard/Advanced 500 shakers1444-2926Autoclavable PVC flask clamp, 120 mlStandard/Advanced 350, "Standard/Advanced 500 shakers1444-2926Autoclavable PVC flask clamp, 120 mlStandard/Advanced 500 ml1444-2926Autoclavable PVC flask clamp, 120 mlStandard/Advanced 500 ml1444-2926Autoclavable PVC flask clamp, 120	Test tube rack, PVC coated steel	10 - 13 mm Ø tubes, holds 63 tubes	1	444-0278
Test tube rack, PVC coated steel18 - 20 mm Ø tubes, holds 35 tubes1444-0280Test tube rack, PVC coated steel2 - 25 mm Ø tubes, holds 24 tubes1444-0281Universal platform, fölov457 mm*Standard/Advanced 3500, Advanced 3750**, Standard/Advanced 5000** shakes1444-2932Universal platform, fölov457 mm*Standard/Advanced 3500, Advanced 3750**, Standard/Advanced 5000 shakers1444-2937Microplate clampStandard/Advanced 3500, Advanced 3750**, Standard/Advanced 5000 shakers1444-2937Microplate clamp, holds 1 standard microplate or 1 deep-well plate, B9/129 mStandard/Advanced 3500, 5000, 10000, 15000 shakers1444-2950Autoclavable PVC flask clamp, 125 mlStandard/Advanced 3500, 5000, 10000, 15000 shakers1444-2960Autoclavable PVC flask clamp, 125 ml250 ml Erlenmeyer1444-2961Autoclavable PVC flask clamp, 100 ml500 ml Erlenmeyer1444-2961Autoclavable PVC flask clamp, 100 ml1444-2961444-2961Autoclavable PVC flask clamp, 200 ml100 ml1444-2961Autoclavable PVC flask clamp, 200 ml1444-2961444-2961Autoclavable PVC flask clamp, stainless steel1000 ml1444-2961Flask clamp	Test tube rack, PVC coated steel	14 - 16 mm Ø tubes, holds 48 tubes	1	444-0279
Test tube rack, PVC coated steel22 · 25 mm Ø tubes, holds 24 tubes1444-0281Universal platform, 610-457 mm*Standard/Advanced 3500, Advanced 3500*, standard/Advanced 5000** shakers1444-2932Universal platform, 610-457 mm*Standard/Advanced 3500, Advanced 3750**, Standard/Advanced 5000 shakers1444-2934Universal platform, 610-457 mm*Standard/Advanced 3500, Standard/Advanced 5000 shakers1444-2934Microplate clamp,Madard/Advanced 3500, Standard/Advanced 3500, Standard/Advanced 5000 shakers1444-2954Microplate clamp, holds 1 standard microplate or 1 deep-well plate, 89×129 mStandard/Advanced 3500, 5000, 10000, 15000 shakers1444-2954Autoclavable PVC flask clamp, 125 mlStandard/Advanced 3500, 5000, 10000, 15000 shakers1444-2954Autoclavable PVC flask clamp, 250 ml250 ml Erlenmeyer1444-2961Autoclavable PVC flask clamp, 200 ml1000 ml Erlenmeyer1444-2961Autoclavable PVC flask clamp, 200 ml1000 ml Erlenmeyer1444-2961Autoclavable PVC flask clamp, 200 ml1444-2961444-2961Autoclavable PVC flask clamp, 200 ml1444-2961444-2961Flask clamps, stainless steel000 ml1444-7031 <td>Test tube rack, PVC coated steel</td> <td>18 - 20 mm Ø tubes, holds 35 tubes</td> <td>1</td> <td>444-0280</td>	Test tube rack, PVC coated steel	18 - 20 mm Ø tubes, holds 35 tubes	1	444-0280
Universal platform, 610×457 mm*Standard/Advanced 3500, Advanced 3750**, Standard/Advanced 5000** shakers1444-2932Universal platform, 762×457 mm*Standard/Advanced 5000 shakers1444-2934Culture platform, 610×457 mm*Standard/Advanced 3500, Advanced 3750**, Standard/Advanced 5000 shakers1444-2934Culture platform, 610×457 mm*Standard/Advanced 3500, 5000, 10000, 15000 shakers1444-2954Microplate clamp, holds 1 standard microplate or 1 deep-well plate, 89×129 mStandard/Advanced 3500, 5000, 10000, 15000 shakers1444-2954Autoclavable PVC Flask clamp, 125 mlStandard/Advanced 3500, 5000, 10000, 15000 shakers1444-2954Autoclavable PVC flask clamp, 500 ml500 ml Erlenmeyer1444-2962Autoclavable PVC flask clamp, 500 ml500 ml Erlenmeyer1444-2963Autoclavable PVC flask clamp, 500 ml1000 ml Erlenmeyer1444-2961Autoclavable PVC flask clamp, 500 ml1000 ml Erlenmeyer1444-2961Autoclavable PVC flask clamp, 500 ml1000 ml Erlenmeyer1444-2961Autoclavable PVC flask clamp, 500 ml2000 ml Erlenmeyer1444-2961Autoclavable PVC flask clamp, stainless steel1000 ml Erlenmeyer1444-2961Flask clamps, stainless steel1000 ml444-2961444-2961Flask clamps, stainless steel1444-2961444-2961Flask clamps, stainless steel1444-2961444-2961Flask clamps, stainless steel1444-7031444-7031Flask clamps, sta	Test tube rack, PVC coated steel	22 - 25 mm Ø tubes, holds 24 tubes	1	444-0281
Universal platform, 762×457 mm*Standard/Advanced 5000 shakers1444-2934Culture platform, 610×457 mm*Standard/Advanced 3500, Advanced 3500*, Standard/Advanced 5000 shakers1444-2937Microplate clampKandard/Advanced 3500, 5000, 10000, 15000 shakers1444-2936Microplate clamp, holds 1 standard incroplate or 1 deep-well plate, 89×129 mStandard/Advanced 3500, 5000, 10000, 15000 shakers1444-2956Autoclavable PVC Flask clamp, 125 mlStandard/Advanced 5000 shakers1444-2960Autoclavable PVC flask clamp, 250 mlSton I Erlenmeyer1444-2961Autoclavable PVC flask clamp, 250 mlSton I Erlenmeyer1444-2962Autoclavable PVC flask clamp, 200 mlSton I Erlenmeyer1444-2961Autoclavable PVC flask clamp, 200 mlSton I Erlenmeyer1444-2961Flask clamps, stainless steelSton I Erlenmeyer1444-2961Flask clamps, stainless steel (for Fernbach flasks)Stoo I I Erlenmeyer1444-7031Flask clamps, stainless steel (for Fernbach flasks)Stoo I I Erlenmeyer1444-7031Flask clamps, stainless steel (for Fernbach flasks)Gtoo I I I Erlenmeyer1444-7031Flask clamps,	Universal platform, 610×457 mm*	Standard/Advanced 3500, Advanced 3750**, Standard/Advanced 5000** shakers	1	444-2932
Cluture platform, 610x457 mm*Standard/Advanced 3750**, Standard/Advanced 5000 shakers1444-2937Microplate clamp, holds 1 standard microplate or 1 deep-well plate, 89×129 mmStandard/Advanced 3500, 5000, 10000, 15000 shakers1444-2954Autoclavable PVC Filenmeyer flask clamp,1244-29621444-2962Autoclavable PVC flask clamp, 125 ml125 ml Erlenmeyer1444-2962Autoclavable PVC flask clamp, 250 ml250 ml Erlenmeyer1444-2962Autoclavable PVC flask clamp, 200 ml1000 ml Erlenmeyer1444-2962Autoclavable PVC flask clamp, 200 ml1000 ml Erlenmeyer1444-2962Autoclavable PVC flask clamp, 200 ml1000 ml Erlenmeyer1444-2964Flask clamps, stainless steel, VWR*1444-2961444-2961Flask clamps, stainless steel (for Fernbach flasks)2000 ml1444-2961Flask clamps, stainless steel (for Fernbach flasks)2000 ml1444-2961Flask clamps, stainless steel (for Fernbach flasks)2000 ml1444-2961Flask clamps, stainless steel (for Fernbach flasks)2000 ml1444-7031Flask clamps, stainless steel (for Fernbach flasks)2000 ml1444-7031Flask clamps, stainless steel (for Fernbach flasks)6000 ml1444-7031Flask clamps, stainless steel (for Fernbach flasks)6000 ml1444-7031Flask clamps, stainless steel (for Fernbach flasks)6000 ml1444-7031Flask clamps, stainless steel (for Fernbach flasks)1<	Universal platform, 762×457 mm*	Standard/Advanced 5000 shakers	1	444-2934
Microplate clampMicroplate spandStandard/Advanced 3500, 5000, 15000 shakers1444-2954Autoclavable PVC Elenmeyer flask clamps1144-29541444-2961Autoclavable PVC flask clamp, 125 ml125 ml Erlenmeyer1444-2961Autoclavable PVC flask clamp, 500 ml250 ml Erlenmeyer1444-2961Autoclavable PVC flask clamp, 500 ml500 ml Erlenmeyer1444-2961Autoclavable PVC flask clamp, 1000 ml100 ml Erlenmeyer1444-2961Autoclavable PVC flask clamp, 1000 ml1000 ml Erlenmeyer1444-2961Autoclavable PVC flask clamp, 2000 ml2000 ml Erlenmeyer1444-2961Autoclavable PVC flask clamp, 1000 ml1444-2961444-2961Flask clamps, stainless steel, VWR*1444-2961444-2961Flask clamps, stainless steel (for Fernbach flasks)2000 ml1444-2961Flask clamps, stainless steel (for Fernbach flasks)2000 ml1444-7931Flask clamps, stainless steel (for Fernbach flasks)2000 ml1444-7931Flask clamps, stainless steel (for Fernbach flasks)2000 ml1444-7931Flask clamps, stainless steel6000 ml1444-7931Flask clamps, stainless steel1444-7931444-7931Flask clamps, stainless steel1444-7931444-7931Flask clamps, stainless steel1444-7931444-7931Flask clamps, stainless steel1444-7931444-7931Flask clamps, stainless steel <t< td=""><td>Culture platform, 610×457 mm*</td><td>Standard/Advanced 3500, Advanced 3750**, Standard/Advanced 5000 shakers</td><td>1</td><td>444-2937</td></t<>	Culture platform, 610×457 mm*	Standard/Advanced 3500, Advanced 3750**, Standard/Advanced 5000 shakers	1	444-2937
Microplate clamp, holds 1 standard microplate or 1 deep-well plate, 89×129 mStandard/Advanced 3500, 5000, 10000, 15000 shakers1444-295Autoclavable PVC Erlenmeyer flask clamp, 125 ml125 ml Erlenmeyer1444-2960Autoclavable PVC flask clamp, 250 ml250 ml Erlenmeyer1444-2961Autoclavable PVC flask clamp, 500 ml500 ml Erlenmeyer1444-2962Autoclavable PVC flask clamp, 1000 ml000 ml Erlenmeyer1444-2961Autoclavable PVC flask clamp, 200 ml2000 ml Erlenmeyer1444-2961Autoclavable PVC flask clamp, 200 ml2000 ml Erlenmeyer1444-2961Autoclavable PVC flask clamp, 200 ml2000 ml Erlenmeyer1444-2961Flask clamps, stainless steel, VWR*1444-2961444-7030Flask clamps, stainless steel (for Fernbach flasks)2800 ml1444-7031Flask clamps, stainless steel (for Fernbach flasks)2800 ml1444-7031Flask clamps, stainless steel (for Fernbach flasks)2800 ml1444-7032Flask clamps, stainless steel (for Fernbach flasks)6000 ml1444-7031Flask clamps, stainless steel000 ml1444-7034Flask clamps, stainless steel1444-7034444-7034Flask clamps, stainless steel6000 ml1444-7034Flask clamps, stainless steel1444-7034444-7034Flask clamps, stainless steel1444-7034444-7034Flask clamps, stainless steel6000 ml1444-7034	Microplate clamp			
Autoclavable PVC Erlenmeyer flask clampsAutoclavable PVC Erlesk clamp, 125 ml125 ml Erlenmeyer1444-2960Autoclavable PVC flask clamp, 250 ml250 ml Erlenmeyer1444-2961Autoclavable PVC flask clamp, 500 ml500 ml Erlenmeyer1444-2962Autoclavable PVC flask clamp, 1000 ml1000 ml Erlenmeyer1444-2963Autoclavable PVC flask clamp, 2000 ml2000 ml Erlenmeyer1444-2963Autoclavable PVC flask clamp, 2000 ml2000 ml Erlenmeyer1444-2963Autoclavable PVC flask steel, VVR*1444-70301Flask clamps, stainless steel, VVR*1444-70301Flask clamps, stainless steel (for Fernbach flasks)2800 ml1444-7031Flask clamps, stainless steel4000 ml1444-7032Flask clamps, stainless steel6000 ml1444-7032Flask clamps, stainless steel6000 ml1444-7034PVC coated test tube rackPVC coated test tube rack1444-7037PVC coated test tube rack1444-7038444-7037PVC coated test tube rack1444-7038444-7038PVC coated test tube rack1444-7038444-7038PVC coated test tube rack1444-7038PVC coated test tube rack1444	Microplate clamp, holds 1 standard microplate or 1 deep-well plate, 89×129 mm	Standard/Advanced 3500, 5000, 10000, 15000 shakers	1	444-2954
Autoclavable PVC flask clamp, 125 ml125 ml Erlenmeyer1444-2961Autoclavable PVC flask clamp, 250 ml250 ml Erlenmeyer1444-2961Autoclavable PVC flask clamp, 500 ml500 ml Erlenmeyer1444-2962Autoclavable PVC flask clamp, 1000 ml1000 ml Erlenmeyer1444-2963Autoclavable PVC flask clamp, 2000 ml2000 ml Erlenmeyer1444-2963Autoclavable PVC flask clamp, 2000 ml2000 ml Erlenmeyer1444-2964Flask clamps, stainless steel, VWR*TTTFlask clamps, stainless steel1000 ml1444-7030Flask clamps, stainless steel (for Fernbach flasks)2800 ml1444-7031Flask clamps, stainless steel (for Fernbach flasks)2800 ml1444-7031Flask clamps, stainless steel1444-70301444-7037Flask clamps, stainless steel6000 ml1444-7037Flask clamps, stainless steel6000 ml1444-7037Flask clamps, stainless steel7444-7037444-7037Flask clamps, stainless steel7444-7037444-7037Flask clamps, stainless steel6000 ml1444-7037Flask clamps, stainless steel7444-7037444-7037Flask clamps, stainless steel7444-7037444-7037Flask clamps, stainless steel7444-7037444-7037Flask clamps, stainless steel7444-7037444-7037Flask clamps, stainless steel7444-7037444	Autoclavable PVC Erlenmeyer flask clamps			
Autoclavable PVC flask clamp, 250 ml250 ml Erlenmeyer1444-2961Autoclavable PVC flask clamp, 500 ml500 ml Erlenmeyer1444-2962Autoclavable PVC flask clamp, 1000 ml1000 ml Erlenmeyer1444-2963Autoclavable PVC flask clamp, 2000 ml2000 ml Erlenmeyer1444-2964Flask clamps, stainless steel, VWR°1444-7030444-7030Flask clamps, stainless steel (for Fernbach flasks)2000 ml1444-7031Flask clamps, stainless steel (for Fernbach flasks)2800 ml1444-7033Flask clamps, stainless steel (for Fernbach flasks)2800 ml1444-7034Flask clamps, stainless steel (for Fernbach flasks)6000 ml1444-7034Flask clamps, stainless steel (for Fernbach flasks)6000 ml1444-7034Flask clamps, stainless steel (for Fernbach flasks)1444-7034444-7034Flask clamps, stainless steel (for Fernbach flasks)1444-7034444-7034PVC coated test tube rack1 </td <td>Autoclavable PVC flask clamp, 125 ml</td> <td>125 ml Erlenmeyer</td> <td>1</td> <td>444-2960</td>	Autoclavable PVC flask clamp, 125 ml	125 ml Erlenmeyer	1	444-2960
Autoclavable PVC flask clamp, 500 ml500 ml Erlenmeyer1444-296Autoclavable PVC flask clamp, 1000 ml1000 ml Erlenmeyer1444-296Autoclavable PVC flask clamp, 2000 ml2000 ml Erlenmeyer1444-2964Flask clamps, stainless steel, VWR®1444-7030Flask clamps, stainless steel (for Fernbach flasks)2000 ml1444-7031Flask clamps, stainless steel (for Fernbach flasks)2800 ml1444-7032Flask clamps, stainless steel (for Fernbach flasks)2800 ml1444-7033Flask clamps, stainless steel (for Fernbach flasks)6000 ml1444-7034Flask clamps, stainless steel (for Fernbach flasks)6000 ml1444-7034Flask clamps, stainless steel (for Fernbach flasks)1444-7034444-7034Flask clamps, stainless steel (for Fernbach flasks)1444-7034444-7034PVC coated test tube rack1444-70	Autoclavable PVC flask clamp, 250 ml	250 ml Erlenmeyer	1	444-2961
Autoclavable PVC flask clamp, 1000 ml1000 ml Erlenmeyer1444-2963Autoclavable PVC flask clamp, 2000 ml2000 ml Erlenmeyer1444-2964Flask clamps, stainless steel, VWR®1444-7030Flask clamps, stainless steel1000 ml1444-7030Flask clamps, stainless steel (for Fernbach flasks)2000 ml1444-7031Flask clamps, stainless steel (for Fernbach flasks)2800 ml1444-7033Flask clamps, stainless steel (for Fernbach flasks)6000 ml1444-7034Flask clamps, stainless steel (for Fernbach flasks)6000 ml1444-7034Flask clamps, stainless steel6000 ml1444-7034Flask clamps, stainless steel6000 ml1444-7034Flask clamps, stainless steel1444-7034444-7034Flask clamps, stainless steel1444-7034444-7034Flask clamps, stainless steel1444-7034444-7034Flask clamps, stainless steel1444-7037444-7034Flask clamps, stainless steel1444-7037444-7037Flask clamps, stainless steel1444-7037444-7037 <tr <tr="">Flask</tr>	Autoclavable PVC flask clamp, 500 ml	500 ml Erlenmeyer	1	444-2962
Autoclavable PVC flask clamp, 2000 ml2000 ml Erlenmeyer1444-2964Flask clamps, stainless steel, VWR®1444-7030Flask clamps, stainless steel1000 ml1444-7031Flask clamps, stainless steel (for Fernbach flasks)2000 ml1444-7032Flask clamps, stainless steel (for Fernbach flasks)2800 ml1444-7033Flask clamps, stainless steel (for Fernbach flasks)6000 ml1444-7034Flask clamps, stainless steel (for Fernbach flasks)6000 ml1444-7034Flask clamps, stainless steel6000 ml1444-7034Flask clamps, stainless steel1444-7034444-7034Flask clamps, stainless steel1444-7037444-7034Flask clamps, stainless steel1444-7037444-7037FVC coated test tube rack1444-7037444-7037FVC coated test tube rack1444-7038444-7038FVC coated test tube rack1444-7039444-7039FVC coated test tube rack1444-7039444-7039<	Autoclavable PVC flask clamp, 1000 ml	1000 ml Erlenmeyer	1	444-2963
Flask clamps, stainless steel, VWR°Flask clamps, stainless steel1000 ml1 444-7030Flask clamps, stainless steel2000 ml1 444-7032Flask clamps, stainless steel (for Fernbach flasks)2800 ml1 444-7033Flask clamps, stainless steel4000 ml1 444-7033Flask clamps, stainless steel6000 ml1 444-7034Flask clamps, stainless steel1 444-7034Flask clamps, stainless steel6000 ml1 444-7034Flask clamps, stainless steel1 444-7034Flask clamps, stainless steel1 444-7037PVC coated steel, VWR°1 444-7037PVC coated test tube rack1 444-7037PVC coated test tube rack1 444-7037PVC coated test tube rack1 444-7038PVC coated test tube rack1 444-7037PVC coated test tube rack1 444-7038PVC coated test tube rack1 444-7039	Autoclavable PVC flask clamp, 2000 ml	2000 ml Erlenmeyer	1	444-2964
Flask clamps, stainless steel1000 ml1444-7030Flask clamps, stainless steel2000 ml1444-7031Flask clamps, stainless steel (for Fernbach flasks)2800 ml1444-7032Flask clamps, stainless steel4000 ml1444-7033Flask clamps, stainless steel6000 ml1444-7034Flask clamps, stainless steel6000 ml1444-7034Flask clamps, stainless steel6000 ml1444-7034Flask clamps, stainless steel1444-7037PVC coated steel, VWR°1444-7037PVC coated test tube rack1444-7038PVC coated test tube rack1444-7039PVC coated test tube rack1444-7039	Flask clamps, stainless steel, VWR®			
Flask clamps, stainless steel2000 ml1444-703Flask clamps, stainless steel (for Fernbach flasks)2800 ml1444-7033Flask clamps, stainless steel4000 ml1444-7034Flask clamps, stainless steel6000 ml1444-7034Fest tube racks, PVC coated steel, VWR°PVC coated steel, VWR°PVC coated test tube rack1444-7037PVC coated test tube rack1444-7038PVC coated test tube rack1444-7038PVC coated test tube rack1444-7039	Flask clamps, stainless steel	1000 ml	1	444-7030
Flask clamps, stainless steel (for Fernbach flasks)2800 ml1444-7032Flask clamps, stainless steel4000 ml1444-7033Flask clamps, stainless steel6000 ml1444-7034Fest tube racks, PVC coated steel, VWR°PVC coated test tube rack1444-7037PVC coated test tube rack1444-7038PVC coated test tube rack1444-7038PVC coated test tube rack1444-7039	Flask clamps, stainless steel	2000 ml	1	444-7031
Flask clamps, stainless steel4000 ml1444-7033Flask clamps, stainless steel6000 ml1444-7034Test tube racks, PVC coated steel, VWR°PVC coated test tube rack1444-7037PVC coated test tube rack1444-7038PVC coated test tube rack1444-7039PVC coated test tube rack1444-7039	Flask clamps, stainless steel (for Fernbach flasks)	2800 ml	1	444-7032
Flask clamps, stainless steel6000 ml1444-7034Test tube racks, PVC coated steel, VWR°1444-7037PVC coated test tube rack1444-7038PVC coated test tube rack1444-7038PVC coated test tube rack1444-7039	Flask clamps, stainless steel	4000 ml	1	444-7033
Test tube racks, PVC coated steel, VWR°       1       444-7037         PVC coated test tube rack       1       444-7038         PVC coated test tube rack       1       444-7039         PVC coated test tube rack       1       444-7039	Flask clamps, stainless steel	6000 ml	1	444-7034
PVC coated test tube rack         1         444-7037           PVC coated test tube rack         1         444-7038           PVC coated test tube rack         1         444-7039	Test tube racks, PVC coated steel, VWR®			
PVC coated test tube rack         1         444-703           PVC coated test tube rack         1         444-703	PVC coated test tube rack		1	444-7037
PVC coated test tube rack 1 444-7039	PVC coated test tube rack		1	444-7038
	PVC coated test tube rack		1	444-7039



#### **ORBITAL SHAKER, ADVANCED MINI SHAKER 15, VWR®**

A compact, powerful mini shaker with microprocessor control that is ideal for a wide variety of shaking applications. The unit has optimal speed range and orbit for larger samples. Variable speed control provides consistent, uniform shaking action. The speed is adjustable in 1 min<sup>-1</sup> increments throughout the speed range. Ramping feature slowly increases speed to desired set point to avoid splashing.

- 15 mm orbit gives optimal speed for mixing larger-sized samples, unit provides powerful shaking with a small footprint
- Independent LED displays for speed, time, and integral timer, 1 s to 160 h, shows elapsed time or counts down and enables automatic switch off and audible alarm when program is complete
- Low profile design easily fits into most hoods and incubators
- The maintenance-free, triple eccentric drive provides reliable service and continuous operation
- Uses a range of interchangeable accessories from the VWR Mini Shaker line, simply remove mat to mount a variety of optional flask clamps or test tube racks
- Can be used at -10 to +40 °C (max. 80% relative humidity), in an incubator, dry CO<sub>2</sub> incubator or cold room

The unit features overload protection, and audible and visual signals will activate when the system detects an obstruction or tray overload. Suitable for use in biotech, pharmaceutical, healthcare, as well as university and government areas, for applications including cell culture, bacterial suspensions, ELISA and solubility studies.

Shaker accommodates a maximum of two of the racks detailed and 35×10, 20×25, 15×50, 12×125, 6×250 or 4×500 ml flasks and 3×500 ml media bottles.

Supplied with perforated tray and non slip rubber mat but without attachments. Accessories must be ordered separately.

Model	Advanced Mini Shaker 15
Environmentally preferable attribute	Waste Reducing
Max. load	3,6 kg
Orbit (mm)	15
Platform W×D	222×298 mm
Power	25 W
Shaking motion	Orbital
Speed (min <sup>-1</sup> )	40 - 300
Speed accuracy	±2%
Weight (kg)	10,7
W×D×H (mm)	279×432×102

Description	Pk	Cat. No.
Advanced Mini Shaker 15, EU-plug	1	444-7106
Advanced Mini Shaker 15, UK-plug	1	444-7107
Advanced Mini Shaker 15, CH-plug	1	444-7108

		DI	<b>C</b> ( N
Description	For	РК	Cat. No.
Accessories			
Centrifuge tube rack, PVC coated steel	15 ml tubes, holds 35 tubes	1	444-0283
Centrifuge tube rack, PVC coated steel	50 ml tubes, holds 12 tubes	1	444-0284
Stainless steel media bottle clamps			
Clamps for media bottles, stainless steel	500 ml	1	444-7035
Stainless steel Erlenmeyer flask clamps			
Flask clamps, stainless steel	10 ml flasks	1	444-7040
Flask clamps, stainless steel	25 ml flasks	1	444-7041
Flask clamps, stainless steel	50 ml flasks	1	444-7042
Flask clamps, stainless steel	125 ml flasks	1	444-7043
Flask clamps, stainless steel	250 ml flasks	1	444-7044
Flask clamps, stainless steel	500 ml flasks	1	444-7045
Accessories			
Microtube rack, PVC coated steel	1,5/2,0 ml tubes, holds 70 tubes	1	444-0276
Roller bar platform, which has 2 adjustable cushioned rollers to hold glassware securely, 297×218 mm, bar size 218 mm	-	1	444-0282
Test tube rack, PVC coated steel	10 - 13 mm Ø tubes, holds 63 tubes	1	444-0278
Test tube rack, PVC coated steel	14 - 16 mm Ø tubes, holds 48 tubes	1	444-0279
Test tube rack, PVC coated steel	18 - 20 mm Ø tubes, holds 35 tubes	1	444-0280
Test tube rack, PVC coated steel	22 - 25 mm Ø tubes, holds 24 tubes	1	444-0281



#### **INCUBATING 3-D ROTATOR WAVER, VWR®**

The incubating three-dimensional rotator waver combines vertical and horizontal wave motion with incubation in one compact bench top unit. The spill resistant design channels fluids away from internal components. The microprocessor control provides electronic tilt angle adjustment which allows the user to easily adjust rocking angle from 0 to 20° while unit is operating. The PID temperature controller maintains precise temperature control from ambient 5 to 65 °C.

- Electronic tilt adjustment from 0 to 20° while unit is operating
- LED displays shows temperature, speed, tilt angle and time simultaneously
- Timer from 1 s to 160 h, with audible alarm when the time reaches zero
- Can be used at 5 to 40 °C (max. 80% relative humidity, non condensing) in cold rooms, incubators and CO<sub>2</sub> environments

Easy to use controls allow users to adjust temperature in 1 °C increments. Precise speed control provides smooth, low speed wave motion down to 1 min<sup>-1</sup>. Touch pad controls with easy to read LED displays for temperature, speed, tilt angle and time allow the operator to view all settings at once. Provides repeatable and accurate results every time and is easily visible across lab benches. A 'hot' warning light illuminates when the air temperature in the chamber reaches 40 °C and remains on until the temperature cools to below 40 °C.

Polycarbonate lid allows viewing of samples without disturbing the internal temperature. Timer displays elapsed time or, when programmed to user-defined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off. Overload protection via audible and visual signals activated when system detects an obstruction or tray overload. Speed ramping feature slowly increases speed to desired set point to avoid splashing. Unit is ideal for cell cultures, hybridisation procedures and blotting techniques.

Supplied without accessories. Mat must be ordered separately.

\* Note: Maximum speed/tilt angle may vary with heavy or unbalanced loads

#### \*\* Centred on tray

Model	Incubating 3-D waver
Angle	0 - 20° (*)
Int. W×D×H	197×273×86 mm
Max. load	2,3 kg**
Platform W×D	184×235 mm
Shaking motion	3-dimensional
Speed accuracy	±1 min <sup>4</sup>
Speed range (min <sup>-1</sup> )	1 - 30*
Temperature range (°C)	Ambient +565
Temperature uniformity	±0,5 °C @ 37 °C
Weight (kg)	9,5
W×D×H (mm)	279×432×267

Description	Pk	Cat. No.
Incubating 3-D waver, EU-plug	1	444-0765
Incubating 3-D waver, UK-plug	1	444-0766
Incubating 3-D waver, CH-plug	1	444-0767
Description	Pk	Cat. No.
Mat for incubating 3-D rotator waver		
Dimpled mat, 235×184 mm for incubating 3-D waver	1	444-0771



#### **INCUBATING ROCKING PLATFORM SHAKER, VWR®**

The incubating rocking platform shaker combines smooth rocking motion and incubation in one compact bench top unit. The spill resistant design channels fluids away from internal components. The microprocessor control provides electronic tilt angle adjustment which allows the user to easily adjust the rocking angle from zero to 15° while unit is operating. The PID temperature controller maintains precise temperature control from ambient +5 to 65 °C.

- Electronic tilt adjustment from zero to 15° while unit is operating
- LED display shows temperature, speed, tilt angle and time simultaneously
- Timer from 1s to 160 h, with audible alarm when the time reaches zero
  - Can be used at five to 40 °C (max. 80% relative humidity, non condensing) in cold rooms, incubators and CO<sub>2</sub> environments

Easy to use controls allow users to adjust temperature in 1 °C increments. Precise speed control provides smooth, low speed rocking motion down to 1 min<sup>-1</sup>. Touch pad controls with easy to read LED displays for temperature, speed, tilt angle and time allowing operator to view all settings at once. Provides repeatable and accurate results every time and is easily visible across lab benches. A hot warning illuminates when the air temperature in the chamber reaches 40 °C and remains on until the temperature cools to below 40 °C.

Polycarbonate lid allows viewing of samples without disturbing the internal temperature. Timer displays elapsed time or, when programmed to userdefined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off. Overload protection via audible and visual signals activated when system detects an obstruction or overload of the tray. Speed ramping feature slowly increases speed to desired set point to avoid splashing. Unit is ideal for cell cultures, staining and destaining gels, hybridisation procedures, haematology and blotting techniques.

Supplied without accessories. Mat must be ordered separately.

- \* Note: Maximum speed/tilt angle may vary with heavy or unbalanced loads.
- \*\* Centred on tray

Model	Incubating rocking platform shaker
Angle	0 - 15° (*)
Int. W×D×H	197×273×97 mm
Max. load	4,5 kg**
Platform W×D	191×254 mm
Shaking motion	Rocking
Speed accuracy	±1 min <sup>4</sup>
Speed range (min <sup>-1</sup> )	1 - 50*
Temperature range (°C)	Ambient +565
Temperature uniformity	±0,5 °C @ 37 °C
Weight (kg)	9,5
W×D×H (mm)	279×432×267

Description	Pk	Cat. No.
Incubating rocking platform shaker, EU-plug	1	444-0762
Incubating rocking platform shaker, UK-plug	1	444-0763
Incubating rocking platform shaker, CH-plug	1	444-0764

Description	Pk	Cat. No.
Mat for incubating rocking platform shaker		
Dimpled mat, 254×191 mm for incubating rocking platform shaker	1	444-0769



50001



5000IR

#### **INCUBATING SHAKERS, 5000I AND 5000IR, VWR®**

VWR incubating/refrigerating 50001 / 50001R orbital shakers are designed for a variety of shaking and incubating applications, such as cell culture, solubility studies, bacterial suspensions and extraction procedures. Large capacity platform holds up to 22,7 kg. Variable speed, microprocessor control provides consistent, uniform mixing action. Microprocessor will display last set point and will restart if power is interrupted. Ramping feature slowly increases speed to set point for added safety. The Accu-drive shaking system delivers exceptional speed control, accuracy, safety and durability. System continuously monitors shaking speed and will maintain set point even under changing loads. Displayed speed is accurate to 1% of set speed (when speed is above 100 min<sup>-1</sup>), below 100 rpm, ±1 rpm.

- Three independent LED displays show speed, temperature and time
- Integral timer, 1 s to 160 h, shows elapsed time or counts down, automatic switchoff and audible alarm when program is complete
- Microprocessor PID temperature controller maintains precise temperature from ambient +5 to 65 °C (5000I) or from 15 below ambient (5000IR), adjustable in 1 °C increments and recalls last set point, even when unit has been shut off. Will also restart if power is interrupted
- Opti-Flow forced ventilation system delivers exceptional uniformity
- Overload protection audible and visual signals will activate when system detects an obstruction or a tray overload
- Polycarbonate lid enables samples to be viewed, without altering internal temperature. When lid is opened, automatic shut-off circuit will stop shaker platform to protect operator
- Uses the same accessories as the VWR shaker line

Built-in load sensor can detect an unbalanced condition and will automatically reduce  $\min^{-1}$  to a safe speed to prevent spills and protect samples. Powerful triple-eccentric drive and brushless motor is designed for continuous use and is able to handle heavy loads. Spill resistant design protects internal components from accidental spills and leaks. Removable tray design allows chamber to be cleaned easily. Opti-Flow forced ventilation system uses twin induction fans (5000I) or one large, fan (5000IR) and air deflectors to deliver exceptional temperature uniformity and stability. Overtemperature sensor will shut down unit and activate audible and visual alarms if temperature deviates  $\pm 1$  °C from set point. Speed calibration mode enables user to automatically recalibrate speed display. Temperature calibration mode allows user to calibrate unit to an external temperature device and RS232 serial port provides two-way communication for data logging and unit control.

Supplied with a non-slip mat which fits optional universal tray (444-0967) and 2340 mm detachable power cord. Required accessories must be ordered separately.

Model	50001	5000IR		
Int. W×D×H	629×523×432 mm			
Max. load	22,7 kg			
Orbit (mm)	2	25		
Platform W×D	457×45	457×457 mm		
Shaking motion	Orbital			
Speed accuracy	±1 min <sup>-1</sup> below 100 min <sup>-1</sup> ±1% of set speed above 100 min <sup>-1</sup>			
Speed range (min <sup>-1</sup> )	15 -	15 - 500		
Temperature range (°C)	Ambient +565	15 below ambient65		
Temperature uniformity	±0,5 °C	±0,5 °C @ 37 °C		
Weight (kg)	78,9	107		
W×D×H (mm)	675×815×596	675×1044×596		
Description		Pk 9	Cat. No.	
5000I incubating shaker, EU/UK/CH-plug		1 4.	44-7109	
5000IR refrigerated incubating shaker, EU/UK/CH-plug		1 4	44-7112	
Description	For	Pk 9	Cat. No.	
Accessories				
Universal tray, aluminium 457×457 mm	5000I/IR	1 44	44-0967	
Test tube racks, pivoting stainless steel, VWR®				
Pivoting stainless steel test tube rack		1 44	44-2955	
Accessories				
Centrifuge tube rack, PVC coated steel	15 ml tubes, holds 35 tubes	1 44	4-0283	

## **GENERAL EQUIPMENT** SHAKERS, VORTEXERS & STIRRERS

Description	For	Pk	Cat. No.
Accessories			
Test tube racks, pivoting stainless steel, VWR®			
Pivoting stainless steel test tube rack		1	444-2956
Accessories			
Centrifuge tube rack, PVC coated steel 5	50 ml tubes, holds 12 tubes	1	444-0284
Test tube racks, pivoting stainless steel, VWR®			
Pivoting stainless steel test tube rack		1	444-2957
Pivoting stainless steel test tube rack		1	444-2958
Stainless steel media bottle clamps			
Clamps for media bottles, stainless steel 5	500 ml	1	444-7035
Test tube racks, pivoting stainless steel, VWR®			
Pivoting stainless steel test tube rack		1	444-2959
Stainless steel media bottle clamps			
Clamps for media bottles, stainless steel	000 ml	1	444-7036
Stainless steel Erlenmeyer flask clamps			
Flask clamps, stainless steel	0 ml flasks	1	444-7040
Flask clamps, stainless steel 2	25 ml flasks	1	444-7041
Flask clamps, stainless steel 5	50 ml flasks	1	444-7042
Flask clamps, stainless steel	25 ml flasks	1	444-7043
Flask clamps, stainless steel 2	250 ml flasks	1	444-7044
Flask clamps, stainless steel 5	500 ml flasks	1	444-7045
Accessories			
Microtube rack, PVC coated steel 1,	,5/2,0 ml tubes, holds 70 tubes	1	444-0276
Test tube rack, PVC coated steel	0 - 13 mm Ø tubes, holds 63 tubes	1	444-0278
Test tube rack, PVC coated steel	4 - 16 mm Ø tubes, holds 48 tubes	1	444-0279
Test tube rack, PVC coated steel	8 - 20 mm Ø tubes, holds 35 tubes	1	444-0280
Test tube rack, PVC coated steel 2	22 - 25 mm Ø tubes, holds 24 tubes	1	444-0281
Universal platform 330×279 mm s	Standard/Advanced 3500, Incubating 3500, Advanced 3750, Professional 3500 shakers, mounting Erlenmeyer flask clamps and test tube racks	1	444-7087
Autoclavable PVC Erlenmeyer flask clamps			
Autoclavable PVC flask clamp, 125 ml	25 ml Erlenmeyer	1	444-2960
Autoclavable PVC flask clamp, 250 ml 2	250 ml Erlenmeyer	1	444-2961
Autoclavable PVC flask clamp, 500 ml 5	500 ml Erlenmeyer	1	444-2962
Autoclavable PVC flask clamp, 1000 ml	000 ml Erlenmeyer	1	444-2963
Autoclavable PVC flask clamp, 2000 ml 2	2000 ml Erlenmeyer	1	444-2964
Flask clamps, stainless steel, VWR®			
Flask clamps, stainless steel	000 ml	1	444-7030
Flask clamps, stainless steel 2	2000 ml	1	444-7031
Flask clamps, stainless steel (for Fernbach flasks) 2	2800 ml	1	444-7032
Flask clamps, stainless steel 4	4000 ml	1	444-7033
Flask clamps, stainless steel 6	5000 ml	1	444-7034
Test tube racks, PVC coated steel, VWR®			
PVC coated test tube rack		1	444-7037
PVC coated test tube rack		1	444-7038
PVC coated test tube rack		1	444-7039



#### ACCESSORIES FOR VWR® ANALOGUE, DIGITAL AND PULSING VORTEX SHAKERS

Tube holder kit (444-7047) consists of:

- Insert retainer
- Tube holder for 10 tubes of Ø 9 mm, 8 tubes of Ø 13 mm
- Tube holder for 8 tubes of Ø 14 mm, 8 tubes of Ø 19 mm
- Tube holder for 8 tubes of Ø 25/29 mm, 5 tubes of Ø 20 mm
- Two vessel harnesses (example, Erlenmeyer)
- Foam insert without holes

Attachment and foam inserts for microplates (444-0210):

- Set of two foam inserts for microplates (444-0219) and one insert retainer (444-7048)

Insert holder and foam inserts for microtubes (444-0209):

- Set of two foam inserts for microtubes (444-0218) and one insert retainer (444-7048)

Single tube holder (444-0217):

Fits all vortex shakers and holds tubes 64 to 114 mm length, minimum  $\emptyset$  19 mm. Hands-free mixing. Simple assembly, no tools required. Holds 15 or 50 ml centrifuge tubes.

Ampoule tube adapters (444-0212 and 444-0213)

Clamping devices for up to four vials or tubes. Two sizes available:

- For vials/tubes 15 to 17 mm Ø
- For vials/tubes 10 to 17 mm Ø
- \* Can only be used with insert retainer 444-7048
- \*\* Can only be used with tube holder 444-0217

Environmentally preferable attribute	Waste Reducing		
Description		Pk	Cat. No.
Ampoule tube adapters 10 - 17 mm Ø (detaile	rd above)	1	444-0213
Ampoule tube adapters 15 - 17 mm Ø (detaile	d above)	1	444-0212
Cup head and cup head cover complete, 76 r	nm Ø	1	444-0208
Cup head only, 76 mm Ø		1	444-7058
Foam insert for 9 – 13 mm Ø tubes (e.g. 5 ml ø	culture tubes)*	2	444-7051
Foam insert for 14 – 19 mm Ø tubes (e.g. 15 m	l centrifuge tubes)*	2	444-7052
Foam insert for 20 – 25 mm Ø tubes (e.g. 50 r	nl centrifuge tubes)*	2	444-7053
Foam insert for 48×0,25 - 2,0 ml microcentrifu	ige tubes, included in 444-0209*	2	444-0218
Foam insert microplate holder for 96-well pla	te or a deep well block, included in 444-0210*	2	444-0219
Foam insert, blank without holes*		2	444-0211
Head cover only for 444-7058, 76 mm Ø		1	444-7059
Holder for $12 \times 1,5/2,0$ microcentrifuge tubes (	included with pulsating vortex mixer 444-0205)	1	444-0214
Insert retainer that holds the accessories (tub	es, microplates, microtubes, etc) and the vessel harnesses	1	444-7048
Set of inserts to be used with insert retainer (4 1× foam insert without holes (444-0211); 1× foo 20 - 29 mm tubes (444-7053)	444-7048) consists of: Im insert to hold 9 - 13 mm tubes (444-7051); 1× foam insert to hold 14 - 19 mm tubes (444-7052); 1× foam insert to hold	1 SET	444-7049
Single tube holder for 15 and 50 ml tubes, ha	nds-free shaking, accommodates tube up to 15 cm long or adapter (444-0215 or 444-0216) for microtubes	1	444-0217
Small cup head		1	444-7060
Tube holder for 0,5 ml microtubes for continu	ous operation, holds 24 tubes**	1	444-0215
Tube holder for 1,5/2,0 ml microtubes for cont	inuous operation, holds 18 tubes**	1	444-0216
Tube holder kit with retainer (detailed above)		1	444-7047
Vessel harness for use with e.g. Erlenmeyer flo	asks*	2	444-7050



EU/CH: 444-0994 / UK: 444-0995



EU/CH: 444-0998 / UK: 444-0999



#### EU/CH: 444-1041 / UK: 444-1042

## MINI VORTEX MIXERS, VWR®

Ergonomic mini vortex mixers with features to suit different applications, these compact units provide optimum comfort and minimal stress.

- Continuous or touch mode operation (except fixed speed unit which has touch mode only)
- Can be used at 4 to 40 °C (maximum 85% relative humidity, non condensing), in an incubator,  $CO_2$  incubator or cold room
- Pulsing model has unique action which reduces heat generation and ensures efficient mixing and disruption
- Digital and pulsing units have timer, 1 s to 160 h

The analogue unit features low speed start up for gentle shaking or high speed vigorous mixing.

The fixed-speed unit starts mixing when the cup head is pressed down, it provides vigorous vortexing at full speed.

The digital model is ideal for applications that need reproducible results as the microprocessor control maintains the set speed. The timer displays elapsed time or can be programmed to a user-defined time limit and will switch off when elapsed time reaches zero.

The pulsing model provides powerful pulsing, ensuring complete cell disruption within minutes for glass bead procedures.

Supplied with 1830 mm power cord with EU and UK plug or CH adapter, cup head, 7,6 cm head and 7,6 cm rubber head cover, the pulsing vortex mixer is also supplied with a 1,5 to 2 ml microtube holder with built-in cup head.

Maximum speed will vary depending on which accessory is used.

- \* Can only be used with insert retainer 444-7048
- \*\* Can only be used with tube holder 444-0217

Model	Fixed speed	Analogue	Digital	Pulsing
Environmentally preferable attribute	Waste Reducing			
Motor input	150 W			
Orbit (mm)	4,9			2,5
Shaking motion	Orbital			
Speed range (min <sup>-1</sup> )	2500	300 - 2500	500 - 2500	
Weight (kg)	4,1			
W×D×H (mm)	112×178×135			

Description	Pk	Cat. No.
Fixed speed mini vortex mixer with EU plug (and CH adapter)	1	444-0994
Fixed speed mini vortex mixer with UK plug	1	444-0995
Analogue mini vortex mixer with EU plug (and CH adapter)	1	444-0996
Analogue mini vortex mixer with UK plug	1	444-0997
Digital mini vortex mixer with EU plug (and CH adapter)	1	444-0998
Digital mini vortex mixer with UK plug	1	444-0999
Pulsing mini vortex mixer with EU plug (and CH adapter)	1	444-1041
Pulsing mini vortex mixer with UK plug	1	444-1042
Description	Pk	Cat. No.
Accessories		

Accessories		
Ampoule tube adapters 10 - 17 mm Ø (detailed above)	1	444-0213
Ampoule tube adapters 15 - 17 mm Ø (detailed above)	1	444-0212
Cup head and cup head cover complete, 76 mm Ø	1	444-0208
Description	Pk	Cat. No.
---	-------	----------
Accessories		
Cup head only, 76 mm Ø	1	444-7058
Foam insert for 9 – 13 mm Ø tubes (e.g. 5 ml culture tubes)*	2	444-7051
Foam insert for 14 – 19 mm Ø tubes (e.g. 15 ml centrifuge tubes)*	2	444-7052
Foam insert for 20 – 25 mm Ø tubes (e.g. 50 ml centrifuge tubes)*	2	444-7053
Foam insert for 48×0,25 - 2,0 ml microcentrifuge tubes, included in 444-0209*	2	444-0218
Foam insert microplate holder for 96-well plate or a deep well block, included in 444-0210*	2	444-0219
Foam insert, blank without holes*	2	444-0211
Head cover only for 444-7058, 76 mm Ø	1	444-7059
Holder for 12 x 1,5/2,0 microcentrifuge tubes (included with pulsating vortex mixer 444-0205)	1	444-0214
Insert retainer that holds the accessories (tubes, microplates, microtubes, etc) and the vessel harnesses	1	444-7048
Set of inserts to be used with insert retainer (444-7048) consists of: 1× foam insert without holes (444-0211); 1× foam insert to hold 9 - 13 mm tubes (444-7051); 1× foam insert to hold 14 - 19 mm tubes (444-7052); 1× foam insert to hold 20 - 29 mm tubes (444-7053)	1 SET	444-7049
Single tube holder for 15 and 50 ml tubes, hands-free shaking, accommodates tube up to 15 cm long or adapter (444-0215 or 444-0216) for microtubes	1	444-0217
Small cup head	1	444-7060
Tube holder for 0,5 ml microtubes for continuous operation, holds 24 tubes**	1	444-0215
Tube holder for 1,5/2,0 ml microtubes for continuous operation, holds 18 tubes**	1	444-0216
Tube holder kit with retainer (detailed above)	1	444-7047
Vessel harness for use with e.g. Erlenmeyer flasks*	2	444-7050



#### **ROCKING PLATFORM SHAKER, VWR®**

Rocking platform shaker with low profile design can be used in most fume hoods and incubators. The cast aluminium base offers durability and stability, the spill resistant design channels fluids away from internal components. Precise speed control provides smooth, low speed rocking motion down to one min<sup>-1</sup>.

- Microprocessor control provides electronic tilt angle adjustment from zero to 15° while unit is operating
- LED display shows speed, tilt angle and time simultaneously
- Timer from 1 s to 160 h, with audible alarm when the time reaches zero
- Can be used at −10 to +60 °C (max. 80% relative humidity, non condensing) in cold rooms, incubators and CO<sub>2</sub> environments

Touch pad controls with easy to read LED display. Provides repeatable and accurate results every time and is easily visible across lab benches. Timer displays elapsed time or, when programmed to user-defined limit, will shut off unit when time reaches zero. Display will show last used settings, even after power has been turned off. Overload protection via audible and visual signals activate when system detects an obstruction or tray overload. Speed ramping feature slowly increases speed to desired set point to avoid splashing. Unit is ideal for cell culture work, staining and destaining gels, hybridisation procedures, haematology and blotting techniques.

Supplied with a 324×254 mm non slip rubber mat. Stacking tray must be ordered separately.

\* Note: Maximum speed/tilt angle may vary with heavy or unbalanced loads.

\*\* Centred on tray.

Model	Rocking platform shaker	
Angle	0 - 15°	
Max. load	4,5 kg**	
Platform W×D	254×324 mm	
Shaking motion	Rocking	
Speed range (min <sup>-1</sup> )	1 - 50*	
Weight (kg)	6,5	
W×D×H (mm)	279×432×127	
Description	Pk	Cat. No.
Description Rocking platform shaker, CH-plug	Pk 1	Cat. No. 444-0758
Description Rocking platform shaker, CH-plug Rocking platform shaker, UK-plug	Pk 1 1	Cat. No. 444-0758 444-0757
Description Rocking platform shaker, CH-plug Rocking platform shaker, UK-plug Rocking platform shaker, EU-plug	Pk 1 1 1 1	Cat. No. 444-0758 444-0757 444-0756
Description Rocking platform shaker, CH-plug Rocking platform shaker, UK-plug Rocking platform shaker, EU-plug	Pk           1           1           1           1	Cat. No. 444-0758 444-0757 444-0756
Description Rocking platform shaker, CH-plug Rocking platform shaker, UK-plug Rocking platform shaker, EU-plug Description	Pk           1           1           1           1           1           Pk	Cat. No. 444-0758 444-0757 444-0756 Cat. No.
Description         Rocking platform shaker, CH-plug         Rocking platform shaker, UK-plug         Rocking platform shaker, EU-plug         Description         Accessories	Pk           1           1           1           1           1           Pk	Cat. No. 444-0758 444-0757 444-0756 Cat. No.
Description           Rocking platform shaker, CH-plug           Rocking platform shaker, UK-plug           Rocking platform shaker, EU-plug           Description           Accessories           Spare dimpled mat to prevent tubes from rolling	around Pk	Cct. No. 444-0758 444-0757 444-0756 Cct. No. 444-0768



#### **DISPOSABLE WEIGHING BOATS, VWR®**

PS, diamond.

- Wide, flat bottom avoids tipping
- Temperature resistant up to +70 °C

These flexible boats feature smooth surfaces to provide accurate pour-out with minimal sample loss. They are ideal for use with microwaves and moisture analysers.

They are produced and packed in plastic bags in a cleanroom.

Capacity (ml)	W×D×H (mm)	Colour	Pk	Cat. No.
Anti-static				
5	53×33×6	Black	500	611-1995
25	67×47×14	Black	500	611-9190
30	78×56×14	Black	500	611-9191
100	115×85×17	Black	500	611-9192
5	53×33×6	White	500	611-1994
25	67×47×14	White	500	611-9187
30	78×56×14	White	500	611-9188
100	115×85×17	White	500	611-9189



#### **DISPOSABLE WEIGHING BOATS**

PS, square.

- Shallow form with wide, flat bottom avoids tipping
- Rounded corners simplify transfer
- Temperature resistant up to +70 °C

These flexible weighing boats, with smooth surfaces, enable accurate pour-out with minimal sample loss. They are biologically inert and resistant to dilute and weak acids, aqueous solutions, alcohols and bleaches. Ideal for use with microwaves, balances or moisture analysers.

These weighing boats are produced and packed in plastic bags in a cleanroom.

Capacity (ml)	W×D×H (mm)	Colour	Pk	Cat. No.
Anti-static				
7	46×46×8	White	500	611-9178
7	46×46×8	Blue	500	611-3113
7	46×46×8	Black	500	611-9181
100	85×85×24	White	500	611-9179
100	85×85×24	Blue	500	611-3114
100	85×85×24	Black	500	611-9182
250	140×140×22	White	500	611-9180
250	140×140×22	Blue	500	611-3115
250	140×140×22	Black	500	611-9183



#### **POUR-BOAT WEIGHING DISHES**

PS.

- Flat bottom avoids tipping
- Temperature resistant to +70 °C
- Maximise recovery of often very expensive chemicals
- Biologically inert and resistant to dilute and weak acids, aqueous solutions, alcohols and bases

Samples are easily dispensed with the pour spout design without flexing the dish. These flat bottomed dishes are made from 0,3 mm thick polystyrene for better strength, stability and handling.

The anti-static versions help reduce the risk of static build up on samples, and helps maximise sample transfer when weighing out products.

These weighing boats are produced and packed in plastic bags in a cleanroom.

Description	W×D×H (mm)	Colour	Pk	Cat. No.
Anti-static				
Small	43×58×13	White	500	611-3116
Medium	83×132×26	White	500	611-3117
Large	108×183×26	White	500	611-3118



Weighing boat, sterile

#### WEIGHING BOATS, STERILE

These disposable boats are flexible and feature smooth surfaces to provide accurate pour-outs with minimal sample loss. Ideal for applications where there is concern of cross-contamination and 'clean' is a necessity in life science research, food, biopharmaceutical, environmental and molecular research environments. Manufactured from FDA food grade PS and packed in a cleanroom.

- Electron beam sterilised
- Lot number traceability for quality assurance
- Biologically inert and resistant to dilute and weak acids, aqueous solutions, alcohols, and bases
- Temperature range -10 to +70 °C
- Wide flat bottoms ensure stability and prevent tipping
- Rounded corners allow simple flexing for controlled pouring of liquid, powdered or granular samples
- Flat bottoms and sloping sides allow easy stacking for convenient storage

Ideal for weighing, dispensing, or storing applications. Can be used with microwave moisture analysers.

Certificate of Sterility available upon request.

Easy tear packaging makes handling quick and efficient.

Capacity (ml)	Size	Dimensions (mm)	Colour	Pk	Cat. No.
85	Medium	85×85×24	White	200	611-4672



Dual-purpose, anti-static scoops

#### DUAL-PURPOSE SCOOPS, STERILE AND NON STERILE

The dual-purpose scoops are a unique economical solution that combines the function of a scoop and a weighing boat into one product. They are made from anti-static polystyrene that is waterproof and reduces the chance of materials sticking to the scoop.

- Ships and stores flat, and when ready to use, is easy to assemble by inserting the locking tab into the hole
- Locking tab feature enables the scoop shape to help retain materials
- Broad tip design keeps the scoop stable while on the scales and enables materials to be easily scooped and dispensed
- Coated to stand up to powders, gels and semi-solids
- Scoop can be used flat as an alternative to weighing paper
- Electron beam sterilised scoops are ideal for biologically-sensitive applications

The weighing process has been streamlined. Now, just sample or retrieve the material in the scoop and place it directly on the scales. This eliminates the need for a weighing boat or weighing paper and saves valuable space in the laboratory. When finished the dual-solution scoop is disposable.

Certificate of Sterility available upon request for sterile scoops. The dosage requirements for electron beam sterilisation that results in sterilised products is determined by procedures that are compliant with ISO 11137-3:2017.

Туре	Length (mm)	Width (mm)	Sterile	Colour	Pk	Cat. No.
Small	127	63	-	White	100	611-4350
Large	127	90	-	White	100	611-4349



Semi-micro balance

#### SEMI-MICRO BALANCES VWR® TS PROFESSIONAL: TOUCH SCREEN

Semi-micro balances that have 5» colour touch screen display with advanced applications and large databases for professional weighing. The user has easy, intuitive access to balance functions, via interactive, icon-driven menus ensuring efficient and productive weighing. Balances can be used by up to 10 different users, each with their own customisable settings and password protection. Ideal for laboratories requiring GLP compliance. All models have a stainless steel top pan.

- Internal and external calibration (optional factory calibration certificate)
- Multiple languages (English, German, French, Italian, Spanish or Portuguese)
- Check weighing, statistics, dynamic weighing, formulation and advanced piece counting function with statistics report
- Advanced density function, with density index calculation for quality assessment of metals
- Special textile function to measure fibres/filaments (cotton, linen, wool, nylon and polyester) with statistics report
- Serial output for connection to printer, USB port for database import or export and test results

User can choose three options for models with internal calibration (denoted by 'i' at end of the model's name):

Balance will calibrate using the internal weight by pressing CAL button

Balance will automatically recalibrate when ambient temperature changes and/or after a certain time has passed (Incal+)

The user can choose to calibrate the balance with an external weight

EN 61326-1:2013, EN 61010-1:2010, EN 61010-2-010:2014, EN 50581:2012

Supplied with plastic in use protective cover.

Models with suffix D have dual-range, 'i' denotes internal calibration and C denotes calibration certificate.

Model	Weighing cap. (g)	Linearity (mg)	Pan/platform size (mm)	Readability (mg)	Pk	Cat. No.	
Models without factory calibration certificate							
TS 425i	42	±0,05	Ø 80	0,01	1	611-3663	
TS 1265Di	62 / 120	±0,08 / ±0,2	Ø 80	0,01 / 0,1	1	611-3664	
TS 2285Di	82 / 220	±0,1 / ±0,2	Ø 80	0,01 / 0,1	1	611-3666	

#### **GENERAL EQUIPMENT** BALANCES AND ACCESSORIES

Model	Weighing cap. (g)	Linearity (mg)	Pan/platform size (mm)	Readability (mg)	Pk	Cat. No.
<b>Models without factory</b>	calibration certificate					
TS 2215Di	102 / 220	±0,1 / ±0,2	Ø 80	0,01 / 0,1	1	611-3667
Models with factory cal	ibration certificate					
TS 425i-C	42	±0,05	Ø 80	0,01	1	611-3668
TS1265Di-C	62 / 120	±0,08 / ±0,2	Ø 80	0,01 / 0,1	1	611-3669
TS 2285Di-C	82 / 220	±0,1 / ±0,2	Ø 80	0,01 / 0,1	1	611-3671
TS 2215Di-C	102 / 220	±0,1 / ±0,2	Ø 80	0,01 / 0,1	1	611-3672
Description					Pk	Cat. No.
Dot printer for VWR ba	lances					
TX-110 dot printer for bo	lances				1	611-4790

TX-110 dot printer for balances

Roll of paper



#### ANALYTICAL BALANCES VWR® TA PROFESSIONAL: TOUCH SCREEN

Laboratory analytical balances that have 5» colour touch screen display with advanced applications and large databases for professional weighing. The user has easy and intuitive access to balance functions, via interactive, icon-driven menus ensuring efficient and productive weighing. Balances can be used by up to 10 different users, each with their own customisable settings and password protection. Ideal for laboratories requiring GLP compliance. All models have a stainless steel top pan.

- Internal and external calibration (optional factory calibration certificate)
- Multilanguage (English, German, French, Italian, Spanish or Portuguese)
- Check weighing, statistics, dynamic weighing, formulation and advanced piece counting function with statistics report
- Advanced density function, with density index calculation for quality assessment of metals
- Special textile function to measure fibres/filaments (cotton, linen, wool, nylon, polyester) with statistics report
- Serial output for connection to printer, USB port for database import or export and test results

Models with built-in ioniser, denoted by -ION, ensure accurate sample preparation. Static charges accumulate in different samples that are routinely weighed in the laboratory. These static charges can build up and alter the weighing value. By blowing ions, the built-in ioniser neutralises static electricity and within seconds the sample is ready to be weighed. The balance calibration system automatically calibrates the balance when there is a temperature change or at a set period of time (factory settings), this ensures accurate measurements even if the user has not manually calibrated the balance.

User can choose three options for models with internal calibration (denoted by 'i' at end of the model name):

Balance will calibrate using the internal weight by pressing CAL button

Balance will automatically recalibrate when ambient temperature changes and/or after a certain time has passed (Incal+)

The user can choose to calibrate the balance with an external weight.

EN 61326-1:2013, EN 61010-1:2010, EN 61010-2-010:2014, EN 50581:2012

Supplied with plastic in use protective cover.

Model	Weighing cap. (g)	Linearity (mg)	Pan/platform size (mm)	Readability (mg)	Pk	Cat. No.
Models without factory calibrat	ion certificate					
TA 224i	220	±0,3	Ø 80	0,1	1	611-3674
TA 314i	310	±0,4	Ø 80	0,1	1	611-3676
TA 414i	410	±0,5	Ø 80	0,1	1	611-3677
TA 614i	610	±0,6	Ø 80	0,1	1	611-3679
Models with factory calibration	certificate					
TA 224i-C	220	±0,3	Ø 80	0,1	1	611-3681
TA 314i-C	310	±0,4	Ø 80	0,1	1	611-3683
TA 414i-C	410	±0,5	Ø 80	0,1	1	611-3684
TA 614i-C	610	±0,6	Ø 80	0,1	1	611-3686
Description		For			Pk	Cat. No.
Accessories						

TLP-50 printer (630-1485)

vwr.com | Cell Culture solutions from Avantor 113

1 Roll

611-3662



Semi-micro balance with LCD and ioniser

#### SEMI-MICRO BALANCES WITH IONISER, SM AND SMG SERIES, VWR®

Semi-micro balances with resolution of 0,01 mg and a built-in ioniser, which ensures accurate sample preparation. Static charges accumulate in different samples that are routinely weighed in the laboratory. These static charges can build up and alter the weighing value. By blowing ions, the built-in ioniser neutralises static electricity and within seconds the sample is ready to be weighed. The balance calibration system automatically calibrates the balance when there is a temperature change or at a set period of time (factory settings), this ensures accurate measurements even if the user has not manually calibrated the balance. All models have a stainless steel top pan.

- Integrated weighing sensor for enhanced stability and quick response time
- Selectable filter levels and measuring units
- Check weighing (alarm function), weight totalising, piece counting functions and density determination
- Automatic internal calibration and RS232 connection as standard (optional factory calibration certificate)
- Large graphic display available, includes GLP procedures, time/date, formulation with database capability and multi-language options

Balances are equipped with a new highly integrated electromagnetic cell. All models feature automatic internal calibration and are characterised by a high level of precision and repeatability. These VWR semi-micro balances provide an excellent price/performance ratio, thanks to continuous intensive research and study of how weighing works.

EN 61326-1:2013, EN 61010-1:2010, EN 61010-2-010:2014, EN 50581:2012

Optional Tablet System (611-8683) is suitable for use with models denoted with \*.

Supplied with mains adapter and universal plug suitable for use in EU and UK and plastic in use protective cover. Optional accessories include density determination kit and serial printer.

Models with suffix D have dual-range, i denotes internal calibration and C denotes calibration certificate.

1 Roll

611-3714

Model	Weighing cap. (g)	Linearity (mg)	Pan/platform size (mm)	Readability	Pk	Cat. No.
Models without a factory calibr	ation certificate					
SM 625i-ION *	62	±0,08	Ø 80	0,01 mg	1	611-4284
SM 1265Di-ION *	62 / 120	±0,08 / ±0,2	Ø 80	0,01 / 0,1 mg	1	611-3800
SM 2285Di-ION*	82 / 220	±0,1 / ±0,2	Ø 80	0,01 / 0,1 mg	1	611-3801
SMG 1265Di-ION *	62 / 120	±0,08 / ±0,2	Ø 80	0,01 / 0,1 mg	1	611-3806
SMG 2285Di-ION *	82 / 220	±0,1 / ±0,2	Ø 80	0,01 / 0,1 mg	1	611-3807
Models with a factory calibration	on certificate					
SM 625i-ION-C *	62	±0,08	Ø 80	0,01 mg	1	611-4294
SM 1265Di-ION-C *	62 / 120	±0,08 / ±0,2	Ø 80	0,01 / 0,1 mg	1	611-3803
SM 2285Di-ION-C *	82 / 220	±0,1 / ±0,2	Ø 80	0,01 / 0,1 mg	1	611-3804
SMG 1265Di-ION-C*	62 / 120	±0,08 / ±0,2	Ø 80	0,01 / 0,1 mg	1	611-3809
SMG 2285Di-ION-C *	82 / 220	±0,1/±0,2	Ø 80	0,01 / 0,1 mg	1	611-3810
Description		For			Pk	Cat. No.

Printer (611-3623)

Paper roll for thermal printer



Semi-micro balance

#### SEMI-MICRO BALANCES, TS PROFESSIONAL SERIES, VWR®

These semi-micro balances with 5» colour touch screen display and built-in ioniser ensure accurate sample preparation. Static charges accumulate in different samples that are routinely weighed in the laboratory. These static charges can build up and alter the weighing value. By blowing ions, the built-in ioniser neutralises static electricity and within seconds the sample is ready to be weighed. The balance calibration system automatically calibrates the balance when there is a temperature change or at a set period of time (factory settings), this ensures accurate measurements even if the user has not manually calibrated the balance.

- Internal calibration and RS232 connection as standard (optional factory calibration certificate)
- Multiple languages (English, German, French, Italian, Spanish or Portuguese)
- Check weighing, statistics, dynamic weighing, formulation and advanced piece counting function with statistics report
- Advanced density function, with density index calculation for quality assessment of metals
- Special textile function to measure fibres/filaments with statistics report
- Serial output for connection to printer, USB port for database import or export and test results

Balances feature advanced applications and large databases for professional weighing. The user has easy and intuitive access to balance functions, via interactive, icon-driven menus ensuring efficient and productive weighing. Balances can be used by up to 10 different users, each with their own customisable settings and password protection. Ideal for laboratories requiring GLP compliance.

#### EN 61326-1:2013, EN 61010-1:2010, EN 61010-2-010:2014, EN 50581:2012

Supplied with mains adapter and universal plug suitable for use in EU and UK. Optional accessories include density determination kit and serial printer.

Models with suffix D have dual-range, i denotes internal calibration and C denotes calibration certificate.

Model	Weighing cap. (g)	Linearity (mg)	Pan/platform size (mm)	Readability	Pk	Cat. No.	
Models without a factory calibration certificate							
TS 1265Di-ION	62 / 120	±0,08 / ±0,2	Ø 80	0,01 / 0,1 mg	1	611-3811	
TS 2285Di-ION	82 / 220	±0,1 / ±0,2	Ø 80	0,01 / 0,1 mg	1	611-3812	
Models with a factory calibratio	n certificate						
TS 1265Di-ION-C	62 / 120	±0,08 / ±0,2	Ø 80	0,01 / 0,1 mg	1	611-3813	
TS 2285Di-ION-C	82 / 220	±0,1 / ±0,2	Ø 80	0,01 / 0,1 mg	1	611-3814	



Precision balance, circular draft shield

### PRECISION BALANCES, PROFESSIONAL TP / TPW SERIES WITH TOUCH SCREEN, VWR<sup>®</sup>

VWR Professional precision balances are ideal for wide range of laboratory weighing tasks, they have been designed for multi-user environments (each user profile has password protection). These interactive balances, which feature an internal database to store data and drying methods, help improve efficiency and productivity. All professional models have a 5» touch screen with icon-driven menu, qwerty touch keypad and a stainless steel top pan. Models are GLP set-up, storing balance, project and user identification data, as well as date and time. GLP information can be also printed out with results, a statistics printout is available even without a statistical printer.

- Selectable filter levels and user can select the measuring unit that the balance will use to display the weight
- Electromagnetic force restoration or high resolution load cells for accurate weighing
- RS232 and USB data interface allows import/export of data
- Optional integrated ioniser at the rear of the balance
- Live colour indication for check weighing
- Easy to operate and have multiple languages: English, German, French, Italian, Spanish and Portuguese, different users can set different use preferences, each user account is password protected

Functions include suspended weighing, piece counting, percentage weighing, check weighing, density determination, totalisation and statistics function, formulation, textile (thread measuring), maximum load (peak hold) function, animal weighing, internal database to store parameters, settings and recipes.

The user can choose three options for models with internal calibration (denoted by 'i' at end of the model name): Balance will calibrate using the internal weight by pressing CAL button. Balance will automatically recalibrate when ambient temperature changes and/or after a certain time has passed (Incal+). The user can choose to calibrate the balance with an external weight.

Models with pipette check function allow you to easily check the tolerances of pipettes in the laboratory following ISO 8655 directive procedures, or lets you define a standard operating procedure. These models have repeatability of 0,001 g and a stabilisation time of  $\leq$ 2 seconds.

EN 61326-1:2013, EN 61010-1: 2010, EN 61010-2-010:2014, EN 50581:2012. verified and approved models comply with the Harmonised Standard EN 45501.

Balances with suffix D have dual-range, suffix i denotes internal calibration. Models with suffix -C are delivered with factory calibration certificate, suffix -M denotes approved or verified models and suffix -P denotes units are complete with trap kit for pipette calibration. Models with prefix W indicates a three door draft shield. TP models do not have a draft shield.

Supplied with plastic in use protective cover. A wide range of accessories including printer, software and PC connection cable are available and must be purchased separately. These balances are also available with a calibration certificate.

Note: Balances are now supplied without an internal battery to meet recent transport regulations. An optional external rechargeable battery (611-8684) may be purchased for portable operation of models. The following models can work with external battery pack (611-8684): 611-3688, 611-3689, 611-3690, 611-3692, 611-3695, 611-3698, 611-3701, 611-3703, 611-3704, 611-3706, 611-3826, 611-3827, 611-4339 and 611-4340.

Model	Weighing cap. (g)	Linearity (mg)	Pan/platform size (mm)	Readability (g)	Repeatability	Pk	Cat. No.
TPW touch screen balances with automatic internal calibration (3-door draft shield)							
TPW 313i	310	±3	Ø 110	0,001	0,0006 g	1	611-3688
TPW 523i	520	±2	Ø 110	0,001	0,001 g	1	611-3689
TPW 723i	720	±2	Ø 110	0,001	0,001 g	1	611-3690
TPW 1203i	1200	±3	Ø 110	0,001	0,001 g	1	611-3857
TPW 2103i	2100	±5	Ø 110	0,001	0,001 g	1	611-3858

Model	Weighing cap. (g)	Linearity (mg)	Pan/platform size (mm)	Readability (g)	Repeatability	Pk	Cat. No.
TPW touch screen balanc	TPW touch screen balances with automatic internal calibration (3-door draft shield)						
TPW touch screen balanc	TPW touch screen balances with automatic internal calibration and factory calibration certificate (3-door draft shield)						
TPW 313i-C	310	±3	Ø 110	0,001	0,0006 g	1	611-3692
TPW 523i-C	520	±2	Ø 110	0,001	0,001 g	1	611-3693
TPW 723i-C	720	±2	Ø 110	0,001	0,001 g	1	611-3694
TPW 1203i-C	1200	±3	Ø 110	0,001	0,001 g	1	611-3861
TPW 2103i-C	2100	±5	Ø 110	0,001	0,001 g	1	611-3862
TP touch screen balances	with automatic internal ca	libration (without draft shie	ld)				
TP 6202i	6200	±30	Ø 160	0,01	0,01 g	1	611-3697
TP touch screen balances	with automatic internal ca	libration and factory calibre	ation certificate (without dre	aft shield)			
TP 6202i-C	6200	±30	Ø 160	0,01	0,01 g	1	611-3700
TP touch screen balances	with external calibration (v	vithout draft shield)					
TP 2202	2200	±30	Ø 160	0,01	0,01 g	1	611-3695
TP 4202	4200	±30	Ø 160	0,01	0,01 g	1	611-3696
TP 6501	6500	±100	195×175	0,1	0,05 g	1	611-3701
TP 20001	20000	±400	195×175	0,1	0,1 g	1	611-3703
TP touch screen balances with external calibration and factory calibration certificate (without draft shield)							
TP 2202-C	2200	±30	Ø 160	0,01	0,01 g	1	611-3698
TP 4202-C	4200	±30	Ø 160	0,01	0,01 g	1	611-3699
TP 6501-C	6500	±100	195×175	0,1	0,05 g	1	611-3704
TP 20001-C	20000	±400	195×175	0,1	0,1 g	1	611-3706



#### **DRESSING FORCEPS, ABS, VWR®**

Made of ABS (acrylonitrile butadiene styrene), purple.

- Temperature resistance: -15 to +50 °C
- Available in sterile or non sterile versions
- EO sterilisation: Meets minimum requirement of SAL 10<sup>-6</sup> (ISO 11137)

Shelf life: Expiration date is based on product and packaging shelf life, providing the product wrapper is not damaged.

Meets the requirements of BSE/TSE. Manufactured under the ISO 13485 standard.

Туре	Length (mm)	Colour	Thickness (mm)	Width (mm)	Packed	Pk	Cat. No.
Sterile	110	Purple	1,5	9,9	Individually packed	100	232-0219
Sterile	130	Purple	1,6	13	Individually packed	100	232-0221
Non sterile	110	Purple	1,5	9,9	100 per bag	100	232-0218
Non sterile	130	Purple	1,6	13	100 per bag	100	232-0220



Precision balance

#### PRECISION BALANCES, PREMIUM SERIES, VWR®

A selection of 36 high level balances offering high accuracy and repeatability combined with easy, intuitive operation and a large touch screen for applications in the laboratory, industrial and educational settings.

- Highly accurate results (high-end weighing technology)
- Fast stabilisation times
- Easy to clean
- High chemical resistance
- Control panel with high resolution, touch screen functionality and eight language options
- Overload protection
- Future-proof USB type C interface
- Under bench weighing
- Data transfer as PC spreadsheet, PC text and Ascii protocols
- Six built-in applications with GLP/GMP compliant data output: Weighing and dosing, counting, percentage weighing, density determination, mass unit conversion and animal weighing

These high-quality balances have a polybutylene terephthalate (PBT) housing, which has excellent chemical resistance. The control unit is made of glass and has intuitive operation and a large touch screen. The weighing pan is stainless steel. All Precision models (PBA) have a glass draft shield with convenient access to the weighing pan. This draft shield is specially coated to minimise weighing errors from electrostatically charged samples. Precision models with readability of 10 or 1000 mg do not have draft shields.

Models with internal 'One-Touch-Calibration' are denoted by I in the model name.

FC models are supplied with a factory calibration certificate.

EN 61326-1:2013, EN 61010-1: 2010, EN 61010-2-010:2014, EN 50581:2012, IEC 60664-1

Model	Weighing cap. (g)	Linearity (mg)	Pan/platform size (mm)	Readability (mg)	Repeatability (mg)	Pk	Cat. No.
<b>Balances with extern</b>	al calibration						
PBP423-1S	420	±2	Ø 120	1	±1	1	611-4801
PBP623-1S	620	±2	Ø 120	1	±1	1	611-4805
PBP2202-1S	2200	±20	Ø 180	10	±10	1	611-4809
PBP4202-1S	4200	±20	Ø 180	10	±10	1	611-4813
PBP6202-1S	6200	±20	Ø 180	10	±10	1	611-4817
PBP2201-1S	2200	±300	Ø 180	100	±100	1	611-4821
PBP5201-1S	5200	±300	Ø 180	100	±100	1	611-4825
PBP8201-1S	8200	±300	Ø 180	100	±100	1	611-4829
PBP8200-1S	8200	±1000	Ø 180	1000	±1000	1	611-4833
<b>Balances with extern</b>	al calibration and factory co	libration certificate					
PBP423-1S-FC	420	±2	Ø 120	1	±1	1	611-4803
PBP623-1S-FC	620	±2	Ø 120	1	±1	1	611-4807
PBP2202-1S-FC	2200	±20	Ø 180	10	±10	1	611-4811
PBP4202-1S-FC	4200	±20	Ø 180	10	±10	1	611-4815
PBP6202-1S-FC	6200	±20	Ø 180	10	±10	1	611-4819
PBP2201-1S-FC	2200	±300	Ø 180	100	±100	1	611-4823
PBP5201-1S-FC	5200	±300	Ø 180	100	±100	1	611-4827
PBP8201-1S-FC	8200	±300	Ø 180	100	±100	1	611-4831
PBP8200-1S-FC	8200	±1000	Ø 180	1000	±1000	1	611-4835
Balances with interne	al calibration						
PBP423i-1S	420	±2	Ø 120	1	±1	1	611-4802
PBP623i-1S	620	±2	Ø 120	1	±1	1	611-4806
PBP2202i-1S	2200	±20	Ø 180	10	±10	1	611-4810
PBP4202i-1S	4200	±20	Ø 180	10	±10	1	611-4814
PBP6202i-1S	6200	±20	Ø 180	10	±10	1	611-4818
PBP2201i-1S	2200	±300	Ø 180	100	±100	1	611-4822
PBP5201i-1S	5200	±300	Ø 180	100	±100	1	611-4826
PBP8201i-1S	8200	±300	Ø 180	100	±100	1	611-4830
PBP8200i-1S	8200	±1000	Ø 180	1000	±1000	1	611-4834
Balances with interne	al calibration and factory ca	libration certificate					
PBP423i-1S-FC	420	±2	Ø 120	1	±1	1	611-4804
PBP623i-1S-FC	620	±2	Ø 120	1	±1	1	611-4808
PBP2202i-1S-FC	2200	±20	Ø 180	10	±10	1	611-4812
PBP4202i-1S-FC	4200	±20	Ø 180	10	±10	1	611-4816

#### **GENERAL EQUIPMENT** BALANCES AND ACCESSORIES

Model	Weighing cap. (g)	Linearity (mg)	Pan/platform size (mm)	Readability (mg)	Repeatability (mg)	Pk	Cat. No.
Balances with external cal	ibration						
PBP6202i-1S-FC	6200	±20	Ø 180	10	±10	1	611-4820
PBP2201i-1S-FC	2200	±300	Ø 180	100	±100	1	611-4824
PBP5201i-1S-FC	5200	±300	Ø 180	100	±100	1	611-4828
PBP8201i-1S-FC	8200	±300	Ø 180	100	±100	1	611-4832
PBP8200i-1S-FC	8200	±1000	Ø 180	1000	±1000	1	611-4836

Description	Pk	Cat. No.
Dot printer for VWR balances		
TX-110 dot printer for balances	1	611-4790
Accessories for Sartorius balances		
Data cable RS232 9-pin (male) to USB type A. To connect laboratory balances such as VWR Premium balance product family PBA and PBP and Sartorius product family Entris® to a computer via RS232 interface. Length: approx. 1,5 m, Colour: black	1	611-4920
Data cable USB type C to USB type A. To connect laboratory balances such as VWR Premium balance product family PBA and PBP and Sartorius product family Entris® to a computer via USB interface. Length: approx. 1,5 m, Colour: black	1	611-4918
Data cable USB type C to USB type B. To connect laboratory balances such as VWR Premium balance product family PBA and PBP and Sartorius product family Entris® to a printer or a second display via USB interface. Length: approx. 1,5 m, Colour: black	1	611-4919
Kensington security lock cable	1	611-4916
Spare parts		
Dust cover, XXL, for BI and TR 500 PH, 600×530 mm	1	630-0876
F1 weights in plastic cases with certificate		
	1	611-8250
	1	611-8251



#### **CALIBRATION WEIGHTS, CLASS F1, VWR®**

Weights made from anti-magnetic, polished stainless steel. Suitable for medium resolution precision electronic balances. Weights have adjustment cavities for weights of more than 20 g.

- Wire weights up to 500 mg in cobalt alloy
- Identification number guarantees traceability for weights from 1 g upwards
- Laser engraving improves legibility of the markings
- Available with or without COFRAC certificate

Conform to OIML R111 recommendations.

All weights from 1 mg to 20 kg are available with or without COFRAC certificate please visit vwr.com or contact your local Avantor sales office. A range of weight sets are also available - please search for product 'Calibration weight sets, Class F1'.

Plastic cases have a vacuum sealed protective film to ensure that the case and calibration weight are protected during transportation.

Weight	Tolerance (± mg)	Pk	Cat. No.
F1 weights in plastic cases with certificate			
2 kg	10	1	611-8250
5 kg	25	1	611-8251



TX-110 dot printer for balances

#### DOT PRINTER FOR VWR BALANCES

The TX-110 provides high speed dot printing and features a 184×64 OLED display.

- Printouts are suitable for long-term preservation
- ISO/GLP compliant data printout
- Built-in real-time clock
- Sample name and batch number can be input and printed
- Sum, mean and formulation function

Description	Pk	Cat. No.
TX-110 dot printer for balances	1	611-4790



CO 3100 L

#### CONDUCTIVITY/TDS/°C METER, BENCH, PHENOMENAL® CO 3100L, VWR®

This user friendly instrument, with articulated electrode stand and IP 43-rated housing, provides high resolution and accuracy for precise measurements. Complete with USB output for connection to a computer. GLP compliant.

- Large graphic LCD with continuous LED backlight showing both conductivity/TDS and temperature values simultaneously
- Data logging function selectable between 1 min and 1 h; memory capacity of 5000 data sets
- Automatic power shut-off: Adjustable from 10 min to 24 h
- Advanced self-test and diagnostics (electrode efficiency diagnostic, drift control); calibration symbol shows when re-calibration is required
- Low energy consumption. Choice of mains supply or 4× AA batteries for over 1000 operating hours

Ready to use conductivity CO 3100L kit includes instrument, conductivity probe CO 11 with built-in temperature sensor, 1,5 m cable and articulated stand, conductivity standard and plastic beaker and instruction manual (22 languages) on CD ROM.

Conductivity probes for low conductivities are available on request. Please contact your local Avantor sales office for further information.

Model	CO 3100L		
Conductivity range	0,001 µS/cm - 1000 mS/cm		
Conductivity resolution	Up to 0,001 µS/cm (depending on probe)		
Conductivity accuracy	±0,5% of measured value		
Conductivity cell constant	0,001 - 25 (depending on probe)		
Conductivity calibration	1 point		
Resistivity range	1,000 Ω/cm - 999,9 MΩ/cm		
Resistivity resolution	0,001 Ω/cm - 0,1 MΩ/cm		
Resistivity accuracy	±0,5% of measured value		
Salinity range	0,00 - 70 ppt		
TDS range	0 - 1999 mg/L / 2,00 - 19,99 g/L / 20,0 - 199,9 g/L		
TDS resolution	1 mg/L / 0,01 g/L / 0,1 g/L		
TDS accuracy	±0,5% of measured value		
Temperature range (°C)	-5+105,0		
Temperature resolution (°C)	0,1		
Temperature accuracy (°C)	±0,2		
Temperature compensation	Automatic and manual: 0,000 - 10,000%/K (linear or non linear); or no compensation		
Display	Graphic LCD with LED backlight		
Data logging capacity	5000 data sets		
Data logging - log function	Selectable between 1 min and 1 h		
Connections	8-pin connection for conductivity and temperature		
Outputs	Watertight (IP 43) USB connection (slave, bidirectional)		
Power supply	4× AA batteries or mains supply		
Compliance	IP 43 / GLP		
Description	Pk Cat No		

Description				Pk	Cat. No.
Bench conductivity/TDS/°C meter CO 3	3100L, pHenomenal			1 SET	663-0233
Description	Conductivity	Cell constant	Connection	Pk	Cat. No.
Conductivity cell, pHenomenal®					
pHenomenal CO11, 2-pole graphite, integrated NTC 30	10 µS/cm - 20	0,84 cm <sup>-1</sup>	8 pin, 1,5 m cable	1	663-0147
Accessories					
pHenomenal electrode stand, holds up to 4 electrodes + 1 temperature sensor				1	662-1169



#### pH/MV/°C METER, BENCH, PHENOMENAL® pH 1100 L, VWR®

This user friendly instrument, with articulated electrode stand and IP 43-rated housing, provides high resolution and accuracy for precise measurements. Complete with USB output for connection to a computer. GLP compliant.

- Large graphic LCD with continuous LED backlight showing both pH/mV and temperature value simultaneously
- Data logging function selectable between 1 min and 1 h; memory capacity of 5000 data sets
- Automatic power shut-off: Adjustable from 10 min to 24 h
- Automatic buffer recognition of DIN and NIST buffers (1,68 / 4,00 / 6,86 / 9,18 / 12,54)
- Three additional technical buffers at 25 °C (4,00 / 7,00 / 10,00) in memory
- Advanced self-test and diagnostics (electrode efficiency diagnostic, drift control); calibration symbol shows when recalibration is required
- Low energy consumption. Choice of mains supply or 4× AA batteries for over 1000 operating hours
- Low battery indicator

Ready to use pH 1100 L kit includes instrument, glass pH electrode with built-in 221 temperature sensor, 1 m cable and articulated stand, 2× buffers (4,00 / 7,00), plastic beaker and instruction manual (22 languages) on CD ROM.

The life science kit pH 1100LB includes the LS 221 Biotech electrode with 1 m cable instead of the 221 electrode.

Model	pH 1100LB		
pH range	-2,000+20,000		
pH resolution	0,1 / 0,01 / 0,001 (selectable)		
pH accuracy	±0,1 / ±0,01 / ±0,005		
pH calibration	Up to 5 points		
Automatic buffer recognition	VWR® Chemicals TITRINORM® buffers at 25 °C: 4,00 / 6,98 / 9,94 NIST / DIN 19266 (1,68 / 4,00 / 6,86 / 9,18 / 12,54) Technical buffers at 25 °C: 4,00 / 7,00 / 10,00		
mV range	±1200,0 / ±2500		
mV resolution	0,1 / 1 (selectable)		
mV accuracy	±0,3 / ±1		
Temperature range	Auto: -5,0+105,0 °C; manual: -25+130 °C		
Temperature resolution	0,1/1 °C		
Temperature accuracy	±0,2 °C		
Temperature compensation	Auto / manual		
Data logging capacity	5000 data sets		
Data logging - log function	Selectable between 1 min and 1 h (selectable intervals: 1 s, 5 s, 10 s, 30 s, 1 min, 5 min, 10 min, 15 min, 30 min, 60 min)		
Display	Graphic LCD with LED backlight		
Connections	BNC for pH / banana for temperature		
Power supply	Mains or 4× AA batteries		
Compliance	IP 43 / GLP		
Outputs	USB connection (slave, bidirectional)		
Description	Pk Cat No.		

 Bench pH/mV/°C meter pH 1100LB, pHenomenal, with LS 221 electrode for biotech applications
 1 SET
 662-1861

 Description
 Pk
 Cat. No.

 Accessories
 pHenomenal electrode stand, holds up to 4 electrodes + 1 temperature sensor
 1
 662-1169

 Potassium chloride 3 mol/L (3 N) in aqueous solution AVS TITRINORM
 100 ml
 83605.180

 Electrode cleaning solutions
 1
 662-1363

 Electrode cleaning solution pepsin/hydrochloric acid for removal of proteins
 100 ml
 83603.180

#### **GENERAL EQUIPMENT** PH METERS



#### MULTI-PARAMETER METER (pH/CONDUCTIVITY/DO), BENCH, PHENOMENAL® MU 6100 L, VWR®

This user friendly instrument, with articulated electrode stand and IP 43-rated housing, provides high resolution and accuracy for precise multi-parameter measurements. This meter can either measure pH/mV and conductivity or pH/mV and oxygen simultaneously. Complete with USB output for connection to a computer. GLP compliant.

- Large graphic LCD with continuous LED backlight shows the measured parameter and the temperature value simultaneously
- Data logging function selectable between 1 min and 1 h; memory capacity of 5000 data sets
- Automatic power shut-off: Adjustable from 10 min to 24 h
- Automatic buffer recognition of DIN and NIST buffers (1,68 / 4,00 / 6,86 / 9,18 / 12,54)
- Three additional technical buffers at 25 °C (4,00 / 7,00 / 10,00) in memory
- Advanced self-test and diagnostics (electrode efficiency diagnostic, drift control); calibration symbol shows when recalibration is required
- Low energy consumption. Choice of mains supply or 4× AA batteries for over 1000 operating hours

Ready to use **MU 6100 L S1** kit includes bench multi-parameter meter, glass pH electrode 221 with built-in temperature sensor (1 m cable), conductivity probe CO 11 with built-in temperature sensor (1,5 m cable), articulated stand, two pH buffers, one conductivity standard and one plastic beaker, and instruction manual (22 languages) on CD ROM. The **MU 6100 L S2** kit also includes a galvanic oxygen probe OX 11-3 with built-in temperature sensor (3 m cable).

Conductivity probes for low conductivities are available on request. Please contact your local Avantor sales office for further information.

Model	MU 6100 L, S1 kit	MU 6100 L, S2 kit				
pH range	-2,000+19,999					
pH resolution	0,1/0,01/0,00	1 (selectable)				
pH accuracy	±0,1/±0,0	1/±0,005				
pH calibration	Up to 5	points				
	VWR <sup>®</sup> Chemicals TITRINORM <sup>®</sup>	buffers at 25 °C: 4,00/6,98/9,94				
Automatic buffer recognition	NIST/DIN 19266 (1,68/4,00/6,86/9,18/12,54)					
	lechnical butters at 2	/5 °C: 4,00/7,00/10,00				
mV range	±1200,0	/±2500				
mV resolution	0,1	1/1				
mV accuracy	±0,3	3/±1				
Conductivity range	0,001 µS/cm -	1000 mS/cm				
Conductivity resolution	0,1 µ!	S/cm				
Conductivity accuracy	±0,5% of me	asured value				
Conductivity cell constant	0,001 - 25 cm <sup>-1</sup> (de	pending on probe)				
Conductivity calibration	1 point					
Resistivity range	1 Ω/cm - 999 MΩ/cm					
Resistivity accuracy	$\pm 0,5\%$ of measured value					
Salinity range	0,00 - 70 ppt					
TDS range	0 - 1999 mg/L / 2,00 - 19	,99 g/L / 20,0 - 199,9 g/L				
TDS resolution	1 mg/L / 0,01	g/L / 0,1 g/L				
DO concentration (mg/L)	0,00 - 20,00; 0,0 - 90,0					
DO concentration resolution (mg/L)	0,1%; 0,01 (deper	nding on sensor)				
DO saturation	0,0 - 200,0; 0 - 600 %	(depending on sensor)				
DO accuracy	±0,5% of value (b	etween 530 °C)				
DO calibration	Satura	ted air				
Temperature range	Auto: -5,0+105,0 °C;	manual: –25+130 °C				
Temperature resolution	0,1/	1 °C				
Temperature accuracy	±0,2	2 °C				
Temperature compensation	Automati	c/manual				
Data logging capacity	5000 da	ata sets				
Data logging - log function	Selectable between 1 s and 1 h (selectable intervals: 1 s, 5	5 s, 10 s, 30 s, 1 min, 5 min, 10 min, 15 min, 30 min, 60 min)				
Display	Graphic LCD wit	h LED backlight				
Connections	BNC for pH/banana for temperate	ure/8-pin for conductivity and DO				
Power supply	Mains supply or	4× AA batteries				
Compliance	IP 43,	/GLP				
Outputs	Waterproof USB connec	tion (slave, bidirectional)				

Description	Pk	Cat. No.
Bench top pH/mV/conductivity/DO meter pHenomenal MU 6100 L S1 kit	1 SET	665-0309
Bench top pH/mV/conductivity/DO meter pHenomenal MU 6100 L S2 kit	1 SET	665-0310

#### GENERAL EQUIPMENT PH METERS

Description Te	emp.	Material	Electrolyte	Ø×L	Diaphr.	Connection	Pack type	Pk	Cat. No.
Conductivity cell, pHe	enomenal®								
pHenomenal CO11, 2-pole graphite, 0. integrated NTC 30	+80	Ероху		15,3×120		8 pin, 1,5 m cable		1	663-0147
Dissolved oxygen prob	be, pHenomenal®, <sup>v</sup>	VWR <sup>®</sup>							
pHenomenal OXY11-3, (resolution 0,1 mg/L) pr	galvanic robe	Ероху				3 m cable, 8-pin		1	664-0042
pH electrodes, pHenor	menal®, VWR®								
pHenomenal 111 pH ele with temperature sense	ectrode, 3 in 1, or	Ероху	Gel	12×120	Ceramic	BNC, 1 m cable		1	662-1157
Accessories									
pHenomenal electrode	e stand, holds up to	4 electrodes + 1 tem	nperature sensor					1	662-1169
Potassium chloride 3 mol/L (3 N) in aqueous solution AVS TITRINORM					Plastic bottle	100 ml	83605.180		
Potassium chloride aqueous solution 3 mol/l (3 N) saturated with silver chloride aqueous solution AVS TITRINORM® for filling electrodes					Plastic bottle	500 ml	83606.260		
Electrode cleaning sol	Electrode cleaning solutions								
Electrode cleaning solu	ution pepsin/hydro	chloric acid for remo	val of proteins				Plastic bottle	100 ml	83603.180



#### pH ELECTRODES, PHENOMENAL®, VWR®

pH electrodes with BNC connector and cable.

These electrodes are checked at five points during the manufacturing process and then lot stamped to ensure quality. Every electrode is supplied with a soaker storage bottle and cap to ensure the pH-sensitive glass and reference junction remain in top condition and are instantly ready for use.

\* Integrated temperature probe.

Туре	Material	Electrolyte	Diaphr.	Ø×L (mm)	Connection	Pk	Cat. No.
pHenomenal 111, 3 in 1, gel *	Ероху	Gel	Ceramic	12×120	BNC, 1 m cable	1	662-1157



#### pH BUFFER SOLUTIONS IN SACHETS, 20 °C, AVS TITRINORM

For calibration of pH meters.

- Practical colour-coded 30 ml sachets single-use per sachet no risk of contamination
- Ideal for on-site analyses
- Traceable to SRM from NIST

pH value	pH accuracy	pH buffer type	Colour	Pk	Cat. No.
4,00	±0,02	Phthalate	Colourless	1 KIT	85041.001
7,00	±0,02	Phosphate	Colourless	1 KIT	85042.001
9,00	±0,02	Borate	Colourless	1 KIT	85043.001
10,00	±0,02	Carbonate	Colourless	1 KIT	85044.001

#### POTASSIUM CHLORIDE ELECTROLYTIC SOLUTIONS, AVS TITRINORM

Potassium chloride 3 Molar solution may also be used as an electrode storage solution.

For full information concerning health and safety data please see the SDS on the www.vwr.com website.

Description	Pk	Cat. No.
Potassium chloride 3 mol/L (3 N) in aqueous solution AVS TITRINORM	100 ml	83605.180
Potassium chloride aqueous solution 3 mol/l (3 N) saturated with silver chloride aqueous solution AVS TITRINORM® for filling electrodes	500 ml	83606.260



#### ELECTRODE STAND, PHENOMENAL® VWR®

Electrode arm moves smoothly in almost any direction, holding up to four electrodes plus one temperature sensor safely and securely in selected positions. Fingertip control raises, lowers, and pivots the holder. The arm articulates at three points while maintaining electrodes in a vertical position.

- Ideal for multiple readings
- Accepts all standard electrodes
- Pivots 360°, extends 53 cm

Description and the second s	Pk	Cat. No.
pHenomenal electrode stand, holds up to 4 electrodes + 1 temperature sensor		662-1169

**Avantor Services** 

## ∧ avantor

## Equipment and instrument services

Avantor Services helps you simplify equipment and instrument services, in and around the laboratory.

Our team specialises in providing a quick and targeted response

- Improve efficiency by keeping your equipment in compliance
- Optimise your budget and maximise your equipment investment

With our network of ISO 9001 / IEC17025 accredited service providers, we can be your single point of contact for all

We are focused on helping you in the following areas:

- Calibration
- Certification
- Qualification and validation
- Preventive maintenance

Visit vwr.com/avantor\_services for more information.

PB18006-EN



620-2322

#### **TEMPERATURE LOGGER, TRACEABLE® LOGGER TRAC**

This temperature logger can display, record and report data during storage, handling and transportation of products.

- Reusable or re-programmable device with active LCD for cumulative duration of temperature excursion from user-selected minimum/maximum values to be viewed immediately and downloaded if needed
- LCD shows the running alarm tally based on the acceptable temperature range and recording interval: Alarm tally is incremented when reading goes outside acceptable parameters during recording interval
- Once an alarm condition has occurred, an 'ALARM' notification appears on the display: If too many alarm events occur within pre-set parameters 'QUARANTINE' will appear once the alarm tally has reached the maximum number acceptable (from 1 to 99)
- Perfect for monitoring material during transportation
- Integrates with maxithermal software for complete data analysis

User selectable recording intervals, for complete flexibility, the user-defined recording interval may be set based on the number of desired days to log (from 4 hours to 365 days) or the desired time interval (from every 2 seconds to every 24 hours). Internal flash memory stores 7680 readings. To insure that no data is lost, once the memory is full the thermometer will stop logging data (data will not be overwritten). While recording, the following information is displayed: Current, Minimum and Maximum temperature achieved and cumulative running time. Once an alarm condition has occurred, the following additional information is displayed: Alarm tally, 'ALARM' notification, cumulative alarm time. If a quarantine condition has occurred, the following additional information is displayed: 'QUARANTINE' notification (taking the place of the 'ALARM' notification), alarm icon.

Individual Logger-Trac<sup>™</sup> Thermometers are pre-programmed with alarm values of 2 (low) and 8 °C (high) and a recording interval to allow for 30 days of recording (readings are logged every 5 minutes, 33 seconds). Perfect solution for monitoring material in transit as well as reagents, clinical samples, vaccines, pharmaceuticals and food items in any location.

Active LCD display technology allows the duration (cumulative time) for the temperature excursion to be viewed on the display immediately without the need to download data. The user may select the acceptable temperature parameters (high and low temperature values) in 1° increments. The cumulative alarm duration timer is started each time the reading is outside of the acceptable temperature parameters to provide a total excursion time since the start of recording.

Multi-point calibration on an individually numbered Traceable® certificate which assures accuracy from our ISO/IEC 17025:2017 (1750.01) calibration laboratory accredited by A2LA. It indicates traceability of measurements to the SI units through NIST or other recognised national measurement institutes (NMI) that are signatories to the CIPM mutual recognition agreement.

Starter kit includes logger, USB cradle with cable, MaxiThermal software package, battery and Traceable® certificate of calibration.

Data memory - No. of readings	7680
Display	LCD
Weight	0.65 oz.

Description	Range (°C)	Accuracy (°C)	Resolution (°C)	Pk	Cat. No.
Starter kit	T: -35+50	±0,2 (010) °C; otherwise ±1	T: 0,1	1	620-2322
Temperature logger, with Traceable® certificate of calibration	T: -35+50	±0,2 (010) °C; otherwise ±1	T: 0,1	1	620-2324



#### TEMPERATURE AND HUMIDITY LOGGER, TRACEABLE®, LOGGER TRAC, VWR®

These loggers travel with shipments to track relative humidity and temperature. For complete flexibility, the user-defined recording interval may be set based on the number of desired days to log (from 4 hours to 365 days) or the desired time interval (from every 2 seconds to every 24 hours). To ensure that no data is lost, once memory is full the thermometer/hygrometer will stop logging data (data will not be overwritten).

- User-selectable humidity/temperature parameters (high and low values) in 1,0% or 1,0 °C increments
- Displays cumulative alarm duration
- Current RH and temperature, minimum/maximum temperature achieved, cumulative running time

ISO/IEC 17025 calibration laboratory accredited by A2LA indicating traceability to NIST.

Starter kit includes Traceable® logger trac logger, data capture cable, MaxiThermal software package, battery and Traceable® certificate of calibration.

Model		Logger trac						
Data memory - No. of readings			30000					
Battery life			2 years					
W×D×H (mm)			89×51×28					
Weight			70 g					
Description	Range (%)	Accuracy	Resolution (%)	Pk	Cat. No.			
Starter kit leaser tree	T: −29…+72 °C	T: ±0,2 °C (010 °C); ±0,5 °C otherwise	T: 0,1 °C	1	620 2225			
Starter kit, logger trac	RH: 0 - 100	RH: ±3% (25 - 75%); ±5% otherwise	RH: 0,1	1	620-2325			
Temperature and humidity logger,	T: −29…+72 °C	T: ±0,2 °C (010 °C); ±0,5 °C otherwise	T: 0,1 °C	1	(20.222)			
logger trac	RH: 0 - 100	RH: ±3% (25 - 75%); ±5% otherwise	RH: 0,1		620-2326			



#### DIGITAL TIMER, TWO CHANNELS, WITH CLOCK, JUMBO, VWR®

- Simultaneous programming of two different activities from 24 hours to 1 second
- Features: Count up/down, time-in/-out, memory, alarm, 12/24 hour clock and stopwatch
- Jumbo display (25 mm high LCD digits) easy to read with indicator when 0 is reached
- Display is adjustable from 90° to 180°: Can be used flat, in the sit-up position, or wall-mounted with the bracket supplied
- Electronic alarm can be turned off or silenced automatically after one minute
- A second display mode shows time of day and a stopwatch (for count up)

Supplied with bracket for wall mounting, AAA battery and certificate of calibration.

Description	Colour	Accuracy (%)	W×D×H (mm)	Pk	Cat. No.
Digital timer, 2 channels, Jumbo	Black	±0,01	95×140×13	1	609-0090



#### **DIGITAL TIMER, ONE CHANNEL, VWR®**

Counts down and up for 99 minutes, 59 seconds

- Stopwatch mode
- Waterproof and steamproof design
- For wash-down areas, wet labs, manufacturing plants or field work
- Memory function

Complies with ISO/IEC 17025, ANSI/NCSL Z540-1 and 9001, accredited by A2LA indicates traceability to standards provided by NIST.

Supplied with battery, stand, removable suction cup and certificate of calibration.

Description	Colour	Accuracy (%)	W×D×H (mm)	Pk	Cat. No.
Digital timer, single channel	White/blue	±0,01	84×13×76	1	609-0197



DIGITAL TIMER, FOUR CHANNELS, WITH WHITE BOARD, VWR®

This timer is built in a white board with marker and eraser, which helps to keep track of time and other critical information. It provides different mounting options: flat on bench, vertical view, and metal surface attachment.

- Switchable count up and down with elapsed time displayed after countdown
- Switchable capacity of 23 hours, 59 minutes to 59 minutes, 59 seconds
- Audible alarm for each channel
- Last time set memory
- Audible confirmation for a data entry key press

Individually tested and inspected using NIST in A2LA accredited laboratory (certification #2448.01), assuring conformance to ISO 17025:2005. RoHS compliant.

Supplied with batteries and certificate of calibration. Requires two AAA batteries.

Description	Colour	Accuracy	W×D×H (mm)	Pk	Cat. No.
Digital timer, 4 channels, with white board	White	±5 s/day	114,3×25,4×88,9	1	609-0208

#### DIGITAL TIMER, THREE CHANNELS, WITH CLOCK, VWR®

This user-friendly bench timer displays three different times simultaneously, counts down and alarms. It also functions as a stopwatch and a 'time of day' clock displaying time to the second.

- Timing capacity: 99 hours, 59 min, and 59 s
- Time-of-day in 24 hour format
- Quartz-crystal accuracy is 0,001%
- Four rubber feet keep the timer off a wet bench
- Three channels may be started individually or simultaneously, triple-display allows simultaneous up and down timing on different channels
  - When zero is reached, an alarm sounds, a TIME'S UP message flashes on the display, and timer begins counting up
- Adjustable volume alarm can be set to sound for 60 seconds or to sound continuously until turned off
- Memories return the display to the previously programmed time at the touch of a button

#### Weight: 85 g

A serial numbered certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA to indicate instrument traceability to standards provided by the National Institute of Standards and Technology.

Supplied with AAA alkaline battery and certificate.

Description	Colour	Accuracy (%)	W×D×H (mm)	Pk	Cat. No.
Digital timer, 3 channels	White/grey	0,001	82,5×25,4×76	1	609-0218



#### DIGITAL TIMER, THREE CHANNELS, ORIGINAL<sup>™</sup>, VWR®

This three-channel lab timer is ideal for quality control and experimental requirements. It signals drying and incubating times, helps catch all test results, and even alarms for appointments.

- Timing capacity: 9 hours, 59 minutes, 59 seconds (resolution: 1 second)
- Features countdown, distinct alarm and display indicator per channel
- Alarms sound for 60 seconds; can be manually silenced or automatically silences after 1 minute
- Extremely simple operation
- Large 6,3 mm high LCD digits are easy to read
- Portable thanks to small size and light weight

#### Weight: 113 g

A serial numbered certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA to indicate instrument traceability to standards provided by the National Institute of Standards and Technology.

Supplied with two AA batteries and certificate.

Description	Colour	Accuracy (%)	W×D×H (mm)	Pk	Cat. No.
Digital timer, 3 channels	White/blue	±0,001	76×35×76	1	609-0220



Three-channel alarm timer



#### DATA LOGGING THERMOMETERS, TRACEABLE® EXCURSION TRAC, VWR®

These highly accurate logging thermometers are designed to monitor temperatures in refrigerators, freezers, water baths, heating blocks and incubators.

- High/low alarms and time stamps
- User-defined time intervals from 1 min to 24 hours
- Stores up to 10 unique alarm events
- Meets current CDC requirements for vaccine storage and monitoring
- Rolling memory structure, maintains most recent 525 600 temperature observations
- Memory can be cleared on unit after downloading data to USB stick
- Hassle-free retrieval of data: Unit remains in use while downloading and analysing data
- Status indicators: Low battery, full memory, USB data transfer and active alarm state

Traceable to NIST. Calibration complies with ISO/IEC 17025, ANSI/NCSL Z540-1 and 9001.

Supplied with individually numbered Traceable® certificate of calibration.

Range (°C)	Accuracy (°C)	Resolution (°C)	W×D×H (mm)	Weight (g)	Probe	Pk	Cat. No.
-50+70	±0,25	0,01	70×20×107	140	1 bottle	1	620-2204
-50+70	±0,25	0,01	70×20×107	140	2 bottles	1	620-2205
-50+70	±0,25	0,01	70×20×107	140	1 bullet	1	620-2206
-50+70	±0,25	0,01	70×20×107	140	2 bullets	1	620-2207
-50+70	±0,25	0,01	70×20×107	140	1 bottle/1 bullet	1	620-2208
-50+70	±0,25	0,01	70×20×107	140	1 stainless steel	1	620-2209
-50+70	±0,25	0,01	70×20×107	140	2 stainless steel	1	620-2210



620-2440

#### DATA LOGGING ULT FREEZER THERMOMETERS, TRACEABLE®, EXCURSION TRAC, VWR®

Data logging thermometers with user-defined timing intervals. Ideal for monitoring ultra-low temperature freezers.

- Simultaneously display, minimum, maximum and current temperatures, °F/°C switchable
- Rolling memory structure, maintains the most recent 525 000 temperature observations and 10 unique alarm events
- Recorded data (CSV file) may be transferred from thermometer to PC or Mac using a USB flash drive no additional software is needed
- Memory can be cleared on unit after downloading data to USB stick
- Smart alarm features a visual/audible alarm that continues to alarm even if the unit returns to non alarm conditions
- Status indicators low battery, memory full, USB data transfer and active alarm state
- Includes 24,5 cm PTFE cable
- Hassle-free retrieval of data unit can remain in use while downloading and analysing data

Thermometer is calibrated at multiple points (-80; -40; 0 and +100  $^{\circ}$ C) and comes with an individually serialised and certified Traceable<sup>®</sup> calibration certificate from an ISO/IEC 17025 calibration laboratory accredited by A2LA as standard.

Supplied with stand, batteries, VELCRO®, magnetic strips, wall mount and Traceable® certificate.

Description	Range (°C)	Accuracy (°C)	Resolution (°C)	Probe	W×D×H (mm)	Weight (g)	Pk	Cat. No.
Excursion trac data logging ULT freezer thermometer, 1 channel	-90+105	±0,2	0,01	Platinum RTD sensor, stainless steel 316 probe (included)	70×20×107	140	1	620-2440
Excursion trac data logging ULT freezer thermometer, 2 channels	-90+105	±0,2	0,01	Platinum RTD sensor, stainless steel 316 probe (included)	70×20×107	140	1	620-2441
Excursion trac USB data logging refrigerator/freezer thermometer	-50+70	±0,2	0,01	1 plastic bottle designed for refrigerator/freezer	70×20×107	140	1	620-2444
Excursion trac USB data logging refrigerator/freezer thermometer	-50+70	±0,2	0,01	2 plastic bottles designed for refrigerator/freezer	70×20×107	140	1	620-2445



#### LIQUID NITROGEN USB DATA LOGGING THERMOMETERS, TRACEABLE® EXCURSION TRAC

These USB Traceable® excursion trac LN<sub>2</sub> data logging thermometers monitor the temperature in liquid nitrogen Dewars, covering cryogenic needs for sensitive, irreplaceable biological samples.

- Memory capacity of 525 500 temperature observations
- Four calibration points: -196; -80; 0 and +100 °C
- Monitor readings overnight, at the weekend, or for any time period with rolling data log
- User-defined data logging interval of 1 observation/minute to 1 observation/24 hours
- Memory capacity maintains a year of recorded data when using 1 minute intervals and longer when using larger intervals
- Status indicators: Low battery, memory full, USB data transfer and active alarm state

**Hi/Lo alarms and time/date stamps**: Alarm-tracking feature stores in memory each alarm event detailing when the alarm state occurred, as well as when the unit returned back to within range. Alarm-state indicators include visual LEDs, audio alerts and flashing LCD segments. Data for up to 10 different alarm events can be retrieved with the most current event viewable on the display.

**Smart alarm signals 'out of range' conditions**: When an 'out of range' condition is sensed, the smart alarm triggers. Smart alarm features visual and audible indicators which continuously signals until acknowledged, even if the parameter returns to the non alarm range.

**USB data transfer**: The liquid nitrogen temperature monitor allows recorded data, in a CSV format, to be transferred from the thermometer to PC/Mac with a USB flash drive (not included). Specific software is not needed for this thermometer. Each device has a unique ID that allows multiple units to be used in the same location.

Multi-point calibration on individually numbered Traceable® certificate which ensures accuracy from our ISO/IEC 17025:2005 (1750.01) calibration laboratory accredited by A2LA. It indicates traceability of measurements to the SI units through NIST or other recognised national measurement institutes (NMI) that are signatories to the CIPM Mutual Recognition Agreement.

Supplied with stainless steel probe(s), stand, VELCRO<sup>®</sup>, magnetic strips, wall mount, Traceable<sup>®</sup> certificate and batteries.

Description	Range (°C)	Accuracy (°C)	Resolution (°C)	Probe	Weight (g)	Pk	Cat. No.
USB data logging liquid nitrogen Traceable® excursion trac thermometer, with 1 probe	-200105	±0,25	0,01	1 stainless steel	141,74	1	620-2633
USB data logging liquid nitrogen Traceable® excursion trac thermometer, with 2 probes	-200105	±0,25	0,01	2 stainless steel	141,74	1	620-2634



#### TOP LOADING VAPOUR-LINEECO AUTOCLAVES, VWR®

Easy to use, automatic, flexible, reliable and convenient autoclave for all standard laboratory procedures with special features, such as  $F_0$  calculation and liquid sterilisation with flexible thermoprobe (for 50 litre model).

- User friendly programmer, instructions printed on the front panel
- Easy to install, easy to use and maintain
- Fully automatic with GLP special functions
- Reliable: 10 year warranty against perforating corrosion
- Customisable programs
- Safety: ABS insulating lid with vertical position lock temperature-dependent lid lock
- Flexible PT100 thermoprobe for eco 50 (fixed for eco 25), can be positioned in liquid load (max. 50 ml recommended)

Inside pressure vessel and outside structure made from stainless steel (*eco* 25 AISI 304 S/S, *eco* 50 AISI 316L S/S).

Conforms to European PED regulations, CE mark. IQ/OQ/PQ documentation available on request.

Please contact your local Avantor office to clarify the correct model/features that suit your application.

Model	VAPOUR-Line <sup>eco</sup> 25	VAPOUR-Lineeco 50
Capacity	25 L	50 L
Material	AISI 304 S/S	AISI 316L S/S
Max. pressure	2,1 bar	
Voltage	230 V	380 V (3 phase, 16A)
Int.Ø×H	250×450 mm	320×600 mm
W×D×H ext.	550×540×1005 mm	550×570×1005 mm
Weight (kg)	45	60
Power rating	1,7 kW	3,7 kW
Temperature	134 °C	

Description	Pk	Cat. No.
Autoclave, vertical, VAPOUR-Line <sup>eco</sup> 25, with 5 personal programs, can hold 1× Ecobox-25 or 2× Ecobox-25-Mini	1	481-0671
Autoclave, vertical, VAPOUR-Line∞ 25, with printer, with 5 personal programs, can hold 1× Ecobox-25 or 2× Ecobox-25-Mini	1	481-0708
Autoclave, vertical, VAPOUR-Line 👓 50, with 7 personal programs, can hold 2× Ecobox-50 or 3× Ecobox-50-Mini	1	481-0665

Description	Pk	Cat. No.
Accessories		
Ecobox-25 basket: (Ø×H): 240×420 mm, in stainless steel AISI 304 (max. load: 1 basket)	1	710-0887
Ecobox-25-mini basket: (Ø×H): 240×210 mm, in stainless steel AISI 304 (max. load: 2 baskets)	1	481-0669
Ecobox-50 basket: (Ø×H): 310×285 mm, in stainless steel AISI 304 (max. load: 2 baskets)	1	481-0672
Ecobox-50-mini basket: (Ø×H): 310×190 mm in stainless steel AISI 304 (max. load: 3 baskets)	1	481-0668
IQ-OQ-PQ instruction manual for Beta 25 Easy Lock autoclave	1	481-0724
Betabox basket: Ext. Ø 310×380 mm, in stainless steel AISI 304 (max. load: 1 basket)	1	481-0677



#### **VERTICAL AUTOCLAVES, VAPOUR-LINE, VWR®**

VAPOUR-Line autoclaves are designed for applications such as liquids in open or slightly closed vessels, instruments and solids, unwrapped and waste sterilisation (not DIN 58951 compliant).

- Sterile filter for chamber venting is equipped as standard
- Microprocessor controller with 10 pre-programmed protocols (5 pre-recorded freely modifiable and 5 protected by code)
- TÜV-approved safety locking mechanism and thermal lock according to EN DIN 61010-2-43 with flexible sensor reference probe
- Air removal by gravity (except M models)
- Integrated exhaust steam condensation, water cooled and temperature controlled
- Integrated memory chip for storing up to 150 cycles (later printout possible)

All VAPOUR-Line 80 and 135 models generate steam directly in the chamber. Heating elements are situated under the base of the chamber so there is no contact between them and the feed water, ensuring long element lifetime and preventing contamination by spilt waste, broken bottles or similar. The elements are protected from overheating by a temperature limiter.

VAPOUR-Line 80M and 135M models are equipped with an effective air cooling system for liquid sterilisation. This speeds cooling time by up to 40% compared to standard models.

#### RS485 interface.

Please contact your local Avantor sales office to clarify the correct model/features that suit your application.

Model	Capacity	Heating power	Voltage	Int.Ø×H	W×D×H ext.	Weight (kg)	Temperature
VAPOUR-Line 80/80M	80 L	3000 W	230 V	410×720 mm	740×600×915 mm	155/165	
VAPOUR-Line 135/135M	135 L	6000 W	Phase 380 V+ N	500×720 mm	840×700×965 mm	195/205	98138 °C

Description	Pk	Cat. No.
Vertical autoclave, VAPOUR-Line 80, EU-plug	1	481-0689
Vertical autoclave, VAPOUR-Line 80, UK-plug	1	481-0690
Vertical autoclave, VAPOUR-Line 80, CH-plug	1	481-0727
Vertical autoclave, VAPOUR-Line 80M, EU-plug, with integrated cooling system	1	481-0693
Vertical autoclave, VAPOUR-Line 80M, UK-plug, with integrated cooling system	1	481-0694
Vertical autoclave, VAPOUR-Line 80M, CH-plug, with integrated cooling system	1	481-0728
Vertical autoclave, VAPOUR-Line 135, EU-plug	1	481-0691
Vertical autoclave, VAPOUR-Line 135, UK-plug	1	481-0692
Vertical autoclave, VAPOUR-Line 135M, EU-plug, with integrated cooling system	1	481-0695
Vertical autoclave, VAPOUR-Line 135M, UK-plug, with integrated cooling system	1	481-0696

Description	Pk	Cat. No.
Accessories		
Stacking basket 400×300 mm (Ø×H) for 80 models (max. 2)	1	481-0698
Stacking basket 485×300 mm (Ø×H) for 135 models (max. 2)	1	481-0700
Wire mesh basket with closed bottom: 400×245 mm (Ø×H) for 80 models (only in the lower part)	1	481-0702
Wire mesh basket with closed bottom: 495×245 mm (Ø×H) for 135 models (only in the lower part)	1	481-0703
Waste bucket: 400×300 mm (Ø×H) for 80 models (max.1)	1	481-0699
Waste bucket: 485×300 mm (Ø×H) for 135 models (max. 1)	1	481-0701
Exhaust steam collecting tank (requires installation), for all models	1	481-0704
Lid seal for VAPOUR-Line 80 model	1	481-0705
Lid seal for VAPOUR-Line 135 model	1	481-0706
Printer	1	481-0697



#### **BAGS, BIOHAZARD**

Sturdy bags, ideal for disposing of biologically hazardous waste that must first be autoclaved.

PP, 75 µm thick, red, with 'Biohazard' label.

- Autoclavable up to 135 °C
- The useful temperature indicator text is white before autoclaving, then black
- 'Contents Have Been Autoclaved' indicates successful autoclaving
- Luminous red for easy recognition and highly visible 'Biohazard' label with the corresponding warning sign

These bags are DOT approved.

Capacity	Material	L×W (mm)	Thickness (µm)	Pk	Cat. No.
12 L	PP	610×305	75	250	129-0030
60 L	PP	914×610	75	250	129-0031
200 L	PP	1220×965	75	50	129-0032



#### **BAGS, NON HAZARDOUS WASTE**

Sturdy bags, ideal for disposing of non hazardous waste that must first be autoclaved.

In PP, 50 µm thick, transparent, with labelling area.

- Autoclavable up to 121 °C
- Highly resistant to tears and impact
- Specially welded seams reduce risk of leakage

Bags meet the requirements of the 165 g puncture inspection standard as described in ASTM D1709-98.

Capacity	Material	L×W (mm)	Pk	Cat. No.
11 L	PP	483×356	200	129-0020
27 L	PP	610×483	200	129-0021
80 L	PP	889×635	200	129-0022
210 L	PP	1143×914	100	129-0023



#### **BIOHAZARD BAGS, PP**

Sturdy bags, ideal for disposing of biologically hazardous waste that must first be autoclaved. Complete with wire closures that allow expansion of the bag and ventilation when cooling. Highly resistant to tears and punctures. Available as transparent bags without temperature indicator, or orange with temperature indicator. PP, 50 µm thick, with 'Biohazard' label.

- Autoclavable up to 135 °C
- The useful temperature indicator text is white before autoclaving, then black
- 'Contents Have Been Autoclaved' indicates successful autoclaving
- Highly visible 'Biohazard' label with the corresponding warning sign

Bags meet the requirements of the 165 g puncture inspection standard as described in ASTM D 709-98.

Capacity	Material	L×W (mm)	Pk	Cat. No.
Orange				
11 L	PP	483×356	200	129-0024
27 L	PP	610×483	200	129-0025
80 L	PP	889×635	200	129-0026
210 L	PP	1143×914	100	129-0027
Clear				
12 L	PP	610×305	200	129-0028
60 L	PP	915×610	200	129-0029
200 L	PP	965×1220	100	129-1157



#### **AUTOCLAVABLE BAGS**

Sturdy, temperature resistant bags, ideal for disposing of hazardous waste that must first be autoclaved. Can also be used for autoclaving other products. Supplied complete with sealing wires. PP,  $37,5 \mu m$  or  $50 \mu m$  thick, transparent.

- Clear bag
- Autoclavable up to 135 °C
- Highly resistant to tears and impact

Autoclave bags

Capacity	Material	L×W (mm)	Thickness (µm)	Pk	Cat. No.
<3,8 L	PP	200×305	50	100	129-1153
8 L	PP	305×610	50	100	129-1154
8 L	PP	610×305	37,5	1.000	129-0018
34 L	PP	610×760	50	100	129-1155
45 L	PP	910×610	50	100	129-1156
45 L	PP	914×610	37,5	500	129-0019



#### **BAGS, BIOHAZARD**

These sturdy bags are ideal for disposing of biologically hazardous waste that must first be autoclaved. PP, 50  $\mu m$  thick, red.

- Autoclavable up to 135 °C
- Available with or without temperature indicator
- Useful temperature indicator text is white before autoclaving, then black
- Text 'Contents Have Been Autoclaved' indicates successful autoclaving
- Luminous red for easy recognition and highly visible 'Biohazard' label with corresponding warning sign

Bags meet the requirements of the 480 g tensile strength test as described in ASTM D 299-94A.

Description	Capacity	Material	L×W (mm)	Pk	Cat. No.
Red, with printed sign and temperature indicator	12 L	PP	610×305	200	129-0033
Plain red, without printed sign	12 L	PP	610×305	200	129-0037
Red, with printed sign and temperature indicator	80 L	PP	890×635	200	129-0034
Red, with printed sign and temperature indicator	75 L	PP	914×610	200	129-0035
Red, with printed sign and temperature indicator	260 L	PP	1219×965	100	129-0036



#### **BAGS, BIOHAZARD**

Sturdy bags, ideal for disposing of biologically hazardous waste that must first be autoclaved. Supplied complete with the necessary sealing wires. HDPE, 100  $\mu m$  thick, red, with 'Biohazard' label.

- Autoclavable up to 121 °C
- Highly resistant to tears and impact
- Luminous red for easy recognition and highly visible 'Biohazard' label with corresponding warning sign

Capacity	Material	L×W (mm)	Pk	Cat. No.
12 L	HDPE	610×305	50	129-0039
75 L	HDPE	914×610	50	129-0040
260 L	HDPE	1220×965	50	129-0041



#### **DISPOSAL BAGS, VWR®**

For safe disposal of laboratory waste such as pipette tips, disposable Petri dishes, sample tubes, etc.

PP, 40 µm thick, clear, with or without 'Biohazard' printing.

- Heat resistant up to 145 °C
- Autoclavable

With 'Biohazard' printing

Description	Capacity (I)	L×W (mm)	Pk	Cat. No.
Without 'Biohazard' printing				
Autoclavable bags, clear	2	300×200	500	129-0578
Autoclavable bags, clear	3	400×250	500	129-0579
Autoclavable bags, clear	12	660×305	500	129-0580
Autoclavable bags, clear	14	610×420	500	129-0582
Autoclavable bags, clear	16	780×400	500	129-0581
Autoclavable bags, clear	25	770×550	500	129-0583
Autoclavable bags, clear	32	780×600	500	129-0584
Autoclavable bags, clear	40	1100×700	350	129-0585
Autoclavable bags, clear	60	1100×900	100	129-0586
With 'Biohazard' printing				
Autoclavable bags, clear, with 'Biohazard' printing	12	660×305	200	129-0587
Autoclavable bags, clear, with 'Biohazard' printing	14	610×420	200	129-0588
Autoclavable bags, clear, with 'Biohazard' printing	32	780×600	200	129-0589



#### AUTOCLAVABLE BAGS, YELLOW, BIOHAZARD

Ideal for processing biohazardous materials that require autoclaving prior to disposal. Available with or without temperature indicator. High integrity polypropylene bags withstand 135 °C (275 °F) maximum autoclave temperature. PP, 50  $\mu$ m thick, yellow.

- Twist-tie closure allows bag to expand and vent steam during cooling
- Bags resist punctures, tears and leaks, and they also meet the 165 g dart-drop standard as required by ASTM D1709-98
- Each bag is imprinted with the universal biohazard symbol

All biohazard bags have a temperature indicator patch with the words 'Contents Have Been Autoclaved' printed in a chemically active ink. Before autoclaving the ink is clear on a white background, after autoclaving is complete, it darkens and words appear in a dark brown colour, providing proof that bag has been exposed to high temperatures for sterilisation.

L×W (mm)	Packed	Pk	Cat. No.
305×203	Case of 400	400	129-1148
483×356	Case of 200	200	129-1149
610×483	Case of 200	200	129-1150
914×610	Case of 200	200	129-1151
1220×940	Case of 100	100	129-1152



Microcentrifuge, high speed, universal, ventilated, Micro Star 30

#### MICROCENTRIFUGE, HIGH SPEED, UNIVERSAL, VENTILATED, MICRO STAR 30, VWR®

The compact Micro Star 30 ventilated centrifuge is an economic, versatile, easy to use cross-over centrifuge which combines the features of a high speed microcentrifuge and a multipurpose centrifuge. This quiet and smooth running centrifuge accommodates rotors for microtubes (24×1,5/2,0 ml), microplates and 15/50 ml conical tubes as well as a 16-place rotor for 5 ml tubes and a swing bucket rotor for six blood collection tubes. Ideal for use in life science, biotechnology laboratories and clinical laboratories.

- Max. speed: 31150 ×g (18000 rpm) for extremely fast separation results
- Timer from 10 seconds to 99,5 minutes or continuous
- Saves up to 100 user-defined programs
- Automatic rotor recognition, imbalance detection and Fast-Spin function
- Great flexibility with seven rotor options

The Micro Star 30 is available without rotor for free rotor selection, or as a package which includes high speed microtube rotor RA 24/2 with aerosol-tight rotor lid.

Model	Micro Star 30 (521-2752)	Micro Star 30 (521-2753)			
Max. capacity	24×2 ml	6×50 ml (with RA 6/50 rotor)			
Max. speed (min <sup>-1</sup> )	18000	18000 (with RA24/2 rotor)			
Max. RCF (×g)	31150	31150 (with RA24/2 rotor)			
Programs	100				
Acceleration/braking ramps	Levels from 0 to 9/ levels from 0 to 9 (0 - no braking) s				
Timer	10 s - 99,5 min or continuous (hold)				
Noise level	≤62 dB(A) at maximum speed				
Power consumption	450 W				
W×D×H (mm)	360×430×288				
Weight (kg)	23,5 22,5				
Electrical	230 V ±10%, 50 / 60 Hz, 2 A				
Speed range	200 - 18000 min <sup>-1</sup>				

Model	Max Capacity	Max. speed (min <sup>-1</sup> )	Max. RCF (×g)	Speed range		Programs	Timer	Noise level	Electrical	Power consumption	W×D×H mm.	Weight (kg)
Micro Star 30 (521-2752)	24×2 ml	18000	31150	Levels f 200 - 18000 0 to 9/le	Levels from 0 to 9/levels		10 s - 99,5 min	≤62 dB(A) at	230 V ±10%,		2	23,5
Micro Star 30 (521-2753)	6×50 ml (with RA 6/50 rotor)	18000 (with RA24/2 rotor)	31150 (with RA24/2 rotor)	min <sup>-1</sup>	from 0 to 9 (0 - no braking) s	100	or continuous (hold)	speed	2 A	450 W	360×430×288	22,5

Description	Pk	Cat. No.
Centrifuge Micro Star 30 with aerosol-tight rotor RA 24/2	1	521-2752
Centrifuge Micro Star 30 without rotor	1	521-2753
Accessories		
Angle rotor RA 24/2 with aerosol tight lid, max. RCF 31150 ×g, max. rpm 18000, max. capacity 24× 2 ml	1	521-2576
Angle rotor RA 16/5 with aerosol tight lid, max. RCF 21000 ×g, max. rpm 14000, max. capacity 16× 5 ml	1	521-2577
Angle rotor RA 8/15, max. RCF 4400xg, max. RPM 6000, max. capacity 8x15 ml conical, 17x120 mm	1	521-3377
Angle rotor RA 6/50, max. RCF 4400xg, max. RPM 6000 max. capacity 6x50 ml conical	1	521-3380
Swing rotor for microplates with carriers, max. RCF 2200 ×g, max. rpm 5000 max. capacity 4 microtitre or 2 deep well plates (max. height: 31,5 mm)	1	521-2586
Swing rotor RS 6/12 with buckets, max. RCF 2500 ×g, max. rpm 4400, max. capacity 6× 12 ml, 17×105 mm	1	521-2587
Adapter 15 ml (set of 6), for angle rotor RA 6/50, max. RCF 4400 ×g	1	521-2585



Centrifuge, Microstar 30R

#### MICROCENTRIFUGE, HIGH SPEED, UNIVERSAL, REFRIGERATED, MICRO STAR 30R

The compact Micro Star 30R refrigerated centrifuge is an economic, versatile and easy to use cross-over centrifuge which combines the features of a high speed microcentrifuge and a multipurpose centrifuge. This quiet and smooth running centrifuge accommodates rotors for microtubes (24×1,5/2,0 ml), microplates and 15/50 ml conical tubes as well as a 16-place rotor for 5 ml tubes and a swing-bucket rotor for six blood collection tubes. Ideal for use in life science, biotechnology laboratories and clinical laboratories.

- Temperature range from -9 to +40 °C with pre-cooling function
- Max. speed: 31150 ×g (18000 min<sup>-1</sup>)
- Timer from 10 seconds to 99,5 minutes or continuous
- Saves up to 100 user-defined programs
- Automatic rotor recognition, imbalance detection and quick-spin function
- Refrigerant with low GWP and CO<sub>2</sub> emissions according to EU standards valid from 2020
- Six different rotors available

The Micro Star 30R is available without rotor for free rotor selection or as a package which includes microtube rotor RA 24/2 with aerosol-tight rotor lid.

Model	Max Capacity	Max. speed (min <sup>-1</sup> )	Max. RCF (×g)	Temperature	Timer	Noise level	Power consumption	W×D×H mm.	Weight (kg)
Micro Star 30R (521-2574)	24×2 ml	18000	31150		40 005				51
Micro Star 30R (521-2575)	6×50 ml (with RA 6/50 rotor)	18000 (with RA24/2 rotor)	31150 (with RA24/2 rotor)	−9+40 °C	10 s - 99,5 min or continuous	<56 dB(A)	700 W	360×675×288	50
Description Pk C							Cat. No.		
Microcentrifuge, refrigerated, Micro Star 30R with gerosol-tight rotor RA 24/2							1	521-2574	

Microcentrifuge, refrigerated, Micro Star 30R with aerosol-tight rotor RA 24/2 Microcentrifuge, refrigerated, Micro Star 30R without rotor

Suitable accessories are shown on page 135.



Microplate centrifuge, PCR plate centrifuge II

#### CENTRIFUGE, MICROPLATE, PCR PLATE CENTRIFUGE II

The PCR Plate Centrifuge II is a personal sized digital centrifuge designed to spin down droplets in PCR plates. Recommended before and after the use of PCR plates in a thermal cycler for optimised concentration and improved PCR yield. This centrifuge is equipped with a dual-position rotor that accepts a wide variety of PCR plates; 96well, 384-well, skirted and non skirted. Plates are inserted vertically and quickly spin to a max. speed of 2800 rpm (550 ×g).

521-2575

- Digital display for speed and time
- Quick spin function
- Safety lid lock
- Electronic braking system
- Compact size; quiet, simple operation

Supplied with dual-position vertical rotor, two power cords (EU and UK) and USB stick with manuals. An optional adapter for 0,2 ml PCR tube strips and 0,2 ml PCR tubes is available to order separately.

Max. capacity	2× 96- or 384-well PCR plates
Max. RCF	550×g
Timer	15 s to 2 min
Noise level	≤60 dB(A) at maximum speed
Power consumption	45 W
Power supply	230 V ±10%, 50 / 60 Hz
W×D×H (mm)	240×226×260
Weight (kg)	3,3
Acceleration time	Fixed ≤10 s
Deceleration time	Fixed ≤4 s
Speed range	2200 - 2800 rpm
Speed setting	100 rpm (increments)
Description	Pk Cat. No.
PCR Plate centrifuge II, 230V	1 <b>521-3497</b>

# Protecting every sample every day.

## New Avantor<sup>®</sup> biorepository and archiving facility in Frankfurt, Germany, now open.

At this purpose-built facility, Avantor does more than just store — we take care of your critical biologic and research assets. Strategically located, this state-of-the-art biorepository leverages our 40+ years of clinical trials expertise and standards of care to offer:

- Customised solutions that accommodate samples from -196 to +21 °C
- 24-hour sample monitoring, 365 days a year with back-up and full redundancy safeguards
- Real-time material asset management system to enable operational efficiencies
- Over 100 million research assets stored, never failing to return even one. We don't just store, we take care.

- Dedicated Facilities Management, Quality Assurance and Information Technology teams
- Direct service to 90+ major EU cities and 300+ international destinations





#### **BENCH PROTECTORS, VWR®**

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 radiochemical laboratories preventing radioactive contamination
- Enables recovery of expensive leaked materials
- Breakage protection for hard surfaces
- Absorption layer for removing water or solvent from desiccant chambers
- Impermeable protective material for lining animal cages

Absorbance rate: 115-9220 and 115-9221: 500 ml/m<sup>2</sup>

Absorbance rate: 115-0673: 750 ml/m<sup>2</sup>

Description	Colour	L×W (mm)	Packed	Pk	Cat. No.
Absorption: Approx. 500 ml/m <sup>2</sup>	White	460×570	Single sheets	50	115-9220
Absorption: Approx. 500 ml/m <sup>2</sup>	White	460×50 000	Roll	1	115-9221
Absorption: Approx. 750 ml/m <sup>2</sup>	White	460×570	Single sheets	50	115-0673



#### LAB MAT, SILICONE

The reusable, environmentally friendly lab mat is an economical solution to help keep bench tops clean and safe from stains, spills and wear. The Lab Mat is made from a durable FDA-approved silicone material that creates a stain resistant, washable working surface. It is chemically inert and does not react with most chemicals.

- Protect bench tops from hot items up to 200 °C
- Large anti-skid and noise-dampening working surface
- Lip design around the outer edge of the mat helps contain spillage
- Can be cleaned with standard disinfectants in a sink or dishwasher, allowing repeated use
- Mat can be rolled up for compact storage
- Autoclavable at 121 °C for 15 minutes

Can be used with centrifuges, vortex mixers, hot plates, stirrers, pipettes. Ideal for every type of laboratory and more specialised areas, such as cold rooms, cleanrooms, sterile suites and areas where high sterility is a requirement.

Thickness (mm)	Colour	L×W (mm)	Pk	Cat. No.
2	Purple	350×600	1	111-9200



#### LENS CLEANING TISSUES, GRADE 541, VWR®

Suitable for cleaning various optical lenses such as objectives, binoculars, magnifying glasses, spectacles, as well as optical fibre filaments.

Description	L×W (mm)	Packed	Pk	Cat. No.
Lens cleaning tissues	80×100	1×500 sheets	500	111-5003
Lens cleaning tissues	100×150	25×25 sheets	625	111-5004



#### **ELECTROPORATION CUVETTES**

These electroporation cuvettes are made from clear, medical grade polycarbonate and are compatible with all common commercially available electroporators.

- Polished aluminium lowers arcing frequency
- Colour-coded caps for easy identification of gap sizes
- Round caps for easy, single-handed cap removal

Available in three gap sizes to meet common application requirements: 1 mm for highest field strength, suitable for bacteria; 2 mm gap for intermediate requirements; 4 mm gap for lowest field strength, suitable for mammalian cells and some plant cells.

Sterilised by gamma irradiation and individually packed for assured sterility.

Description	Volume (μl)	Pk	Cat. No.
Cuvettes with 1 mm gap size, grey cap	20 - 90	50	732-1135
Cuvettes with 2 mm gap size, blue cap	40 - 400	50	732-1136
Cuvettes with 4 mm gap size, yellow cap	80 - 800	50	732-1137

C avantor™

# Solutions for nucleic acid preparation

Featuring tools needed along the entire workflow: Sample disruption and homogenisation, nucleic acid isolation, photometry, centrifugation and storage.

For more info visit vwr.com

# Setting science in motion to create a better world

#### **AUSTRIA**

VWR International GmbH Graumanngasse 7 1150 Wien Tel.: +43 1 97 002 0 info.at@vwr.com

#### **BELGIUM**

VWR International bv Researchpark Haasrode 2020 Geldenaaksebaan 464 3001 Leuven Tel.: +32 (0) 16 385 011 vwr.be@vwr.com

#### CZECH REPUBLIC VWR International s. r. o. Veetee Business Park Pražská 442 CZ - 281 67 Stříbrná Skalice

Tel.: +420 321 570 321 info.cz@vwr.com

VWR International A/S Tobaksvejen 21 2860 Søborg Tel.: +45 43 86 87 88 info.dk@vwr.com

#### FINLAND

VWR International Oy Valimotie 17-19 00380 Helsinki Tel.: +358 (0) 9 80 45 51 info.fi@vwr.com

#### FRANCE

VWR International S.A.S. Immeuble Estréo 1-3 rue d'Aurion 93114 Rosny-sous-Bois cedex Tel.: 0 825 02 30 30\* (national) Tel.: +33 (0) 1 45 14 85 00 (international) info.fr@vwr.com \* 0,18 € TTC/min + prix appel

#### GERMANY

VWR International GmbH Hilpertstraße 20a D - 64295 Darmstadt Tel.: 0800 702 00 07\* (national) Tel.: +49 (0) 6151 3972 0 (international) info.de@vwr.com \*Freecall

#### HUNGARY

VWR International Kft. Simon László u. 4. 4034 Debrecen Tel.: +36 52 521130 info.hu@vwr.com

#### IRELAND

VWR International Ltd Orion Business Campus Northwest Business Park Ballycoolin Dublin 15 Tel.: +353 (0) 1 88 22 222 sales.ie@vwr.com

#### ITALY

VWR International S.r.l. Via San Giusto 85 20153 Milano (MI) Tel.: +39 02 3320311 info.it@vwr.com

#### THE NETHERLANDS

VWR International B.V. Postbus 8198 1005 AD Amsterdam Tel.: +31 (0) 20 4808 400 info.nl@vwr.com

#### **NORWAY** VWR International AS

Brynsalleen 4, 0667 Oslo Tel.: +47 22 90 00 00 info.no@vwr.com

#### POLAND

VWR International Sp. z o.o. Limbowa 5 80-175 Gdansk Tel.: +48 58 32 38 200 info.pl@vwr.com

#### PORTUGAL

VWR International – Mat. de Laboratório, Soc. Unipessoal, Lda Edifício Ramazzotti Avenida do Forte 6, P-1.09 e P-1.10 2790-072 Carnaxide Tel.: +351 21 3600 770 Info.pt@vwr.com

#### **SPAIN**

VWR International Eurolab S.L.U. C/ Tecnología 5-17 A-7 Llinars Park 08450 - Llinars del Vallès Barcelona Tel.: +34 902 222 897 info.es@vwr.com

#### SWEDEN

VWR International AB Fagerstagatan 18b 163 94 Stockholm Tel.: +46 (0) 8 621 34 20 kundservice.se@vwr.com

#### SWITZERLAND VWR International GmbH

Lerzenstrasse 16/18 8953 Dietikon Tel.: +41 (0) 44 745 13 13 info.ch@vwr.com

#### UK VWR International Ltd Customer Service Centre Hunter Boulevard - Magna Park Lutterworth Leicestershire LE17 4XN Tel.: +44 (0) 800 22 33 44 uksales@vwr.com



#### **CHINA**

VWR (Shanghai) Co., Ltd Bld.No.1, No.3728 Jinke Rd, Pudong New District Shanghai, 201203- China Tel.: 400 821 8006 info\_china@vwr.com

#### INDIA

VWR Lab Products Private Limited No.139. BDA Industrial Suburb, 6th Main, Tumkur Road, Peenya Post, Bangalore, India – 560058 Tel.: +9180 28078400 ywr india@vwr.com

#### KOREA

Avantor Performance Materials Korea Ltd 2F ACE Gwanggyo Tower I, Daehak 4ro 17 Yeongtong-gu Suwon, Korea 16226 Tel.: +82 31 645 7256 saleskorea@avantorsciences.com

#### **MIDDLE EAST & AFRICA**

VWR International FZ-LLC Office 203, DSP Lab Complex, Dubai Science Park, Dubai, United Arab Emirates Tel: +971 4 5573271 Info.mea@vwr.com

#### **SINGAPORE**

VWR Singapore Pte Ltd The Metropolis Tower 1, #05-03 9 North Buona Vista Drive Singapore 138588 Tel: +65 6505 0760 sales.sg@vwr.com