avantor™

Cell culture solutions from Avantor

01. IN VIVO MIMICKING: CELL CULTURE INSERTS

02. WHEN ORIGIN MATTERS: FBS FROM US & AUSTRALIA

03. ULTRA-COOL SAMPLE PROTECTION: CHEST OR UPRIGHT FREEZERS



VWR®

Cell culture solutions from Avantor

WELCOME TO THE AVANTOR BRANDED RANGE OF PRODUCTS FOR CELL CULTURE

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, don't you? No matter if you are seeding, expanding, harvesting, storing or analysing your cells, find the tools you need and rely on in this catalogue.

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 and media components, while the 'Cryopreservation' chapter covers helpful storage solutions for storing cells in your lab - or maybe take advantage of our biobanking services? Check the 'Analysis' chapter if you need a new microscope, 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



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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 striation 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, stressful culture conditions, or those which normally require additional biological coatings for attachment.

ISO 13485:2003 and ISO 9001:2008 certified.

Capacity (ml)	Surface	Growth area (cm^2)	Working volume (ml)	Closure type	Packed	Pk	Cat. No.
Flasks for suspension cells							
25	Non treated	-	20	Plug seal screw cap	10 per bag/200 per case	200	**734-2783**
25	Non treated	-	20	Vented cap	10 per bag/200 per case	200	**734-2784**
50	Non treated	-	40	Plug seal screw cap	10 per bag/200 per case	200	**734-2785**
50	Non treated	-	40	Vented cap	10 per bag/200 per case	200	**734-2786**
250	Non treated	-	175	Plug seal screw cap	5 per bag/100 per case	100	**734-2787**
250	Non treated	-	175	Vented cap	5 per bag/100 per case	100	**734-2788**
600	Non treated	-	400	Plug seal screw cap	5 per bag/40 per case	40	**734-2789**
600	Non treated	-	400	Vented cap	5 per bag/40 per case	40	**734-2790**
850	Non treated	-	800	Plug seal screw cap	3 per bag/18 per case	18	**734-2791**
850	Non treated	-	800	Vented cap	3 per bag/18 per case	18	**734-2792**
Flasks for adherent 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 of 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

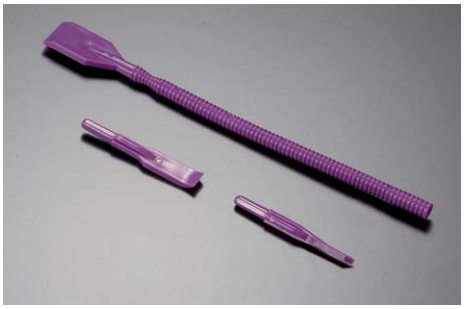


734-2602



734-2603

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

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, 3-D SCAFFOLD

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 and 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 (cm^2)	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**



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
- Optically clear, making them suitable for microscopy
- Dish surface is smooth and free from striation 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

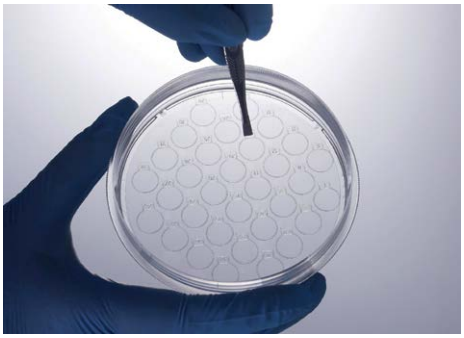
Confocal dishes are suitable for fluorescent, confocal and phase-contrast microscopy experiments. These dishes combine the convenience of standard 35 mm, PS cell culture dishes with the optical benefits of glass. Dishes are available with either Ø 15 or Ø 20 mm glass centre, with or without a tissue 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 striation 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 test 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 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 (cm^2)	Packed	Pk	Cat. No.
Culture dish, 60 mm, with 18 cell slides, cell growth area 0,50 cm^2 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^2 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^2 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^2 per cell slide	10	25,12	Individually wrapped	24	**734-2976**

From cell
to therapy

DISCOVER MORE AT VWR.COM

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





MULTIWELL CELL CULTURE PLATES, VWR®

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 striation 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 (cm^2)	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**
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, PC





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

- 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.
Packed in individual 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**

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 µm
- Non pyrogenic
- Sterilised by electron beam irradiation

Temperature range: –20 to 50 °C.
ISO 9001, ISO 13485.
Packed in individual 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	Transparent	24	6/box, 24/case	24	**734-2718**
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	0,1	1,12	1,5	Transparent	12	12/box, 48/case	48	**734-2729**
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	0,1	0,33	0,6	Transparent	6,5	12/box, 48/case	48	**734-2740**
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**

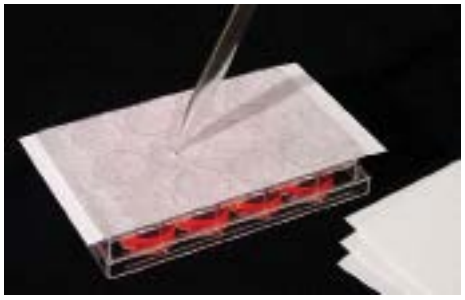
Solutions for nucleic acid preparation

DOWNLOAD NOW

Featuring tools needed along the entire workflow: Sample disruption and homogenisation, nucleic acid isolation, photometry, centrifugation and storage.



PB19047-EU



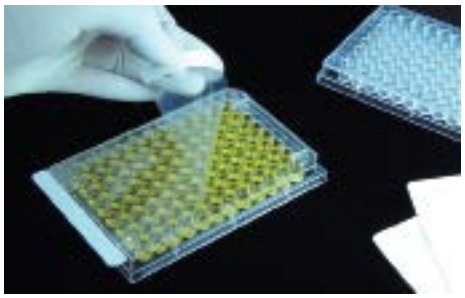
BREATHABLE RAYON FILM SEALS FOR BIOLOGICAL CULTURES

A 114 µm 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_2 exchange for all wells, unlike plate lids which favour exchange for wells near plate edges. Sterile product is packaged 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	Pk	Cat. No.
Rayon films, non sterile	100	**391-1261**
Rayon films, sterile	50	**391-1262**



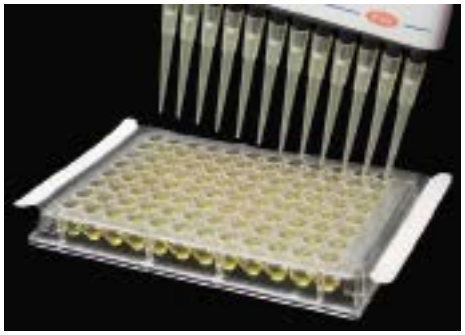
POLYESTER FILMS FOR ELISA AND GENERAL INCUBATION

These 50 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

Each film L×D: 146,1×79,4 mm

Description	Pk	Cat. No.
Polyester films, non sterile	100	**391-1250**
Polyester films, sterile	100	**391-1251**



PIERCEABLE FILMS FOR ELISA AND GENERAL INCUBATION

Easily pierceable 70 µm thick PE films with acrylic adhesive allow direct sample recovery with single or multichannel pipettors and robotic probes.

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

Each film L×D: 142,9×82,6 mm

Description	Pk	Cat. No.
PE films, plain, non sterile	100	**391-1263**
PE films, plain, sterile	50	**391-1277**



POLYESTER FILMS WITH COLOUR CODED MARKING AREAS

Identical to polyester films above, but including 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

Description	Pk	Cat. No.
Films with purple dot, non sterile	100	**391-1267**
Films with orange dot, non sterile	100	**391-1268**
Films with red dot, non sterile	100	**391-1269**
Films with blue dot, non sterile	100	**391-1270**
Films with assorted dots, non sterile	50	**391-1271**

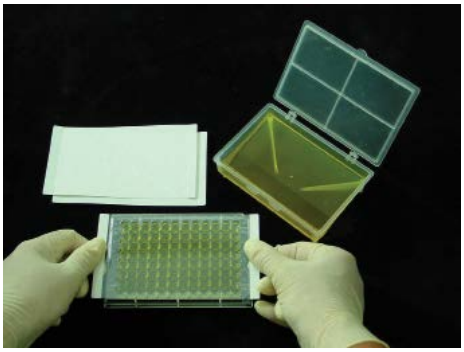
SEALING FILM FOR ELISA AND GENERAL INCUBATION, SEALPLATE®, VWR®

SealPlate® 50 µm thickness polyester sealing films minimise evaporation, prevent spillage and contamination between wells, and provide a secure seal, not just a cover. Secure sealing of all wells eliminates 'edge effects' in sensitive ELISA assays.

- Supplied non sterile
- Non-pierceable
- Suitable for ELISA, EIA, and incubation applications

SealPlate sealing films can also be used with tissue-culture plates for short-term storage, incubation, and containment of biohazards. Each SealPlate sealing film measures 79,4×146,1 mm.

Description	Pk	Cat. No.
Polyester films, non sterile	100	**391-1279**



POLYESTER SEALING FILM

Polyester film, acrylic adhesive. These 50 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	Pk	Cat. No.
Polyester sealing film	100	**731-0319**
Polyester sealing film, sterile	100	**731-0320**



SEALING FILM FOR AUTOMATION

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

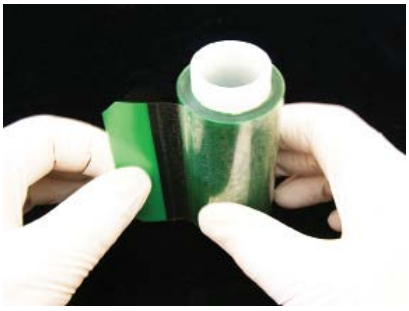
- Continous rolls - no splices
- Film or foil does not extend beyond edge of plastic core
- Robust static-free packaging provides protection during shipment and facilitates accurate alignment and adhesion

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	Pk	Cat. No.
Sealing film, rayon	1 Roll	**731-0306**



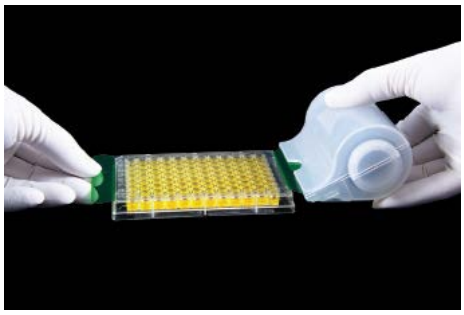
SEALING FILM FOR ELISA AND GENERAL INCUBATION

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 63 µm (film 38 µm, adhesive 25 µm)
- Prescored 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	Pk	Cat. No.
Starter kit including dispenser and 2 film rolls	1 KIT	**731-0309**
Starter kit including dispenser and 2 film rolls, sterile	1 KIT	**731-0310**
Replacement rolls	2 Roll	**731-0311**
Replacement rolls, sterile	2 Roll	**731-0312**



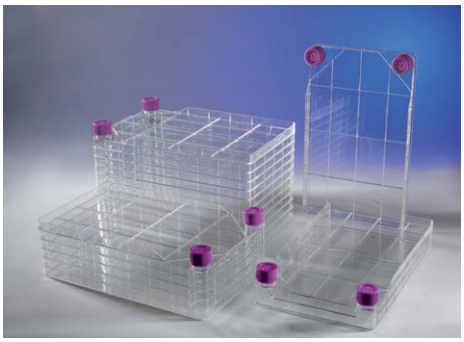
SEALING FILM FOR BIOLOGICAL CULTURES

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 140 µm
- Prescored 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	Pk	Cat. No.
Starter kit including dispenser and 2 film rolls	1 KIT	**731-0313**
Starter kit including dispenser and 2 film rolls, sterile	1 KIT	**731-0314**
Replacement rolls	2 Roll	**731-0315**
Replacement rolls, sterile	2 Roll	**731-0316**



CELL CHAMBERS

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

Type	Recommended working volume (ml)	Growth area (cm^2)	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**



Treated surface, plug seal cap

ROLLER BOTTLES

Roller bottles are optimal vessels for large scale cell growth and multiplication, and 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^2 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 striation, 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

Description	Capacity (ml)	Growth area (cm^2)	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, plug-seal cap	2000	850	5/bag, 40/case	40	**734-2751**
Treated surface, vented cap	2000	850	2/bag, 40/case	40	**734-2752**
Treated surface, ribbed, plug-seal cap	2000	1900	5/bag, 40/case	40	**734-2753**



VWR® Square/Octagonal Media Bottles, Polycarbonate

MEDIA BOTTLES WITH CAP

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

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

VWR Collection 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 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.

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		
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

Square PET media bottles 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 molded-in graduations
- EB Sterilisation Sterility Assurance Level (SAL) of 10^{-6} (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**



LABORATORY BOTTLES, ROUND

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**



LABORATORY BOTTLES, ROUND, AMBER

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.

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

Borosilicate 3.3 glass, clear or amber with screw cap and pouring ring.

- Very good 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.

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



CARBOYS, WIDE NECK, RECTANGULAR, WITH STOPCOCK

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 °C), working temperature of –80 to +120 °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 (l)	Neck I-Ø (mm)	Thread (mm)	Pk	Cat. No.
HDPE				
10	85	100	1	**216-1719**
20	83	100	1	**216-1700**
PP				
10	85	100	1	**216-1735**
20	85	100	1	**216-1732**



CARBOYS, NARROW NECK, ROUND, WITH SCREW CAPS

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



Round carboy with spigot group

CARBOYS, NARROW NECK, ROUND, WITH STOPCOCK AND SCREW CAP

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



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 (l)	Neck I-Ø (mm)	Thread (mm)	Pk	Cat. No.
10	65	83	1	**216-1709**
20	65	83	1	**216-1707**



CARBOYS, WIDE NECK, ROUND, WITH SCREW CAPS

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.

Capacity (l)	Neck I-Ø (mm)	Thread (mm)	Pk	Cat. No.
LDPE carboys				
10	85	100	1	**216-1708**
15	85	100	1	**216-1919**
PP carboys				
10	83	100	1	**216-1730**
20	83	100	1	**216-1733**





Sanitary neck carboy 20 l

STOPCOCK FOR VWR® COLLECTION CARBOYS

PP, white/purple

Pack consists of stopcock, adapter for tube connection and stopper for long storage. Stopcock is designed to be tightly assembled by hand and, therefore, does not require any tools for assembly. Autoclavable.

Resin meets US FDA 21 CFR, USP Class VI

Description	Pk	Cat. No.
Stopcock, with adapter for tubing connection and stopper for long storage for VWR Collection carboys	1	**216-1745**

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.

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

SPARE CAPS FOR VWR® CARBOYS

Spare caps are designed for use with either narrow mouth or wide mouth VWR® carboys

Autoclavable.

Description	Cap size (mm)	Colour	Pk	Cat. No.
Cap for narrow mouth VWR® carboys	83	Purple	1	**216-1840**
Cap for wide mouth VWR® carboys	100	Purple	1	**216-1841**

FILLING AND VENTING CAP FOR VWR® CARBOYS

The filling and venting cap for VWR® carboys is an autoclavable closure designed for the aseptic transfer of media, biological reagents, pure water and chemicals

Each cap is equipped with integrated 6,35 mm ports.

Description	Pk	Cat. No.
Filling/venting 3-port cap for VWR® carboys	1	**216-1842**



Rectangular carboy group

CARBOYS, WIDE NECK, RECTANGULAR

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 °C.

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

Resin meets US FDA 21 CFR, USP Class VI.

Capacity (l)	Neck-Ø (mm)	Pk	Cat. No.
HDPE carboys			
20	100	1	**216-1927**
PP carboys			
10	100	1	**216-1898**
20	100	1	**216-1907**



Reinforced silicone hose

SINGLE-USE HIGH PRESSURE TRANSFER HOSE WITH STERILENZ™ CONNECTIONS, AVANTOR

Avantor's high-pressure single-use transfer hose with Avantor SterilEnz™ 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 150 psi
- 25,4 mm inner diameter for high flow rate applications
- Gamma-irradiated with SAL 10^{-6}
- 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 PSI.

Avantor single-use transfer hose with SterilEnz™ connections are pre-sterilized and gamma irradiated with SAL 10^{-6}, then packaged 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 150 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**

AVANTOR SINGLE-USE BIOPROCESSING BAGS

Avantor single-use bioprocessing bags are designed to transfer and store your products throughout the drug-manufacturing process. Made from proprietary FlexFilm™ 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 provided 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^{-6} 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.

The 2D bag assemblies are designed for hanging which allows ease of use and complete fluid recovery. The standard 3D bag chambers available at 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	1 L	15	**734-3304**
Pillow bag, 2 ports Luer	1 L	15	**734-3305**
Pillow bag, 2 ports MPC	1 L	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**



Pre-sterilised Single Use Sample Tube

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

OmniTop Sample Tubes® 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®, TYGON®, silicone or PharMed®).

- 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 permits quick delivery on small lots
- Closure system can be used with various glass bottles
- Available individually packaged 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® are availble 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®, 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**



BOTTLE ASSEMBLIES, PETG, STERILE, SINGLE-USE

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^{-6}

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}.

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	c
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 1: 24" Port 2: 3"	C-Flex	Port 1: $^1/_8$ x $^1/_4$" Port 2: $^1/_4$ x $^3/_8$"	2	734-2894
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



Seradigm ultimate grade fetal bovine serum (FBS)

AVANTOR FOETAL BOVINE SERUM (FBS), US ORIGIN

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 growth-inhibiting factors
- Independently tested by third party laboratories
- Fully traceable

Ultimate grade FBS (endotoxin ≤10 EU/ml; haemoglobin ≤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; haemoglobin ≤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
Haemoglobin	≤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**



Seradigm ultra low IgG fetal bovine serum (FBS)

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

Ultra-low IgG foetal bovine serum (FBS) is purified of immunoglobulin (IgG) using a chromatographic process that delivers significantly reduced levels of IgG (≤5 µg/ml).

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

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.

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	**10018-830**
Ultra-low IgG foetal bovine serum (FBS), gamma irradiated	Frozen	Sterile filtered	500 ml	**10836-696**
Ultra-low IgG foetal bovine serum (FBS), gamma irradiated and heat inactivated	Frozen	Sterile filtered	500 ml	**10836-698**



Australia origin fetal bovine serum (FBS), 500 ml

AUSTRALIAN ORIGIN FETAL BOVINE SERUM (FBS), AVANTOR®

Australian Origin FBS is widely considered the gold standard for safety and regulatory compliance by cell culturists around the world. Avantor Seradigm Australian 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 Fetal 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 fetal bovine serum (FBS)	50 ml	**76294-120**
Australia Origin fetal bovine serum (FBS), gamma irradiated	500 ml	**76294-122**
Australia Origin fetal bovine serum (FBS), gamma irradiated, heat inactivated	500 ml	**76294-124**
Australia Origin fetal bovine serum (FBS), heat inactivated	50 ml	**76294-178**
Australia Origin fetal bovine serum (FBS)	500 ml	**76294-180**
Australia Origin fetal bovine serum (FBS), heat inactivated	500 ml	**76294-182**



Seradigm FB essence

AVANTOR FB ESSENCE, US ORIGIN

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

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**



Seradigm iron supplemented bovine calf serum (BCS)

AVANTOR BOVINE CALF SERUM (BCS), IRON-SUPPLEMENTED, US ORIGIN

Iron-supplemented bovine calf serum, sourced from US origin animals aged up to six months, and raised on a diet consisting mainly of formula.

- 100% US origin
- Cost effective alternative to FBS
- Similar performance to FBS in many established cell lines

These source animals have naturally high levels of transferrin. When the serum is supplemented with iron, the iron binds to the unbound transferrin, resulting in a product with three to four times the amount of available iron compared to FBS or equine serum. This product is an excellent, cost effective alternative to FBS and often performs as well as FBS in many established cell lines. In some applications, it even outperforms FBS and equine serum.

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

Endotoxin	≤20 EU/ml
Haemoglobin	≤30 mg/dl
Origin	United States

Description	Serum format	Pk	Cat. No.
Iron-supplemented bovine calf serum (BCS)	Frozen	50 ml	**10158-360**
Iron-supplemented bovine calf serum (BCS)	Frozen	500 ml	**10158-358**
Iron-supplemented bovine calf serum (BCS)	Frozen	1 L	**10153-134**
Iron-supplemented bovine calf serum (BCS), gamma irradiated	Frozen	1 L	**10153-136**

IPTG (ISOPROPYL-B-D-THIOGALACTOPYRANOSIDE) ≥98% (BY HPLC ON DRIED BASIS), BIOTECH REAGENT, 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

Packaged 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, J.T. Baker®	Wide mouth polyethylene bottle	10 g	**V264-01**
IPTG (isopropyl-β-D-thiogalactopyranoside) ≥98% (by HPLC on dried basis), Biotech Reagent, J.T. Baker®	Wide mouth polyethylene bottle	100 g	**V264-02**
IPTG (isopropyl-β-D-thiogalactopyranoside) ≥98% (by HPLC on dried basis), Biotech Reagent, J.T. Baker®	Polyethylene pail, screw top	1 kg	**V264-05**

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**

HEPES (2-[4-(2-HYDROXYETHYL)-1-PIPERAZINYL] ETHANESULPHONIC ACID) FREE ACID ≥99%, HIGH PURITY

HEPES is a general purpose buffer available for biological research.

Has been used to advantage in tissue culture, oxidative phosphorylation, protein synthesis with cell-free bacterial systems, photophosphorylation and CO_2 fixation. Suitable buffer for TEM studies (Transmission Electron Microscopy) as it does not affect metal substrates. Recommended buffer for glutamate binding assays, preventing binding to non receptor materials.

Description	Pack type	Pk	Cat. No.
HEPES (2-[4-(2-hydroxyethyl)-1-piperazinyl] ethanesulphonic acid) free acid ≥99%, high purity	HDPE Bottle	50 g	**0511-50G**
HEPES (2-[4-(2-hydroxyethyl)-1-piperazinyl] ethanesulphonic acid) free acid ≥99%, high purity	HDPE Bottle	250 g	**0511-250G**
HEPES (2-[4-(2-hydroxyethyl)-1-piperazinyl] ethanesulphonic acid) free acid ≥99%, high purity	HDPE Bottle	1 kg	**0511-1KG**

Γ-(N-MORPHOLINO)PROPANESULPHONIC ACID (MOPS) ≥99%, ULTRAPURE

MOPS is a zwitterionic buffer used as a running buffer for denaturing agarose gel electrophoresis of RNA.

Description	Pack type	Pk	Cat. No.
γ-(N-Morpholino)propanesulphonic acid (MOPS) ≥99%, ultrapure	Glass bottle	100 g	**0670-100G**
γ-(N-Morpholino)propanesulphonic acid (MOPS) ≥99%, ultrapure	Glass bottle	250 g	**0670-250G**
γ-(N-Morpholino)propanesulphonic acid (MOPS) ≥99%, ultrapure	Glass bottle	500 g	**0670-500G**

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

– GMP manufactured product

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

Solutions for nucleic acid preparation

DOWNLOAD NOW

Featuring tools needed along the entire workflow: Sample disruption and homogenisation, nucleic acid isolation, photometry, centrifugation and storage.



PB19047-EU

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™ 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

POTASSIUM IODIDE 99.0-101.5%, GENAR® USP, MACRON FINE CHEMICALS™

Description	Pk	Cat. No.
Potassium iodide 99.0-101.5%, GenAR® USP, Macron Fine Chemicals™	500 g	1115-04

PYRIDOXINE HYDROCHLORIDE USP, FCC, J.T. BAKER®

Description	Pack type	Pk	Cat. No.
Pyridoxine hydrochloride USP, FCC, J.T. Baker®	Glass bottle for solids	5 g	3343-01

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, J.T. Baker®	Bottle, WMA glass, blk tamper evident cap	500 g	3605-01

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

– Management of Change (MOC) category = R

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

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

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

– Food GMP manufactured product

Description	Pack type	Pk	Cat. No.
Disodium hydrogen phosphate 98.0-100.5% (dried basis) USP, FCC, 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

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

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

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

BUFFER, PBS SOLUTION (PHOSPHATE BUFFERED SALINE), ULTRA PURE GRADE

VWR LIFE SCIENCE®

Dulbecco's formulation without calcium and magnesium.

– Free from DNase, RNase or protease

137,7 mM sodium chloride, 2,7 mM potassium chloride, 9,55 mM phosphate buffer

pH @ 25 °C 7,1 to 7,7

Description	Pk	Cat. No.
Phosphate buffered saline (PBS), 1X solution, Dulbecco's formulation, sterile	20 L	K812-20L
Phosphate buffered saline (PBS), 1X solution, Dulbecco's formulation, sterile	500 ml	K812-500ML

PHOSPHATE BUFFERED SALINE (PBS), POWDERED, ULTRA PURE GRADE

PBS, Ultra Pure Grade is a powdered, magnesium- and calcium-free formulation of PBS suitable for cell culture and for use in flow cytometry applications

- Unsurpassed quality ideal for cell culture applications
- Suitable for flow cytometry applications
- Convenient powdered format is also available in single use packs
- Does not contain magnesium or calcium
- May be sterilized by filtration

pH at 25 °C, 1X PBS: 7.3 – 7.5

Conductivity at 25 °C, 1X PBS: 13,500 – 17,000 umhos

Preparation of PBS 1X

Dissolve 9.88 g of PBS powder in 1 litre of water to prepare a 1X PBS solution containing 137 mM sodium chloride, 2.7 mM potassium chloride and 9.8 mM phosphate buffer.

Description	Pk	Cat. No.
PBS powder, each pack prepares 1 litre of 10X concentrate	2	**0780-2PK**
PBS powder, sufficient to prepare 10 litres of 1X buffer	1	**0780-10L**
PBS powder, sufficient to prepare 50 litres of 1X buffer	1	**0780-50L**

PHOSPHATE BUFFERED SALINE (PBS) 1X, FOR BIOTECHNOLOGY

137 mM sodium chloride, 2,7 mM potassium chloride, 12 mM phosphate buffer

- Sterile
- pH 7,4

Description	Pk	Cat. No.
Phosphate buffered saline (PBS), 1X solution, sterile, pH 7,4	100 ml	**E504-100ML**
Phosphate buffered saline (PBS), 1X solution, sterile, pH 7,4	500 ml	**E504-500ML**

Description	Pk	Cat. No.
Buffer, PBS solution (phosphate buffered saline), Ultra Pure Grade		
Phosphate buffered saline (PBS), 1X solution, Dulbecco's formulation, sterile	500 ml	**K812-500ML**

PBS AND TBS WASH BUFFERS, ULTRA PURE GRADE

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 Ready-Pack™, each pack prepares 1 l of 20X concentrate, Ultra Pure Grade	2	**0788-2PK**
PBS, 20X liquid concentrate, prepares 20 l of 1X buffer, Ultra Pure Grade	1 L	**E703-1L**
PBS buffer solution 20X concentrate (phosphate buffered saline), Ultra Pure Grade	500 ml	**E703-500ML**
TBS, 20X liquid concentrate, prepares 80 l of 1X buffer, Ultra Pure Grade	4 L	**J640-4L**

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**

CALCIUM CHLORIDE 1 MOL/L IN AQUEOUS SOLUTION FOR BIOTECHNOLOGY, STERILE

Sterile reagent for the preparation of competent cells for transformation.

Description	Pack type	Pk	Cat. No.
Calcium chloride 1 mol/l in aqueous solution for biotechnology, sterile	Plastic bottle	100 ml	**E506-100ML**
Calcium chloride 1 mol/l in aqueous solution for biotechnology, sterile	Plastic bottle	500 ml	**E506-500ML**

BUFFER, HEPES SOLUTION pH 7.3 (1 MOL/L)

Description	Pk	Cat. No.
HEPES buffer solution pH 7.3 (1 mol/l)	100 ml	**J848-100ML**
HEPES buffer solution pH 7.3 (1 mol/l)	500 ml	**J848-500ML**

MAGNESIUM CHLORIDE 1 MOL/L (2 N) IN AQUEOUS SOLUTION FOR BIOTECHNOLOGY, STERILE

A sterile reagent for the preparation of competent cells for transformation.

Description	Pack type	Pk	Cat. No.
Magnesium chloride 1 mol/l (2 N) in aqueous solution for biotechnology, sterile	Plastic bottle	100 ml	**E525-100ML**
Magnesium chloride 1 mol/l (2 N) in aqueous solution for biotechnology, sterile	Plastic bottle	500 ml	**E525-500ML**

SODIUM CHLORIDE 5 MOL/L (5 N) IN AQUEOUS SOLUTION FOR BIOTECHNOLOGY, STERILE

Common source of salts for media propagation of many organisms.

Description	Pack type	Pk	Cat. No.
Sodium chloride 5 mol/l (5 N) in aqueous solution for biotechnology, sterile	Plastic bottle	500 ml	**E529-500ML**

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**

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**

AMPICILLIN SODIUM SALT USP, ULTRA PURE GRADE

Interferes with formation of bacterial cell wall.
Working concentration: 50 µg/ml.

Description	Pack type	Pk	Cat. No.
Ampicillin sodium salt USP, Ultra Pure Grade	Plastic bottle for solids	25 g	0339-EU-25G

CHLORAMPHENICOL 97.0-103.0%, ULTRA PURE GRADE

Inhibits protein synthesis at peptidyltransferase.
Recommended working concentration: 20 µg/ml.

Description	Pack type	Pk	Cat. No.
Chloramphenicol 97.0-103.0%, Ultra Pure Grade	Plastic bottle for solids	100 g	0230-EU-100G

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

CYCLOHEXIMIDE, ULTRA PURE GRADE

Inhibitor of protein synthesis in eucaryotic organisms. Widely used to determine protein half-life and as a selection agent for yeast and fungi. Working concentration: 100 to 1000 µg/ml.

Description	Pack type	Pk	Cat. No.
Cycloheximide, Ultra Pure Grade	Glass bottle	1 g	94271-1G
Cycloheximide, Ultra Pure Grade	Glass bottle	5 g	94271-5G

HYGROMYCIN B 50 MG/ML IN SOLUTION, ULTRA PURE GRADE

An aminoglycoside antibiotic that inhibits protein synthesis in bacteria, fungi and higher eucaryotic cells. Inhibits chain elongation. Widely used as a selection agent for procaryotic and eucaryotic cells carrying the hygromycin resistance gene.

- Purity (by HPLC): 80%
- Recommended working concentration: 100 µg/ml

Store between 2 and 8 °C.

Description	Pack type	Pk	Cat. No.
Hygromycin B 50 mg/ml in solution, Ultra Pure Grade	Vial	20 ml	K547-20ML

KANAMYCIN SULPHATE, ULTRA PURE GRADE

Binds to the 70S subunit of bacterial ribosome.
Recommended working concentration: 30 µg/ml.

Description	Pack type	Pk	Cat. No.
Kanamycin sulphate, Ultra Pure Grade	Plastic bottle for solids	10 g	0408-EU-10G
Kanamycin sulphate, Ultra Pure Grade		10 kg	0408-EU-10KG

KANAMYCIN SULPHATE 50 MG/ML IN SOLUTION, ULTRA PURE GRADE

Kanamycin is an aminoglycoside antibiotic that inhibits protein synthesis in gram-negative and gram-positive bacteria and in mycoplasma. Recommended working concentration: 30 µg/ml.

Description	Pack type	Pk	Cat. No.
Kanamycin sulphate 50 mg/ml in solution, Ultra Pure Grade	Vial	20 ml	E713-20ML

NALIDIXIC ACID ≥98%, HIGH PURITY

A bactericidal agent that inhibits DNA gyrase activity.
Recommended working concentration: 15 µg/ml.

Description	Pack type	Pk	Cat. No.
Nalidixic acid ≥98%, high purity	Plastic bottle for solids	250 g	0677-250G
Nalidixic acid ≥98%, high purity	Plastic bottle for solids	50 g	0677-50G

NEOMYCIN SULPHATE, ULTRA PURE GRADE

Antibiotic. Causes miscoding during protein synthesis.
Recommended working concentration: 50 µg/ml.

Description	Pack type	Pk	Cat. No.
Neomycin sulphate, Ultra Pure Grade	Plastic bottle for solids	25 g	0558-EU-25G

PENICILLIN : STREPTOMYCIN FOR TISSUE CULTURE, Γ-IRRADIATED

Aseptic, gamma-irradiated, tissue culture tested. 10 000 U/ml penicillin. 10 mg/ml streptomycin solution when reconstituted in 20 ml of sterile water.

Description	Pack type	Pk	Cat. No.
Penicillin : Streptomycin for tissue culture, γ-irradiated	Vial	20 ml	E490-20ML

STREPTOMYCIN SULPHATE, ULTRA PURE GRADE

30 µg/ml, binds to the 30S subunit of bacterial ribosome.

Description	Pack type	Pk	Cat. No.
Streptomycin sulphate, Ultra Pure Grade	Plastic bottle for solids	50 g	0382-EU-50G
Streptomycin sulphate, Ultra Pure Grade	Plastic bottle for solids	100 g	0382-EU-100G

STREPTOZOCIN, ULTRA PURE GRADE

Selection agent, mutagenic agent, and diabetes inducer.

Description	Pack type	Pk	Cat. No.
Streptozocin, Ultra Pure Grade	Glass bottle	1 g	N407-1G

TETRACYCLINE HYDROCHLORIDE, ULTRA PURE GRADE

Blocks the binding of tRNA to the 30S subunit.
Recommended working concentration: 15 µg/ml.

Description	Pack type	Pk	Cat. No.
Tetracycline hydrochloride, Ultra Pure Grade	Glass bottle	25 g	0422-EU-25G

L-ALANINE ≥99%, HIGH PURITY

Non animal origin. White crystalline powder.

Non polar. Aliphatic amino acid. Non essential amino acid. Common component of culture media. Involved in regulation of a variety of metabolic functions.

Description	Pack type	Pk	Cat. No.
L-Alanine ≥99%, high purity	Plastic bottle for solids	100 g	**0106-100G**
L-Alanine ≥99%, high purity	Plastic bottle for solids	500 g	**0106-500G**

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

Description	Pack type	Pk	Cat. No.
L(+)-Arginine 98.5-101.5% (dried basis) USP, FCC, Multi-compendial, Macron Fine Chemicals™	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™

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

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

Description	Pack type	Pk	Cat. No.
L(+)-Arginine USP, Multi-compendial, J.T. Baker®	Plastic bottle for solids	1 kg	**2066-06**

L(+)-ASPARAGINE, ANHYDROUS ≥99.0%, HIGH PURITY

Animal-free amino acid. Polar. Amide.

Description	Pack type	Pk	Cat. No.
L(+)-Asparagine, anhydrous ≥99.0%, high purity	Plastic bottle for solids	100 g	**94341-100G**

L(+)-ASPARTIC ACID ≥98%, HIGH PURITY

Animal-free amino acid. Polar. Acidic.

Description	Pack type	Pk	Cat. No.
L(+)-Aspartic acid ≥98%, high purity	Plastic bottle for solids	1 kg	**0192-1KG**
L(+)-Aspartic acid ≥98%, high purity	Plastic bottle for solids	500 g	**0192-500G**

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(+)-GLUTAMINE ≥98.5%, HIGH PURITY

Non-animal origin. Fine white powder

Description	Pack type	Pk	Cat. No.
L(+)-Glutamine ≥98.5%, high purity	Plastic bottle for solids	500 g	**0374-500G**
L(+)-Glutamine ≥98.5%, high purity	Plastic bottle for solids	1 kg	**0374-1KG**

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**

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

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

L(+)-GLUTAMINE, TECHNICAL

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

GLYCINE ≥99% FOR BIOTECHNOLOGY

Description	Pack type	Pk	Cat. No.
Glycine ≥99% for biotechnology	Plastic bottle for solids	1 kg	**0167-1KG**
Glycine ≥99% for biotechnology	Bucket (plastic)	5 kg	**0167-5KG**
Glycine ≥99% for biotechnology	Bucket (plastic)	10 kg	**0167-10KG**
Glycine ≥99% for biotechnology	Bucket (plastic)	12 kg	**0167-12KG**
Glycine ≥99% for biotechnology	Plastic drum	50 kg	**0167-50KG**

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**

L(+)-HISTIDINE MONOHYDROCHLORIDE MONOHYDRATE 98.5-101.5% FCC

Animal-free amino acid. Polar. Basic.

Description	Pack type	Pk	Cat. No.
L(+)-Histidine monohydrochloride monohydrate 98.5-101.5% FCC	Plastic bottle for solids	100 g	**E806-100G**

L(+)-HISTIDINE MONOHYDROCHLORIDE MONOHYDRATE 98.5-101.5% (DRIED BASIS) FCC, MULTI-COMPENDIAL, MACRON FINE CHEMICALS™

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

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 USP, MULTI-COMPENDIAL, J.T. BAKER®

Description	Pack type	Pk	Cat. No.
L(+)-Histidine USP, Multi-compendial, J.T. Baker®	Glass bottle for solids	100 g	**2080-05**

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

– Food GMP manufactured product

Description	Pack type	Pk	Cat. No.
L-a-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(+)-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-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(+)-VALINE 98.5-101.5% (DRIED BASIS) USP, FCC, MULTI-COMPENDIAL, MACRON FINE CHEMICALS™

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

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 ≥99%, HIGH PURITY

Description	Pack type	Pk	Cat. No.
D-(-)-Fructose ≥99%, high purity	Plastic bottle	1 kg	0226-1KG
D-(-)-Fructose ≥99%, high purity	Bucket (plastic)	5 kg	0226-5KG
D-(-)-Fructose ≥99%, high purity	Bucket (plastic)	12 kg	0226-12KG

D-(-)-FRUCTOSE, GPR RECTAPUR®

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

D-(+)-GALACTOSE ≥99.0%, HIGH PURITY

Description	Pack type	Pk	Cat. No.
D-(+)-Galactose ≥99.0%, high purity	Plastic bottle for solids	100 g	0637-100G
D-(+)-Galactose ≥99.0%, high purity	Plastic bottle for solids	250 g	0637-250G
D-(+)-Galactose ≥99.0%, high purity	Plastic bottle for solids	500 g	0637-500G

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-(+)-GALACTOSE ≥98.5%, GPR RECTAPUR®

Description	Pack type	Pk	Cat. No.
D-(+)-Galactose ≥98.5%, GPR RECTAPUR®	Plastic bottle for solids	100 g	24333.183
D-(+)-Galactose ≥98.5%, GPR RECTAPUR®	Plastic bottle for solids	1 kg	24333.296

D-(+)-GLUCOSE ≥99.5% FOR BIOTECHNOLOGY

Sugar used as an energy source in specialised media.

Description	Pack type	Pk	Cat. No.
D-(+)-Glucose ≥99.5% for biotechnology	Plastic bottle for solids	500 g	0188-500G
D-(+)-Glucose ≥99.5% for biotechnology	Plastic bottle for solids	1 kg	0188-1KG
D-(+)-Glucose ≥99.5% for biotechnology	Plastic bottle for solids	2,5 kg	0188-2.5KG
D-(+)-Glucose ≥99.5% for biotechnology	Bucket (Plastic)	5 kg	0188-5KG
D-(+)-Glucose ≥99.5% for biotechnology	Bucket (Plastic)	12 kg	0188-12KG
D-(+)-Glucose ≥99.5% for biotechnology	Plastic drum	50 kg	0188-50KG

D-(+)-GLUCOSE, ANHYDROUS 97.5-102.0% (BY ANHYDROUS BASIS) USP, J.T. BAKER®

– GMP manufactured product

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

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 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-(+)-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, anhydrous, GPR RECTAPUR®	Bucket (Plastic)	25 kg	24379.465

D-(+)-MALTOSE MONOHYDRATE ≥85%, REAGENT GRADE

Common media additive, particularly for the cultivation of lambda phage.

Description	Pack type	Pk	Cat. No.
D-(+)-Maltose monohydrate ≥85%, Reagent Grade	Plastic bottle for solids	100 g	**1B1184-100G**
D-(+)-Maltose monohydrate ≥85%, Reagent Grade	Plastic bottle for solids	500 g	**1B1184-500G**
D-(+)-Maltose monohydrate ≥85%, Reagent Grade	Plastic bottle for solids	1 kg	**1B1184-1KG**

D-(+)-MALTOSE MONOHYDRATE, GPR RECTAPUR®

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

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

Description	Pack type	Pk	Cat. No.
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-(-)-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, GPR RECTAPUR®	Bucket (Plastic)	25 kg	**27478.467**

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**

FICOLL® 400, BIOTECHNOLOGY GRADE

VWR LIFE SCIENCE

Ficoll® 400 is a neutral, hydrophilic polymer of sucrose, which readily dissolves in aqueous solutions.

Ficoll® is a registered trademark of GE Healthcare group of companies.

Description	Pk	Cat. No.
Ficoll® 400, biotechnology grade	50 g	**E965-50G**
Ficoll® 400, biotechnology grade	100 g	**E965-100G**

D-(+)-SUCROSE (FROM SUGAR CANE) ≥99% (BY HPLC) NF, MULTI-COMPENDIAL LOW IN ENDOTOXINS, J.T. BAKER®

Description	Pack type	Pk	Cat. No.
D-(+)-Sucrose (from sugar cane) ≥99% (by HPLC) NF, Multi-compendial low in endotoxins, J.T. Baker®	Polyethylene pail, screw top	1 kg	**6320-05**

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-(+)-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**

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**



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



SYRINGE FILTERS, ACRODISC®, SUPOR®

Low protein binding filters for sterile filtration of biological samples, serum and cell culture media.

Supor® hydrophilic polyethersulfone (PES) membrane: PP housing (except 25 and 32 mm: Acrylic and Acrodisc Serum: ABS)

Acrodisc® and Acrodisc® PF syringe filters with 0,2 µm Supor® membrane were challenged with bovine serum or a bacterial culture (10^{-7} cfu/ml) at a constant pressure of 1,4 bar. Built-in prefilter enhances throughput of viscous, particulate-laden or proteinaceous solutions.

Ø (mm)	Pore size	Inlet/outlet	Max. temperature (°C)	Max. pressure (bar)	Water flow rate
Acrodisc Supor®					
13	0,2 µm	Luer lock female/Luer male	55	5,2	22 ml/min (3,1 bar)
	0,45 µm				35 ml/min (3,1 bar)
25	0,2 µm				175 ml/min (3,1 bar)
	0,45 µm				300 ml/min (3,1 bar)
32	0,2 µm				490 ml/min (3,1 bar)
	0,45 µm				700 ml/min (3,1 bar)
	5 µm				1750 ml/min (3,1 bar)
Acrodisc Supor® PF with membrane prefilter					
25	0,8/0,2 µm	Luer lock female/Luer male	55	5,2	145 ml/min (3,1 bar)
32					440 ml/min (3,1 bar)
Serum Acrodisc® with glass fibre prefilter					
37	GF/0,2 µm	Luer lock female/Luer male	55	5,2	425 ml/min (3,1 bar)

Pore size (µm)	Filtration area (cm^2)	Ø (mm)	Sterile	Pk	Cat. No.
Acrodisc Supor®					
0,2	1	13	+	75	514-4122
0,45	1	13	+	75	514-4123
0,2	2,8	25	+	50	514-4126
0,45	2,8	25	+	50	514-4127
0,2	5,8	32	+	50	514-4131
0,45	5,8	32	+	50	514-4133
5,0	5,8	32	+	50	514-4129
Acrodisc Supor® PF with membrane prefilter					
0,8/0,2	2,8	25	+	50	514-4102
0,8/0,2	5,8	32	+	50	514-4136
Serum Acrodisc® with glass fibre prefilter					
GF/0,2	7,5	37	+	20	514-4119



SYRINGE FILTERS, ACRODISC® DMSO-SAFE

For solutions containing dimethylsulfoxide (DMSO).
Sterilisation of media used for cell cryopreservation.

Nylon membrane, PP housing, sterile

Inlet/outlet	Female Luer lock, male slip Luer
Max. temperature (°C)	55
Max. pressure (bar)	6,2
Water flow rate	60 ml/min (2,1 bar)

Type	Pore size (µm)	Filtration area (cm^2)	Ø (mm)	Sterile	Pk	Cat. No.
DMSO-Safe	0,2	2,8	25	+	50	**514-4011**



SYRINGE FILTERS

Available with either cellulose acetate or PES membrane. Sterile membranes with 0,2 µm pore size are ideal for sterile filtration applications, whilst those with 0,45 µm pore size can be used for clarifications. These sterile syringe filters are gamma irradiated to prevent cytotoxic residues caused by alternative sterilisation methods.

- Cellulose acetate membrane surfaces are not treated by wetting agents. This is especially useful for cell culture applications
- PES membranes show very low levels of extractables and high flow rates. Ideal for cell culture applications
- Certified non pyrogenic and non cytotoxic
- Delivered with certificate

** Retains 10^7 *brevundimonas diminuta* per cm^2 according to modified ASTM F838

Pore size (µm)	Ø (mm)	Sterile	Pk	Cat. No.
Cellulose acetate membrane				
0,2 **	25	+	50	**514-0061**
0,2 **	25	-	100	**514-0060**
0,45	25	+	50	**514-0063**
0,45	25	-	100	**514-0062**
PES membrane				
0,2 **	25	+	50	**514-0073**
0,2 **	25	-	100	**514-0072**
0,45	25	+	50	**514-0075**
0,45	25	-	100	**514-0074**

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PB19051-EN



FILTRATION CAPSULES, ACROPAK™ 20

AcroPak™ 20 capsule filters are designed to efficiently process up to 2 litres of chemical and biological fluids. These filters are available in 3 different membrane types.

Supor®

The Supor® membrane has high flow rates and throughputs, and is ideal for solutions where low protein binding is required. Not recommended for use with some ketones. For sterile filtration of media and buffers.

- Built-in prefilter extends filter life when particulate-laden solutions such as serum-containing media are processed
- Sterilisation by gamma irradiation eliminates potential contamination by EtO residuals
- PP housing and vent plug, PC filling bell, Supor® (hydrophilic PES) membrane
- Suitable for use with fluids containing dilute proteins, preservatives, or other critical components

Supor® EKV

Built-in MachV asymmetric pre-filter layer for maximum flow and throughput performance. For Sterile filtration of media and buffers.

- Disposable for reduced labour and associated costs
- Significantly reduces the cost of repeat testing when scaling up your filtration system
- Ideal for filtering aqueous solutions, cell culture media and serum
- Suitable for use with fluids containing dilute proteins, preservatives, or other critical components

Fluorodyne® II

The Fluorodyne® II membrane is compatible with aqueous and many organic solvents.

- Double layer sterilising membrane enhances reliability
- Upstream air vent prevents vapour lock
- Manufactured without the use of adhesives to minimise extractables

Supor and Supor EKV can withstand one autoclave cycle at 125 °C (257 °F) for 60 minutes; water wet capsule prior to autoclaving. Fluorodyne II can withstand one autoclave cycle at 131 °C (268 °F) for 30 min.

Type	Supor®
Inlet/outlet	6,4 - 12,7 mm Ø stepped hose barb with female Luer slip interior and filling bell outlet
Max. temperature (°C)	60
Max. pressure (bar)	4,1

Description	Type	Pore size (µm)	Filtration area (cm²)	Pk	Cat. No.
Supor® membrane					
AcroPak™ 20	Supor®, gamma-irradiated	0,8/0,2	20	3	**514-4097**



FILTRATION CAPSULES, ACROPAK™

A filter for every step in your process. From drug discovery and basic research to process development and production, Pall Laboratory's AcroPak capsules come in a variety of membrane types and volume sizes.

- 100% integrity tested (where noted)
- Endotoxin level: <0,25 EU/ml using Limulus Amebocyte Lysate test
- Bacterial retention: 0,2 µm lot samples retain 10^7 cfu/cm^2 of B. diminuta per modified ASTM F838
- Mycoplasma reduction: 0,1 µm lot samples retain 10^7 cfu/cm^2 A. Laidlawii per modified ASTM F838
- Biological safety: Passes United States Pharmacopeia (USP) biological reactivity test in vivo <88>
- Sterilisation by gamma irradiation

Primary applications include: Buffer media and reagent manufacturing, protein purification and cell culture and bioburden filtration.

Supor PES (Polyethersulfone):

With high flow and capacity, broad fluid compatibility, low protein adsorption, active ingredients, and stabilizers, Pall PES membranes are best suited for filtration of preparative fluids such as buffers, media, and bioprocess intermediates.

Supor EKV Asymmetric PES:

PES filters with asymmetric membrane layers have the same benefits of Supor PES (above), but with additional debris holding. This makes them ideal for high turbidity, high bioburden solutions. All Supor EKV products are a 0,65 um pre-filter and a 0,2 um asymmetric membrane.

Fluorodyne II PVDF (hydrophilic polyvinylidene fluoride):

Low extractables, low product and excipient adsorption, simple validation for the sterilization of a wide range of formulations make PVDF membranes ideal for final filtration.

Description	Pore size	Filtration area (cm²)	Connection	Pk	Cat. No.
Supor membrane					
AcroPak™ 200	0,8/0,2 µm	200	Stepped hose barb	3	**514-4098**



VENTING FILTERS, ACRO® 50

Reusable filters with superior performance for critical applications, ideal for use with bioreactors and fermenters and for filtration of aggressive solvents.

Membrane: PTFE on a hydrophobic PP support; housing: PP, autoclavable

* inlet/outlet: 1/8" MNPT

** inlet/outlet: 9,5 mm diameter straight

Pore size	0,2 µm	0,45 µm	1 µm
Ø (mm)	50		
Airflow rate	8 l/min (0,2 bar)	12 l/min (0,2 bar)	15 l/min (0,2 bar)
Max. pressure (bar)	4,1		
Max. temperature (°C)	130		
Inlet/outlet	Stepped hose barbs 6,4 - 12,7 mm Ø		1/8" MNPT

Pore size (µm)	Filtration area (cm²)	Pk	Cat. No.
0,2	19,6	18	**514-4109**
0,45	19,6	18	**514-4110**
1	19,6	18	**514-4111**
1 *	19,6	18	**515-0125**



Bacterial air vents

BACTERIAL AIR VENTING FILTERS

Economical, disposable depth filter for venting applications. Hydrophobic media allows air and gasses to pass freely while blocking aqueous fluid and aerosol contaminents.

- Use as a vent device for receiving vessels and small isolation or environmental chambers
- Recommended for small-volume venting and degassing

Hydrophobic glass laminated (polyester/glass fibre/polyester) membrane; PP housing

Aerosol retention: 99,97% 0,3 µm (DOP) at 32 l/min/100 cm^2

* Sterilised by gamma irradiation

Ø (mm)	37
Airflow rate	40 l/min (0,4 bar)
Max. pressure (bar)	5,2
Max. temperature (°C)	121
Inlet/outlet	stepped hose barbs 6,4 - 12,7 mm Ø

Pore size (µm)	Filtration area (cm^2)	Ø (mm)	Pk	Cat. No.
1 *	7,5	37	10	**514-4114**
1	7,5	37	24	**514-4107**



VENTING FILTERS, VACUSHIELD™

Protects valves and pump components from damage due to liquids. Protects laboratory personnel from potential biohazards, airborne and aerosol contaminants.

Hydrophobic PTFE membrane, PP housing

Aerosol retention: 99,97% of 0,3 µm DOP particles at 32 l/min/100 cm^2

Ø (mm)	50
Airflow rate	8 l/min (0,2 bar)
Max. pressure (bar)	1
Max. temperature (°C)	130
Inlet/outlet	for tubing Ø 6,4 - 12,7

Pore size (µm)	Filtration area (cm^2)	Ø (mm)	Pk	Cat. No.
0,2	19,6	50	3	**514-4115**



Acro® 37 TF vent devices

VENTING FILTERS, ACRO® 37 TF

Multipurpose filter for small volume venting and gas filtration, ideal for small bioreactors and fermenters.

- Broad chemical compatibility
- Disposable

Hydrophobic membrane PP reinforcened PTFE; PP housing

Ø (mm)	37
Airflow rate	3,58 l/min (0,2 bar)
Max. pressure (bar)	4,1
Max. temperature (°C)	100
Inlet/outlet	stepped hose barbs 6,4 - 9,5 mm Ø

Pore size (µm)	Filtration area (cm^2)	Ø (mm)	Pk	Cat. No.
0,2	7,5	37	24	**514-4117**
0,2	7,5	37	200	**514-4118**



BOTTLE TOP VACUUM FILTRATION SYSTEMS, VACUCAP®, SUPOR®

Supor® hydrophilic polyethersulphone (PES) membrane; PP housing. VacuCap® filtration device eliminates the need to constantly refill funnel in traditional bottle top filters as it draws directly from the mixing reservoir. The patented small design accepts a variety of collection vessels and reduces laboratory storage space and waste. The Supor® membrane in the VacuCap® 60 and VacuCap® 90 devices provides high flow rates for fast vacuum filtration of 100 ml to 5 litres of aqueous solutions and is available with prefilter to increase throughput of particulate laden solutions.

- Excellent for cell culture media preparation and available with 0,1 µm pore size to remove mycoplasma
- Pre-sterilised by gamma irradiation to eliminate contamination by EtO residuals, individually packed
- Environmentally friendly design with minimal plastic waste

* with prefilter

** with individually attached tubing

Environmentally preferable	Waste Reducing

Type	Pore size (µm)	Membrane Ø (mm)	Filtration area (cm²)	Pk	Cat. No.
VacuCap® 60	0,1	60	30	10	**515-0016**
VacuCap® 60	0,2	60	30	10	**515-0017**
VacuCap® 60	0,2 **	60	30	10	**516-9813**
VacuCap® 60	0,45	60	30	10	**515-0018**
VacuCap® 60 PF	0,8/0,2 *	60	30	10	**515-0019**
VacuCap® 90	0,1	90	60	10	**515-0012**
VacuCap® 90	0,2	90	60	10	**515-0013**
VacuCap® 90	0,2 **	90	60	10	**516-9812**
VacuCap® 90	0,45	90	60	10	**515-0014**
VacuCap® 90 PF	0,8/0,2 *	90	60	10	**515-0015**



Acro® 50 vent devices

VENTING FILTERS, ACRO® 50

These filters are ideal for venting of bioreactors, fermentation tanks and carboys or sterile gas purging of culture vessels. Ideal for attachment to disposable systems that need to undergo gamma irradiation.

- Connects easily to hoses of various sizes in-line or as a final filter
- Light weight prevents crimping of tubing
- Excellent for disposable systems. Eliminates cleaning validation

Emflon® II (hydrophobic PVDF) membrane; PP housing

Ø (mm)	50
Airflow rate	27 l/min (1 bar)
Max. pressure (bar)	4,1
Max. temperature (°C)	60
Inlet/outlet	stepped hose barbs 6,4 - 12,7 mm Ø

Type	Pore size (µm)	Filtration area (cm²)	Ø (mm)	Pk	Cat. No.
Filter with vent	0,2	20	50	3	**514-4227**



BOTTLE-TOP VACUUM FILTRATION SYSTEMS, PES

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 µm 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.

Description	Capacity (ml)	Pore size (µm)	Membrane Ø (mm)	Pk	Cat. No.
Complete filtration units					
Complete filtration unit	150	0,2	50	12	**514-0328**
Complete filtration unit	150	0,45	50	12	**514-0329**
Complete filtration unit	250	0,2	50	12	**514-0330**
Complete filtration unit	250	0,45	50	12	**514-0331**
Complete filtration unit	500	0,2	75	12	**514-0332**
Complete filtration unit	500	0,45	75	12	**514-0333**
Complete filtration unit	1000	0,2	91	12	**514-0334**
Complete filtration unit	1000	0,45	91	12	**514-0335**
Filtration cups only					
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	0,2	75	24	**514-0340**
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	**514-0343**
PS reservoir bottles (caps included)					
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**



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.

Membrane	Capacity (ml)	Pore size (µm)	Membrane Ø (mm)	Pk	Cat. No.
Complete filtration units					
PVDF	150	0,10	50	12	**514-1040**
PVDF	150	0,22	50	12	**514-1041**
PVDF	150	0,45	50	12	**514-1042**
PVDF	250	0,10	50	12	**514-1043**
PVDF	250	0,22	50	12	**514-1044**
PVDF	250	0,45	50	12	**514-1045**
PVDF	500	0,10	75	12	**514-1046**
PVDF	500	0,22	75	12	**514-1047**
PVDF	500	0,45	75	12	**514-1048**
PVDF	1000	0,10	91	12	**514-1049**
PVDF	1000	0,22	91	12	**514-1050**
PVDF	1000	0,45	91	12	**514-1051**
SFCA	150	0,22	50	12	**514-1052**
SFCA	150	0,45	50	12	**514-1053**
SFCA	250	0,22	50	12	**514-1054**
SFCA	250	0,45	50	12	**514-1055**
SFCA	500	0,22	75	12	**514-1056**
SFCA	500	0,45	75	12	**514-1057**
SFCA	1000	0,22	91	12	**514-1058**
SFCA	1000	0,45	91	12	**514-1059**
Nylon	150	0,22	50	12	**514-1060**
Nylon	150	0,45	50	12	**514-1061**
Nylon	250	0,22	50	12	**514-1062**
Nylon	250	0,45	50	12	**514-1063**
Nylon	500	0,22	75	12	**514-1064**
Nylon	500	0,45	75	12	**514-1065**
Nylon	1000	0,22	91	12	**514-1066**
Nylon	1000	0,45	91	12	**514-1067**

Membrane	Capacity (ml)	Pore size (µm)	Membrane Ø (mm)	Pk	Cat. No.
Filtration cups only					
PVDF	150	0,10	50	24	**514-1012**
PVDF	150	0,22	50	24	**514-1013**
PVDF	150	0,45	50	24	**514-1014**
PVDF	250	0,10	50	24	**514-1015**
PVDF	250	0,22	50	24	**514-1016**
PVDF	250	0,45	50	24	**514-1017**
PVDF	500	0,10	75	24	**514-1018**
PVDF	500	0,22	75	24	**514-1019**
PVDF	500	0,45	75	24	**514-1020**
PVDF	1000	0,10	91	24	**514-1021**
PVDF	1000	0,22	91	24	**514-1022**
PVDF	1000	0,45	91	24	**514-1023**
SFCA	150	0,22	50	24	**514-1032**
SFCA	150	0,45	50	24	**514-1033**
SFCA	250	0,22	50	24	**514-1034**
SFCA	250	0,45	50	24	**514-1035**
SFCA	500	0,22	75	24	**514-1036**
SFCA	500	0,45	75	24	**514-1037**
SFCA	1000	0,22	91	24	**514-1038**
SFCA	1000	0,45	91	24	**514-1039**
Nylon	150	0,22	50	24	**514-1024**
Nylon	150	0,45	50	24	**514-1025**
Nylon	250	0,22	50	24	**514-1026**
Nylon	250	0,45	50	24	**514-1027**
Nylon	500	0,22	75	24	**514-1028**
Nylon	500	0,45	75	24	**514-1029**
Nylon	1000	0,22	91	24	**514-1030**
Nylon	1000	0,45	91	24	**514-1031**



24 Well filter plates

FILTER PLATES, 24 WELL, ACROPREP™

The Acroprep 24-well filter plate utilises Pall's proprietary high-performance multi-layer filter media and membranes to offer time savings, strong performance claims and streamlined workflow improvements in a 24 well plate format.

- Intrinsic Acroprep plate and membrane properties minimize sample loss from non-specific binding
- Dual layer clarification plate contains a depth filter plus 0,65/0,2 µm Supor EKV PES membrane and allow clarification of large cellular debris prior to filtration through the 0,65/0,2 µm EKV Supor membrane
- Dual layer clarification plate has reliable recovery of >95% of extra cellular proteins
- Single layer AcroPrep 24-well filter plate contains 0,65/0,2 µm Supor EKV membrane and is designed for applications where a sterile filtrate is required

The AcroPrep cell clarification and sterile filtration plate for protein purification workflows saves time and simplifies workflows by both clarifying and 0,2 µm sterile filtering in a single device and workflow step. With either a vacuum manifold or centrifuge, high density cell cultures (such as CHO or HEK) can be processed resulting in the capture of cells, cell debris and other biological aggregates in the filter media. The plate's top layer features Pall's Seitz® depth media and efficiently captures whole cells and cell debris. The lower Supor® EKV layer provides an efficient sterile filtration layer. The combination effortlessly recovers proteins from whole cell cultures of up to 25M+ cells/ml with varying viabilities. Combining the clarification and sterilisation step eliminates the need to harvest the cells in a centrifugation step, saving additional time.

The AcroPrep 0,2 µm Supor EKV filtration plate for sterile filtration workflows is well suited for high volume (up to 7 ml) plate based sterile filtration needs such as media, reagent, serum or proteins. Compatible with either a vacuum manifold or centrifuge, the 24-well Supor EKV plate features a dual-layer configuration, 0,65 µm membrane integrated with a highly asymmetric 0,2 µm membrane for fast, efficient, and sterilising grade filtration.

Description	Well volume (ml)	Pk	Cat. No.
AcroPrep cell clarification and sterile filtration plate for protein purification workflows			
AcroPrep 24 Clarify and sterile filter plate, Depth + Supor EKV filter media, 0,65/0,2 µm	7	2	**738-0220**
AcroPrep 24 Clarify and sterile filter plate, Depth + Supor EKV filter media, 0,65/0,2 µm	7	8	**738-0219**
AcroPrep 0,2 µm Supor EKV filtration plate for sterile filtration workflows			
AcroPrep 24 sterile filter plate, Supor EKV filter media, 0,2 µm	7	2	**738-0222**
AcroPrep 24 sterile filter plate, Supor EKV filter media, 0,2 µm	7	8	**738-0221**



SEROLOGICAL PIPETTES, STANDARD LINE

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

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 packed in peel-to-open wraps plastic/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 pipettes 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 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 pipette, green strip

SEROLOGICAL PIPETTES, TRIPLE BAGGED

The pipettes are individually packed in plastic/plastic and then put in double bags.

- Polyolefin filter
- Latex, DNase, RNase free, non pyrogenic, non cytotoxic
- Sterility Assurance Level (SAL) of 10^{-6}
- Dispenser box: Easy opening

Colour coding for easy identification.

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

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**



Aspirating pipettes

ASPIRATING PIPETTES

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

- Use at –20 to 50 °C
- Sterilized by gamma irradiation SAL 10^{-6} (ISO11137)
- 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.

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 CONTROLLER, POWERPETTE *PRO*

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 µm, 1×0,2 µm), 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		
Pack of 3 coloured nose cones (red, blue and pink)	1	**612-4555**
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, SAFETYPETTE

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



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

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

Capacity (µl)	Accuracy (%)	Imprecision (%)	Pk	Cat. No.
0,1 - 2	±12,0 - ±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 kits for UHP pipettes		
5 Pack incl. 5 pipettes (0,1 - 2 / 0,5 - 10 / 2 - 20 / 20 - 200 / 100 - 1000 µl), 3 racks of tips (10, 200 and 1000 µl) and 8 pipette multiple stand	1	613-5464
4 Pack incl. 4 pipettes (0,5 - 10 / 2 - 20 / 20 - 200 / 100 - 1000 µl), 3 racks of tips (10, 200 and 1000 µl) and 8 pipette multiple stand	1	613-5463
3 Pack incl. 3 pipettes (0,5 - 10 / 10 - 100 / 100 - 1000 µl), 3 racks of tips (10, 200 and 1000 µl) and 8 pipette multiple stand	1	613-5468
Accessories		
Linear stand for 4 pipettes	1	613-5471
Starter kits for UHP pipettes		
3 Pack incl. 3 pipettes (2 - 20 / 20 - 200 / 100 - 1000 µl), 2 racks of tips (200 and 1000 µl) and 8 pipette multiple stand	1	613-5467
Accessories		
Multiple stand for up to 8 pipettes	1	613-5472
Stand for 4 UHP pipettes	1	613-1589





PIPETTE TIPS

These tips are made of high quality, 100% pure, virgin medical grade PP. Made in the highest quality moulds, these tips can be used whenever the work demands a higher standard.

- Sustainable design based on virgin resins
- A wide seal ensures tips will seal easily and consistently without leaking
- Guaranteed free of detectable DNA, DNase/RNase, endotoxins and heavy metals
- Tested for endotoxin (pyrogen) contamination
- Resins are pre-tested for metal contamination
- Graduated tips only: Graduations allow a visual check of pipetting accuracy
- Certificates are on file by lot number for all test results

Items (pipette tips and boxes) can be autoclaved at 122 °C for a maximum of 20 minutes at 15 psi.

Macro tips (1 - 5 and 5 - 10 ml) are supplied in composite racks (fibre carton). These racks are not autoclavable. For sterile tips, please order the sterilised version.

Please note: A steam cycle should be used. Always air dry these items. Do not use a dry cycle or glassware cycle as deformation can occur to plastics that are heated for extended periods.

Tip styles:

Bevel Point: Pipette tips that feature bevelled points are designed to retain less fluid and are a good choice for a multitude of procedures.

UltraFine: Pipette tips with UltraFine™ point feature a thin flexible section at the end that is non bevelled and very flexible. This helps you dispense the last tiny amount of sample from the tip.

FlexTop: These ultimate tips feature a uniquely thin and flexible top that conforms to the pipette barrel unlike any other tips. This design allows them to mount and eject from most pipettes with forces that help eliminate the potential for repetitive strain injuries.

Wide orifice: Extra wide opening allows you to pipette macrophages or sticky DNA materials. Bevelled end helps eliminate carry-over from viscous solutions.

Environmentally preferable Low Manufacturing Impact, Sustainable Packaging

Tip style	Volume (µl)	Sterile	Length (mm)	Packed	Pk	Cat. No.
0,1 - 10 µl						
UltraFine	0,1 - 10	-	31,42	Bulk	1.000	**613-0364**
UltraFine	0,1 - 10	-	31,42	12 racks, 96 each	1.152	**613-0334**
UltraFine	0,1 - 10	+	31,42	12 racks, 96 each	1.152	**613-0335**
UltraFine	0,1 - 10	-	31,42	6 refills, 96 each (Next Generation)	576	**613-2104**
UltraFine	0,1 - 10	-	31,42	13 refills, 96 each (Next Generation)	1.248	**613-1646**
UltraFine, extra long	0,1 - 10	-	47,60	10 racks, 96 each	960	**613-2136**
Extended length, with Tubegard™ ring (pipette protection)	0,1 - 10	-	38,10	Bulk	1.000	**613-0259**
Extended length, with Tubegard™ ring (pipette protection)	0,1 - 10	-	38,10	10 racks, 96 each	960	**613-0260**
Extended length, with Tubegard™ ring (pipette protection)	0,1 - 10	+	38,10	10 racks, 96 each	960	**613-0261**
Extended length, with Tubegard™ ring (pipette protection)	0,1 - 10	-	38,10	14 refills, 96 each (Next Generation)	1.344	**613-0735**
1 - 200 µl						
UltraFine, FlexTop	1 - 200	-	49,66	10 refills, 96 each (Next Generation)	960	**613-0725**
Bevel Point	1 - 200	-	49,66	10 refills, 96 each (Next Generation)	960	**613-0740**
Bevel Point (yellow)	1 - 200	-	49,66	Bulk	1.000	**613-0239**
Bevel Point (yellow)	1 - 200	-	49,66	10 racks, 96 each	960	**613-0241**
Bevel Point (yellow)	1 - 200	+	49,66	10 racks, 96 each	960	**613-0242**
Bevel Point (yellow)	1 - 200	-	49,66	10 refills, 96 each (Next Generation)	960	**613-0732**
Bevel Point, graduated	1 - 200	-	49,66	Bulk	1.000	**613-0298**
Bevel Point, graduated	1 - 200	-	49,66	Bulk	10.000	**525-0144**
Bevel Point, graduated	1 - 200	-	49,66	10 racks, 96 each	960	**613-0299**
Bevel Point, graduated	1 - 200	+	49,66	10 racks, 96 each	960	**613-0300**
Bevel Point, graduated	1 - 200	-	49,66	10 refills, 96 each (Next Generation)	960	**613-0742**
Bevel Point, wide orifice	1 - 200	-	49,66	10 refills, 96 each (Next Generation)	960	**613-0731**

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Tip style	Volume (µl)	Sterile	Length (mm)	Packed	Pk	Cat. No.
UltraFine, FlexTop	1 - 200	-	49,66	5 refills, 96 each (Next Generation)	480	**613-2108**
Bevel Point (yellow)	1 - 200	-	49,66	5 refills, 96 each (Next Generation)	480	**613-2106**
Bevel Point, graduated	1 - 200	-	49,66	5 refills, 96 each (Next Generation)	480	**613-2107**
1 - 250 µl						
UltraFine	1 - 250	-	52,07	10 refills, 96 each (Next Generation)	960	**613-0744**
1 - 300 µl						
UltraFine, FlexTop	1 - 300	-	71,12	Bulk	1.000	**613-0331**
UltraFine, FlexTop	1 - 300	-	71,12	6 racks, 96 each	576	**613-0332**
UltraFine, FlexTop	1 - 300	+	71,12	6 racks, 96 each	576	**613-0333**
UltraFine, FlexTop	1 - 300	-	71,12	6 refills, 96 each (Next Generation)	576	**613-0723**
100 - 1000 µl						
UltraFine (blue)	100 - 1000	-	75,95	Bulk	1.000	**613-0340**
UltraFine (blue)	100 - 1000	-	75,95	6 racks, 96 each	576	**613-0341**
UltraFine (blue)	100 - 1000	+	75,95	6 racks, 96 each	576	**613-0342**
UltraFine, graduated	100 - 1000	-	75,95	Bulk	1.000	**613-0343**
UltraFine, graduated	100 - 1000	-	75,95	6 racks, 96 each	576	**613-0344**
100 - 1250 µl						
UltraFine, FlexTop, extended	100 - 1250	-	88,90	Bulk	1.000	**613-0272**
UltraFine, FlexTop, extended	100 - 1250	-	88,90	5 refills, 96 each (Next Generation)	480	**613-0738**
Wide orifice	100 - 1250	-	88,90	5 refills, 96 each (Next Generation)	480	**613-0737**
1000 - 5000 µl						
Standard	1000 - 5000	-	144,27	49/rack	49	**613-2147**
Standard	1000 - 5000	+	144,27	49/rack	49	**613-2148**
Graduated (Eppendorf/Sartorius)	1000 - 5000	-	123,06	Bulk	250	**613-0339**
Graduated (Eppendorf/Sartorius)	1000 - 5000	-	123,06	49/rack	49	**613-2145**
Graduated (Eppendorf/Sartorius)	1000 - 5000	+	123,06	49/rack	49	**613-2146**
Graduated (Gilson® Classic/Rainin® Classic)	1000 - 5000	-	123,06	Bulk	250	**613-0338**
Graduated (Gilson® Classic/Rainin® Classic)	1000 - 5000	-	123,06	49/rack	49	**613-2143**
Graduated (Gilson® Classic/Rainin® Classic)	1000 - 5000	+	123,06	49/rack	49	**613-2144**
5000 - 10000 µl						
Standard	5000 - 10000	-	155,70	Bulk	250	**613-0831**
Standard	5000 - 10000	-	155,70	36/rack	36	**613-2149**
Standard	5000 - 10000	+	155,70	36/rack	36	**613-2150**



732-0519



Rack

FILTER TIPS

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

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

Environmentally preferable Low Manufacturing Impact, Sustainable Packaging

Tip style	Volume (µl)	Sterile	Length (mm)	Packed	Pk	Cat. No.
Racked, sterile						
UltraFine, extended	0,1 - 10	+	38,10	10 racks, 96 each	960	**732-0543**
UltraFine, graduated	0,1 - 10	+	31,42	12 racks, 96 each	1.152	**732-0516**
Bevel Point	1 - 40	+	49,66	10 racks, 96 each	960	**732-0528**
Standard	1 - 100	+	49,66	10 racks, 96 each	960	**732-1103**
Bevel Point, graduated	1 - 100	+	49,66	10 racks, 96 each	960	**732-1102**
UltraFine	1 - 200	+	52,07	10 racks, 96 each	960	**732-0541**
UltraFine, extended	1 - 200	+	83,82	6 racks, 96 each	576	**732-0610**
UltraFine, extended	1 - 300	+	71,12	6 racks, 96 each	576	**732-0611**
UltraFine	100 - 1000	+	88,90	6 racks, 96 each	576	**732-0534**



613-5471

STANDS FOR VWR® PIPETTES

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)

Stand 613-5473: Compatible only with single-channel pipettes, volumes 2 to 1000 µl (EHP and Standard Line)



613-5472 613-5473

Description	Pk	Cat. No.
Linear stand for 4 pipettes	1	**613-5471**
Multiple stand for up to 8 pipettes	1	**613-5472**



FILTER TIPS, LOW RETENTION

Low retention tips made of transparent PP resins offering unsurpassed fluid retention performance and proven aerosol blocking with endotoxin-free, 10 µm porous, hydrophobic filter. Ideal for PCR and DNA manipulation.

- Sustainable design based on virgin resins
- With PE filter, sterile
- Up to 10 times less fluid retention than standard tips
- Sample can be completely recovered without cutting into tip
- Lot-certified purity (free from protease, RNase/DNase, human DNA and endotoxin, non pyrogenic)
- Tips and racks are autoclavable to 121 °C for a maximum of 15 minutes (dry cycle is not recommended)

Environmentally preferable	Low Manufacturing Impact, Sustainable Packaging

Tip style	Volume (µl)	Sterile	Length (mm)	Packed	Pk	Cat. No.
Low retention, extended	10	+	38,10	10 racks, 96 each	960	**732-1487**
Low retention	10	+	31,42	12 racks, 96 each	1.152	**732-1486**
Low retention	20	+	49,66	10 racks, 96 each	960	**732-1488**
Low retention	100	+	49,66	10 racks, 96 each	960	**732-2385**
Low retention	200	+	52,07	10 racks, 96 each	960	**732-1489**
Low retention	300	+	52,07	10 racks, 96 each	960	**732-1490**
Low retention	1000	+	88,90	6 racks, 96 each	576	**732-1491**

Avantor Services

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.



Ask for a quote

PB20051



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	Type	Material	Packed	Pk	Cat. No.
Centrifuge tubes, 15 ml, 17000×g, flat cap with sealing ring						
15	Flat cap	Non sterile	PP	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	PP	Bulk (tubes and caps in separate bags)	500	**525-1083**
15	Flat cap	Sterile	PP	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	PP	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, plug cap						
15	Plug type cap	Non sterile	PP	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	PP	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	PP	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	PP	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	PP	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, freestanding, flat cap with sealing 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 and 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, HIGH PERFORMANCE, FLAT OR PLUG CAP, PP, VWR®

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
- Sterile 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 angular at one end to stack up easily. The interlocking design of each polypropylene rack makes them ideal for benchtop organisation.

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.

Capacity (ml)	Closure type	Type	Packed	Pk	Cat. No.
Conical bottom centrifuge tubes with flat cap					
15	Flat cap	Non sterile	Bulk	500	**525-1066**
15	Flat cap	Sterile	50/bag, 10 bags/case	500	**525-1068**
50	Flat cap	Non sterile	Bulk	500	**525-1072**
50	Flat cap	Sterile	50/bag, 10 bags/case	500	**525-1075**
Conical bottom centrifuge tubes with plug cap					
15	Plug type cap	Non sterile	Bulk	500	**525-1067**
15	Plug type cap	Sterile	50/bag, 10 bags/case	500	**525-1070**
50	Plug type cap	Non sterile	Bulk	500	**525-1073**
50	Plug type cap	Sterile	50/bag, 10 bags/case	500	**525-1077**
Free-standing centrifuge tubes with plug 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**



Centrifuge tubes

CENTRIFUGE TUBES, ULTRA-HIGH PERFORMANCE, LIGHT-SENSITIVE, VWR®

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

- 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

These sterile tubes feature a printed labelling area for quick and convenient sample identification. Green high density polyethylene caps are included. All tubes and caps are autoclavable.

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.

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**





471-1139

ULTRA-LOW TEMPERATURE FREEZERS, UPRIGHT MODELS, –86 °C

These freezers are designed and constructed for long-term performance and are ideal for applications where temperature control is critical. Modern design includes an easy to grasp handle for one-handed operation. Dual wheel, locking swivel castors allow mobility as well as secure positioning. Industrial-grade cabinets are constructed of high quality, heavy gauge, cold-rolled steel. The powder-coated finish is rust- and chip-resistant. Upright freezers feature a triple-point silicone door gasket, three stainless steel shelves that are fully adjustable (bottom of unit acts as fourth shelf), lockable castors, and a vacuum-relief port for easy re-entry following door closings.

- Dual compressors
- Microprocessor temperature control system
- Advanced monitor/alarm system
- Automatic voltage compensator
- Cascade refrigeration system
- Non CFC, non HFCF, non flammable refrigerants
- The microprocessor temperature control system maintains constant freezer temperature, along with a sophisticated microprocessor monitor/alarm system to keep the operator informed of over-/under-temperature conditions, power failures, low battery and door ajar scenarios. LED indicates actual chamber temperature
- Air-cooled, hermetically-sealed dual compressors work in unison and cycle on demand of the microprocessor temperature controller
- To reduce cold air loss, units feature four inner compartment doors
- Acoustic mufflers and sound-absorbing foam in the freezer base reduce the noise level in the lab

Temperature: –50 to –86 °C

Cat. No.	471-1202
Alarm	Audible and visual
Shelves/drawers	2 shelves
Weight	390 kg

Type	Pk	Cat. No.
ULT upright freezer rack packages and chart recorder		
Ultra-low temperature upright freezer rack package with 2 shelves of sliding drawer racks and boxes plus chart recorder (651 l)	1	**471-1202**

ULTRA-LOW TEMPERATURE CHEST FREEZERS, –86 °C

These chest freezers have been designed for sample protection and ease of use.

- Convenient information centre control and monitoring system
- Polystyrene interior sublids reduce cold air loss and improve temperature recovery after door openings
- Insulation: High density HFC-blown PU foam (127 mm)
- 2" locking castors for easy to roll installation
- Refrigerant type: R 404-A
- RS485 interface
- Optional temperature chart recorder (7 day) and optional data logger can be connected

Temperature range: –50 to –86 °C

Regulatory certifications: UL, cUL, CE

Model / **Cat. No.**	471-1137	471-1138	471-1139
Display	Digital		
Defrost	Manual		
Alarm	Audible and visual		
Electrical	230 V, 50 Hz, 1 phase, 3450 W		
Noise level	55 dB (A)	57 dB (A)	
Door type	1 door		
Door lock	Yes		
Access ports	1		
Material	Exterior: Cold-rolled steel, powder coated Interior: Stainless steel		
Specifications	Storage capacity for 2" boxes: 63 Storage capacity for 3" boxes: 9 Storage capacity for vials: 45	Storage capacity for 2" boxes: 252 Storage capacity for 3" boxes: 21 Storage capacity for vials: 168	Storage capacity for 2" boxes: 396 Storage capacity for 3" boxes: 33 Storage capacity for vials: 264
Weight	159 kg	338 kg	386 kg

Type	Pk	Cat. No.
ULT chest freezer, 85 l	1	**471-1137**
ULT chest freezer, 359 l	1	**471-1138**
ULT chest freezer, 566 l	1	**471-1139**



CRYOGENIC VIALS

Designed for the storage of biological material, human or animal cells, at temperatures as low as –196 °C (should only be used in the gas phase of liquid nitrogen).

- Graduations and white marking area
- Sterilised by gamma radiation
- Compatible with most storage systems

Closures and tubes are made of PP, and both have the same coefficient of expansion, further enhancing the leakproof qualities of these vials at various temperatures. Round bottom vials can be centrifuged up to 17000×g.

Please note that 479-1237 has a PE screw cap and there are no cap inserts available for this model.

Certified RNase-, DNase-, pyrogen- and DNA-free.

Packed in unique tamper-proof, resealable, safety-lock bags of 100.

Capacity (ml)	Base	Ø ext.×H (mm)	Pk	Cat. No.
With external thread and lip seal				
1,20	Free-standing	12,5×41	1.000	**479-1219**
2,00	Round bottom	12,5×46	1.000	**479-1235**
2,00	Free-standing	12,5×48	1.000	**479-1220**
3,00	Free-standing	12,5×71	1.000	**479-1775**
4,00	Free-standing	12,5×77	1.000	**479-1776**
5,00	Round bottom	12,5×91	1.000	**479-1777**
5,00	Free-standing	12,5×91	1.000	**479-1236**
With internal thread and silicone O-ring				
1,20	Free-standing	12,5×41	1.000	**479-1261**
2,00	Round bottom	12,5×48	1.000	**479-1263**
2,00	Free-standing	12,5×49	1.000	**479-1262**
4,00	Round bottom	12,5×70	1.000	**479-1265**
4,00	Free-standing	12,5×72	1.000	**479-1264**
5,00	Round bottom	12,5×91	1.000	**479-1266**
5,00	Free-standing	12,5×91	1.000	**479-1773**
With external thread, lip and silicone washer seal				
1,20	Free-standing	12,5×43	1.000	**479-1207**
2,00	Round bottom	12,5×48	1.000	**479-1209**
2,00	Free-standing	12,5×49	1.000	**479-1208**
3,00	Free-standing	12,5×72	1.000	**479-1210**
4,00	Free-standing	12,5×76	1.000	**479-1217**
5,00	Round bottom	12,5×91	1.000	**479-1774**
5,00	Free-standing	12,5×91	1.000	**479-1218**
With internal thread and silicone washer seal				
1,20	Free-standing	12,5×41	1.000	**479-1254**
2,00	Round bottom	12,5×48	1.000	**479-1258**
2,00	Free-standing	12,5×49	1.000	**479-1256**
4,00	Round bottom	12,5×70	1.000	**479-1255**
4,00	Free-standing	12,5×72	1.000	**479-1260**
5,00	Round bottom	12,5×90	1.000	**479-1259**
5,00	Free-standing	12,5×92	1.000	**479-1257**
With external thread and silicone washer seal				
1,20	Free-standing	12,5×43	1.000	**479-1238**
2,00	Round bottom	12,5×48	1.000	**479-1240**
2,00	Free-standing	12,5×49	1.000	**479-1239**
3,00	Free-standing	12,5×72	1.000	**479-1251**
4,00	Free-standing	12,5×76	1.000	**479-1252**
5,00	Round bottom	12,5×91	1.000	**479-1778**
5,00	Free-standing	12,5×91	1.000	**479-1253**
10,00	Free-standing	17,0×84	500	**479-1237**

Colour	Pk	Cat. No.
Coloured cap inserts for cryogenic vials		
Amber	500	**479-0809**
Blue	500	**479-0814**
Green	500	**479-0812**
Grey	500	**479-0808**
Purple	500	**479-0807**
Orange	500	**479-0806**
Pink	500	**479-0804**
Red	500	**479-0813**
Violet	500	**479-0805**
White	500	**479-0815**
Yellow	500	**479-0811**
Assorted	500	**479-0810**



478-0236

CRYOBOXES

Polycarbonate.

- Can be used from –190 to +121 °C.

VWR freezer boxes can be used with most manufacturer's upright and chest freezer racks in general purpose and ultra-low mechanical freezers.

Compartments	Height (mm)	Pk	Cat. No.
Cryoboxes, PC, with dividers			
10×10	50	1	**478-0236**
5×5	50	1	**478-0238**
Dividers, cardboard			
5×5	-	1	**478-0242**



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	Low Manufacturing Impact, 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 diameters.

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



CRYOBOXES, WITHOUT OR WITH DIVIDERS

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	Type	Pk	Cat. No.
-	Without divider	100	**479-1386**
49 (7x7)	With divider	100	**479-1385**
64 (8x8)	With divider	100	**479-1384**
81 (9x9)	With divider	100	**479-1383**
100 (10x10)	With divider	100	**479-1382**



CRYOBOXES

Made of extra strong polycarbonate.

- Writing surface has numbered squares for easy sample identification
- Stackable
- Vials readily visible through transparent cover
- Cover and base are keyed to prevent misalignment
- Drain holes under base
- Writing surface for identifying base and/or cover
- Numeric identification of each vial
- Air vents minimise condensation

Transparent cover allows the user to see the contents of the box, and is keyed to the base to prevent misalignment. Printed with a series of squares (numbered from 1 to 25, 1 to 42, 1 to 81, or 1 to 100), surface accepts writing with markers, facilitating inventory control. Can be used from –196 to +121 °C.

A unique colour coding system uses coloured plastic grids to separate the cover from the base on the 25-, 42- and 81-place boxes. Those made to accept 100 tubes have a coloured base instead of a grid.

Description	Compartments	For (ml)	W×D×H ext. (mm)	Pk	Cat. No.
White box with blue grid	5×5	Cryotubes 1 - 2	76×76×52	8	**479-0470**
White box with green grid	5×5	Cryotubes 1 - 2	76×76×52	8	**479-0471**
White box with red grid	5×5	Cryotubes 1 - 2	76×76×52	8	**479-0472**
White box with yellow grid	5×5	Cryotubes 1 - 2	76×76×52	8	**479-0473**
White box with blue grid	9×9	Cryotubes 1 - 2	133×133×52	4	**479-0474**
White box with green grid	9×9	Cryotubes 1 - 2	133×133×52	4	**479-0475**
White box with red grid	9×9	Cryotubes 1 - 2	133×133×52	4	**479-0476**
White box with yellow grid	9×9	Cryotubes 1 - 2	133×133×52	4	**479-0477**
White box with blue grid	9×9	Cryotubes 3 - 4	133×133×81	3	**479-0891**
White box with green grid	9×9	Cryotubes 3 - 4	133×133×81	3	**479-0892**
White box with red grid	9×9	Cryotubes 3 - 4	133×133×81	3	**479-0893**
White box with yellow grid	9×9	Cryotubes 3 - 4	133×133×81	3	**479-0894**
White box with blue grid	9×9	Cryotubes 3 - 5	133×133×95	5	**479-0482**
White box with green grid	9×9	Cryotubes 3 - 5	133×133×95	5	**479-0483**
White box with red grid	9×9	Cryotubes 3 - 5	133×133×95	5	**479-0484**
White box with yellow grid	9×9	Cryotubes 3 - 5	133×133×95	5	**479-0485**
Blue box without grid	10×10	Cryotubes 1 - 2	133×133×52	4	**479-0486**
Green box without grid	10×10	Cryotubes 1 - 2	133×133×52	4	**479-0487**
Red box without grid	10×10	Cryotubes 1 - 2	133×133×52	4	**479-0488**
Yellow box without grid	10×10	Cryotubes 1 - 2	133×133×52	4	**479-0489**



CRYOBOXES, CARDBOARD, 133×133 MM

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 (mm)	W×D×H ext. (mm)	Pk	Cat. No.
Cryoboxes 32 mm high						
-	White	-	32	133×133×32	1	**479-1407**
-	Blue	-	32	133×133×32	1	**479-1408**
-	Red	-	32	133×133×32	1	**479-1409**
-	Green	-	32	133×133×32	1	**479-1410**
-	Yellow	-	32	133×133×32	1	**479-1411**
Cryoboxes 50 mm high						
-	White	-	50	133×133×50	1	**479-1417**
-	Blue	-	50	133×133×50	1	**479-1418**
-	Red	-	50	133×133×50	1	**479-1419**
-	Green	-	50	133×133×50	1	**479-1420**
-	Yellow	-	50	133×133×50	1	**479-1421**
Cryoboxes 75 mm high						
-	White	-	75	133×133×75	1	**479-1427**
-	Blue	-	75	133×133×75	1	**479-1428**
-	Red	-	75	133×133×75	1	**479-1429**
-	Green	-	75	133×133×75	1	**479-1430**
-	Yellow	-	75	133×133×75	1	**479-1431**
Cryoboxes 100 mm high						
-	White	-	100	133×133×100	1	**479-1387**
-	Blue	-	100	133×133×100	1	**479-1388**
-	Red	-	100	133×133×100	1	**479-1389**
-	Green	-	100	133×133×100	1	**479-1390**
-	Yellow	-	100	133×133×100	1	**479-1391**
Cryoboxes 130 mm high						
-	White	-	130	133×133×130	1	**479-1397**
-	Blue	-	130	133×133×130	1	**479-1398**
-	Red	-	130	133×133×130	1	**479-1399**
-	Green	-	130	133×133×130	1	**479-1400**
-	Yellow	-	130	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**

Compartments	Colour	For tubes	Height (mm)	W×D×H ext. (mm)	Pk	Cat. No.
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**
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 13,3 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 mm 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**

Biorepository

We have 100+ million samples stored and never failed to return one

International biorepository services organisation that supports customers across the entire regulated product research, development, and commercialisation lifecycle

Learn more on how we store



PB20051



CRYOBOXES, CARDBOARD, 136X136 MM

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

Compartments	Colour	For tubes	Height (mm)	W×D×H ext. (mm)	Pk	Cat. No.
Cryoboxes 32 mm high						
-	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**
Cryoboxes 50 mm high						
-	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**
Cryoboxes 75 mm high						
-	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**
Cryoboxes 100 mm high						
-	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**
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 mm 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**

Compartments	Colour	For tubes	Height (mm)	W×D×H ext. (mm)	Pk	Cat. No.
Cryoboxes 32 mm high						
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 mm 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 mm 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**



479-1392

CRYOBOXES WITH DIVIDERS

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

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

Compartments	W×D×H ext. (mm)	Pk	Cat. No.
81 (9x9)	133x133x32	1	**479-1437**
81 (9x9)	133x133x50	1	**479-1438**
81 (9x9)	133x133x75	1	**479-1440**
81 (9x9)	133x133x100	1	**479-1441**
81 (9x9)	133x133x130	1	**479-1442**
100 (10x10)	133x133x50	1	**479-1439**



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, HALF SIZE, 136X66,5 MM

Corrugated cardboard box.

- Waterproof coating
- Freezable to –140 °C
- Available with or 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, half size, with dividers				
5×10	White	136x66,5x50	10	**479-7000**
5×10	Blue	136x66,5x50	10	**479-7001**
5×10	Red	136x66,5x50	10	**479-7002**
5×10	Green	136x66,5x50	10	**479-7003**
5×10	Yellow	136x66,5x50	10	**479-7004**
Dividers for cryoboxes half size				
5×10	—	-	10	**479-7005**



CRYOBOXES, DOUBLE SIZE, 133X257 MM

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	133x257x50	1	**479-7006**
-	Blue	133x257x50	1	**479-7007**
-	Red	133x257x50	1	**479-7008**
-	Green	133x257x50	1	**479-7009**
-	Yellow	133x257x50	1	**479-7010**
Cryoboxes, double size, with dividers				
10×20	White	133x257x50	1	**479-7011**
10×20	Blue	133x257x50	1	**479-7012**
10×20	Red	133x257x50	1	**479-7013**
10×20	Green	133x257x50	1	**479-7014**
10×20	Yellow	133x257x50	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

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	136x136x55	1	**479-7019**
		Blue	136x136x55	1	**479-7020**
		Red	136x136x55	1	**479-7021**
		Green	136x136x55	1	**479-7022**
		Yellow	136x136x55	1	**479-7023**
		White	136x136x75	1	**479-7024**
		White	136x136x95	1	**479-7025**
Boxes, with dividers					
	10 x 10	White	136x136x55	1	**479-7026**
	10 x 10	Blue	136x136x55	1	**479-7027**
	10 x 10	Red	136x136x55	1	**479-7028**
	10 x 10	Green	136x136x55	1	**479-7029**
	10 x 10	Yellow	136x136x55	1	**479-7030**
	10 x 10	White	136x136x75	1	**479-7031**
	10 x 10	White	136x136x95	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**



MICROTUBE STORAGE BOXES

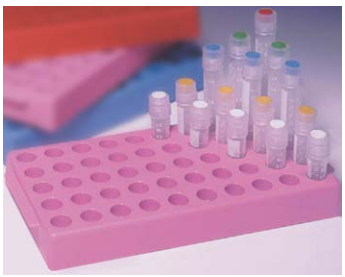
PP.

- 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**



CRYOVIAL WORKSTATION RACK

Constructed from sturdy polypropylene, the VWR cryovial workstation rack is compact and stackable, with strong handles for safe and easy transport.

- Holds up to 50 cryogenic vials
- Autoclavable
- Anti-skid rubber feet for bench top stability
- Alphanumeric indexing for easy vial identification

For (ml)	No. of holes	W×D×H (mm)	Colour	Pk	Cat. No.
1 - 5	50 (5×10)	205×103×26	Violet	4	**479-1869**



SLIDING SHELF RACKS FOR CRYOBOXES, COMFORT

Stainless steel.

- Racks for five different box heights are available
- Can be used with all freezer brands
- Fits all standard cryoboxes

For upright freezers. These racks ensure a more ergonomic operating process. The cryoboxes are placed in drawers in the sliding shelf rack, increasing flexibility. Measure the inside height and depth of your freezer in order to choose the right rack.

Delivered with or without cryoboxes.

Compartments	W×D×H ext. (mm)	Pk	Cat. No.
Racks for cryoboxes height 50 mm			
15 (5×3)	140×421×285	1	**479-0760**
20 (5×4)	140×558×285	1	**479-0763**
25 (5×5)	140×640×278	1	**479-1839**



RACK FOR CRYOGENIC VIALS

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 (ml)	No. of holes	W×D×H (mm)	Colour	Pk	Cat. No.
(Ø 12,5 mm) 1 - 5	50 (5×10)	199×104×24,5	Blue	1	**211-0139**



RACKS FOR 15 OR 50 ML TUBES

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.

Colour	W×D×H (mm)	Pk	Cat. No.
Purple	132×132×129	5	**211-0370**



CENTRIFUGE TUBE STANDS

PP, purple.

- Free from DNase and RNase and non pyrogenic
- Autoclavable at 121 °C and freezable to –80 °C
- Very good chemical resistance

Suitable for 1,5/2,0 ml microcentrifuge tubes and 15/50 ml conical centrifuge tubes.

Description	No. of holes	Colour	Pk	Cat. No.
For 1,5/2,0 ml microcentrifuge tubes and 15/50 ml centrifuge tubes	7	Purple	5	**525-1003**



CRYO 1 °C FREEZING CONTAINER

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	Int.Ø×H (mm)	No. of holes	Pk	Cat. No.
Cryo 1 °C freezing container	86×117	18	1	**479-0640**

GLYCERINE SOLUTION 20%, BIOTECHNOLOGY GRADE, STERILE

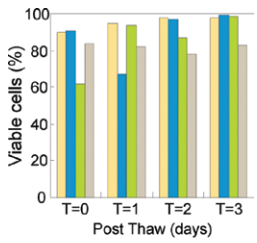
Used as a cryopreservative in bacterial preservation media.

- Sterile
- Used in cell culture applications

Description	Pack type	Pk	Cat. No.
Glycerine solution 20%, Biotechnology Grade, sterile	Plastic bottle	100 ml	**E550-100ML**

DIMETHYL SULPHOXIDE ≥99.9%, ULTRA PURE GRADE

Description	Pack type	Pk	Cat. No.
Dimethyl sulphoxide ≥99.9%, Ultra Pure Grade	Plastic tube	5	**N182-5X10ML**



Viability of post-thaw cultures of K562 cells. Cells frozen in AMRESCO SeraFree Cryopreservation Media (□) exhibited higher recovery than cells frozen in traditional RPMI freezing media containing DMSO and serum (□). Viability of cells recovering from cryopreservation in AMRESCO SeraFree Cryopreservation Media was comparable or better than that of cells in Competitors 1 (□) and 2 (□) serum-free freezing media. Viability was determined by standard trypan-blue exclusion assay.

CRYOPRESERVATION MEDIA, SERAFREE

SeraFree cryopreservation media is ready to use freezing media for cryopreservation of adherent or suspension cultured cells. The animal-free media composition eliminates batch-to-batch variability and is optimised for cell viability and cell growth after thawing. Suitable for use in environments that prohibit the use of animal-derived products.

- Sterile and endotoxin tested
- Ready to use, animal-free, RPMI- or DMEM-based media
- Optimises cell growth and cell viability after thawing
- Reduces potential for transmission of infectious diseases

Description	Pk	Cat. No.
Cryopreservation media, DMEM-based	50 ml	**N676-50ML**



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 space saving 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 (l)	Colour	W×D×H (mm)	Pk	Cat. No.
2,5	Black	285×338×120	1	**216-1510**
2,5	Blue	285×338×120	1	**216-1513**
2,5	Green	285×338×120	1	**216-1514**
2,5	Red	285×338×120	1	**216-1515**
4,5	Black	285×338×187	1	**216-1516**
4,5	Blue	285×338×187	1	**216-1517**
4,5	Green	285×338×187	1	**216-1518**
4,5	Red	285×338×187	1	**216-1519**



479-0642

LABTOP COOLERS

–20 °C mini labtop cooler PC, non toxic gel

The –20 °C mini labtop cooler holds 12× 0,5 or 1,5 ml microcentrifuge tubes at below –20 °C for over 1 hour. Ideal for bench top use or transport. Wire handle secures top while carrying. 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× 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	W×D×H (mm)	Pk	Cat. No.
–20 °C mini labtop cooler	12	151×108×125	1	**479-0642**
–20 °C labtop cooler	20	151×108×125	1	**479-0643**
–20 °C maxi labtop cooler	32	243×157×146	1	**479-0641**



BOX STORAGE SYSTEM, BSS SERIES

BSS tanks offer various solutions for storage of vials or straws in liquid or gaseous phase. They provide extremely good temperature uniformity, even with as little as 2 cm of liquid nitrogen remaining above the rack insulator (or 5 cm above the bottom of BSS-5100). The tanks are manufactured from aluminium alloy with fibre glass/ epoxy neck and a high vacuum multi-layered super insulation that limits nitrogen evaporation.

- Extremely good temperature uniformity
- Lid can also be padlocked shut, except on model BSS-5100 (padlock not included)

CE - Medical.

S70 controller: Temperature read out (1 point), automatic filling procedure (up to desired LN_2 level), visible and audible alarms (high/ low temperature and level, and time-out fill error), one potential free contact (with programmable function) for external alarm.

The newly developed **S170 controller** offers maximum sample security and many features: Automatic filling procedure, temperature measurement (via two probes), regulation of liquid nitrogen level, providing visual and audible alarms (low level alarm, low level fill, normal level stop fill, high level alarm), position of the cover display (open/ closed), management of the 'defog' function (for better visibility inside the vessel), RS485 interface enables complete management and control of the system via a PC (software included), four potential free contacts for connection to an in-house alarm system or to a telephone dialling system (four different alarm functions can be transferred).

Stainless steel racks for standard type boxes (25, 81 or 100 tubes) are included.

For BSS-5100: Pie-shaped drawers (for cryotubes) or canisters (for goblets and straws) must be ordered separately.

Model	BSS-750	BSS-3000	BSS-4800
Capacity (l)	48,5	100	148
Static holding time (days)	180	155	227
Ø×H (mm)	500×707	680×748	680×920
No. of canisters	30		48
No. of test tube racks	6		
Weight, empty (kg)	20,5	45	56

Description	Neck-Ø (mm)	Pk	Cat. No.
BSS-750	119	1	**478-0274**
BSS-3000	215	1	**478-0279**
BSS-4800	215	1	**478-0280**



CRYOGENIC STORAGE VESSELS, CSS AND XSS SERIES

CSS series tanks offer storage for small to medium capacity applications. The XSS series offer similar benefits and extended storage capacity. The tanks are manufactured from aluminium alloy with fibre glass/epoxy neck. High vacuum, multi-layered super insulation limits nitrogen evaporation.

- Extremely low liquid nitrogen evaporation
- Lid is lockable with padlock (not included)
- Vessels are equipped with stainless steel canisters with hook for easy retrieval from the vessel

The samples are placed in stainless steel canisters directly in the liquid nitrogen inside the vessel.

Canisters which are 270 mm high can hold two goblets or canes with 6×1,8 ml vials

Canisters which are 110 mm high can hold one goblet or 1/2 height canes with 3×1,8 ml vials

CE - Medical

Model	CSS-4/6	CSS-10/6	CSS-21/6	CSS-36/6	XSS-13/6	XSS-26/10	XSS/36/6	XSS-48/10
Capacity (l)	4,1	10,5	21,7	35,9	13	26	35,9	48,5
Static holding time (days)	42 (without canister)	93 (without canister)	238 (without canister)	365 (without canister)	59 (without canister)	104 (without canister)	211 (without canister)	180 (without canister)
Ø×H (mm)	245×433	368×455	395×673	480×652	380×450	480×482	480×688	500×707
No. of canisters	6					10	6	10
Ø×H canisters (mm)	37×110		37×270		66×110		66×270	73×270
Weight, empty (kg)	4,2	6,4	9,8	16	8,7	11,2	14,7	17,1

Description	Neck-Ø (mm)	Pk	Cat. No.
CSS series; models with very low LN_2 consumption			
CSS-4/6	51	1	**478-0281**
CSS-10/6	51	1	**478-0282**
CSS-21/6	51	1	**478-0283**
CSS-36/6	51	1	**478-0284**
XSS series; models with low LN_2 consumption and increased storage capacity			
XSS-13/6	89	1	**478-0285**
XSS-26/10	89	1	**478-0286**
XSS-36/6	89	1	**478-0287**
XSS-48/10	119	1	**478-0288**

Description	Pk	Cat. No.
Accessories		
Roller base with 4 castors, extendable, can accommodate containers with outer Ø 360 to 490 mm, maximum load 60 kg on smooth floor	1	**478-0301**
Roller base with 5 castors (2 equipped with brakes), can accommodate containers with outer Ø 680 mm, maximum load 250 kg on smooth floor	1	**478-0303**
Roller base with 5 castors (2 equipped with brakes), extendable, can accommodate containers with outer Ø 460 to 500 mm, maximum load 120 kg on smooth floor	1	**478-0302**

LIQUID NITROGEN DEWARS FOR STORAGE AND TRANSPORT, LD SERIES

LD series aluminium Dewars are specially designed for storage and transport (not on public roads) of liquid nitrogen and are ideal for most miscellaneous laboratory and industrial applications.

- Lightweight, reliable and robust
- Very easy to handle

The bigger units (LD-25, LD-35 and LD-50) are fitted with an NW50 Pneurop-flange for mounting a pressure head for LN_2 withdrawal.



Model	LD-2M	LD-5	LD-12	LD-25	LD-35	LD-50
Capacity (l)	2	5,5	12,4	25	35	50
Ø×H (mm)	190×465	245×494	310×600	395×684	480×591	500×675
Weight, empty (kg)	2,7	4,4	8,1	10	13	17

Description	Neck-Ø (mm)	Pk	Cat. No.
Dewar, LD-2M	35	1	478-0289
Dewar, LD-5	50	1	478-0290
Dewar, LD-12	50	1	478-0291
Dewar, LD-25	50	1	478-0292
Dewar, LD-35	50	1	478-0293
Dewar, LD-50	50	1	478-0294

Description	Pk	Cat. No.
Accessories		
Basic withdrawal head can be connected to any model with a Pneurop NW50 flange; small amounts of liquid nitrogen can be withdrawn from the Dewar until the inner pressure of the vessel has dropped to ambient pressure	1	478-0296
Electric pump MP25/50 for LD25/LD50 cryogenic container, manually activated	1	478-0368
Phase separator, Ø×H: 30×100 mm	1	478-0316
LN_2 level indicator stick, 62 cm long, with grading in cm and inches	1	478-0300
Low level alarm, with voltage-free contact, warns user of any imminent shortage of nitrogen inside the container; fits on all models, probe to be fixed on the canister to desired length	1	478-0304
Standard flexible hose; 1,20 m, 2× female ¾" connections	1	478-0315
Standard flexible hose; 2 m, 2× female ¾" connections	1	478-0371
Standard flexible hose; 3 m, 2× female ¾" connections	1	478-0372
Transfer elbow with phase separator, can be mounted on the withdrawal valve of the TS head	1	478-0298
Withdrawal tube with deflector shield and phase separator (can be mounted on the withdrawal valve of the TS head), flexible not included	1	478-0299

Biorepository

We have 100+ million samples stored and never failed to return one

International biorepository services organisation that supports customers across the entire regulated product research, development, and commercialisation lifecycle

Learn more on how we store



PB20051



DRY SHIPPERS, DS SERIES

Dry shippers are used for the safe transport of samples at cryogenic temperatures.

Hydrophobic absorbent material is fixed in the inner capacity of the vessel. After complete saturation of the material with liquid nitrogen, the vessels are ready to transport samples at cryogenic temperatures, without the risk of liquid nitrogen spilling if the container is overturned.

Model DS-24 can be equipped with removable absorbent cartridges to improve the holding time.

* DS-24 is delivered without canister, rack or cartridge (must be ordered separately).
For details of the range contact your local VWR sales office.

CE - Medical.

Shippers do not conform to International Air Transport Regulations (IATA) for transportation of infectious material.

Model	DS-2	DS-5	DS-24
Capacity (l)	2	5,2	24
Ø×H (mm)	190×407	251×497	400×664
No. of canisters	1		7*
No. of test tube racks	-		1×6 boxes*
Static holding time (days)	23	19	11
Weight, empty (kg)	3,3	6,9	15,6

Description	Neck-Ø (mm)	Pk	Cat. No.
Dry shipper, DS-2	35	1	**478-0305**
Dry shipper, DS-5	70	1	**478-0306**
Dry shipper, DS-24	215	1	**478-0307**

Description	For	Pk	Cat. No.
Removable cartridges for DS-24			
60 mm cartridge to enlarge the capacity of absorbed LN_2	DS-24	1	**478-0317**
120 mm cartridge to enlarge the capacity of absorbed LN_2	DS-24	1	**478-0318**
Extractor for cartridges	DS-24	1	**478-0319**

Description	For	Pk	Cat. No.
Protective flight case for DS, with foam protection inside			
Case with 4 mm foam protection inside	DS-2	1	**478-0308**
Case with 4 mm foam protection inside	DS-5	1	**478-0309**
Accessories			
Complementary triangular storage system, 6 baskets in stainless steel (9 levels)		1	**478-0708**
Protective flight case for DS, with foam protection inside			
Case with 7 mm foam protection inside	DS-24	1	**478-0310**
Accessories			
Phase separator, Ø×H: 30×100 mm		1	**478-0316**
Standard flexible hose; 1,20 m, 2× female ¾" connections		1	**478-0315**
Standard flexible hose; 2 m, 2× female ¾" connections		1	**478-0371**
Standard flexible hose; 3 m, 2× female ¾" connections		1	**478-0372**



TL824 (BF)

UPRIGHT MICROSCOPES, VISISCOPE® 800

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 VWR 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 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 (movement: 100×60 mm)	
Condenser	Swing-out type, N.A.0,9 with centering system	Phase contrast condenser 10×, 20×, 40×, 100×, BF, DF
Focusing system	Coaxial coarse and fine knobs	
Illumination	LED (white, 3,6 W)	
W×D×H	250×394×460 mm	
Weight	10 kg	

Description	Type	Model	Pk	Cat. No.
Brightfield microscope	Trinocular	TL824 (BF)	1	**630-1940**
Phase contrast microscope	Trinocular	TL824 (PH)	1	**630-1941**

Description	Magnification	Pk	Cat. No.
Eyepieces			
Widefield micrometer eyepiece with 0,1 mm division	10×/22 mm	1	**630-1968**



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	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**



IT405 FLD

INVERTED FLUORESCENCE MICROSCOPE, VISISCOPE® IT405 FLD

Routine inverted fluorescence microscope for transmitted brightfield, phase contrast and fluorescence observations with IOS LWD W-Plan PH objectives. 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
- 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 W-Plan PH objectives (IOS) with anti-fungus treatment

The LED fluorescence illuminators are combined with blue and green excitation filter set for the visualization of the following fluorochromes: Acridine Yellow, Acridine Orange, Auramine, DiO, DTAF, FITC, GFP, YFP, etc. (blue) plus Rhodamine, Texas Red and TRITC (green).

Supplied ready to use with eyepieces, objectives, dust cover and multi-plug power supply. Also includes blue and green fluorescence filter cubes (Fluorescence B: EM: 460, EX 455 - 495, DM 500, EM 510LP; Fluorescence G: EM: 523, EX 510 - 550, DM 570, EM 575LP).

Model	IT406 FL2 BG
Observation method	Brightfield, phase contrast and fluorescence
Head	45° inclined
Eyepieces	WF 10×/22 mm
Nosepiece	Quintuple
Objectives	IOS LWD W-Ph plan achromatic 10×, 20×, 40×
Stage	Fixed, 250×160 mm
Condenser	N.A. 0,30, pre-centred (WD = 72 mm)
Focusing system	Coaxial coarse and fine knobs
Illumination	Transmitted: LED (white, 8 W) High-power X-LED (8 W), with brightness control and 3-position filter holder and blue and green filter sets
W×D×H	230×540×495 mm
Weight	10,5 kg

Description	Type	Model	Pk	Cat. No.
Inverted fluorescence microscope	Trinocular	IT405 FLD	1	**VWRI630-3254**

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	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**
Camera adapters for VisiCam®			
C-mount adapter for 1/3" sensor		1	**VWRI630-1748**
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**
Stages			
Mechanical stage for VisiScope® IT415 PH		1	**630-3266**
Spare parts			
TNT dust cover, large (for models SZB360 OH, SZT360 OH)		1	**630-2824**



INVERTED MICROSCOPE, VISISCOPE® IT415 PH

This Brightfield and 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

Description	Type	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, (for models SZBL360, SZTL360, SZBL360-Plus, SZTL360-Plus, SZB360, and SZT360)		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**
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**
Stages			
Mechanical stage for VisiScope® IT415 PH		1	**630-2173**
Spare parts			
TNT dust cover, large (for models SZB360 OH, SZT360 OH)		1	**630-2824**

3-(4,5-DIMETHYLTHIAZOL-2-YL)-2,5-DIPHENYLTETRAZOLIUM BROMIDE (MTT) ≥98%, ULTRAPURE

MTT, a yellow tetrazole dye, can be reduced to a water-insoluble purple formazan compound by mitochondrial reductase enzymes. Since reduction only occurs in living cells, the quantitation of formazan can be equated to the number of viable cells in the population.

- Sensitive colorimetric substitute for radioisotopes in cell proliferation and cytotoxicity studies
- Applications include cell viability assays, dose response curves and cytotoxicity assays

Description	Pack type	Pk	Cat. No.
3-(4,5-Dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT) ≥98%, ultrapure	Glass bottle	1 g	**0793-1G**
3-(4,5-Dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT) ≥98%, ultrapure	Glass bottle	5 g	**0793-5G**

Cell counting and imaging

Interested in microscopes, cell counters, imaging systems or multimode readers? Find additional solutions for the analysis of cells within the analysis section of our From Cell to Therapy' microsite!

DISCOVER MORE





Bead mill MAX

BEAD MILL MAX

The VWR® Bead Mill MAX is the premier model of the VWR® Bead Mill homogeniser line. The 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.

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: (24×0,5ml / 24×1,5ml / 24×2ml / 12×7ml / 6×30ml)
Circumferential speed (m/s)	0,8 - 6,5 m/s
No. of cycles	1 - 10
Sample volume (nominal volume)	0,5 - 30 ml

Description	Pk	Cat. No.
Bead Mill MAX Homogeniser, 230 V	1	**432-0380**

Description	Type	Volume (ml)	For	Pk	Cat. No.
Accessories					
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**
2 ml pre-filled bead kit with 0,5 mm ceramic beads	Screw cap tubes	2	Bacteria/cultured cells, spores, yeast, fungi, algae, plankton	50	**432-0424**
1,5 ml snap cap tubes pre-filled with 1,4 mm ceramic beads. Nuclease-free	Snap cap tubes	1,5	Soft tissues such as brain, liver, kidney, spleen and soft plant	50	**432-0369**
1,5 ml snap cap reinforced tubes pre-filled with 2,8 mm ceramic beads. Nuclease-free	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. Nuclease-free	Screw cap tubes	2	Soft tissues such as brain, liver, kidney, spleen and soft plant	50	**432-0372**
2 ml screw cap reinforced tubes pre-filled with 2,8 mm ceramic beads. 50 per pack. Nuclease-free	Reinforced screw cap tubes	2	Hard tissue such as heart, muscle, skin and plant material	50	**432-0373**
0.5 ml screw cap tubes pre-filled with 1,4 mm ceramic beads. Nuclease-free	Screw cap tubes	0,5	Soft tissues such as brain, liver, kidney, spleen and soft plant	50	**432-0375**
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	50	**432-0398**
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 1,4 mm ceramic beads	Screw cap tubes	30	Soft tissues such as brain, liver, kidney, spleen and soft plant	50	**432-0403**
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**
2 ml pre-filled bead kit with 0,7 mm garnet beads. Nuclease-free	Screw cap tubes	2	Clay, feces, sludge	50	**432-0423**
2 ml pre-filled bead kit with 0,1 mm ceramic beads. Nuclease-free	Screw cap tubes	2	Bacteria/cultured cells, spores, yeast, fungi, algae, plankton, soft soil, sediment, waste water	50	**432-0425**
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**
2 ml screw cap tubes pre-filled with 0,1 mm glass beads	Screw cap tubes	2	Bacteria/cultured cells	50	**432-0426**
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**
1,4 mm ceramic beads, bulk packaged. Certified DNase- and RNase-free			Soft tissues such as brain, liver, kidney, spleen and soft plant	325 g	**432-0377**

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Description	Type	Volume (ml)	For	Pk	Cat. No.
Accessories					
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 ml tubes with screw caps and O-rings, bulked packaged. Reinforced polypropylene to withstand high impact forces. O-ring in silicon. 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, bulked 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, bulked 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, bulked packaged. 100 per package. For use with VWR Bead mill MAX	Screw cap tubes	30		100	**432-0405**
30 ml tubes with screw caps, bulked packaged. For use with VWR Bead mill MAX	Screw cap tubes	30		500	**432-0406**
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**



Bead mill homogeniser

BEAD MILL HOMOGENISER

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	305×432×368 mm
Capacity	16 tubes: 12×2 ml tubes + 4×7 ml tubes
No. of cycles	1 - 10
Run time	1 s - 10 min
Weight	24 kg

Description	Pk	Cat. No.
Bead Mill homogeniser, 230 V	1	**432-0367**

Description	Type	Volume (ml)	For	Pk	Cat. No.
Accessories					
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**
2 ml pre-filled bead kit with 0,5 mm ceramic beads	Screw cap tubes	2	Bacteria/cultured cells, spores, yeast, fungi, algae, plankton	50	**432-0424**
2 ml screw cap tubes pre-filled with 1,4 mm ceramic beads. 50 per pack. Nuclease-free	Screw cap tubes	2	Soft tissues such as brain, liver, kidney, spleen and soft plant	50	**432-0372**
2 ml screw cap reinforced tubes pre-filled with 2,8 mm ceramic beads. 50 per pack. Nuclease-free	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 1,4 mm ceramic beads	Reinforced screw cap tubes	7	Soft tissues such as brain, liver, kidney, spleen and soft plant	50	**432-0398**

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Description	Type	Volume (ml)	For	Pk	Cat. No.
Accessories					
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 pre-filled bead kit with 0,7 mm garnet beads. Nuclease-free	Screw cap tubes	2	Clay, feces, sludge	50	**432-0423**
2 ml pre-filled bead kit with 0,1 mm ceramic beads. Nuclease-free	Screw cap tubes	2	Bacteria/cultured cells, spores, yeast, fungi, algae, plankton, soft soil, sediment, waste water	50	**432-0425**
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**
2 ml screw cap tubes pre-filled with 0,1 mm glass beads	Screw cap tubes	2	Bacteria/cultured cells	50	**432-0426**
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**
1,4 mm ceramic beads, bulk packaged. Certified DNase- and RNase-free			Soft tissues such as brain, liver, kidney, spleen and soft plant	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 ml tubes with screw caps and O-rings, bulked packaged. Reinforced polypropylene to withstand high impact forces. O-ring in silicon. 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, bulked 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, bulked 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**



Mini bead mill

4-PLACE MINI BEAD MILL HOMOGENISER

The VWR 4-place Mini Bead Mill homogeniser is a compact and powerful bead mill homogeniser.

- 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	215×292×254 mm
Weight	7,48 kg
Capacity	4 tubes : 4×0,5ml ; 4×1,5ml ; 4×2ml ; 4×7ml
Electrical	100 – 230V, 50/60 Hz
Run time	1 sec to 5 min

Description	Pk	Cat. No.
4-Place Mini Bead Mill homogeniser, 230 V	1	**432-0366**

Description	Type	Volume (ml)	For	Pk	Cat. No.
Accessories					
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**
2 ml pre-filled bead kit with 0,5 mm ceramic beads	Screw cap tubes	2	Bacteria/cultured cells, spores, yeast, fungi, algae, plankton	50	**432-0424**
1,5 ml snap cap tubes pre-filled with 1,4 mm ceramic beads. Nuclease-free	Snap cap tubes	1,5	Soft tissues such as brain, liver, kidney, spleen and soft plant	50	**432-0369**
1,5 ml snap cap reinforced tubes pre-filled with 2,8 mm ceramic beads. Nuclease-free	Snap cap tubes	1,5	Hard tissue such as heart, muscle, skin and plant material	50	**432-0370**

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Description	Type	Volume (ml)	For	Pk	Cat. No.
Accessories					
2 ml screw cap tubes pre-filled with 1,4 mm ceramic beads. 50 per pack. Nuclease-free	Screw cap tubes	2	Soft tissues such as brain, liver, kidney, spleen and soft plant	50	**432-0372**
2 ml screw cap reinforced tubes pre-filled with 2,8 mm ceramic beads. 50 per pack. Nuclease-free	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 1,4 mm ceramic beads	Reinforced screw cap tubes	7	Soft tissues such as brain, liver, kidney, spleen and soft plant	50	**432-0398**
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 pre-filled bead kit with 0,7 mm garnet beads. Nuclease-free	Screw cap tubes	2	Clay, feces, sludge	50	**432-0423**
2 ml pre-filled bead kit with 0,1 mm ceramic beads. Nuclease-free	Screw cap tubes	2	Bacteria/cultured cells, spores, yeast, fungi, algae, plankton, soft soil, sediment, waste water	50	**432-0425**
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**
2 ml screw cap tubes pre-filled with 0,1 mm glass beads	Screw cap tubes	2	Bacteria/cultured cells	50	**432-0426**
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**
1,4 mm ceramic beads, bulk packaged. Certified DNase- and RNase-free			Soft tissues such as brain, liver, kidney, spleen and soft plant	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 ml tubes with screw caps and O-rings, bulked packaged. Reinforced polypropylene to withstand high impact forces. O-ring in silicon. 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, bulked 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, bulked 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**

VWR Collection
Thermal Cycler XT96

Inside the new VWR PCR Thermal Cycler XT96, a lot of new innovative features are in place.

DISCOVER THE NEW XT96 VIDEO



VWR®



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

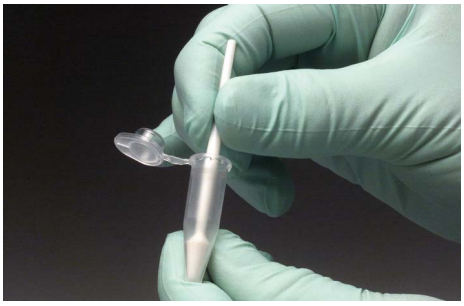
Model	Beater
Max. sample volume (ml)	2×50
Vibrational frequency (Hz)	3 - 30
Speed display	LED
Grinding time setting (min)	5 s to 60 min
Power consumption (W)	200 VA
W×D×H (mm)	365×405×225
Weight (kg)	42

Description	Pk	Cat. No.
Beater	1	**412-0167**

Material	Sample volume (ml)	Max. feed size (mm)	Pk	Cat. No.
Grinding jars				
Stainless steel	0,5	1	2	**412-0168**
Stainless steel	2	2	2	**412-0169**
Stainless steel	4	4	2	**412-0170**
Stainless steel	10	6	2	**412-0171**
Stainless steel	15	6	2	**412-0172**
Stainless steel	20	8	2	**412-0173**
Steel, hardened	0,5	1	2	**412-0174**
Steel, hardened	2	2	2	**412-0175**
Steel, hardened	4	4	2	**412-0176**
Steel, hardened	10	6	2	**412-0177**
Steel, hardened	15	6	2	**412-0178**
Steel, hardened	20	8	2	**412-0179**
PTFE	20	8	2	**412-0260**
Tungsten carbide	10	6	2	**412-0261**
Stainless steel, forensic applications	10	6	2	**412-0264**

Description	Material	Ø	Pk	Cat. No.
Grinding balls				
Grinding ball	Stainless steel	3	20	**412-0201**
Grinding ball	Steel, hardened	3	20	**412-0266**
Grinding ball	Tungsten carbide	3	20	**412-0268**
Grinding ball	Stainless steel	5	20	**412-0190**
Grinding ball	Tungsten carbide	5	20	**412-0269**
Grinding ball	Steel, hardened	5	20	**412-0273**
Grinding ball	Stainless steel	7	20	**412-0202**
Grinding ball	Steel, hardened	7	20	**412-0267**
Grinding ball	Tungsten carbide	7	20	**412-0270**
Grinding ball	Steel, hardened	10	10	**412-0274**
Grinding ball	Stainless steel	10	10	**412-0277**
Grinding ball	Steel, hardened	12	10	**412-0275**
Grinding ball	Stainless steel	12	10	**412-0278**
Grinding ball	Stainless steel	20	5	**412-0265**
Grinding ball	Tungsten carbide	20	5	**412-0271**
Grinding ball	Stainless steel	25	5	**412-0193**
Grinding ball	Steel, hardened	25	5	**412-0276**

Description	Pk	Cat. No.
Accessories		
Tube holder, PTFE for reaction vials, 12×0,2 ml tubes on each arm	1	**412-0181**
Tube holder, PTFE for reaction vials, 12×2 ml tubes on each arm	2	**412-0182**
Tube holder, PTFE for reaction vials, 6×2 ml tubes on each arm	2	**412-0183**
Tube holder, PTFE for reaction vials, 6×2 ml tubes (screw cap) on each arm	2	**412-0184**
Holder, PTFE, for up to 3 microplates or 1 deep well plates on each arm	2	**412-0185**
Rack, PTFE, for 24x1,5/2,0 ml tubes (with or without screw cap)	2	**412-0199**
Dummy plate, PTFE, for replacing 1 microtitre plate in the rack	2	**412-0200**
Rack, PTFE, 50 ml with 5 places for conical tubes	2	**412-0212**
Set of spanners	1 SET	**412-0180**
Holder for 15 ml falcon tubes	2	**412-0263**
Holder, stainless steel, for DNA kit, for 1 deep well plate or 3 standard microplates 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	1,5	100	**431-0094**
Microtube	0,5	100	**431-0097**
Microtube	1,5	100	**431-0096**
Pestle and microtube	0,5	100	**431-0099**
Pestle and microtube	1,5	100	**431-0098**

Description	Pk	Cat. No.
Accessories		
Pestle motor	1	**431-0100**
Replacement pestle adapter	1	**431-0101**

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PB19033-EN





ORBITAL MINI SHAKER

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^{-1} increments up to 500 min^{-1}, and increments of 25 min^{-1} up to 1200 min^{-1}. 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_2 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	Waste Reducing
Max. load (kg)	3,6
Orbit (mm)	3
Platform W×D (mm)	222×298
Power (W)	25
Shaking motion	Orbital
Speed (min^{-1})	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	1	**444-7040**
Flask clamps, stainless steel	25 ml	1	**444-7041**
Flask clamps, stainless steel	50 ml	1	**444-7042**
Flask clamps, stainless steel	125 ml	1	**444-7043**
Flask clamps, stainless steel	250 ml	1	**444-7044**
Flask clamps, stainless steel	500 ml	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**
Universal harness for microplate shakers and orbital mini shakers			
Universal harness, attaches to tray to secure low profile plates		1	**444-0277**
Accessories			
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**
Accessories for VWR orbital mini shaker			
Spare single roller bar, 220 mm	Mounting on roller bar platform 444-0282	1	**444-0565**



ROCKING PLATFORM SHAKER

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 1 min^{-1}.

- Microprocessor control provides electronic tilt angle adjustment from 0 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_2 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 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 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 (kg)	4,5**
Platform W×D (mm)	254×324
Shaking motion	Rocking
Speed range (min^{-1})	1 - 50*
Weight (kg)	6,5
W×D×H (mm)	279×432×127

Description	Pk	Cat. No.
Rocking platform shaker, CH-plug	1	**444-0758**
Rocking platform shaker, UK-plug	1	**444-0757**
Rocking platform shaker, EU-plug	1	**444-0756**

Description	For	Pk	Cat. No.
Accessories			
Spare dimpled mat to prevent tubes from rolling around	Rocking platform shaker	1	**444-0768**
Stacking tray	Rocking platform shaker	1	**444-0772**



INCUBATING ROCKING PLATFORM SHAKER

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 0 to 15° while unit is operating. The PID temperature controller maintains precise temperature control from ambient +5 to 65 °C.

- Electronic tilt adjustment from 0 to 15° while unit is operating
- LED display 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_2 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^{-1}. 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 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 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
Int. WxDxH (mm)	197×273×97
Max. load (kg)	4,5**
Platform W×D (mm)	191×254
Shaking motion	Rocking
Speed accuracy	±1 min^{-1}
Speed range (min^{-1})	1 - 50*
Temperature range (°C)	Ambient +5...65
Uniformity at 37 (°C)	±0,5
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**



INCUBATING 3-D ROTATOR WAVER

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_2 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^{-1}

. Touch pad controls with easy to read LED displays for temperature, speed, tilt angle and time allowing 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
Int. WxDxH (mm)	197×273×86
Max. load (kg)	2,3**
Platform W×D (mm)	184×235
Shaking motion	3-dimensional
Speed accuracy	±1 min^{-1}
Speed range (min^{-1})	1 - 30*
Temperature range (°C)	Ambient +5...65
Uniformity at 37 (°C)	±0,5
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**



ORBITAL SHAKER, ADVANCED 3500

Digital shaker with microprocessor control which is ideal for a range mixing applications, 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 shaking system continuously monitors shaking speed and will maintain the 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 °C (max. 80% relative humidity, non condensing), in an incubator, CO_2 incubator or cold room

Displayed speed is accurate to 1% of set speed (when speed is above 100 min^{-1}). 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^{-1} 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.

Model	Advanced 3500
Environmentally preferable	Waste Reducing
Max. load (kg)	15,9
Orbit (mm)	19
Platform W×D (mm)	330×279
Power (W)	75
Shaking motion	Orbital
Speed (min^{-1})	15 - 500
Speed accuracy (min^{-1})	±1 below 100
Weight (kg)	20
W×D×H (mm)	356×413×146

Description	Pk	Cat. No.
Advanced 3500 orbital shaker, EU-plug	1	**444-2906**
Advanced 3500 orbital shaker, UK-plug	1	**444-2907**
Advanced 3500 orbital shaker, CH-plug	1	**444-2908**

Description	For	Pk	Cat. No.
Test tube racks, pivoting stainless steel			
Pivoting stainless steel test tube rack, 13 mm	90 tubes, 13 mm	1	**444-2955**
Replacement rubber mats for VWR standard and advanced shakers			
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			
Pivoting stainless steel test tube rack, 16 mm	60 tubes, 16 mm	1	**444-2956**

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Description	For	Pk	Cat. No.
Accessories			
Centrifuge tube rack, PVC coated steel	50 ml tubes, holds 12 tubes	1	**444-0284**
Test tube racks, pivoting stainless steel			
Pivoting stainless steel test tube rack, 20 mm	40 tubes, 20 mm (accommodates 15 ml centrifuge tubes)	1	**444-2957**
Pivoting stainless steel test tube rack, 25 mm	24 tubes, 25 mm	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			
Pivoting stainless steel test tube rack, 30 mm	21 tubes, 30 mm	1	**444-2959**
Stainless steel media bottle clamps			
Clamps for media bottles, stainless steel	1000 ml	1	**444-7036**
Tier braces			
Set of 4 tier braces for stacking 2 platforms, clearance is 254 mm		1	**444-2965**
Stainless steel Erlenmeyer flask clamps			
Flask clamps, stainless steel	10 ml	1	**444-7040**
Flask clamps, stainless steel	25 ml	1	**444-7041**
Flask clamps, stainless steel	50 ml	1	**444-7042**
Flask clamps, stainless steel	125 ml	1	**444-7043**
Flask clamps, stainless steel	250 ml	1	**444-7044**
Flask clamps, stainless steel	500 ml	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	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 platforms			
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 platforms			
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 platforms			
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 litre 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 litre flask clamps, 457×457 mm	Standard/Advanced 3500, Advanced 3750** shakers	1	**444-2952**
Platforms for separating funnels			
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, 89×129 mm	Standard/Advanced 3500, 5000, 10000, 15000 shakers	1	**444-2954**
Autoclavable PVC Erlenmeyer flask clamps			
Autoclavable PVC flask clamp, 125 ml	125 ml Erlenmeyer flasks	1	**444-2960**
Autoclavable PVC flask clamp, 250 ml	250 ml Erlenmeyer flasks	1	**444-2961**
Autoclavable PVC flask clamp, 500 ml	500 ml Erlenmeyer flasks	1	**444-2962**
Autoclavable PVC flask clamp, 1000 ml	1000 ml Erlenmeyer flasks	1	**444-2963**
Autoclavable PVC flask clamp, 2000 ml	2000 ml Erlenmeyer flasks	1	**444-2964**
Flask clamps, stainless steel			
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			
PVC coated test tube rack, 10 - 14 mm	48 tubes, 10 - 14 mm	1	**444-7037**
PVC coated test tube rack, 16 - 20 mm	33 tubes, 16 - 20 mm	1	**444-7038**
PVC coated test tube rack, 21 - 25 mm	21 tubes, 21 - 25 mm	1	**444-7039**



ORBITAL SHAKER, ADVANCED 5000

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 °C (max. 80% relative humidity, non condensing), in an incubator, CO_2 incubator or cold room
- Five year warranty on motor and drive mechanism

Displayed speed is accurate to 1% of set speed (when speed is above 100 min^{-1}). 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^{-1} 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 (kg)	22,7
Orbit (mm)	25
Platform W×D (mm)	610×457
Power (W)	75
Shaking motion	Orbital
Speed (min^{-1})	20 - 500
Speed accuracy (min^{-1})	±1 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.
Accessories			
Large vessel carrier platform, has 4 adjustable cushioned rollers to hold glassware securely, 764×459×353 mm, bar size 457 mm	Standard/Advanced 5000 shakers	1	**444-2940**
Test tube racks, pivoting stainless steel			
Pivoting stainless steel test tube rack, 13 mm	90 tubes, 13 mm	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			
Pivoting stainless steel test tube rack, 16 mm	60 tubes, 16 mm	1	**444-2956**
Replacement rubber mats for VWR standard and advanced shakers			
Replacement rubber mat	Standard/Advanced 5000 shakers	1	**444-2967**

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Description	For	Pk	Cat. No.
Accessories			
Centrifuge tube rack, PVC coated steel	50 ml tubes, holds 12 tubes	1	**444-0284**
Test tube racks, pivoting stainless steel			
Pivoting stainless steel test tube rack, 20 mm	40 tubes, 20 mm (accommodates 15 ml centrifuge tubes)	1	**444-2957**
Accessories			
Replacement 457 mm roller bar with mounting hardware	Use with carrier 444-2940 or platforms 444-2938 / 444-2939	1	**444-2943**
Test tube racks, pivoting stainless steel			
Pivoting stainless steel test tube rack, 25 mm	24 tubes, 25 mm	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			
Pivoting stainless steel test tube rack, 30 mm	21 tubes, 30 mm	1	**444-2959**
Stainless steel media bottle clamps			
Clamps for media bottles, stainless steel	1000 ml	1	**444-7036**
Tier braces			
Set of 4 tier braces for stacking 2 platforms, clearance is 254 mm		1	**444-2965**
Stainless steel Erlenmeyer flask clamps			
Flask clamps, stainless steel	10 ml	1	**444-7040**
Flask clamps, stainless steel	25 ml	1	**444-7041**
Flask clamps, stainless steel	50 ml	1	**444-7042**
Flask clamps, stainless steel	125 ml	1	**444-7043**
Flask clamps, stainless steel	250 ml	1	**444-7044**
Flask clamps, stainless steel	500 ml	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	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 platforms			
Universal platform, 610×457 mm*	Standard/Advanced 3500, Advanced 3750**, Standard/Advanced 5000** shakers	1	**444-2932**
Universal platform, 762×457 mm*	Standard/Advanced 5000 shakers	1	**444-2934**
Culture platforms			
Culture platform, 610×457 mm*	Standard/Advanced 3500, Advanced 3750**, Standard/Advanced 5000 shakers	1	**444-2937**
Microplate clamp			
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 Erlenmeyer flask clamps			
Autoclavable PVC flask clamp, 125 ml	125 ml Erlenmeyer flasks	1	**444-2960**
Autoclavable PVC flask clamp, 250 ml	250 ml Erlenmeyer flasks	1	**444-2961**
Autoclavable PVC flask clamp, 500 ml	500 ml Erlenmeyer flasks	1	**444-2962**
Autoclavable PVC flask clamp, 1000 ml	1000 ml Erlenmeyer flasks	1	**444-2963**
Autoclavable PVC flask clamp, 2000 ml	2000 ml Erlenmeyer flasks	1	**444-2964**
Flask clamps, stainless steel			
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			
PVC coated test tube rack, 10 - 14 mm	48 tubes, 10 - 14 mm	1	**444-7037**
PVC coated test tube rack, 16 - 20 mm	33 tubes, 16 - 20 mm	1	**444-7038**
PVC coated test tube rack, 21 - 25 mm	21 tubes, 21 - 25 mm	1	**444-7039**



RECIPROCATING SHAKER, ADVANCED 3750

Digital shaker with microprocessor control which is ideal for a range mixing applications, e.g. solubility studies and extraction procedures. Variable speed control provides consistent, uniform shaking action. The shaking system continuously monitors shaking speed and will maintain the 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 °C (maximum 80% relative humidity, non condensing), in an incubator, CO_2 incubator or cold room

Displayed speed is accurate to 1% of set speed (when speed is above 100 min^{-1}). 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^{-1} to a safe speed to prevent spills and protect samples. Speed calibration mode allows 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.

* Platforms are suitable for optional 2-tier braces, (444-2965) which allow stacking with 254 mm clearance between platforms (recommended for selected platform sizes)

** Platform stacking is not recommended for 3750 or 5000 models

Description	For	Pk	Cat. No.
Universal platforms			
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**
Universal platform, 762×457 mm*	Standard/Advanced 5000 shakers	1	**444-2934**
Culture platforms			
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 platforms			
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 litre 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 litre flask clamps, 457×457 mm	Standard/Advanced 3500, Advanced 3750** shakers	1	**444-2952**
Platforms for separating funnels			
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**

Description	For	Pk	Cat. No.
Replacement rubber mats for VWR standard and advanced shakers			
Rubber mat	Standard/Advanced 3500, Incubating 3500, Advanced 3750 shakers	1	**444-2966**



ORBITAL SHAKER, STANDARD 3500

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	Pk	Cat. 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			
Pivoting stainless steel test tube rack, 13 mm	90 tubes, 13 mm	1	**444-2955**
Replacement rubber mats for VWR standard and advanced shakers			
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			
Pivoting stainless steel test tube rack, 16 mm	60 tubes, 16 mm	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			
Pivoting stainless steel test tube rack, 20 mm	40 tubes, 20 mm (accommodates 15 ml centrifuge tubes)	1	**444-2957**
Pivoting stainless steel test tube rack, 25 mm	24 tubes, 25 mm	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			
Pivoting stainless steel test tube rack, 30 mm	21 tubes, 30 mm	1	**444-2959**
Stainless steel media bottle clamps			
Clamps for media bottles, stainless steel	1000 ml	1	**444-7036**

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Description	For	Pk	Cat. No.
Stainless steel Erlenmeyer flask clamps			
Flask clamps, stainless steel	10 ml	1	**444-7040**
Flask clamps, stainless steel	25 ml	1	**444-7041**
Flask clamps, stainless steel	50 ml	1	**444-7042**
Flask clamps, stainless steel	125 ml	1	**444-7043**
Flask clamps, stainless steel	250 ml	1	**444-7044**
Flask clamps, stainless steel	500 ml	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 platforms			
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 platforms			
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 platforms			
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 litre 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 litre flask clamps, 457×457 mm	Standard/Advanced 3500, Advanced 3750** shakers	1	**444-2952**
Platforms for separating funnels			
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, 89×129 mm	Standard/Advanced 3500, 5000, 10000, 15000 shakers	1	**444-2954**
Autoclavable PVC Erlenmeyer flask clamps			
Autoclavable PVC flask clamp, 125 ml	125 ml Erlenmeyer flasks	1	**444-2960**
Autoclavable PVC flask clamp, 250 ml	250 ml Erlenmeyer flasks	1	**444-2961**
Autoclavable PVC flask clamp, 500 ml	500 ml Erlenmeyer flasks	1	**444-2962**
Autoclavable PVC flask clamp, 1000 ml	1000 ml Erlenmeyer flasks	1	**444-2963**
Autoclavable PVC flask clamp, 2000 ml	2000 ml Erlenmeyer flasks	1	**444-2964**
Flask clamps, stainless steel			
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			
PVC coated test tube rack, 10 - 14 mm	48 tubes, 10 - 14 mm	1	**444-7037**
PVC coated test tube rack, 16 - 20 mm	33 tubes, 16 - 20 mm	1	**444-7038**
PVC coated test tube rack, 21 - 25 mm	21 tubes, 21 - 25 mm	1	**444-7039**



ORBITAL SHAKER, ADVANCED MINI SHAKER 15

A compact, powerful mini shaker with microprocessor control which 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^{-1} 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_2 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	Waste Reducing
Max. load (kg)	3,6
Orbit (mm)	15
Platform W×D (mm)	222×298
Power (W)	25
Shaking motion	Orbital
Speed (min^{-1})	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**

Description	For	Pk	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	1	**444-7040**
Flask clamps, stainless steel	25 ml	1	**444-7041**
Flask clamps, stainless steel	50 ml	1	**444-7042**
Flask clamps, stainless steel	125 ml	1	**444-7043**
Flask clamps, stainless steel	250 ml	1	**444-7044**
Flask clamps, stainless steel	500 ml	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**



5000I



5000IR

INCUBATING SHAKERS, 5000I AND 5000IR

VWR incubating/refrigerating 5000I / 5000IR 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^{-1}), 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 switch-off 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. Over-temperature sensor will shut down unit and activate audible and visual alarms if temperature deviates ±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	5000I	5000IR
Int. W×D×H (mm)	629×523×432	
Max. load (kg)	22,7	
Orbit (mm)	25	
Platform W×D (mm)	457×457	
Shaking motion	Orbital	
Speed accuracy	±1 min^{-1} below 100 min^{-1} ±1% of set speed above 100 min^{-1}	
Speed range (min^{-1})	15 - 500	
Temperature range (°C)	Ambient +5...65	15 below ambient...65
Uniformity at 37 (°C)	±0,5	
Weight (kg)	78,9	107
W×D×H (mm)	675×815×596	675×1044×596

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Description	Pk	Cat. No.
5000I incubating shaker, EU/UK/CH-plug	1	444-7109
5000IR refrigerated incubating shaker, EU/UK/CH-plug	1	444-7112

Description	For	Pk	Cat. No.
Accessories			
Universal tray, aluminium 457×457 mm	5000I/IR	1	444-0967
Test tube racks, pivoting stainless steel			
Pivoting stainless steel test tube rack, 13 mm	90 tubes, 13 mm	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			
Pivoting stainless steel test tube rack, 16 mm	60 tubes, 16 mm	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			
Pivoting stainless steel test tube rack, 20 mm	40 tubes, 20 mm (accommodates 15 ml centrifuge tubes)	1	444-2957
Pivoting stainless steel test tube rack, 25 mm	24 tubes, 25 mm	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			
Pivoting stainless steel test tube rack, 30 mm	21 tubes, 30 mm	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	1	444-7040
Flask clamps, stainless steel	25 ml	1	444-7041
Flask clamps, stainless steel	50 ml	1	444-7042
Flask clamps, stainless steel	125 ml	1	444-7043
Flask clamps, stainless steel	250 ml	1	444-7044
Flask clamps, stainless steel	500 ml	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	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 platforms			
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
Autoclavable PVC Erlenmeyer flask clamps			
Autoclavable PVC flask clamp, 125 ml	125 ml Erlenmeyer flasks	1	444-2960
Autoclavable PVC flask clamp, 250 ml	250 ml Erlenmeyer flasks	1	444-2961
Autoclavable PVC flask clamp, 500 ml	500 ml Erlenmeyer flasks	1	444-2962
Autoclavable PVC flask clamp, 1000 ml	1000 ml Erlenmeyer flasks	1	444-2963
Autoclavable PVC flask clamp, 2000 ml	2000 ml Erlenmeyer flasks	1	444-2964
Flask clamps, stainless steel			
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			
PVC coated test tube rack, 10 - 14 mm	48 tubes, 10 - 14 mm	1	444-7037
PVC coated test tube rack, 16 - 20 mm	33 tubes, 16 - 20 mm	1	444-7038
PVC coated test tube rack, 21 - 25 mm	21 tubes, 21 - 25 mm	1	444-7039



EU/CH: 444-0994 / UK: 444-0995



EU/CH: 444-0998 / UK: 444-0999



EU/CH: 444-1041 / UK: 444-1042

MINI VORTEX MIXERS

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	Waste Reducing	Waste Reducing		Waste Reducing
Motor input (W)	150			
Orbit (mm)	4,9			2,5
Shaking motion	Orbital			
Speed range (min^{-1})	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		
Cup head and cup head cover complete, 76 mm Ø	1	**444-0208**
Ampoule tube adapters 15 - 17 mm Ø (detailed above)	1	**444-0212**
Ampoule tube adapters 10 - 17 mm Ø (detailed above)	1	**444-0213**
Tube holder kit with retainer (detailed above)	1	**444-7047**
Insert retainer that holds the accessories (tubes, microplates, microtubes, etc) and the vessel harnesses	1	**444-7048**
Vessel harness for use with e.g. Erlenmeyer flasks*	2	**444-7050**
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**
Cup head only, 76 mm Ø	1	**444-7058**
Head cover only for 444-7058, 76 mm Ø	1	**444-7059**
Foam insert, blank without holes*	2	**444-0211**
Holder for 12×1,5/2,0 microcentrifuge tubes (included with pulsating vortex mixer 444-0206)	1	**444-0214**
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**

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Description	Pk	Cat. No.
Accessories		
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**
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**
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**
Small cup head	1	**444-7060**



MAGNETIC STIRRERS, SLOW SPEED SERIES

Standard and Advanced Slow Speed stirrers are designed for growth of suspension and microcarrier cell cultures. Slow Speed stirrers work with cell culture flasks and other vessels designed for slow magnetic stirring. Ideal for use in cold rooms, incubators, or CO_2 incubators (–10 to +40 °C, max. 80% relative humidity, non condensing environment).

- Microprocessor control: Precisely regulates speed through the entire range; stirring function, with continuous use motor and magnet, maintains set speed even under changing load or viscosity
- Adjustment knob: Basic speed control knob with dial markings from 1 to 10 (Standard series)
- LED display: Touch pad controls with easy to read, independent LED displays for speed and time; speed is adjustable in 1 rpm increments (Advanced series)
- Timer (Advanced series) will display elapsed time (1 s to 160 h) or, when programmed to user-defined limit, will shut off unit and an audible alarm sounded when time reaches zero
- Speed ramping feature: Slowly increases speed for improved safety and enhanced coupling; avoids splashing, improves spin bar control and provides excellent low speed control; efficient drive motor eliminates heat transfer to sample

The low profile design means that it takes up minimal space and easily fits into fume hoods and most incubators. The spill resistant housing channels fluids away from internal components, and the cast iron base offers durability and added stability. 10 litre model features a glass-filled nylon top plate, which has an easy to clean, reflective white surface. 2 litre models have a durable aluminium top plate that will not crack or chip. Maximum vessel diameter is 150 mm (2 litre model) or 250 mm (10 litre model).

Supplied with a 234 cm detachable, 3-wire cord and plug.

Model	Standard Slow Speed 1	Advanced Slow Speed 1	Advanced Slow Speed
Max. stirring capacity H_2O (l)	2		10
Speed range (min^{-1})	1 - 150		
Power input (W)	14		
Plate material	Aluminium		Nylon, glass filled
Plate dimensions (mm)	178×178		279×318
W×D×H (mm)	216×307×102		279×432×102
Weight (kg)	4,0		6,6

Description	Pk	Cat. No.
Standard Slow Speed stirrer 1, 2 l, EU plug	1	**444-7121**
Standard Slow Speed stirrer 1, 2 l, CH plug	1	**444-7123**
Advanced Slow Speed stirrer 1, 2 l, EU plug	1	**444-7124**
Advanced Slow Speed stirrer 1, 2 l, UK plug	1	**444-7125**
Advanced Slow Speed stirrer 1, 2 l, CH plug	1	**444-7126**
Advanced Slow Speed stirrer, 10 l, EU plug	1	**444-7127**
Advanced Slow Speed stirrer, 10 l, UK plug	1	**444-7128**
Advanced Slow Speed stirrer, 10 l, CH plug	1	**444-7129**



Semi-micro balance

SEMI-MICRO BALANCES WITH TOUCH SCREEN, TS SERIES

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)
- Multi-language (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 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**
TS 2215Di	102 / 220	±0,1 / ±0,2	Ø 80	0,01 / 0,1	1	**611-3667**
Models with factory calibration 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	For	Pk	Cat. No.
Accessories			
Roll of paper	TLP-50 printer (630-1485)	1 Roll	**611-3662**
Paper roll for thermal printer	Printer (611-3623)	1 Roll	**611-3714**



ANALYTICAL BALANCES WITH TOUCH SCREEN, TA SERIES

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 calibration 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			
Roll of paper	TLP-50 printer (630-1485)	1 Roll	**611-3662**



Precision balances, circular draft shields

PRECISION BALANCES, PROFESSIONAL TP / TPW SERIES WITH TOUCH SCREEN

The 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 0,001g and a stabilisation time of ≤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, VWRI611-3692, 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 draftshield)							
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**
TPW touch screen balances with automatic internal calibration and factory calibration certificate (3-door draftshield)							
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**

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Model	Weighing cap. (g)	Linearity (mg)	Pan/platform size (mm)	Readability (g)	Repeatability	Pk	Cat. No.
TP touch screen balances with automatic internal calibration (without draftshield)							
TP 6202i	6200	±30	Ø 160	0,01	0,01 g	1	**611-3697**
TP touch screen balances with automatic internal calibration and factory calibration certificate (without draftshield)							
TP 6202i-C	6200	±30	Ø 160	0,01	0,01 g	1	**611-3700**
TP touch screen balances with external calibration (without draftshield)							
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 8202	8200	±40	Ø 160	0,01	0,01 g	1	**611-3859**
TP 6501	6500	±100	195×175	0,1	0,05 g	1	**611-3701**
TP 16001	16000	± 0,3	195×175	0,1	0,08 g	1	**611-4339**
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 draftshield)							
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 8202-C	8200	±40	Ø 160	0,01	0,01 g	1	**611-3863**
TP 6501-C	6500	±100	195×175	0,1	0,05 g	1	**611-3704**
TP 16001-C	16000	± 0,3	195×175	0,1	0,08 g	1	**611-4340**
TP 20001-C	20000	±400	195×175	0,1	0,1 g	1	**611-3706**



Semi-micro balance

SEMI-MICRO BALANCES WITH TOUCH SCREEN AND IONISER, TS SERIES

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)
- Multi-language (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 calibration 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**



Semi micro balance with LCD display and ionizer

SEMI-MICRO BALANCES WITH IONISER, SM & SMG SERIES

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.

Model	Weighing cap. (g)	Linearity (mg)	Pan/platform size (mm)	Readability	Pk	Cat. No.
Models without a factory calibration 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 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.
Accessories			
Paper roll for thermal printer	Printer (611-3623)	1 Roll	**611-3714**



DRESSING FORCEPS, ABS

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 10^{-6} SAL (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.

Type	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**



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 packaged in plastic bags in a cleanroom.

Capacity (ml)	W×D×H (mm)	Colour	Pk	Cat. No.
Anti-static				
7	46×46×8	Blue	500	**611-3113**
7	46×46×8	Black	500	**611-9181**
7	46×46×8	White	500	**611-9178**
100	85×85×24	Blue	500	**611-3114**
100	85×85×24	Black	500	**611-9182**
100	85×85×24	White	500	**611-9179**
250	140×140×22	Blue	500	**611-3115**
250	140×140×22	Black	500	**611-9183**
250	140×140×22	White	500	**611-9180**



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 packaged 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**



DISPOSABLE WEIGHING BOATS

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.

These weighing boats are produced and packaged in plastic bags in a cleanroom.

Capacity (ml)	W×D×H (mm)	Colour	Pk	Cat. No.
Anti-static				
5	53×33×6	White	500	**611-1994**
5	53×33×6	Black	500	**611-1995**
25	67×47×14	White	500	**611-9187**
25	67×47×14	Black	500	**611-9190**
30	78×56×14	White	500	**611-9188**
30	78×56×14	Black	500	**611-9191**
100	119×90×19	White	500	**611-9189**
100	119×90×19	Black	500	**611-9192**

Weighing boat, sterile

WEIGHING BOATS, STERILE, VWR®

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 packaged in a cleanroom.

- Electron beam sterilized
- 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 analyzers.

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 scoops, antistatic

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 weigh 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 a scoop shape to help retain materials
- Broad tip design keeps the scoop stable while on the scale 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 sterilized 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 scale. This eliminates the need for a weigh boat or weighing paper and saves valuable space in the lab. When finished the dual solution scoop is disposable.

Certificate of Sterility available upon request for sterile scoops. The dosage requirements for electron beam sterilization that results in sterilized products is determined by procedures that are compliant with ISO 11137-3:2017.

Type	Length (mm)	Width (mm)	Sterile	Colour	Pk	Cat. No.
Small	127	63	-	White	100	**611-4350**
Large	127	90	-	White	100	**611-4349**



pH/MV/°C METER, BENCH, PHENOMENAL® pH 1100L

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 shutoff: 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 1100L kit includes instrument, glass pH electrode with built-in 221 temperature sensor, 1 metre cable and articulated stand, two 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 metre 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	BDH Prolabo® 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 (°C)	Auto: –5,0...+105,0; manual: –25...+130
Temperature resolution (°C)	0,1/1
Temperature accuracy (°C)	±0,2
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
Outputs	USB connection (slave, bidirectional)
Power supply	Mains or 4× AA batteries
Compliance	IP 43/GLP

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		
Electrode cleaning solution pepsin/hydrochloric acid for removal of proteins	100 ml	**83603.180**



CO 3100 L

CONDUCTIVITY/TDS/°C METER, BENCH, PHENOMENAL® CO 3100L

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 3100 L 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 VWR sales office for further information.

Model	CO 3100 L
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.
Bench conductivity/TDS/°C meter CO 3100 L, 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^{-1}	8 pin, 1,5 m cable	1	**663-0147**
Accessories					
pHenomenal® electrode stand, holds up to 4 electrodes + 1 temperature sensor				1	**662-1169**



Potassium chloride

CONDUCTIVITY STANDARDS, KCL

Convenient sachets for the calibration of the conductimeters.

- Accurate
- Traceable to NIST
- Easy to use
- No risk of contamination
- Can be used in the field

Description	Conductivity (mS/cm)	Pk	Cat. No.
Conductivity standard (0,01 M)	1,41	1 KIT	**85953.001**
Conductivity standard (0,1 M)	12,88	1 KIT	**85954.001**



MULTI-PARAMETER METER (pH/CONDUCTIVITY/ DO), BENCH, PHENOMENAL® MU 6100 L

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 VWR sales office for further information.

Model	MU 6100 L
pH range	–2,000...+19,999
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	BDH Prolabo® 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
mV accuracy	±0,3/±1
Conductivity range	0,001 µS/cm - 1000 mS/cm
Conductivity resolution	0,1 µS/cm
Conductivity accuracy	±0,5% of measured value
Conductivity cell constant (cm^{-1})	0,001 - 25 (depending on probe)
Conductivity calibration	1 point
Resistivity range	1 Ω/cm - 999 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
DO concentration (mg/l)	0,00 - 20,00; 0,0 - 90,0
DO concentration resolution (mg/l)	0,1%; 0,01 (depending on sensor)
DO saturation (%)	0,0 - 200,0; 0 - 600 (depending on sensor)
DO accuracy	±0,5% of value (between 5...30 °C)
DO calibration	Saturated air
Temperature range (°C)	Auto: –5,0...+105,0; manual: –25...+130
Temperature resolution (°C)	0,1/1
Temperature accuracy (°C)	±0,2
Temperature compensation	Automatic/manual
Data logging capacity	5000 data sets
Data logging - log function	Selectable between 1 s 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/8-pin for conductivity and DO
Outputs	Waterproof USB connection (slave, bidirectional)
Power supply	Mains supply or 4× AA batteries
Compliance	IP 43/GLP

Continued on next page

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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**

Description	Temp.	Material	Electrolyte	ØxL	Diaphr.	Connection	Pack type	Pk	Cat. No.
Conductivity cell, pHenomenal®									
pHenomenal® CO11, 2-pole graphite, integrated NTC 30	0...+80	Epoxy		15,3×120		8 pin, 1,5 m cable		1	**663-0147**
Dissolved oxygen probe, pHenomenal®									
pHenomenal® OXY11-3, galvanic (resolution 0,1 mg/l) probe		Epoxy				3 m cable, 8-pin		1	**664-0042**
pH electrodes, pHenomenal®									
pHenomenal® 111 pH electrode, 3 in 1, with temperature sensor		Epoxy	Gel	12×120	Ceramic	BNC, 1 m cable		1	**662-1157**
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							Plastic bottle	100 ml	**83605.180**
Potassium chloride saturated with silver chloride aqueous solution 3 mol/l (3 N) in aqueous solution AVS TITRINORM for filling electrodes							Plastic bottle	500 ml	**83606.260**
Electrode cleaning solutions									
Electrode cleaning solution pepsin/hydrochloric acid for removal of proteins							Plastic bottle	100 ml	**83603.180**



662-1156



662-1157



662-1159

pH ELECTRODES, PHENOMENAL®

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

Type	Material	Electrolyte	Diaphr.	ØxL (mm)	Connection	Pk	Cat. No.
pHenomenal® 111, 3 in 1, gel *	Epoxy	Gel	Ceramic	12×120	BNC, 1 m cable	1	**662-1157**



ELECTRODE STAND, PHENOMENAL®

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	Pk	Cat. No.
pHenomenal® electrode stand, holds up to 4 electrodes + 1 temperature sensor	1	**662-1169**

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 saturated with silver chloride aqueous solution 3 mol/l (3 N) in aqueous solution AVS TITRINORM for filling electrodes	500 ml	**83606.260**



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.
2,00	±0,02	Citrate	Colourless	1 KIT	**85937.001**
4,00	±0,02	Phthalate	Colourless	1 KIT	**85041.001**
6,00	±0,02	Citrate	Colourless	1 KIT	**85938.001**
7,00	±0,02	Phosphate	Colourless	1 KIT	**85042.001**
9,00	±0,02	Borate	Colourless	1 KIT	**85043.001**
10,00	±0,02	Borate	Colourless	1 KIT	**85044.001**
11,00	±0,02	NaOH/NaN_3	Colourless	1 KIT	**85950.001**
12,00	±0,05	Phosphate	Colourless	1 KIT	**85951.001**



DIGITAL TIMER, TWO CHANNELS, WITH CLOCK, JUMBO, TRACEABLE®

- 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 Traceable® certificate of calibration.

Description	Colour	Accuracy (%)	W×D×H (mm)	Pk	Cat. No.
Digital timer, 2 channels, Jumbo, Traceable®	Black	±0,01	95×140×13	1	**609-0090**

DIGITAL TIMER, ONE CHANNEL, TRACEABLE®



- 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 Traceable® certificate of calibration.

Description	Colour	Accuracy (%)	W×D×H (mm)	Pk	Cat. No.
Digital timer, single channel, Traceable®	White/blue	±0,01	84×13×76	1	**609-0197**

DIGITAL TIMER, FOUR CHANNELS, WITH WHITE BOARD



609-0208

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, TRACEABLE®



Traceable three channel alarm timer

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 minutes, and 59 seconds
- 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 key

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 Traceable® certificate.

Description	Colour	Accuracy (%)	W×D×H (mm)	Pk	Cat. No.
Digital timer, 3 channels, Traceable®	White/grey	0,001	82,5×25,4×76	1	**609-0218**



DIGITAL TIMER, THREE CHANNELS, TRACEABLE® ORIGINAL™

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 Traceable® 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**



620-2204

DATA LOGGING THERMOMETERS, TRACEABLE® EXCURSION TRAC

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 minute 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**



620-2322

TEMPERATURE LOGGER, TRACEABLE® LOGGER TRAC

This temperature logger can display, record and report data during storage, handling and transportation of products.

- Reusable or re-progammable 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™ 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 recognized 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 (0...10) °C; otherwise ±1	T: 0,1	1	**620-2322**
Temperature logger, with Traceable® certificate of calibration	T: –35...+50	±0,2 (0...10) °C; otherwise ±1	T: 0,1	1	**620-2324**

Description	Pk	Cat. No.
Accessories		
Paper sleeves	100	**620-2323**
Cradle and cable	1	**620-2669**
Software, MaxiThermal	1	**620-2672**



TEMPERATURE AND HUMIDITY LOGGER, TRACEABLE®, LOGGER TRAC

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, logger trac	T: –29…+72 °C RH: 0 - 100	T: ±0,2 °C (0…10 °C); ±0,5 °C otherwise RH: ±3% (25 - 75%); ±5% otherwise	T: 0,1 °C RH: 0,1	1	**620-2325**
Temperature and humidity logger, logger trac	T: –29…+72 °C RH: 0 - 100	T: ±0,2 °C (0…10 °C); ±0,5 °C otherwise RH: ±3% (25 - 75%); ±5% otherwise	T: 0,1 °C RH: 0,1	1	**620-2326**

Description	Pk	Cat. No.
Accessories		
USB cable	1	**620-2671**
Software, MaxiThermal	1	**620-2672**



620-2440

DATA LOGGING ULT FREEZER THERMOMETERS, TRACEABLE®, EXCURSION TRAC

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 °C) and comes with an individually serialised and certified Traceable® 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_2 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®, magnetic strips, wall mount, Traceable® 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	–200...105	±0,25	0,01	1 stainless steel	141,74	1	**620-2633**
USB data logging liquid nitrogen Traceable® excursion trac thermometer, with 2 probes	–200...105	±0,25	0,01	2 stainless steel	141,74	1	**620-2634**



TOP LOADING VWR® VAPOUR-LINE^{ECO} AUTOCLAVES

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 VWR office to clarify the correct model/features that suit your application.

Model	VAPOUR-Line^{eco} 25	VAPOUR-Line^{eco} 50
Capacity (l)	25	50
Material	AISI 304 S/S	AISI 316L S/S
Temperature (°C)	134	
Max. pressure (bar)	2,1	
Voltage (V)	230	380 (3 phase)
Int.Ø×H (mm)	250×450	320×600
W×D×H ext. (mm)	550×540×1005	550×570×1005
Weight (kg)	45	60

Description	Pk	Cat. No.
Autoclave, vertical, VAPOUR-Line^{eco} 25, with 5 personal programs, can hold 1× Ecobox-25 or 2× Ecobox-25-Mini	1	**481-0671**
Autoclave, vertical, VAPOUR-Line^{eco} 25, with printer, with 5 personal programs, can hold 1× Ecobox-25 or 2× Ecobox-25-Mini	1	**481-0708**
Autoclave, vertical, VAPOUR-Line^{eco} 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**

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 µm or 50 µm thick, transparent.

- Clear bag
- Autoclavable up to 135 °C
- Highly resistant to tears and impact

Material	L×W (mm)	Thickness (µm)	Pk	Cat. No.
PP	200×305	50	100	**129-1153**
PP	305× 610	50	100	**129-1154**
PP	610×305	37,5	1.000	**129-0018**
PP	610×760	50	100	**129-1155**
PP	910×610	50	100	**129-1156**
PP	914×610	37,5	500	**129-0019**



VERTICAL AUTOCLAVES, VAPOUR-LINE

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 VWR sales office to clarify the correct model/features that suit your application.

Model	Capacity (l)	Temperature (°C)	Heating power (W)	Voltage (V)	Int.Ø×H (mm)	W×D×H ext. (mm)	Weight (kg)
VAPOUR-Line 80/80M	80	98...138	3000	230	410×600	740×915×600	155/165
VAPOUR-Line 135/135M	135		6000	Phase 380 V+ N	500×660	840×965×700	195/205

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, 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 (l)	Material	L×W (mm)	Pk	Cat. No.
11	PP	483×356	200	**129-0020**
27	PP	610×483	200	**129-0021**
80	PP	889×635	200	**129-0022**
210	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 (l)	Material	L×W (mm)	Pk	Cat. No.
Orange				
11	PP	483×356	200	**129-0024**
27	PP	610×483	200	**129-0025**
80	PP	889×635	200	**129-0026**
Clear				
–	PP	965×1220	100	**129-1157**
Orange				
210	PP	1143×914	100	**129-0027**
Clear				
12	PP	610×305	200	**129-0028**
75	PP	915×610	200	**129-0029**



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

Capacity (l)	Material	L×W (mm)	Thickness (µm)	Pk	Cat. No.
12	PP	610×305	75	250	**129-0030**
75	PP	914×610	75	250	**129-0031**
260	PP	1220×965	75	50	**129-0032**



BAGS, BIOHAZARD

These sturdy bags are ideal for disposing of biologically hazardous waste that must first be autoclaved. PP, 50 µm 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 (l)	Material	L×W (mm)	Pk	Cat. No.
Red, with printed sign and temperature indicator	12	PP	610×305	200	**129-0033**
Plain red, without printed sign	12	PP	610×305	200	**129-0037**
Red, with printed sign and temperature indicator	75	PP	914×610	200	**129-0035**
Red, with printed sign and temperature indicator	80	PP	890×635	200	**129-0034**
Red, with printed sign and temperature indicator	260	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 µm 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 (l)	Material	L×W (mm)	Pk	Cat. No.
12	HDPE	610×305	50	**129-0039**
75	HDPE	914×610	50	**129-0040**
260	HDPE	1220×965	50	**129-0041**



With 'Biohazard' printing

DISPOSAL BAGS

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

Description	Capacity (l)	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**



129-1150

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 µm 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.
356×483	Case of 200	200	**129-1149**
483×610	Case of 200	200	**129-1150**
610×914	Case of 200	200	**129-1151**
940×1220	Case of 100	100	**129-1152**
203×305	Case of 400	400	**129-1148**



LENS CLEANING TISSUES, GRADE 541

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**



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**



BENCH PROTECTORS

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

- Retains leaked reagents in 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/m²

Absorbance rate: 115-0673: 750 ml/m²

Colour	L×W (mm)	Packed	Pk	Cat. No.
White	460×570	Single sheets	50	**115-9220**
White	460×50 000	Roll	1	**115-9221**
White	460×570	Single sheets	50	**115-0673**



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**

From sample
to sequence

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