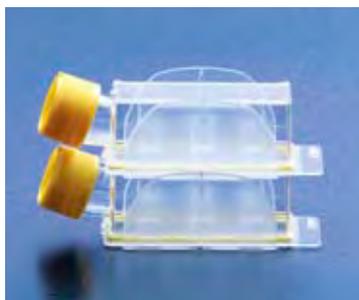




 SWISS DESIGN
AND QUALITY



Tissue Culture and Laboratory Technology

Sales Brochure 2023/2024

TPP Techno Plastic Products AG

TPP is known as manufacturer for disposable plastic products for tissue culture of highest quality. That is typical TPP: serrated gripping ring of the tissue culture dishes, square form for vacuum filtration, pivotal scraper head, collapsible rack for tubes and the famous TubeSpin® bioreactor. We are proud of it!



Dear TPP customers
We say thank you!

Not only must the product be of best quality, but also our services to support you in your daily work. For both, product and service, a worldwide network of local TPP dealers are committed, to fulfill your demands and requests to the full extent.

The TPP target is 100 % customer satisfaction.

Again, thank you for your trust and confidence in TPP for more than 50 years.

TPP Techno Plastic Products AG



TPP - Swiss Quality since 1966



Visit us on www.tpp-shop.com

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3-B Product "Clean Room"



The triple bagged packaging (3-B) solution from TPP meets the stringent clean room requirements.

With a single packaging style, contamination adhering to the outside of the bag can be carried into clean room areas. The 3-B packaging system prevents this contamination reaching the highly sensitive production areas thus significantly increasing safety. 3-B products have a SAL 10^{-6} .

Features of 3-B products:

- The safety-open-style peel-open bags are specially sized, that during handling of one bag the next inner bag is not accidentally broken, rendering it contaminated
- Each product is triple bagged in three peel-open bags
- SAL-value: 10^{-6}
- Safety-open-style:
 - 3 - outer, 2 - middle, 1 - inner bag
- Subsequent numbering assists to identify status of packaging
- Bag #1 (seldom 2) is labeled with the product data:
 - product number
 - product description
 - lot number
 - EXP

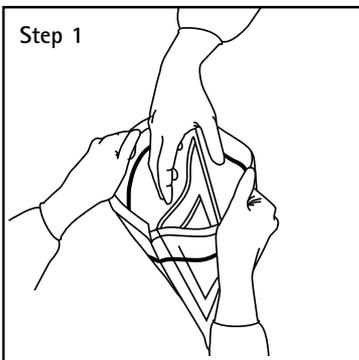
Order code: TPP standard product number plus prefix 3.



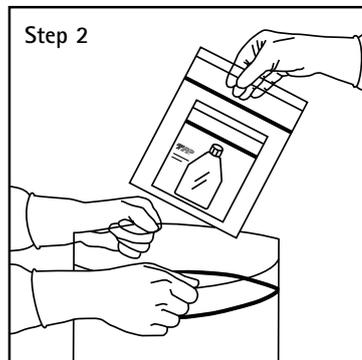
1. Cryo tubes in 3-B
2. Tissue culture dish in 3-B
3. Bioreactor 600 in 3-B
4. Syringe Filter in 3-B



Safety in clean rooms with TPP



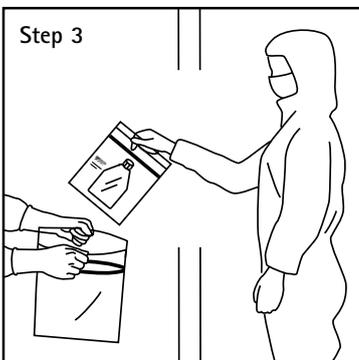
Step 1



Step 2

Step 1
Open bag 3

Step 2
Pull out sterile bag 2
Transfer bag 2 to sluce



Step 3



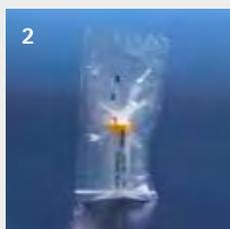
Step 4

Step 3
Open bag 2 in sluce, carefully pull out sterile bag 1
Sterile transfer of bag 1 to growing area

Step 4
Open bag 1 in aseptic room / under the bench
Use product



1



2



3



4

1. Filtermax vacuum filtration in 3-B
2. Centrifuge tube in 3-B
3. Tissue culture test plate in 3-B
4. Cell scraper in 3-B

3-B TubeSpin® Bioreactor

Type	Product-No.	Version	Centrifugal Acceleration max x g	Volume ml	Dimensions Ø x l mm	Material	Qty/ Bag pcs	Qty/ Case pcs
	387050	conical	15'500	50	30.0 x 115	PP	1	50
	387600	conical	3'500	600	100 x 183	PP	1	10

3-B Cryo Tube

Type	Product-No.	Volume max. ml	Volume recom. ml	Dimensions Ø x h mm	Material	Qty/ Bag pcs	Qty/ Case pcs
	389012	0.9	0.7	12 x 37	PP	25	500
	389020	1.5	1.3	12 x 48	PP	25	500
	389050	3.5	4.3	12 x 90	PP	25	300

3-B Tissue Culture Flask and additional Caps

Type	Product-No.	Growth Area cm ²	Version	Volume max. ml	Volume recom. ml	Dimensions l x w x h mm	Material	Qty/ Bag pcs	Qty/ Case pcs
	390025	25	VENT	15	3 - 8	92 x 51 x 29	PS	1	28
	390026	25	filter	15	3 - 8	92 x 51 x 29	PS	1	28
	390028	25	peel-off	15	3 - 8	92 x 51 x 29	PS	1	28
	390075	75	VENT	65	8 - 2 2	155 x 87 x 40	PS	1	20
	390076	75	filter	65	8 - 22	155 x 87 x 40	PS	1	20
	390150	150	VENT	165	15 - 45	210 x 122 x 50	PS	1	20
	390151	150	filter	165	15 - 45	210 x 122 x 50	PS	1	20
	390153	150	peel-off	100	15 - 45	210 x 122 x 50	PS	1	20
	390301	300	filter	410	30 - 85	275 x 170 x 50	PS	1	12
	390552	150	lid	100	15 - 45	210 x 122 x 50	PS	1	20
	390652	115	lid, barrier	100	15 - 33	210 x 122 x 50	PS	1	20
	390850		VENT	150 / 300 cm ²		39 x 24	PE	1	30
	390856		filter	150 / 300 cm ²		39 x 24	PE	1	30

3-B Centrifuge Tube

Type	Product-No.	Volume ml	Version	Dimensions Ø x h mm	Centrifugal Acceleration max x g	Material	Qty/ Bag pcs	Qty/ Case pcs
	391015	15	conical	17.1 x 121	15'500	PP	40	800
	391016	13	round, short	17.1 x 104	15'500	PP	40	800
	391050	50	conical	30.0 x 115	15'500	PP	20	360
	391051	50	conical, self-standing	30.0 x 115	15'500	PP	20	320
	391115	15	conical	17.1 x 121	1'700	PS	40	800

3-B Tissue Culture Tube

Type	Product-No.	Growth Area cm ²	Version	Volume max. ml	Centrifugal Acceleration max x g	Dimensions Ø x l mm	Material	Qty/ Bag pcs	Qty/ Case pcs
	391106	20	VENT	5	1'200	16 x 121	PS	1	100
	391243	10	filter	10	1'200	30 x 105	PS	1	50

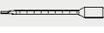
3-B Tissue Culture Test Plate

Type	Product-No.	Number Wells pcs	Growth Area cm ²	Version	Volume ml	Inside- Ø mm	Dimensions l x w x h mm	Material	Qty/ Bag pcs	Qty/ Case pcs
	392006	6	9.026	F	15.80	33.9	128 x 86 x 22	PS	1	36
	392012	12	3.466	F	6.30	21.0	128 x 86 x 22	PS	1	36
	392024	24	1.864	F	3.30	15.4	128 x 86 x 22	PS	1	36
	392048	48	0.875	F	1.60	10.6	128 x 86 x 22	PS	1	36
	392096	96	0.322	F	0.40	6.4	128 x 86 x 17	PS	1	50
	392097	96	0.636	U	0.34	6.4	128 x 86 x 17	PS	1	50

3-B Tissue Culture Dish

Type	Product-No.	Growth Area cm ²	Inside- Ø mm	Dimensions Ø x h mm	Material	Qty/ Bag pcs	Qty/ Case pcs
	393040	9.2	34	40 x 11	PS	1	60
	393060	22.1	53	60 x 16	PS	1	48
	393100	60.0	87	96 x 21	PS	1	54
	393150	147.0	137	146 x 21	PS	1	28

3-B Serological Pipette with Reservoir

Type	Product-No.	Volume ml	Reservoir ml	Color	Dimensions Ø x h mm	Volume Scale ml	Material	Packaging	Qty/ Case pcs
	394525	25	15	red	15 / 20.5 x 345	2/10	PS	plastic / plastic	36
	394550	50	20	purple	20 / 24.0 x 345	1/10	PS	plastic / plastic	36

3-B Vacuum Filtration "rapid"-Filtermax

Type	Product-No.	Filtration Area cm ²	Volume ml	Pore Size µm	Dimensions l x w x h mm	Material	Qty/ Bag pcs	Qty/ Case pcs
	399157	-	150	-	93 x 93 x 63	PS	1	12
	399257	-	250	-	93 x 93 x 87	PS	1	12
	399500	49	500	0.22	93 x 93 x 214	PS / PES	1	8
	399507	-	500	-	93 x 93 x 121	PS	1	12
	399950	69	1000	0.22	111 x 111 x 285	PS / PES	1	6
	399957	-	1000	-	111 x 111 x 160	PS	1	6

3-B Cell Scraper

Type	Product-No.	Length mm	Version	Blade Width mm	Material	Qty/ Bag pcs	Qty/ Case pcs
	399002	240	scraper "S", rotating	13	PE	1	40
	399003	300	scraper "M", rotating	20	PE	1	40

3-B Syringe Filter

Type	Product-No.	Filtration Area cm ²	Pore Size µm	Dimensions Ø x h mm	Material	Qty/ Bag pcs	Qty/ Case pcs
	399722	6	0.22	33 x 27	PES	1	100
	399745	6	0.45	33 x 27	PES	1	100

Tissue Culture Flask 25 – 300 cm²



Features of the Tissue Culture Flask:

- Surface activated growth area for optimal adhesion and best proliferation of adherent cells
- The angled neck of the flask reduces the risk of contact of medium with the inside of the screw cap
- Stacking ring enables stable, non-slip stacking of several flasks
- Highly visible bilateral marking areas
- White volume graduations on both sides for optic control of the filling volume
- Crystal clear transparency

The opto-mechanically activated growth area offers optimal cell adhesion and results in best proliferation.

Flasks are available with VENT or filter screw caps. The filter screw caps offer constant sterile gas exchange through the hydrophobic non wettable PTFE membrane with pore size 0.22 µm.



VENT position at 12 o'clock = gas exchange



VENT position at 3 o'clock = gas tight

- Click:
VENT screw cap is in position for gas exchange.



- Visual control gas exchange:
rectangle is at 12 o'clock.



- Turn 90° degree clockwise over the click:
VENT screw cap closes flask gas tight.



- Visual control of the gas tight position:
rectangle is at 3 o'clock.



The TPP Click

Type	Product-No.	Growth Area cm ²	Version	Volume max. ml	Volume recom. ml	Dimensions l x w x h mm	Material	Qty/ Bag pcs	Qty/ Case pcs
	90025	25	VENT	15	3 - 8	92 x 51 x 29	PS	10	360
	90026	25	filter	15	3 - 8	92 x 51 x 29	PS	10	360
	90075	75	VENT	65	8 - 22	155 x 87 x 40	PS	5	100
	90076	75	filter	65	8 - 22	155 x 87 x 40	PS	5	100
	90150	150	VENT	165	15 - 45	210 x 122 x 50	PS	3	36
	90151	150	filter	165	15 - 45	210 x 122 x 50	PS	3	36
	90300	300	VENT	410	30 - 85	275 x 170 x 50	PS	3	18
	90301	300	filter	410	30 - 85	275 x 170 x 50	PS	3	18



1



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3

1. 100 % cell harvesting
2. Bilateral marking area and volume scale
3. Angled neck

Tissue Culture Flask with Re-Closable Lid 115 - 150 cm²

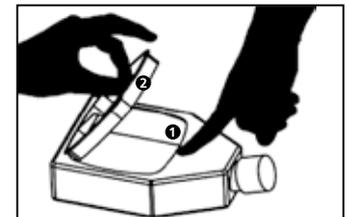


Free access to the cell chamber

Features of the Tissue Culture Flask with Re-Closable Lid:

- A multi-use re-closable liquid-tight lid
- Complete access to flask chamber from above
- Safety edge enables stable, non-slip stacking of several flasks also in combination with the standard TPP tissue culture flasks
- Optionally available with barrier which reduces the growth area to 115 cm²

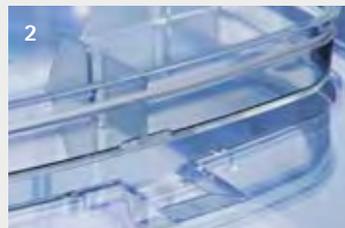
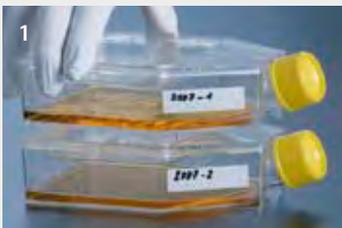
Flask is available with filter screw cap only. If a VENT screw cap is used, a possible pressure buildup of more than 0.03 bar inside the flask could press open the lid.



Opening and closing mechanism

- 1 Press here
- 2 Lift lid

Type	Product-No.	Growth Area cm ²	Version	Lid Opening l x w mm	Volume max. ml	Volume recom. ml	Dimensions l x w x h mm	Material	Qty/ Bag pcs	Qty/ Case pcs
	90552	150	lid	105 x 105	100	15 - 45	210 x 122 x 50	PS	3	18
	90652	115	lid, barrier	105 x 105	100	15 - 33	210 x 122 x 50	PS	3	18



1. Secure stacking of multiple flasks
2. Opening and re-closing mechanism

Tissue Culture Flask 25 - 300 cm² with Peel-Off Foil



Features of the Tissue Culture Flask with Peel-Off Foil:

- Available in all sizes: 25 - 300 cm²
- Large pinched flap for a firm grip
- Foil is peeled off before access to the cells
- Re-closure of the flask is not possible
- Stacking ring enables stable, non-slip stacking of several flasks
- Optionally available with barrier

Flask is available with filter screw cap only. If a VENT screw cap is used, a possible pressure build-up of more than 0.03 bar inside the flask could press to open the foil.

Type	Product-No.	Growth Area cm ²	Version	Lid Opening l x w mm	Volume max. ml	Volume recom. ml	Dimensions l x w x h mm	Material	Qty/ Bag pcs	Qty/ Case pcs
	90028	25	peel-off	38 x 45	15	3 - 8	92 x 51 x 31	PS	5	70
	90078	75	peel-off	87 x 92	65	8 - 22	155 x 87 x 45	PS	2	32
	90153	150	peel-off	100 x 128	100	15 - 45	210 x 122 x 50	PS	3	18
	90303	300	peel-off	140 x 185	200	30 - 85	275 x 170 x 55	PS	2	8
	90653	115	peel-off, barrier	100 x 128	100	15 - 33	210 x 122 x 50	PS	3	18



1. Large flap for easy peel-off
2. Barrier optionally available

Clipmax 10 cm²



Cell culture directly on slide

Grow your cells directly on Clipmax, a standard microscope slide (25 x 75 mm) with activated growth area and removable media chamber. The time-consuming trypsinizing of the cells before microscopy is no longer necessary. Due to the unique optical properties of the polymer TPP used for Clipmax, microscopic applications in fluorescence microscopy are now possible that were not with polystyrene. Thus, Clipmax is perfectly suited for cell culture, immunocytochemistry and a variety of microscopic applications.

Features of Clipmax:

- COP slide
- Refractive index similar to glass (nD 589 nm): 1.52
- UV measurements >300nm, i.e. suitable for confocal fluorescence microscopy
- Suitable for individual coatings
- Suitable for staining and especially for immunofluorescence measurements
- Activated growth surface area for delicate cells
- Resistant to solvents (e.g. acetone, ethanol, xylene)
- Removable medium chamber with a "click" and without the need of a removing tool
- Initial opening protection
- Filter screw cap for optimal gas exchange with minimal evaporation
- Stackable

Type	Product-No.	Growth Area cm ²	Version	Dimensions l x w x h mm	Material	Qty/ Bag pcs	Qty/ Case pcs
	70010	10	filter, clip	93 x 33 x 32	PS / COP	1	5

1. Clipmax with filled media chamber
2. Before medium chamber is removed

3. After medium chamber is removed
4. Remove medium chamber by a click, no tool necessary



VENT or Filter Screw Cap



Filter screw caps with hydrophobic PTFE membrane



VENT or Filter Screw Cap for Tissue Culture Flasks

Type	Product-No.	Version	Dimensions Ø x h mm	Material	Qty/ Bag pcs	Qty/ Case pcs
	90825	VENT for T-25	24 x 16	PE	10	40
	90826	filter for T-25	24 x 16	PE	10	40
	90850	VENT for T-150 / 300	39 x 24	PE	10	40
	90856	filter for T-150 / 300	39 x 24	PE	10	40
	90875	VENT for T-75	33 x 21	PE	10	40
	90876	filter for T-75	33 x 21	PE	10	40



1. Bag of 10 pcs

Tissue Culture Flat Tube 10 cm² and Tissue Culture Tube 20 cm²

3-in-1 product:
Cultivation
Examination
Centrifugation



The tissue culture tubes are a supplement to the TPP tissue culture flask product range.

Features of the Tissue Culture Flat Tube 10 cm²:

- **Cultivation:** 10 cm² surface activated growth area
- Large opening for complete access of pipettes and scrapers
- **Examination:** visual control with inverse microscopes
- Sloped and flattened upper side minimizes disturbing light refractions of the back light
- **Centrifugation:** 1'200 x g in 50 ml standard tube adapter
- Conical form eases removal of pellet
- Segmental packaging for scratch-free transportation

Features of the Tissue Culture Tube 20 cm²:

- 20 cm² surface activated growth area
- Volume graduations down to 0.5 ml
- A click and the VENT screw cap is in the aeration position, guaranteeing gas exchange even in vertical position of the tube
- Centrifuge 1'200 x g, fits a 15 ml standard tube adapter
- Convenient re-closable zipper bag with laser perforation

The TPP tissue culture rack fits 8 x tissue culture flat tubes 10 in a horizontal position for storage in a CO₂ incubator.



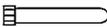
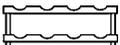
Tissue culture flat tube with filter screw cap



Tissue culture flat tube on inverse microscope



Segmental packaging allows scratch-free transportation

Type	Product-No.	Growth Area cm ²	Version	Volume max. ml	Centrifugal Acceleration max x g	Dimensions Ø x l mm	Material	Qty/ Bag pcs	Qty/ Case pcs
	91106	20	VENT	5	1'200	16 x 120	PS	20	800
	91243	10	filter	10	1'200	30 x 105	PS	4	216
	99018	-	rack	8 x 91243 / 8 x 91106	-	200 x 88 x 72	PP	1	28



1



2

1. Tissue scraper in tissue culture flat tube
2. Surface activation

Cell Scraper and Cell Spatula



100 % cell
harvest

Features of the Cell Scraper:

- Scraper heads made from a flexible polyethylene material
- Pivoting scraper head for easy maneuvering
- Three different blade widths
- Small raised knobs on handle for secure grip
- Single-wrapped in blister packaging
- User-friendly dispenser case

The pivoting scraper head of the cell scraper reaches every corner of the cell vessel. Pivot the scraper head by slight pressure on the handle with the forefinger thus pushing the handle downwards. A slight move of the handle will twist the head to the required position.

Features of the Cell Spatula:

- Blade with sharp edges
- Small raised knobs on handle for secure grip
- Single-wrapped in blister packaging
- User-friendly dispenser case

The cell spatula features a specially formed blade with a sharp edge. It is commonly used with the TPP tissue culture flask with re-closable lid or peel-off foil or with large tissue culture dishes.



Rotation to the required position



Different blade widths available



Cell scraper in a large TPP tissue culture dish

Type	Product-No.	Length mm	Version	Blade Width mm	Material	Qty/ Bag pcs	Qty/ Case pcs
	99002	240	scraper "S", rotating	13	PE	1	150
	99003	300	scraper "M", rotating	20	PE	1	150
	99004	362	scraper "L", rotating	25	PE	1	100
	99010	195	spatula, fix	14	PE	1	150



1



2

1. Knobs for secure grip
2. Soft scraper head to protect the cells

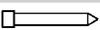
TubeSpin® Bioreactor 15 – 600 ml



TubeSpin® bioreactors are ideal for large-scale screenings and optimizing of suspension cell system process developments. The important parameters for the production upscaling can be evaluated with small amounts. This lowers the cost and increases the efficiency of the process.

Features of TubeSpin® bioreactor

- TubeSpin® bioreactor 15: working volume 1 – 15 ml
Two versions available: round or conical bottom
- TubeSpin® bioreactor 50: working volume 1 – 35 ml
Two versions available: round or conical bottom
- TubeSpin® bioreactor 450: working volume up to approx. 300 ml
- TubeSpin® bioreactor 600: working volume up to approx. 400 ml
- Filter screw cap with 5 different openings (A–B–C–D–E)
- Fits standard centrifuge apparatus
- Spin: 15'500 x g or 3'500 x g
- Trays for shakers from Kuhner or Infors available

Type	Product-No.	Version	Centrifugal Acceleration	Volume	Dimensions Ø x l	Material	Qty/ Bag	Qty/ Case
			max x g	ml	mm		pcs	pcs
	87015	conical	15'500	15	17.1 x 120	PP	40	800
	87017	round	15'500	15	17.1 x 120	PP	40	800
	87050	conical	15'500	50	30.0 x 115	PP	20	180
	87056	round	15'500	50	30.0 x 115	PP	20	180
	87450	conical	3'500	450	96 x 145	PP	1	32
	87600	conical	3'500	600	100 x 183	PP	1	26



Openings can be sealed



Racks (available from vendor of shakers)



Bioreactor 600 after centrifugation



Filter screw caps for sterile gas exchange



Screw cap for large bioreactor, solid or filter version



PlateButler®, Lab Services BV

Racks and Consumables for TubeSpin® Bioreactor

Type	Product-No.	Version	Capacity	Dimensions l x w x h	Material	Qty/ Bag	Qty/ Case
			pcs	mm		pcs	pcs
	87355	filter screw cap for 450 / 600	-	70 x 21	PE	1	20
	87356	screw cap "solid" for 450 / 600	-	70 x 21	PE	1	20
	99013	rack for 87450 / 87600	3 x 450 ml / 600 ml	366 x 146 x 70	PP	1	6
	99017	rack "S" for 87015 / 87017 / 87050	18 x 15 ml / 10 x 50 ml	209 x 98 x 62	PP	1	45

TubeSpin® Bioreactor 50 with Septum



Barcode for automated tracking



Re-closing septum with cross slit

TubeSpin® bioreactor 50 with septum for robotics use

The TubeSpin® bioreactor 50 with septum is intended for the use during laboratory automations such as robotic use for sterile exchange of medium and solutions or withdrawal from cell based products.

Features of the TubeSpin® bioreactor 50 with septum:

- Re-closable cross-slit septum for multiple entries
- Compatible with injection needles, up to 2.1 mm (12 gauges) diameter
- Working volume < 50 ml; graduation markings start at 0.5 ml
- Barcode 128 on each tube for automated tracking coding: lot number plus count renders each tube unique
- Sterile gas exchange through filter openings in the screw cap
- Conical tube fits in standard 50 ml centrifuge adapter
- Max. centrifugal force 15'500 x g

Usage:

- Multiple robot entry with injection needles and cannulas through re-closable cross slit septum
- Sterile media and solution exchange or removal of cell based products, enabled by surface sterilization of septum
- Elimination of laborious screwing / unscrewing during robotic automation by access through septum
- Centrifugation of suspension cells without need of prior removal from tube

Type	Product-No.	Version	Centrifugal Acceleration max x g	Volume ml	Dimensions Ø x l mm	Material	Qty/ Bag pcs	Qty/ Case pcs
	86050	conical, septum, barcode	15'500		30.0 x 115	PP	20	180



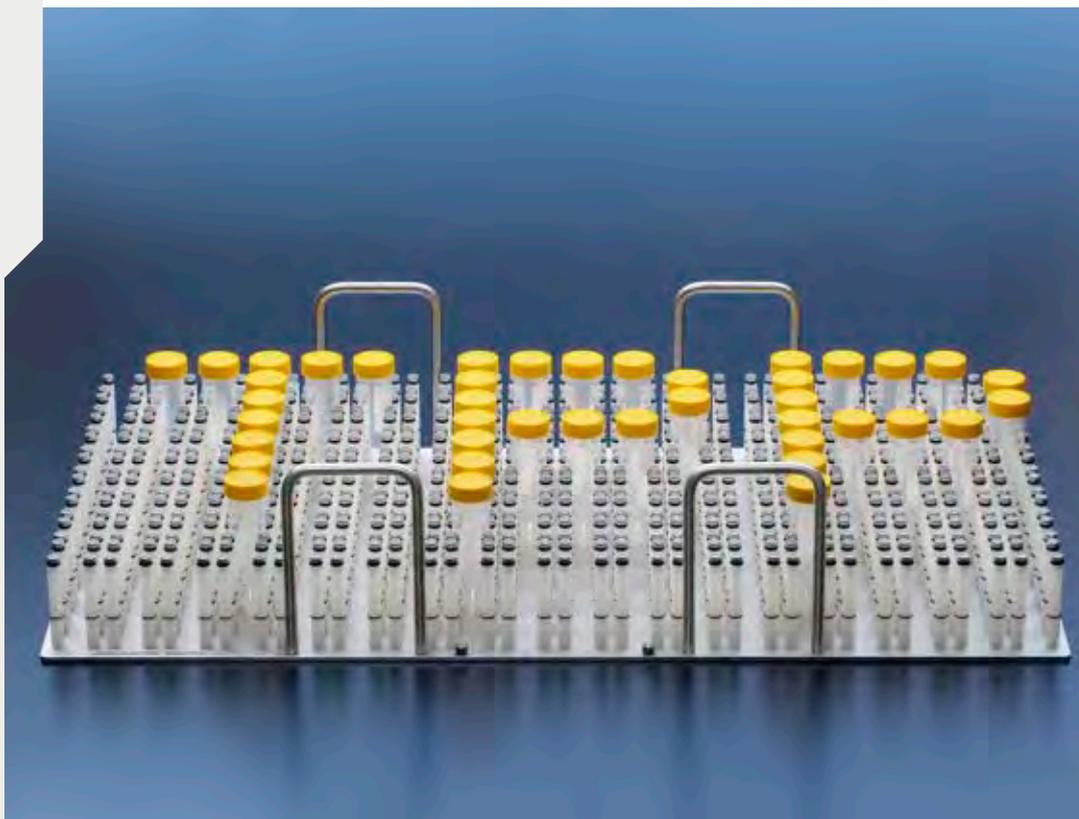
1. Holding bars for 50 ml

Shaker Tray for TubeSpin® Bioreactor 50 – 600 ml



Stable fixation with holding bars

Shaker Tray for TubeSpin® Bioreactor



Features of shaker tray:

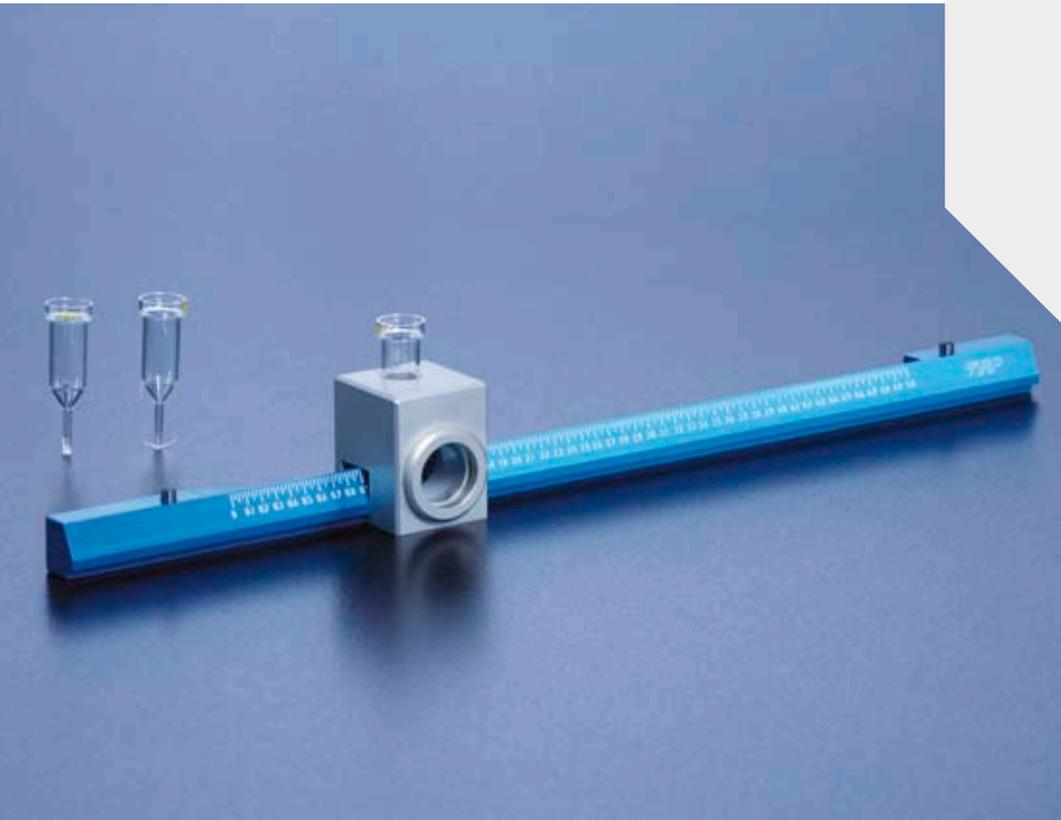
- Shaker tray fits the relevant shaker model from Kuhner or Infors
- Aluminum
- Guarantees largest possible volume per tray
- Secure fixation of the tubes with holding bars

Type	Product-No.	Version	Capacity	Dimensions	Material	Qty/ Bag	Qty/ Case
			pcs	l x w x h mm		pcs	pcs
	87414	Kuhner tray 162, bioreactor 50	162 x 50 ml	800 x 420 x 139	Alu / PA	1	1
	87411	Kuhner tray 32, bioreactor 450	32 x 450 ml	800 x 420 x 139	Alu	1	1
	87412	Kuhner tray 20, bioreactor 450	20 x 450 ml	500 x 420 x 139	Alu	1	1
	87413	Kuhner tray 16, bioreactor 450	16 x 450 ml	420 x 420 x 139	Alu	1	1
	87431	Infors Multitron tray 32, bioreactor 450	32 x 450 ml	850 x 470 x 139	Alu	1	1
	87433	Infors Minitron tray 16, bioreactor 450	16 x 450 ml	480 x 420 x 139	Alu	1	1
	87611	Kuhner tray 32, bioreactor 600	32 x 600 ml	800 x 420 x 139	Alu	1	1
	87612	Kuhner tray 20, bioreactor 600	20 x 600 ml	500 x 420 x 139	Alu	1	1
	87613	Kuhner tray 16, bioreactor 600	16 x 600 ml	420 x 420 x 139	Alu	1	1
	87631	Infors Multitron tray 32, bioreactor 600	32 x 600 ml	850 x 470 x 139	Alu	1	1
	87633	Infors Minitron tray 16, bioreactor 600	16 x 600 ml	480 x 420 x 139	Alu	1	1

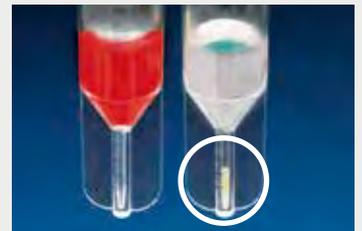


1. Shaker tray for 16 tubes
2. Shaker tray for 20 tubes
3. Shaker tray for 32 tubes

Packed Cell Volume Tube (PCV)



PCV tube without graduation



Left PCV before / right PCV after centrifugation

The PCV tube enables a quick and reproducible measuring technique of the cell volume. This quick method is ideal to monitor cell growth (cell mass).

If during a production process many parameters need to be optimized, many samples accumulate at the same time. In this case a quick analysis with the PCV tube and the read-out process with "easy read" is the method of the choice.

A short centrifugation step (1 minute at 2'500 x g) is sufficient to form a pellet in the calibrated capillary. There the pellet can be measured with the "easy read" measuring device.

Features of Packed Cell Volume (PCV) Tube:

- PCV tube available with or without scale
- Fits in micro centrifuges
- Caps available

Determination of cells/ml

Conversion of PCV volume in cells/ml by an initial parallel determination with the PCV tube and a hemacytometer

Step 1

Determine cell number with the hemocytometer

Step 2

Determine volume of cell pellet with PCV tube from 1 ml cell suspension of the same sample

Step 3

Divide number of cells (step 1) by volume of cell pellet μl (step 2)

Result

Result = number of cells per μl cell pellet

Type	Product-No.	Version	Volume ml	Dimensions $\text{\O} \times \text{h}$ mm	Material	Qty/ Bag pcs	Qty/ Case pcs
☞	87005	with volume scale	1	10.5 x 43	PS	50	250
☞	87007	neutral	1	10.5 x 43	PS	50	150
○	87008	cap for PCV		13.5 x 7	PE	50	150

"easy read" Measuring Device



Easy metering with "easy read"



The most commonly used method for determination of cell number density is to count cells manually with the hemocytometer. However, it is time-consuming.

The TPP system provides a fast, easy-to-use reproducible and accurate alternative. The PCV tubes enable the determination of the packed cell volume in a cell suspension, resulting in absolute data correlating with parameters like protein content, cell count, metabolic activity and others.

The PCV tubes are particularly convenient to work with, requiring neither special training nor sophisticated expensive machines - in contrast to automated cell counting devices.

Features of "easy read" Measuring Device:

- Optimal with the use of PCV tubes
- Accurate and reproducible cell pellet measuring
- Solid re-usable and easy handling measuring device
- Measuring volume 0 - 5 μl

Type	Product-No.	Version	Volume μl	Dimensions l x w x h mm	Material	Qty/ Bag pcs	Qty/ Case pcs
	87010	"easy read" measuring device	0 - 5	320 x 33 x 38	Alu	1	1

Serological Pipette with Reservoir 5 – 70 ml



Features of the serological pipette:

- Accurate volume 5 – 70 ml
- Highly visible, bidirectional graduation inclusive over-volume graduation
- Smooth interior prevents cell hang-up or clumping inside
- Excellent optical transparency
- Volume identification by color-coding on pipettes, blister wrappings, dispensers, box labels
- Convenient, stackable dispenser box
- Single wrapped in blisters, version paper / plastic or plastic / plastic available
- Reservoir
- Stable, break-resistant, highly low drip pipette tip
- Slender, short form enables ergonomic working conditions in the sterile hood
- Optimized form of mouthpiece
- Small outside diameter of the tube at the tip results in an excellent accessibility of these large pipettes even in small tissue culture flasks
- Fits in pipette aid Turbo-Fix or all commercially available pipette aids with rubber inserts

TPP pipettes are free from pyrogens; non-cytotoxic and non-hemolytic.

Axial tapered tip for robotic use.

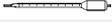
Patented highly polished interior wall, results in a RA value of exceptional range.



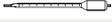
1. Burr free tips



Paper / Plastic Blister

Type	Product-No.	Volume ml	Reservoir ml	Color	Dimensions Ø x h mm	Volume Scale ml	Material	Packaging	Qty/ Case pcs
	94504	5	3.5	blue	14.0 x 265	1/10	PS	paper / plastic	
	94505	5	4	blue	12.8 x 345	1/10	PS	paper / plastic	
	94509	10	5.5	orange	16.5 x 265	1/10	PS	paper / plastic	
	94510	10	7	orange	15.6 x 345	1/10	PS	paper / plastic	
	94525	25	15	red	20.5 x 345	2/10	PS	paper / plastic	60
	94550	50	20	purple	24.0 x 345	--	PS	paper / plastic	50

Plastic / Plastic Blister

Type	Product-No.	Volume ml	Reservoir ml	Color	Dimensions Ø x h mm	Volume Scale ml	Material	Packaging	Qty/ Case pcs
	95504	5	3.5	blue	14.0 x 265	1/10	PS	plastic / plastic	
	95505	5	4	blue	12.8 x 345	1/10	PS	plastic / plastic	
	95509	10	5.5	orange	16.5 x 265	1/10	PS	plastic / plastic	
	95510	10	7	orange	15.6 x 345	1/10	PS	plastic / plastic	
	95525	25	15	red	20.5 x 345	2/10	PS	plastic / plastic	60
	95550	50	20	purple	24.0 x 345	-	PS	plastic / plastic	50



1. TPP Norm 8 mouth piece
2. Stabifix gives secure handling
3. High precision tip

Turbo-Fix Pipette Aid



Highest pipetting speed with Turbo-Fix

Turbo-Fix pipette aid is for aspiration and dispensing aqueous solutions with pipettes of 1 - 100 ml volume. When connected with electric supply, the Turbo-Fix features an extraordinary high suction force and a long operation time. A turbo-quick lightweight, especially when working with large volume pipettes.

Features of Turbo-Fix pipette aid:

- Turbo suction force approx. 13.5 ml/sec (with a serological pipette 50 ml)
- More than six hours pipetting cable free
- Lithium-ion polymer rechargeable battery-technology
- Lightweight = 195 g
- Gravity dispense possible
- Autoclavable pipette nose Stabifix included

The **pipetting speed** can be controlled with two systems:

- Sensitive control of the liquid by applying various finger pressures on the two triggers, from fine to fast pipetting.
- Turn the thumb wheel on the back of the instrument to regulate the speed, providing a sensitive control of the liquid level in the pipette.

Type	Product-No.	Version	Dimensions l x w x h mm	Material	Qty/ Bag pcs	Qty/ Case pcs
	94700	type C: adapter for EU	35 x 125 x 130	PA / POM	1	1
	94701	type A, adapter for China / USA / Japan	35 x 125 x 130	PA / POM	1	1
	94702	type G: adapter for UK	35 x 125 x 130	PA / POM	1	1
	94703	type I: adapter for AUS	35 x 125 x 130	PA / POM	1	1



1. 20 % more suction force with power supply
2. Turbo-Fix

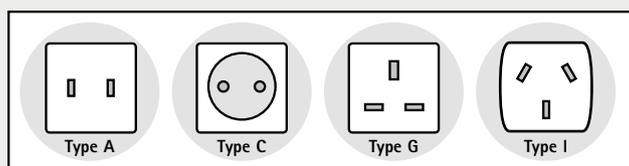
Turbo-Fix Consumables



Turbo-Fix Consumables

Type	Product-No.	Version	Material	Qty/ Bag pcs	Qty/ Case pcs
	94750	Stabifix nose piece, set	var.	1	1
	94751	wall mount	PE	1	1
	94752	replacement filter, 0.45 µm, blue	var.	1	1
	94753	replacement filter, 0.22 µm, red	var.	1	1
	94754	pipette mount in Stabifix	silicone	1	1
	94755	filter rubber in Stabifix	silicone	1	1
	94757	battery compartment lid	PA	1	1
	94758	housing	PA	1	1
	94760	mains adapter type C for EU	var.	1	1
	94761	mains adapter type A for China / USA / Japan	var.	1	1
	94762	mains adapter type G for UK	var.	1	1
	94763	mains adapter type I for AUS	var.	1	1

Types of mains adapter / power supply

Safety approved: PSE, UL, GS, RCM,
CE, FCC, CCC

Tissue Culture Test Plate 6 – 96 wells



Features of the Tissue Culture Test Plates:

- Lid with air-venting system for controlled gas exchange with low evaporation
- Vented base for air flow between stacked dishes to prevent condensation
- Sloped edge allows placement of the lid in one position only
- Yellow inscription field: yellow on yellow - match!
- Surface activated growth area on spherical zone of well only
- Crystal clear transparency for excellent viewing
- Black alphanumeric for quick identification of the wells
- Clear alphanumeric between wells for orientation during microscopy

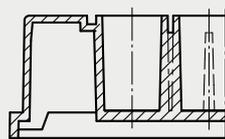
Additional features of Tissue Culture Test Plates with 96 wells:

- Manufactured according to ANSI/SLAS 1-2204 to ANSI/SLAS 4-2004
- Standardized with an interleaved barcode 2/5
- Two well geometries available: F- and U-bottom

The well geometry is an important criterion with a 96 well tissue culture plate. TPP offers two types of well geometries.

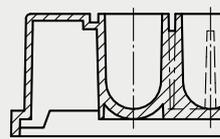
F-base

- Excellent optical characteristics
- Suitable for precise optical measurements, the measuring light is not distracted by the geometry
- Suitable for microscopy applications (bottom reading)
- Growth area 0.322 cm²



U-base

- No rims, well suited for pipetting
- Used for agglutination tests and "+/-" evaluations
- Growth area: 0.636 cm²





1. Black alphanumerical labelling
2. Yellow inscription field
3. Excellent stacking
4. Alphanumerical identification mark next to each well
5. Gripping edges

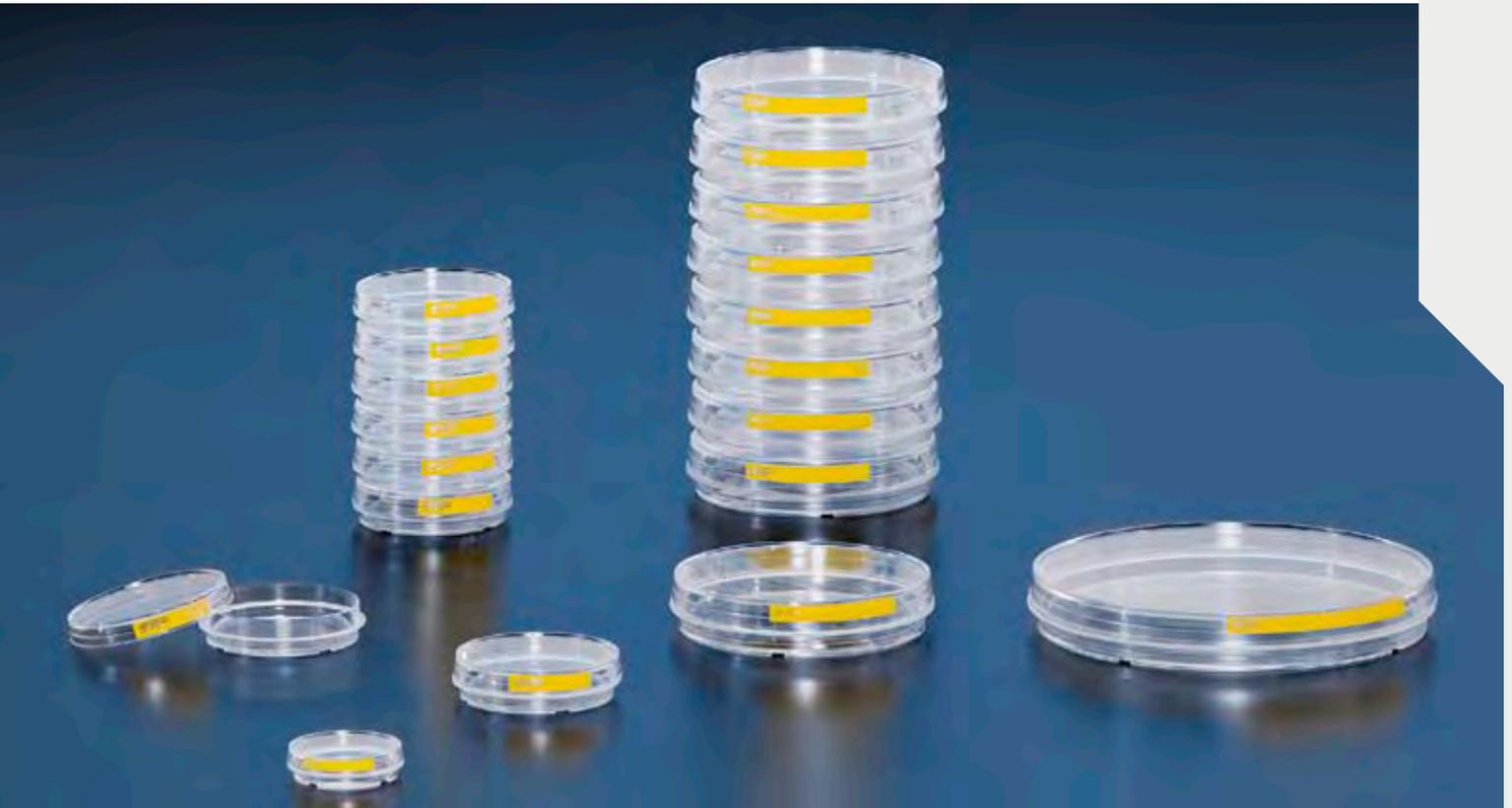
Optimal gas exchange with lowest evaporation

Type	Product-No.	Number Wells pcs	Growth Area cm ²	Version	Volume ml	Inside- Ø mm	Dimensions l x w x h mm	Material	Qty/ Bag pcs	Qty/ Case pcs
	92006	6	9.026	F	15.80	33.9	128 x 86 x 22	PS	1	126
	92012	12	3.466	F	6.30	21.0	128 x 86 x 22	PS	1	126
	92024	24	1.864	F	3.30	15.4	128 x 86 x 22	PS	1	126
	92048	48	0.875	F	1.60	10.6	128 x 86 x 22	PS	1	126
	92096	96	0.322	F	0.40	6.4	128 x 86 x 17	PS	1	162
	92097	96	0.636	U	0.34	6.4	128 x 86 x 17	PS	1	162
	92406	6	9.026	F	15.80	33.9	128 x 86 x 22	PS	4	72
	92412	12	3.466	F	6.30	21.0	128 x 86 x 22	PS	4	72
	92424	24	1.864	F	3.30	15.4	128 x 86 x 22	PS	4	72
	92448	48	0.875	F	1.60	10.6	128 x 86 x 22	PS	4	72
	92696	96	0.322	F	0.40	6.4	128 x 86 x 17	PS	6	108
	92697	96	0.636	U	0.34	6.4	128 x 86 x 17	PS	6	108

Tissue Culture Test Plate 6 - 96 wells, Single Wrapped, Small Packaging Unit

Type	Product-No.	Number Wells pcs	Growth Area cm ²	Version	Volume ml	Inside- Ø mm	Dimensions l x w x h mm	Material	Qty/ Bag pcs	Qty/ Case pcs
	92106	6	9.026	F	15.80	33.9	128 x 86 x 22	PS	1	42
	92112	12	3.466	F	6.30	21.0	128 x 86 x 22	PS	1	42
	92124	24	1.864	F	3.30	15.4	128 x 86 x 22	PS	1	42
	92148	48	0.875	F	1.60	10.6	128 x 86 x 22	PS	1	42
	92196	96	0.322	F	0.40	6.4	128 x 86 x 17	PS	1	54
	92197	96	0.636	U	0.34	6.4	128 x 86 x 17	PS	1	54

Tissue Culture Dish 40 – 150 cm²



Features of the Tissue Culture Dish:

- Surface activation of the growth area enhancing optimal proliferation of the cells
- Side wall of dish is not surface activated
- Gripping ring with serrated edges prevents accidental dropping of the dish bottom
- Lateral yellow inscription field on the lid
- Stacking ring on the lid and corresponding on the base resulting in an extremely secure stacking feature
- Spacer on the inside of the dish lid for a constant movement of air
- Clock-numbering system (3, 6, 9 and 12) inlaid into the base of the dish allows identification, region of interest definition and documentation of the zones
- Vents in the dish base rim for airflow between stacked dishes for consistent growth conditions and prevention of condensation
- Impeccable optical clarity enables a visual control of the cells in stacked dishes using transmitted light

TPP tissue culture dishes are designed for **manual** handling only.



Clock-numbering system inlaid into the base of the dish



The gripping ring: often copied, never like the original!

The TPP gripping ring: often copied, but never like the original!

Type	Product-No.	Growth Area cm ²	Inside- Ø mm	Dimensions Ø x h mm	Material	Qty/ Bag pcs	Qty/ Case pcs
○	93040	9.2	34	40 x 11	PS	20	900
○	93060	22.1	53	60 x 16	PS	14	840
○	93100	60.0	87	96 x 21	PS	10	240
○	93150	147.0	137	146 x 21	PS	5	100



1



2



3

1. Convenient peel-off bag
2. Stacked tissue culture dishes
3. Yellow inscription field

Vacuum Filtration "rapid"-Filtermax 150 – 1000 ml

Quadratic vacuum filtration, conveniently excellent!



1. Filter top and flask are available separately
2. Flask can be used as medium reservoir

Features of the quadratic vacuum filtration "rapid"-Filtermax:

- Large quadratic filter surface of 49 cm² and 69 cm² respectively
- Special lamella grid support and premium PES filter membrane, pore size of 0.22 µm with low protein binding capacity resulting in an extreme high flow rate
- Square thus secure footprint eliminates the risk of encompassment of the filter unit by the vacuum tubing
- Space saving medium reservoir
- Tapered form at the neck enables large and small hands a firm and slip-free grip of the "rapid"-Filtermax system
- Each filter set comes with an adapter for the vacuum connection hose with an inside diameter of Ø 6 - 10 mm and a separately packed screw cap

Full flexibility: Choice of filter set, bottle top filter only or flask only, all provided with a GL-45 compatible screw thread.

TPP recommends filling the liquid into the filter first and then applying the vacuum.

Type	Product-No.	Filtration Area cm ²	Volume ml	Pore Size µm	Dimensions l x w x h mm	Material	Qty/ Bag pcs	Qty/ Case pcs
	99150	49	150	0.22	93 x 93 x 103	PS / PES	1	18
	99155	49	150	0.22	90 x 89 x 57	PS / PES	1	36
	99157	-	150	-	93 x 93 x 63	PS	1	24
	99250	49	250	0.22	93 x 93 x 145	PS / PES	1	12
	99255	49	250	0.22	90 x 89 x 75	PS / PES	1	24
	99257	-	250	-	93 x 93 x 87	PS	1	24
	99500	49	500	0.22	93 x 93 x 214	PS / PES	1	10
	99505	49	500	0.22	90 x 89 x 110	PS / PES	1	21
	99507	-	500	-	93 x 93 x 121	PS	1	36
	99560	49	500	0.22	93 x 93 x 214	PS / PES	1	10
	99950	69	100	0.22	111 x 111 x 285	PS / PES	1	9
	99955	69	100	0.22	108 x 108 x 143	PS / PES	1	12
	99957	-	100	-	111 x 111 x 160	PS	1	20
	99960	69	100	0.22	111 x 111 x 285	PS / PES	1	9

Syringe Filter 0.22 μm and 0.45 μm

Diameter 33 mm for a stable fit of the syringe filter on a 50 ml centrifuge tube



TPP syringe filters are intended to filter aqueous solutions such as tissue culture medium, buffers, protein solution, virus suspensions and DNA.

Features of the Syringe Filter:

- PES filter membrane with pore size 0.45 μm for pre-filtration
- PES filter membrane with pore size 0.22 μm for sterilization
- Membrane with a high flow rate with minimal protein binding
- Standard Luer lock connection enables filtration at high pressure with a syringe
- < 100 μl dead volume
- Burst pressure 10 bar
- Single packed in blister

Type	Product-No.	Filtration Area cm^2	Pore Size μm	Dimensions $\text{\O} \times \text{h}$ mm	Material	Qty/ Bag pcs	Qty/ Case pcs
	99722	6	0.22	33 x 27	PET	1	200
	99745	6	0.45	33 x 27	PET	1	200



1. Stable fit of the filter on a 50 ml centrifuge tube

Centrifuge Tube 13 – 50 ml



Features of the Centrifuge Tube:

- White writing circle on screw cap for easy labelling with any writing instrument
- Gas and aerosol tight cap
- Graduations all the way down to 0.1 ml and 0.5 ml respectively
- Caps that cannot be over-tightened
- Convenient racks available

TPP processes only the highest grade of raw material that fulfils the requirements of USP Class VI. No additives are employed. By this we prevent leaching of substances into the end user's sample.

Relative Centrifugal Force (RFC) = x g

The **limit** on x g is influenced by:

- Type of rotor (diameter)
- Speed / revolution per minute

The **maximum** on x g depends on:

- Material of tubes
- Centrifugation probe (e. g. organic solvents)



1. Writing area
2. TPP tubes, all with 2-way thread
3. Screw cap cannot be over-tightened



Volume graduation



White marking circle, the TPP advantage



Filled racks simplify procedures



50 ml tube with round bottom

Type	Product-No.	Volume	Version	Dimensions Ø x h	Centrifugal Acceleration	Material	Qty/ Bag	Qty/ Case
		ml					pcs	pcs
	91015	15	conical	17.1 x 121	15'500	PP	40	800
	91016	13	round, short	17.1 x 104	15'500	PP	40	800
	91017	15	round, long	17.1 x 121	15'500	PP	40	800
	91019	13	flat	17.1 x 100	15'500	PP	40	800
	91050	50	conical	30.0 x 115	15'500	PP	20	360
	91051	50	conical, self-standing	30.0 x 115	15'500	PP	20	320
	91056	50	round	30.0 x 115	15'500	PP	20	360
	91115	15	conical	17.1 x 121	1'700	PS	40	800
	99017		rack "S"	209 x 98 x 62	-	PP	1	45
	99019		rack "L"	209 x 172 x 62	-	PP	1	30

Centrifuge Tube 15 ml and 50 ml, Small Unit Packaging

Type	Product-No.	Volume	Version	Dimensions Ø x h	Centrifugal Acceleration	Material	Qty/ Bag	Qty/ Case
		ml					pcs	pcs
	91014	15	conical	17.1 x 121	15'500	PP	40	360
	91054	50	conical	30.0 x 114	15'500	PP	20	160

Rack filled with Centrifuge Tubes 15 ml or 50 ml

Type	Product-No.	Volume	Version	Capacity	Centrifugal Acceleration	Material	Qty/ Bag	Qty/ Case
		ml		pcs			max x g	pcs
	91515	15	rack "L" + 15 ml	30 x 15 ml, conical	15'500	PP	1	10
	91550	50	rack "L" + 50 ml	20 x 50 ml, conical	15'500	PP	1	10

Cryo Tube 1.2 – 5 ml



Features of Cryo Tube:

- Storage of samples in freezers or similar low-temperature equipment up to $-196\text{ }^{\circ}\text{C}$
- External thread without silicone gasket
- Secure and tight closure of the tube
- Self standing on star-shaped foot
- One-handed operation with the use of the TPP cryogenic rack # 99016 with locking system in the grooves
- Color inserts for identification or coding
- Convenient, re-closable bag

Do not exceed the recommended maximum working volume.

TPP recommends using the cryo tubes for storage in the vapor-phase. If used in the liquid phase, nitrogen may penetrate into the tube and cause a build-up of pressure due to evaporation of nitrogen. This may lead to explosion of the tube and the release of bio hazardous material. Always use appropriate safety equipment and procedures.



1. Cryo box can be opened single handed
2. Cryo rack
3. Cryo tube with writing area and volume scale



Tube with external thread



Single handed operation possible with the cryo rack

Sealing lip in screw cap for secure closure = no fiddling with a silicone ring necessary

Type	Product-No.	Volume max. ml	Volume recom. ml	Dimensions Ø x h mm	Material	Qty/ Bag pcs	Qty/ Case pcs
	89012	0.9	0.7	12 x 37	PP	100	800
	89020	1.5	1.3	12 x 48	PP	100	800
	89040	3.5	3.3	12 x 75	PP	100	400
	89050	4.5	4.3	12 x 90	PP	100	400
	99014	box "L", 81 x tubes	-	133 x 133 x 95	PP	1	10
	99015	box "S", 81 x tubes	-	133 x 133 x 45	PP	1	20
	99016	rack, 40 x tubes	-	219 x 109 x 26	PP	1	12

Color inserts for cryo tube caps are available in: white, blue, yellow, green, lilac, red

Type	Product-No.	Dimensions Ø x h mm	Color	Material	Qty/ Bag pcs	Qty/ Case pcs
	99020	11 x 1	1 bag of each color	PP	600	7800
	89801	11 x 1	white	PP	600	3600
	89802	11 x 1	blue	PP	600	3600
	89803	11 x 1	yellow	PP	600	3600
	89804	11 x 1	green	PP	600	3600
	89805	11 x 1	lilac	PP	600	3600
	89806	11 x 1	red	PP	600	3600

Rack and Box



Features of all racks and boxes:

- Alphanumerical inscription to identify your samples
- Heat resistant, autoclavable material
- Re-usable

Rack "S" or "L"

- Fits any 15 ml and 50 ml centrifuge tube
- Quickly assembled and disassembled
- Saves space if stored dismantled

Rack for Tissue Culture Tubes

- Fits tissue culture flat tubes 10 cm², tissue culture tubes 20 cm², centrifuge tubes 15 ml and 50 ml
- Transparent top
- Protection rim to protect shifting of tissue culture flat tubes 10

Rack for TubeSpin® Bioreactor 450 / 600

- Fits 3 x tubes
- Stackable
- Safe footprint

Cryo Box "S" or "L"

- Cryo box "S" fits 81 x cryo tubes 1.2 / 2 ml
- Cryo box "L" fits 81 x cryo tubes 4 / 5 ml
- Storage of samples at low temperatures up to -196 °C
- Form is stable even in lowest temperatures
- One-hand handling of the lid even after multiple usages

Cryo Rack

- Fits 40 x cryo tubes
- Ready-mounted rubber feet
- The locking system in the grooves allows one-hand operation when used with the star-shaped foot TPP cryo tubes



Details of click system



1. Cryo rack
2. Black alpha-numeric scale
3. Rack "S" filled with 15 ml tubes
4. Rack for Bioreactor 600 or 450

Type	Product-No.	Capacity pcs	Dimensions Ø x h mm	Material	Qty/ Bag pcs	Qty/ Case pcs
	99013	bioreactor 3 x 450 / 600 ml	366 x 146 x 70	PP	1	6
	99014	cryo tubes 81 x 4 / 5 ml	133 x 133 x 95	PP	1	10
	99015	cryo tubes 81 x 1.2 / 2 ml	133 x 133 x 45	PP	1	20
	99016	cryo tubes 40 x with star foot	219 x 109 x 26	PP	1	12
	99017	centrifuge tubes 18 x 15 ml / 10 x 50 ml	209 x 98 x 62	PP	1	45
	99018	tissue culture tubes 8 x 10 cm ² / 20 cm ² centrifuge tubes 8 x 15 ml / 4 x 50 ml	200 x 88 x 72	PP	1	28
	99019	centrifuge tubes 30 x 15 ml / 20 x 50 ml	209 x 172 x 62	PP	1	30

Quality Assurance

Quality Management

TPP is ISO 9001:2015 certified. The quality standard is audited and confirmed by re-certification processes regularly. The certificate can be downloaded at www.tpp.ch.

Quality Control: from Raw Material to the ready TPP Product

TPP provides its end users with the highest quality tissue culture plastics through the design and manufacturing processes. This intricate monitoring is possible with a complex quality assurance system. Products are dispatched only when all criteria is met. Therefore, TPP guarantees faultless and top-quality products for all areas of tissue culture and laboratory uses.

Raw Material

All incoming materials and products pass a rigorous and documented quality control based on specifications. Deliveries are accepted from checked vendors only.

Production

Production is in clean room environment on in-line production lines.

Maintenance

For a 24/7 manufacturing process the maintenance and servicing of the molding forms, production lines and infrastructures is extremely important. Competent specialists daily ensure the availability of the equipment.

Quality Control

All products are tested during and after the manufacturing process based on strict specifications. Each working step can be reviewed for years by a sophisticated IT system. Test results and corrective actions are documented.

Dispatch Control

We perform random examinations of the quality and quantity of the final product with documentation of the results. After release of the data a quality certificate can be generated on www.tpp.ch.



Sterile

All TPP products are sterilized by radiation. Sterility is maintained as long as the packaging remains unopened and free from visible defect. TPP guarantees a "Sterility Assurance Level" (SAL) of 10^{-3} .



EXP

Products that are beyond their expiry date (EXP) can cause spurious results or errors. Such products should not be used. The shelf-life is 6 years. Thereafter TPP will no longer accept guarantee claims.



LOT

Each product packaging carries a very visible, black lot number. This batch identification number ensures traceability, analyses and monitoring of all data of raw material supply, processes, and quality control for several years.



Single Use

All TPP products, except accessories such as racks etc., are intended for single use only.



Attention

All products are solely intended for general laboratory use by competent staff. The products have not been registered for their direct use on humans.



Certificates

Quality certificates from TPP can be generated online at www.tpp.ch.

Quality Standards

Production

TPP products are manufactured in a clean room environment.

Free from pyrogens and detectable endotoxins

Endotoxins represent pyrogens; fever-inducing substances usually derived from microorganisms, when present in sufficient quantity they can influence the growth and functionality of tissue cultures. All TPP products are tested systematically with the LAL test to prove the absence of endotoxins. The value of endotoxin is < 0.06 EU/ml. Exact data is available from quality certificates that can be generated on www.tpp.ch.

Free from detectable RNA / DNA

RNA / DNA are genetic information carriers. Material that is contaminated with RNA / DNA can lead to false positive signals during PCR. They unintentionally amplify along with the desired template. Independent research laboratories periodically test and confirm that no foreign RNA / DNA is detectable with TPP products.

Free from detectable RNase / DNase

RNases / DNases are enzymes that degrade RNA / DNA. They are components of each living cell and cannot be destroyed by the sterilization process. Independent research laboratories periodically test and confirm that no foreign RNase / DNase is detectable with TPP products.

Sterility

Sterility describes the aseptic condition, i. e. the absence of living organisms. During the sterilization process transferable organisms such as fungi, bacteria or viruses are killed. TPP receives product sterility through a sterile production process followed by sterilization. TPP guarantees a "Sterility Assurance Level" (SAL) of 10^{-3} . The sterility is validated conforming to DIN EN ISO 11137.

Growth treatment

To optimally enhance the adhesion of cells to the plastic surface, the growth areas of all TPP tissue culture vessels are activated by an opto-mechanic method, developed by TPP. The result is a plain and growth-enhancing surface that has optimal proliferation effects. TPP tissue culture products are tested lot-wise for their different tissue growth criteria.

Free from cytotoxic substances

Cytotoxic substances are cell poisons that can weaken or even kill cells. All TPP tissue culture products are free from cytotoxic substances. TPP tests this regularly conforming to DIN EN ISO 10993-5 standards. California residents: go to www.tpp.ch for Resident 65 warning.

Leaching

Leaching signifies the slow dissolving of compounds (leaching) from plastic ware into buffers and solvents. TPP avoids this by using ultrapure raw material conforming to Pharmacopoeia USP Class VI and certified free of chemical softeners and additives. TPP never processes recycled or potentially contaminated raw material. Additionally, TPP uses only optimized molds that work without any slip agents during the production process.

All information in this catalog is provided in good faith, without warranty of accuracy and completeness. We assume no liability for printing errors, mistakes, and product changes.

Transportation and Storage

Storage Recommendations

TPP recommends a careful storage of the fragile and breakable TPP products:

- Relative humidity of max. 50 - 60 %
- Temperature of 10 - 30 °C
- Do not expose to direct sunlight

Jumbo Cases

The very stable jumbo cover cases give the highest protection during transportation and reduce potential damage to fragile tissue culture products. TPP recommends the use of protection cases when shipping goods through couriers with automatic distribution centers.

	Type of Case, Standard	L x W x H in mm
	1/1-case, brown	390 x 330 x 460
	1/2-case, brown	390 x 330 x 230
	1/4-case, brown	390 x 330 x 110
	1/4-dispenser, white	390 x 330 x 110
	1/16-case, brown	390 x 165 x 55
	1/4L-sample case, yellow	390 x 165 x 230
	1/8L-sample case, yellow	390 x 165 x 110
	1/16L-sample case, yellow	390 x 165 x 55

	Type of Case, Cover Case	L x W x H in mm
	Jumbo 1, cover case, yellow	425 x 340 x 490, fits = 1 x 1/1-cases
	Jumbo 2, cover case, yellow	673 x 413 x 490, fits = 2 x 1/1-cases
	Jumbo 1/2, cover case, yellow	425 x 340 x 260, fits = 1 x 1/2-case
	Jumbo 1/4, cover case, yellow	400 x 330 x 140, fits = 1 x 1/4-case

Packaging

Modular TPP cases allow freedom of combination during stacking. The FSC certified cardboard comes from controlled sources. The one-way pallets conform to the international, phytosanitary directives (ISPM 15 standard).

Icons displayed on the TPP cases



- Breakable



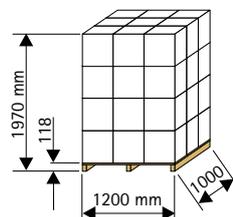
- Protect against humidity



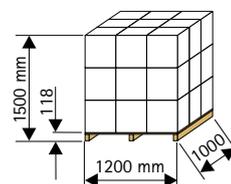
- Do not expose to direct sunlight



- Do not open with sharp instruments



Land / sea freight

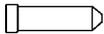


Air freight



1. Stable Jumbo 1 cover case
2. TPP cases in modular system
3. Yellow sample case

3-B TubeSpin® Bioreactor

Type	Product-No.	Version	Volume ml	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	387050	conical	50	PP	1	50	1/2	1.7
	387600	conical	600	PP	1	10	1/2	2.0

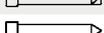
3-B Cryo Tube

Type	Product-No.	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	389012	PP	25	500	1/4	1.7
	389020	PP	25	500	1/4	1.7
	389050	PP	25	300	1/4	1.6

3-B Tissue Culture Flask and additional Caps

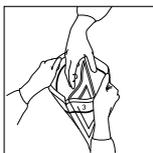
Type	Product-No.	Growth Area cm ²	Version	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	390025	25	VENT	PS	1	28	1/2	1.3
	390026	25	filter	PS	1	28	1/2	1.3
	390028	25	peel-off	PS	1	28	1/2	1.3
	390075	75	VENT	PS	1	20	1/2	1.9
	390076	75	filter	PS	1	20	1/2	1.9
	390150	150	VENT	PS	1	20	1/1	3.5
	390151	150	filter	PS	1	20	1/1	3.5
	390153	150	peel-off	PS	1	20	1/1	3.5
	390301	300	filter	PS	1	12	1/1	3.7
	390552	150	lid	PS	1	20	1/1	3.3
	390652	115	lid, barrier	PS	1	20	1/1	3.3
	390850		VENT	PE	1	30	1/4	0.9
	390856		filter	PE	1	30	1/4	0.9

3-B Centrifuge Tube

Type	Product-No.	Volume ml	Version	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	391015	15	conical	PP	40	800	1/2	2.2
	391016	13	round, short	PP	40	800	1/2	2.2
	391050	50	conical	PP	20	360	1/2	1.7
	391051	50	conical, self-standing	PP	20	320	1/2	1.7
	391115	15	conical	PS	40	800	1/2	2.1

3-B Tissue Culture Tube

Type	Product-No.	Growth Area cm ²	Version	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	391106	20	VENT	PS	1	100	1/2	2.1
	391243	10	filter	PS	1	50	1/2	1.9



3-B Tissue Culture Test Plate

Type	Product-No.	Number Wells pcs	Growth Area cm ²	Version	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	392006	6	9.026	F	PS	1	36	1/2	3.1
	392012	12	3.466	F	PS	1	36	1/2	3.2
	392024	24	1.864	F	PS	1	36	1/2	3.5
	392048	48	0.875	F	PS	1	36	1/2	3.6
	392096	96	0.322	F	PS	1	50	1/2	4.4
	392097	96	0.636	U	PS	1	50	1/2	4.4

3-B Tissue Culture Dish

Type	Product-No.	Growth Area cm ²	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	393040	9.2	PS	1	60	1/4	0.9
	393060	22.1	PS	1	48	1/4	1.2
	393100	60.0	PS	1	54	1/2	2.8
	393150	147.0	PS	1	28	1/2	2.6

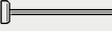
3-B Serological Pipette with Reservoir

Type	Product-No.	Volume ml	Reservoir ml	Color	Material	Packaging	Qty/ Case pcs	Case Size	Weight/ Case kg
	394525	25	15	red	PS	plastic / plastic	36	1/4	1.3
	394550	50	20	purple	PS	plastic / plastic	36	1/4	1.6

3-B Vacuum Filtration "rapid"-Filtermax

Type	Product-No.	Filtration Area cm ²	Volume ml	Pore Size µm	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	399157	-	150	-	PS	1	12	1/2	1.8
	399257	-	250	-	PS	1	12	1/2	1.8
	399500	49	500	0.22	PS / PES	1	8	1/2	2.5
	399507	-	500	-	PS	1	12	1/2	2.3
	399950	69	1000	0.22	PS / PES	1	6	1/2	2.9
	399957	-	1000	-	PS	1	6	1/2	2.4

3-B Cell Scraper

Type	Product-No.	Version	Blade Width mm	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	399002	scraper "S", rotating	13	PE	1	40	1/4	0.9
	399003	scraper "M", rotating	20	PE	1	40	1/4	0.9

3-B Syringe Filter

Type	Product-No.	Filtration Area cm ²	Pore Size µm	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	399722	6	0.22	PES	1	100	1/4	1.2
	399745	6	0.45	PES	1	100	1/4	1.2

46 Quick Review Standard Products

Page 8 Tissue Culture Flask 25 – 300 cm²



Type	Product-No.	Growth Area cm ²	Version	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	90025	25	VENT	PS	10	360	1/1	6.5
	90026	25	filter	PS	10	360	1/1	6.5
	90075	75	VENT	PS	5	100	1/1	6.0
	90076	75	filter	PS	5	100	1/1	6.0
	90150	150	VENT	PS	3	36	1/1	5.0
	90151	150	filter	PS	3	36	1/1	5.0
	90300	300	VENT	PS	3	18	1/1	4.5
	90301	300	filter	PS	3	18	1/1	4.5

Page 10 Tissue Culture Flask with Re-Closable Lid 115 – 150 cm²



Type	Product-No.	Growth Area cm ²	Version	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	90552	150	lid	PS	3	18	1/2	3.0
	90652	115	lid, barrier	PS	3	18	1/2	3.0

Page 11 Tissue Culture Flask 25 – 300 cm² with Peel-Off Foil



Type	Product-No.	Growth Area cm ²	Version	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	90028	25	peel-off	PS	5	70	1/4	1.3
	90078	75	peel-off	PS	2	32	1/2	1.9
	90153	150	peel-off	PS	3	18	1/2	2.2
	90303	300	peel-off	PS	2	8	1/2	1.9
	90653	115	peel-off, barrier	PS	3	18	1/2	2.3

Page 12 Clipmax 10 cm²



Type	Product-No.	Growth Area cm ²	Version	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	70010	10	filter, clip	PS / COP	1	5	1/16	0.8

Page 13 VENT or Filter Screw Cap



Type	Product-No.	Version	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	90825	VENT for T-25	PE	10	40	1/16	0.3
	90826	filter for T-25	PE	10	40	1/16	0.3
	90850	VENT for T-150 / 300	PE	10	40	1/16	0.3
	90856	filter for T-150 / 300	PE	10	40	1/16	0.3
	90875	VENT for T-75	PE	10	40	1/16	0.3
	90876	filter for T-75	PE	10	40	1/16	0.3

Tissue Culture Flat Tube 10 cm² and Tissue Culture Tube 20 cm² Page 14

Type	Product-No.	Growth Area cm ²	Version	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	91106	20	VENT	PS	20	800	1/1	8.1
	91243	10	filter	PS	4	216	1/1	7.9
	99018	-	rack	PP	1	28	1/2	3.1

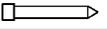


Cell Scraper and Cell Spatula Page 16

Type	Product-No.	Version	Blade Width mm	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	99002	scraper "S", rotating	13	PE	1	150	1/4	1.7
	99003	scraper "M", rotating	20	PE	1	150	1/4	2.0
	99004	scraper "L", rotating	25	PE	1	100	1/4	2.0
	99010	spatula, fix	14	PE	1	150	1/4	1.4



TubeSpin® Bioreactor 15 - 600 ml Page 18

Type	Product-No.	Version	Volume ml	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	87015	conical	15	PP	40	800	1/1	8.1
	87017	round	15	PP	40	800	1/1	8.1
	87050	conical	50	PP	20	180	1/2	3.2
	87056	round	50	PP	20	180	1/2	3.2
	87450	conical	450	PP	1	32	1/1	3.6
	87600	conical	600	PP	1	26	1/1	3.6

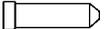


Racks and Consumables for TubeSpin® Bioreactor Page 19

Type	Product-No.	Version	Capacity pcs	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	87355	filter screw cap for 450 / 600	-	PE	1	20	1/16	0.6
	87356	screw cap "solid" for 450 / 600	-	PE	1	20	1/16	0.6
	99013	rack for 87450 / 87600	3 x 450 ml / 600 ml	PP	1	6	1/2	2.5
	99017	rack "S" for 87015 / 87017 / 87050	18 x 15 ml / 10 x 50 ml	PP	1	45	1/2	4.6



TubeSpin® Bioreactor 50 with Septum Page 20

Type	Product-No.	Version	Volume ml	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	86050	conical, septum, barcode	50	PP	20	180	1/2	3.2



Shaker Tray for TubeSpin® Bioreactor 50 – 600 ml



Type	Product-No.	Version	Material	Qty/ Bag	Qty/ Case	Case Size	Weight/ Case kg
				pcs	pcs		
	87414	Kuhner tray 162, bioreactor 50	Alu / PA	1	1	spec.	11.0
	87411	Kuhner tray 32, bioreactor 450	Alu	1	1	spec.	11.0
	87412	Kuhner tray 20, bioreactor 450	Alu	1	1	spec.	6.0
	87413	Kuhner tray 16, bioreactor 450	Alu	1	1	spec.	5.0
	87431	Infors Multitron tray 32, bioreactor 450	Alu	1	1	spec.	11.0
	87433	Infors Minitron tray 16, bioreactor 450	Alu	1	1	spec..	5.0
	87611	Kuhner tray 32, bioreactor 600	Alu	1	1	spec.	11.0
	87612	Kuhner tray 20, bioreactor 600	Alu	1	1	spec.	6.0
	87613	Kuhner tray 16, bioreactor 600	Alu	1	1	spec.	5.0
	87631	Infors Multitron tray 32, bioreactor 600	Alu	1	1	spec.	11.0
	87633	Infors Minitron tray 16, bioreactor 600	Alu	1	1	spec.	5.0

Packed Cell Volume Tube (PCV)



Type	Product-No.	Version	Volume ml	Material	Qty/ Bag	Qty/ Case	Case Size	Weight/ Case kg
					pcs	pcs		
	87005	with volume scale	1	PS	50	250	1/4	0.6
	87007	neutral	1	PS	50	150	1/16	0.3
	87008	cap for PCV		PE	50	150	1/16	0.2

"easy read" Measuring Device



Type	Product-No.	Version	Volume µl	Material	Qty/ Bag	Qty/ Case	Case Size	Weight/ Case kg
					pcs	pcs		
	87010	"easy read" measuring device	0-5	Alu	1	1	1/16	0.4

Serological Pipette with Reservoir 5 – 70 ml with Paper / Plastic Blister



Type	Product-No.	Volume ml	Reservoir ml	Color	Material	Packaging	Qty/ Case pcs	Case Size	Weight/ Case kg
	94504	5	3.5	blue	PS	paper / plastic		1/4	
	94505	5	4	blue	PS	paper / plastic		1/4	
	94509	10	5.5	orange	PS	paper / plastic		1/4	
	94510	10	7	orange	PS	paper / plastic		1/4	
	94525	25	15	red	PS	paper / plastic	60	1/4	1.5
	94550	50	20	purple	PS	paper / plastic	50	1/4	1.5

Serological Pipette with Reservoir 5 – 70 ml with Plastic / Plastic Blister



Type	Product-No.	Volume ml	Reservoir ml	Color	Material	Packaging	Qty/ Case pcs	Case Size	Weight/ Case kg
	95504	5	3.5	blue	PS	plastic / plastic		1/4	
	95505	5	4	blue	PS	plastic / plastic		1/4	
	95509	10	5.5	orange	PS	plastic / plastic		1/4	
	95510	10	7	orange	PS	plastic / plastic		1/4	
	95525	25	15	red	PS	plastic / plastic	60	1/4	1.5
	95550	50	20	purple	PS	plastic / plastic	50	1/4	1.5

Turbo-Fix Pipette Aid Page 26

Type	Product-No.	Version	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	94700	type C: adapter for EU	PA / POM	1	1	1/4	1.6
	94701	type A, adapter for China / USA / Japan	PA / POM	1	1	1/4	1.6
	94702	type G: adapter for UK	PA / POM	1	1	1/4	1.6
	94703	type I: adapter for AUS	PA / POM	1	1	1/4	1.6



Turbo-Fix Consumables Page 27

Type	Product-No.	Version	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	94750	Stabifix nose piece, set	var.	1	1	spec.	spec.
	94751	wall mount	PE	1	1	spec.	spec.
	94752	replacement filter, 0.45 µm, blue	var.	1	1	spec.	spec.
	94753	replacement filter, 0.22 µm, red	var.	1	1	spec.	spec.
	94754	pipette mount in Stabifix	silicone	1	1	spec.	spec.
	94755	filter rubber in Stabifix	silicone	1	1	spec.	spec.
	94757	battery compartment lid	PA	1	1	spec.	spec.
	94758	housing	PA	1	1	spec.	spec.
	94760	mains adapter type C for EU	var.	1	1	spec.	spec.
	94761	mains adapter type A for China / USA / Japan	var.	1	1	spec.	spec.
	94762	mains adapter type G for UK	var.	1	1	spec.	spec.
	94763	mains adapter type I for AUS	var.	1	1	spec.	spec.



Tissue Culture Test Plate 6 - 96 wells Page 28

Type	Product-No.	Number Wells pcs	Growth Area cm ²	Version	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	92006	6	9.026	F	PS	1	126	1/1	8.3
	92012	12	3.466	F	PS	1	126	1/1	9.1
	92024	24	1.864	F	PS	1	126	1/1	10.0
	92048	48	0.875	F	PS	1	126	1/1	10.0
	92096	96	0.322	F	PS	1	162	1/1	11.7
	92097	96	0.636	U	PS	1	162	1/1	11.9
	92406	6	9.026	F	PS	4	72	1/2	4.8
	92412	12	3.466	F	PS	4	72	1/2	5.1
	92424	24	1.864	F	PS	4	72	1/2	5.6
	92448	48	0.875	F	PS	4	72	1/2	5.6
	92696	96	0.322	F	PS	6	108	1/2	7.5
	92697	96	0.636	U	PS	6	108	1/2	7.6



Tissue Culture Test Plate 6 - 96 wells, single wrapped, small packaging unit Page 29

Type	Product-No.	Number Wells pcs	Growth Area cm ²	Version	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	92106	6	9.026	F	PS	1	42	1/2	3.5
	92112	12	3.466	F	PS	1	42	1/2	3.5
	92124	24	1.864	F	PS	1	42	1/2	3.5
	92148	48	0.875	F	PS	1	42	1/2	3.5
	92196	96	0.322	F	PS	1	54	1/2	3.5
	92197	96	0.636	U	PS	1	54	1/2	3.5



Page 30 Tissue Culture Dish 40 – 150 cm²

Type	Product-No.	Growth Area cm ²	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
○	93040	9.2	PS	20	900	1/2	4.0
○	93060	22.1	PS	14	840	1/1	8.2
○	93100	60.0	PS	10	240	1/1	6.7
○	93150	147.0	PS	5	100	1/1	6.6

Page 32 Vacuum Filtration "rapid"-Filtermax 150 – 1000 ml



Type	Product-No.	Filtration Area cm ²	Volume ml	Pore Size µm	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
☐☐	99150	49	150	0.22	PS / PES	1	18	1/2	3.2
☐☐	99155	49	150	0.22	PS / PES	1	36	1/2	3.0
☐☐	99157	-	150	-	PS	1	24	1/2	2.6
☐☐	99250	49	250	0.22	PS / PES	1	12	1/2	2.7
☐☐	99255	49	250	0.22	PS / PES	1	24	1/2	2.4
☐☐	99257	-	250	-	PS	1	24	1/2	3.1
☐☐	99500	49	500	0.22	PS / PES	1	10	1/2	2.7
☐☐	99505	49	500	0.22	PS / PES	1	21	1/2	2.5
☐☐	99507	-	500	-	PS	1	36	1/1	6.0
☐☐	99560	49	500	0.22	PS / PES	1	10	1/2	2.7
☐☐	99950	69	100	0.22	PS / PES	1	9	1/1	4.5
☐☐	99955	69	100	0.22	PS / PES	1	12	1/2	1.7
☐☐	99957	-	100	-	PS	1	20	1/1	5.6
☐☐	99960	69	100	0.22	PS / PES	1	9	1/1	4.5

Page 33 Syringe Filter 0.22 µm and 0.45 µm



Type	Product-No.	Filtration Area cm ²	Pore Size µm	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
☐☐	99722	6	0.22	PET	1	200	1/4 (5 x box)	1.8
☐☐	99745	6	0.45	PET	1	200	1/4 (5 x box)	1.8

Page 34 Centrifuge Tube 13 – 50 ml



Type	Product-No.	Volume ml	Version	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
☐☐	91015	15	conical	PP	40	800	1/1	6.5
☐☐	91016	13	round, short	PP	40	800	1/1	6.6
☐☐	91017	15	round, long	PP	40	800	1/1	6.6
☐☐	91019	13	flat	PP	40	800	1/1	6.2
☐☐	91050	50	conical	PP	20	360	1/1	6.0
☐☐	91051	50	conical, self-standing	PP	20	320	1/1	6.0
☐☐	91056	50	round	PP	20	360	1/1	6.0
☐☐	91115	15	conical	PS	40	800	1/1	7.4
☐☐	99017		rack "S"	PP	1	45	1/2	4.6
☐☐	99019		rack "L"	PP	1	30	1/2	5.0

Centrifuge tube 15 ml / 50 ml, small unit packaging

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Type	Product-No.	Volume ml	Version	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	91014	15	conical	PP	40	360	1/2	4.0
	91054	50	conical	PP	20	160	1/2	3.0



Rack filled with Centrifuge Tubes 15 ml or 50 ml

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Type	Product-No.	Volume ml	Version	Capacity pcs	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	91515	15	rack "L" + 15 ml	30 x 15 ml, conical	PP	1	10	1/1	4.5
	91550	50	rack "L" + 50 ml	20 x 50 ml, conical	PP	1	10	1/1	5.2



Cryo Tube 1.2 - 5 ml

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Type	Product-No.	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	89012	PP	100	800	1/4	1.7
	89020	PP	100	800	1/4	2.0
	89040	PP	100	400	1/4	1.6
	89050	PP	100	400	1/4	1.8
	99014	PP	1	10	1/2	2.7
	99015	PP	1	20	1/2	3.8
	99016	PP	1	12	1/4	1.8



Insert for Cryo Tubes

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Type	Product-No.	Color	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	99020	1 bag of each color	PP	600	7800	1/4	1.3
	89801	white	PP	600	3600	1/16	0.6
	89802	blue	PP	600	3600	1/16	0.6
	89803	yellow	PP	600	3600	1/16	0.6
	89804	green	PP	600	3600	1/16	0.6
	89805	lilac	PP	600	3600	1/16	0.6
	89806	red	PP	600	3600	1/16	0.6

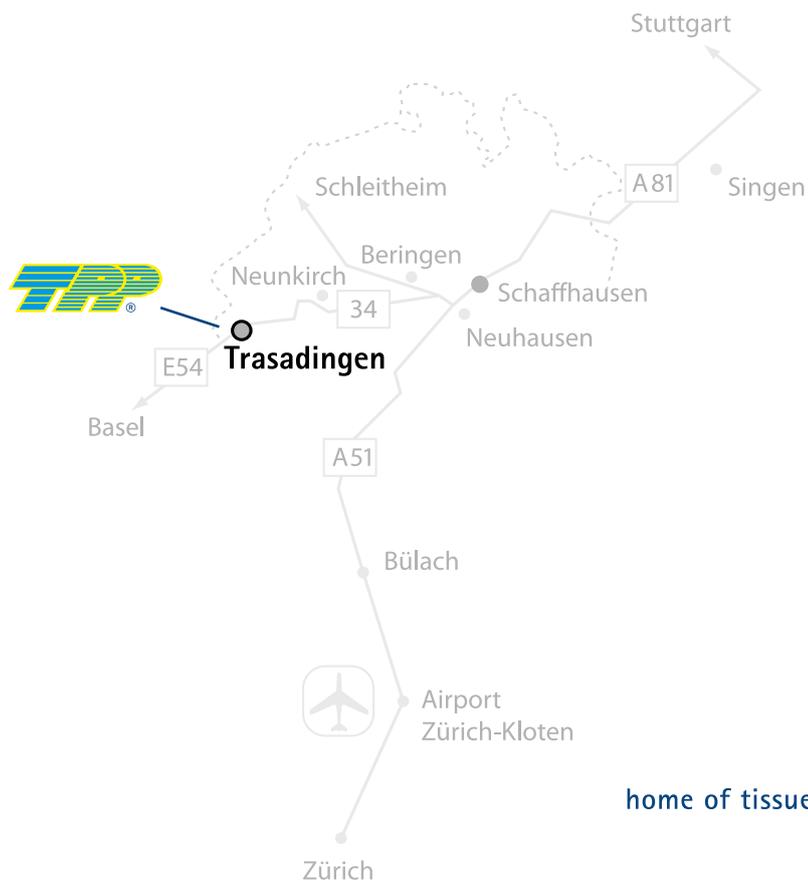
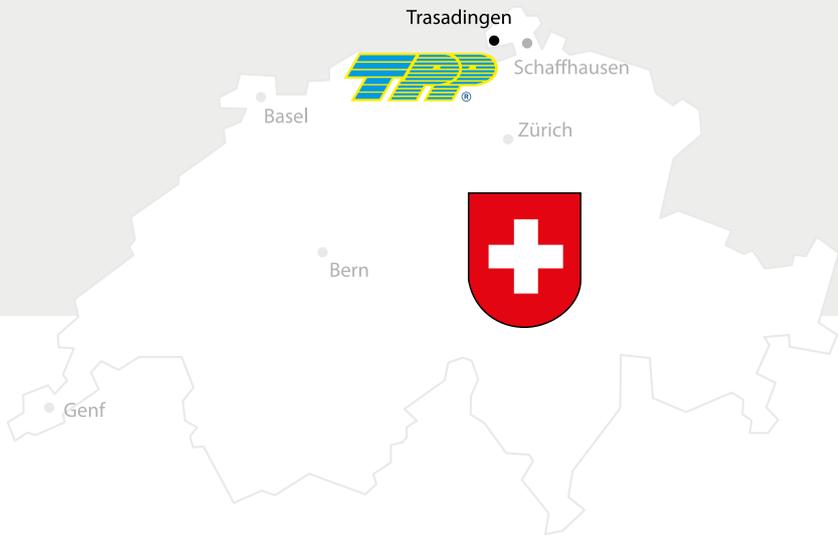


Rack and Box

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Type	Product-No.	Capacity pcs	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	99013	bioreactor 3 x 450 / 600 ml	PP	1	6	1/2	2.5
	99014	cryo tubes 81 x 4 / 5 ml	PP	1	10	1/2	2.7
	99015	cryo tubes 81 x 1.2 / 2 ml	PP	1	20	1/2	3.8
	99016	cryo tubes 40 x with star foot	PP	1	12	1/4	1.8
	99017	centrifuge tubes 18 x 15 ml / 10 x 50 ml	PP	1	45	1/2	4.6
	99018	tissue culture tubes 8 x 10 cm ² / 20 cm ² centrifuge tubes 8 x 15 ml / 4 x 50 ml	PP	1	28	1/2	3.1
	99019	centrifuge tubes 30 x 15 ml / 20 x 50 ml	PP	1	30	1/2	5.0





home of tissue culture



TPP Techno Plastic Products AG

Zollstrasse 7
 CH-8219 Trasadingen
 Switzerland

Tel: +41 (0)52 687 01 87

info@tpp.ch

www.tpp.ch