



# Tissue Culture and Laboratory Technology



SWISS DESIGN

Sales Brochure 2016/2017

home of tissue culture



®

# TPP Techno Plastic Products AG

1966 – 2016: 50 years TPP

TPP is known as manufacturer for disposable plastic products for tissue culture of highest quality. And that is what we are proud of!



Dear TPP customers

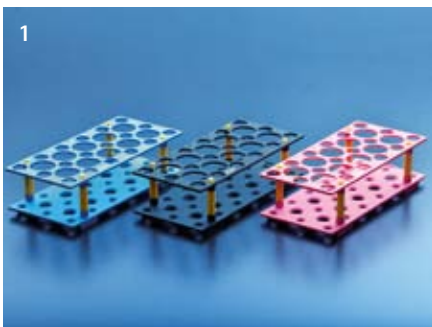
We say thank you!

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

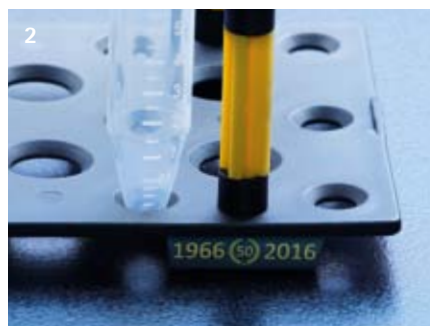
100 % customer satisfaction is the TPP target.

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

TPP Techno Plastic Products AG



1. Anniversary rack "limited edition"



2. 50 years TPP, 1966 - 2016

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## Tissue Culture Flask 25 – 300 cm<sup>2</sup>



### Features of the Tissue Culture Flask:

- Surface activated growth area for optimal adhesion and best proliferation of adherent cells
- Geometry of the neck reduces risk of media slop over
- Staple rim offers stable, slip free stapling 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 resulting 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-wetting PTFE membrane with pore size 0.22 µm



«VENT»-position 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  
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 <sup>2</sup>	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	3-5	92 x 51 x 29	PS	10	360
	90026	25	Filter	15	3-5	92 x 51 x 29	PS	10	360
	90075	75	VENT	65	8-15	155 x 87 x 40	PS	5	100
	90076	75	Filter	65	8-15	155 x 87 x 40	PS	5	100
	90150	150	VENT	165	15-30	210 x 122 x 50	PS	3	36
	90151	150	Filter	165	15-30	210 x 122 x 50	PS	3	36
	90300	300	VENT	410	30-40	275 x 170 x 50	PS	3	18
	90301	300	Filter	410	30-40	275 x 170 x 50	PS	3	18



1



2



3

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

## Tissue Culture Flask with Re-Closable Lid 115 – 150 cm<sup>2</sup>

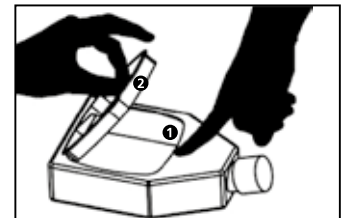


Complete access to the cell chamber

### 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
- Stable, slip-free stacking of multiple flasks also in combination with the standard TPP tissue culture flasks
- Optionally available with barrier which creates a growth area of 115 cm<sup>2</sup>

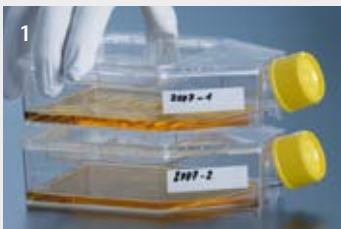
Flask is available with filter screw cap only. If a «VENT» screw cap is used, a build-up of more than 0.03 bar inside the flask could press open the lid.



### Opening and closing mechanism

- 1 Press here
- 2 Lift lid

Type	Product-No.	Growth Area cm <sup>2</sup>	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	15-30	210 x 122 x 50	PS	3	18
	90652	115	lid, barrier	105 x 105	100	15-30	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 cm<sup>2</sup> with Peel-Off Foil



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

- Available in all sizes: 25 - 300 cm<sup>2</sup>
- 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 offers stable and slip-free stapling of several flasks
- Optionally available with barrier

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

Type	Product-No.	Growth Area cm <sup>2</sup>	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	3-5	92 x 51 x 31	PS	5	70
	90078	75	peel-off	87 x 92	65	8-15	155 x 87 x 45	PS	2	32
	90153	150	peel-offl	100 x 128	100	15-30	210 x 122 x 50	PS	3	18
	90303	300	peel-offl	140 x 185	200	30-40	275 x 170 x 55	PS	2	8
	90551	150	peel-off, straight opening	100 x 130	100	15-30	210 x 122 x 50	PS	3	18
	90553	150	peel-off as of 2017: 90153	100 x 128	100	15-30	210 x 122 x 50	PS	3	18
	90653	115	peel-off, barrier	100 x 128	100	15-30	210 x 122 x 50	PS	3	18



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

## Clipmax 10 cm<sup>2</sup> Chamber Slide




Stackable

Cell culture directly on slide

Grow adherent cells in the chamber, directly on Clipmax, a standard microscope slide (25 x 75 mm). Remove the chamber, fix and stain the cells and Clipmax is ready for the microscope. Clipmax is especially useful in cell culture, immunocytochemistry, and various cell analyses.

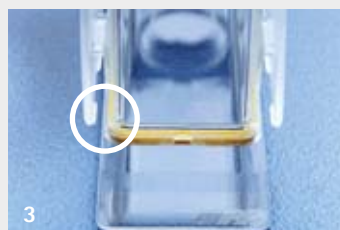
### Features of Clipmax:

- Crystal clear microscope slide
- Suitable for stainings, especially for immunofluorescence measurements
- Resistant to solvents (for ex. acetone, ethanol, xylene)
- Activated growth area for delicate cells
- Removable medium chamber with a "click" and without the need of a removing tool
- Filter screw cap for optimal gas exchange with minimal evaporation
- Initial opening protection
- Stackable

Type	Product-No.	Growth Area cm <sup>2</sup>	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 medium chamber
2. Before medium chamber is removed

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











## «VENT» or Filter Screw Cap



Filter screw cap with hydrophobic PTFE membrane



«VENT» or filter screw cap for TPP tissue culture flask

Type	Product-No.	Version	Dimensions Ø x h mm	Material	Qty/ Bag pcs	Qty/ Case pcs
	90825	Vent screw cap for 25 cm <sup>2</sup> flask	24 x 16	PP	10	40
	90826	Filter screw cap for 25 cm <sup>2</sup> flask	24 x 16	PP	10	40
	90850	Vent screw cap for 150 / 300 cm <sup>2</sup> flask	39 x 24	PP	10	40
	90856	Filter screw cap for 150 / 300 cm <sup>2</sup> flask	39 x 24	PP	10	40
	90875	Vent screw cap for 75 cm <sup>2</sup> flask	33 x 21	PP	10	40
	90876	Filter screw cap for 75 cm <sup>2</sup> flask	33 x 21	PP	10	40



1. Bag of 10 pcs.

## Tissue Culture Flat Tube 10 cm<sup>2</sup> and Tissue Culture Tube 20 cm<sup>2</sup>

3-in-1 product:  
Cultivation,  
Examination,  
Centrifugation



The tissue culture tubes are an extension to the tissue culture flask product range.

### Features of the Tissue Culture Flat Tube 10 cm<sup>2</sup>:

- **Cultivation:** 10 cm<sup>2</sup> surface activated growth area
- Large opening for complete access of pipettes and scrapers
- **Examination:** great optical clarity for visual control with inverse microscopes
- Sloped and flattened upper side for reduced refraction
- **Centrifugation:** fits any 50 ml standard tube adapter, can be spun up to 1'200 g<sub>x</sub>
- Conical form eases removal of pellet
- Segmental packaging for scratch-free transportation

### Features of the Tissue Culture Tube 20 cm<sup>2</sup>:

- 20 cm<sup>2</sup> surface activated growth area, growth area for a length of 50 mm
- Volume graduations up to the tip
- A click and the «VENT» screw cap is in the aeration position, guaranteeing gas exchange even in vertical position of the tube
- Fits a 15 ml standard tube adapter, can be spun up to 1'200 g<sub>x</sub>
- 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 CO<sub>2</sub> incubator



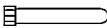


Tissue culture flat tube with filter screw cap



Tissue culture flat tube on inverse microscope



Segmental packaging allows scratch free transportation

Type	Product-No.	Growth Area cm <sup>2</sup>	Version	Volume max. ml	Centrifugal Acceleration max gx	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 tissue culture tube	-	200 x 88 x 72	PP	1	28



1. Tissue scraper in tissue culture flat tube
2. Surface activation on 50 mm

## Cell Scraper and Cell Spatula



100% cell harvest

### Features of the Cell Scraper:

- Scraper heads made from flexible polyethylene material
- Pivoting scraper head for easy maneuvering
- 3 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. Slight move of the handle will twist the head to the required position.

### Features of the Cell Spatula:

- Special formed 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

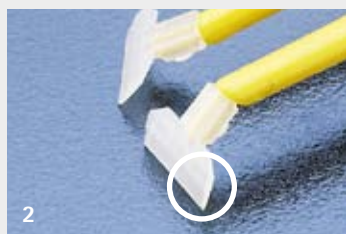


Cell scraper in a large TPP tissue culture dish

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	PP	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  
2 versions available: round or conical bottom
- TubeSpin® Bioreactor 50: working volume 1 - 35 ml
- TubeSpin® Bioreactor 450: working volume up to approx. 300 ml
- TubeSpin® Bioreactor 600: working volume up to approx. 400 ml
- Filter screw cap with partly 5 different openings (A-B-C-D-E)
- Fit standard centrifuge apparatus
- Spin: 15'500 gx or 3'500 gx
- Matching adapter plates for shakers for cultivation of suspension cells in a TubeSpin® Bioreactor 600 available

Type	Product-No.	Version	Centrifugal Acceleration max gx	Volume ml	Dimensions Ø x l mm	Material	Qty/ Bag pcs	Qty/ Case 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
	787050	conical, barcode	15'500	50	30.0 x 115	PP	20	180
	87050	conical	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

#### Rack and consumables for TubeSpin® bioreactors

Type	Product-No.	Version	Capacity pcs	Dimensions l x w x h mm	Material	Qty/ Bag pcs	Qty/ Case pcs
	87605	screw cap "solid" for 450/600	-	70 x 21	PE	5	40
	87606	screw cap "filter" for 450/600	-	70 x 21	PE	5	40
	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



Questions about cultures in shaking technology are answered by "Dr. Shaker".

## TubeSpin® Bioreactor 50 with Septum



Barcode for automated tracking



Re-closing septum with cross slit

TubeSpin® Bioreactor 50 with Septum for robotics use

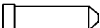
The TubeSpin® Bioreactor 50 with Septum is intended for the use during laboratory automations such as: robotics use for sterile exchange of medium and solutions or withdrawal from cell based products.

### 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 g<sub>x</sub>

### 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

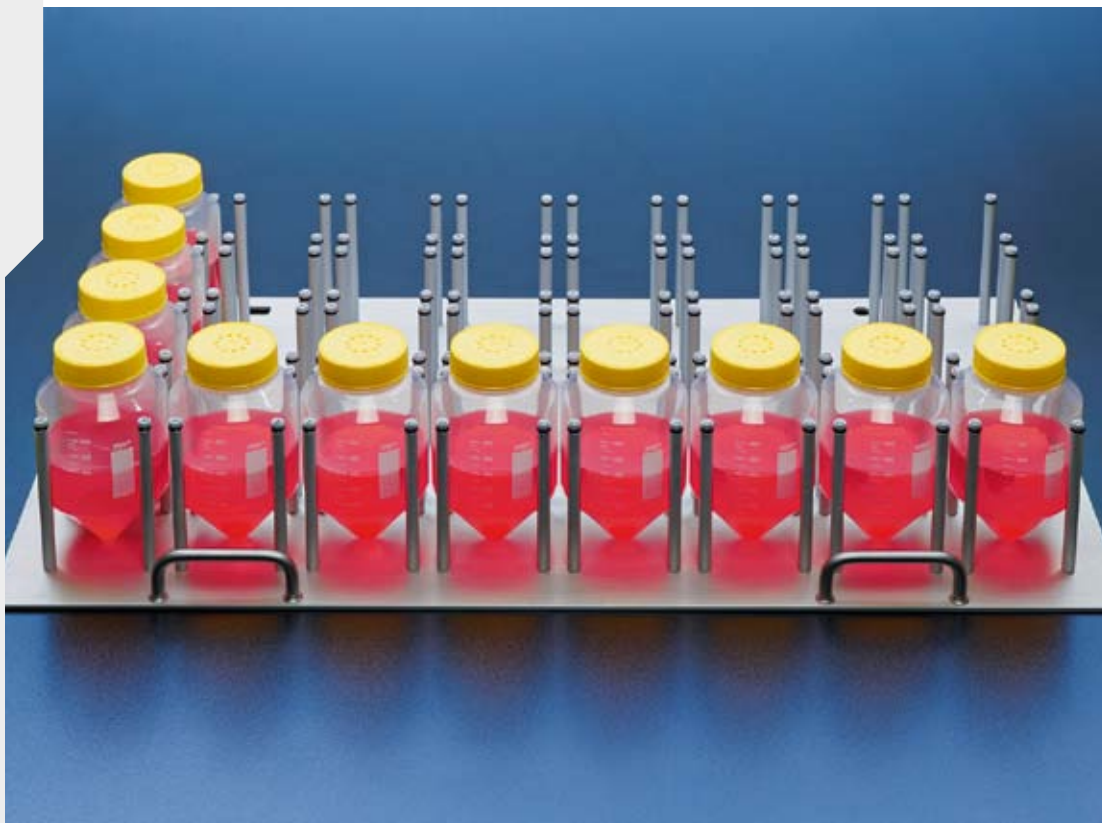
Type	Product-No.	Version	Centrifugal Acceleration	Volume	Dimensions Ø x l	Material	Qty/ Bag	Qty/ Case
			max g <sub>x</sub>	ml	mm		pcs	pcs
	86050	conical, septum, barcode	15'500	50	30.0 x 115	PP	20	180



## Shaker Plate for TubeSpin® Bioreactor 600








Stable fixation with holding bars



### Shaker Plates for TubeSpin® Bioreactor 600

#### Features of shaker plate:

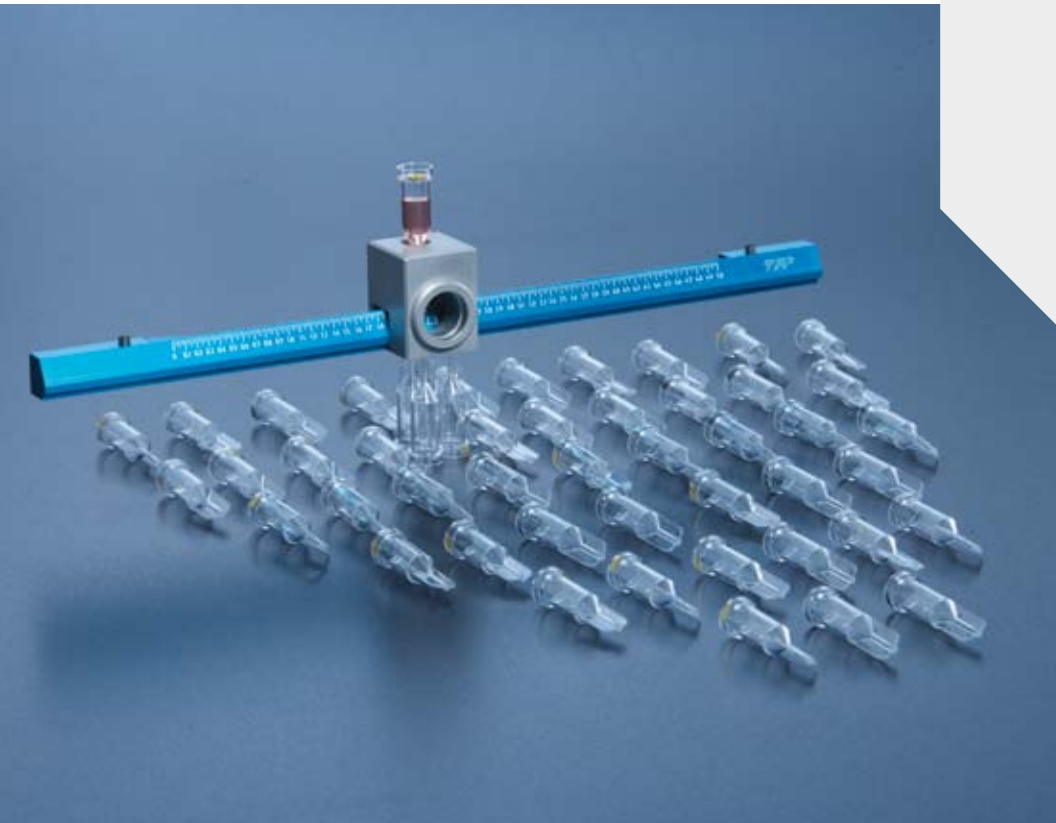
- Shaker plate fits the relevant shaker model
- Aluminum
- Guarantees largest possible volume per shaker plate
- Secure fixation of the tubes with holding bars

Type	Product-No.	Version	Capacity	Dimensions	Material	Qty/ Bag	Qty/ Case
			pcs	l x w x h mm		pcs	pcs
	87611	Kühner plate 32	8 x 4	800 x 420 x 139	Alu	1	1
	87612	Kühner plate 20	5 x 4	500 x 420 x 139	Alu	1	1
	87613	Kühner plate 16	4 x 4	420 x 420 x 139	Alu	1	1
	87631	Infors Multitron plate 32	8 x 4	850 x 420 x 139	Alu	1	1
	87633	Infors Minitron plate 16	4 x 4	850 x 420 x 139	Alu	1	1



1. Shaker plate for 16 x Bioreactor 600
2. Shaker plate for 20 x Bioreactor 600

## PCV Packed Cell Volume Tube



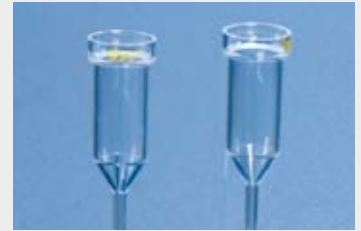
The PCV tube enables a quick and reproducible measuring technique of the cell volume. This quick method is ideal to monitor cell growth (cell mass).

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

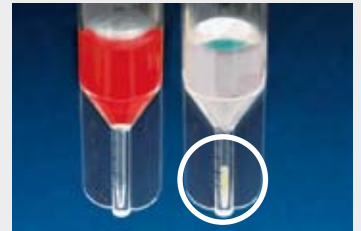
A short centrifugation step (1 minute at 2'500 g<sub>x</sub>) is sufficient to form a pellet in the calibrated capillary. There the pellet can be read with the "easy read" measuring device.

### Features of PCV Packed Cell Volume Tube:

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



PCV tube without graduation



Left PCV before / right PCV after centrifugation

### 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  $\mu$ l (step 2)

### Result

Result = number of cells per  $\mu$ l cell pellet

Type	Product-No.	Version	Volume	Dimensions	Material	Qty/ Bag	Qty/ Case
			ml	$\varnothing$ x h mm		pcs	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 counting cells manually with the hemocytometer. However, it is time-consuming.

The PCV system provides a fast, easy to use, reproducible and accurate alternative. The PCV tubes enable the determination of the packed cell volume (PCV) 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  $\mu$ l

Type	Product-No.	Version	Volume $\mu$ l	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


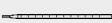

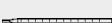
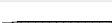
## Serological Pipette Standard 1 – 25 ml



### Features of the Serological Pipette Standard:

- Accurate volume 1 - 25 ml
- Highly visible, bidirectional graduation incl. 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 and cotton plugs to some extent
- Convenient, stackable dispenser box
- Single wrapped in blisters

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

Type	Product-No.	Volume ml	Color	Dimensions Ø x h mm	Volume Scale ml	Material	Qty/ Case pcs
	94001	1	yellow	4.8 x 270	1/100	PS	400
	94002	2	green	5.5 x 270	1/100	PS	300
	94005	5	blue	9.5 x 295	1/10	PS	200
	94010	10	orange	11.0 x 295	1/10	PS	200
	94024	25	red	16.0 x 300	2/10	PS	100



1. TPP product range serological pipettes
2. Standard pipettes from TPP

## Serological Pipette with Reservoir 25 – 70 ml

The reservoir adds a considerable augmentation to the volume

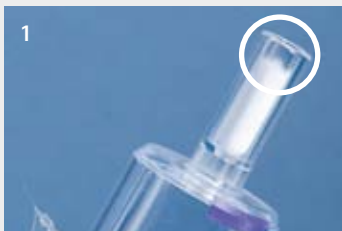


### Features of the Serological Pipette with Reservoir:

- All features of the serological pipette standard size plus
- Reservoir
- Stable, break-resistant, highly low drip pipette tip
- Slender, short form enables ergonomic working conditions in the sterile hood
- Small outside diameter of the tube at the tip resulting in an excellent accessibility of these large pipettes even in small tissue culture flasks
- Optimized form of mouthpiece
- 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.

Type	Product-No.	Volume ml	Reservoir ml	Color	Dimensions Ø x h mm	Volume Scale ml	Material	Qty/ Case pcs
	94525	25	15	red	15 / 20.5 x 345	2/10	PS	60
	94550	50	20	purple	20 / 24.0 x 345	1/10	PS	50



1. Rounded optimized mouth piece
2. Ideal combination with Turbo-Fix
3. Slender pipette 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 6 h pipetting cable free
  - Li-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	EU adapter	35 x 125 x 130	PA/POM	1	1
	94701	USA/Japan adapter	35 x 125 x 130	PA/POM	1	1
	94702	UK adapter	35 x 125 x 130	PA/POM	1	1



1















2

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	various	1	1
	94751	wall mount	PE	1	1
	94752	replacement filter, 0.45 µm, blue	various	1	1
	94753	replacement filter, 0.22 µm, red	various	1	1
	94754	pipette mount in "Stabifix"	silicone	1	1
	94755	filter rubber in "Stabifix"	silicone	1	1
	94756	battery	lithium polymere	1	1
	94757	battery compartment lid	PA	1	1
	94758	housing	PA	1	1
	94760	mains adapter, EU	various	1	1
	94761	mains adapter, USA/Japan	various	1	1
	94762	mains adapter, UK	various	1	1

## 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

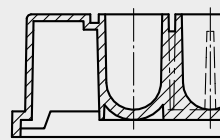
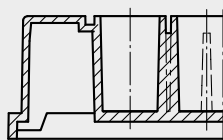
### Additional features with Tissue Culture Test Plates with 96 wells:

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

The well geometry is an important criterion with a 96 well tissue culture plate. TPP offers 2 types of well geometries

#### F-base

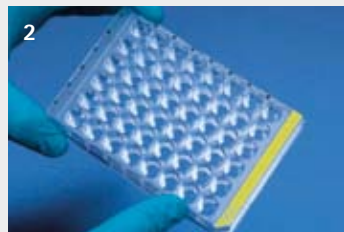
- Excellent optical characteristics
- Suitable for precise optical measurements, the measuring light is not distracted by the geometry
- Suitable for microscopy applications (bottom reading)
- Growth area 0.322 cm<sup>2</sup>



#### U-base

- No rims, well suited for pipetting
- Used for agglutination tests and «+/-» evaluations
- Growth area: 0.636 cm<sup>2</sup>
- Working volume: 0.34 ml





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

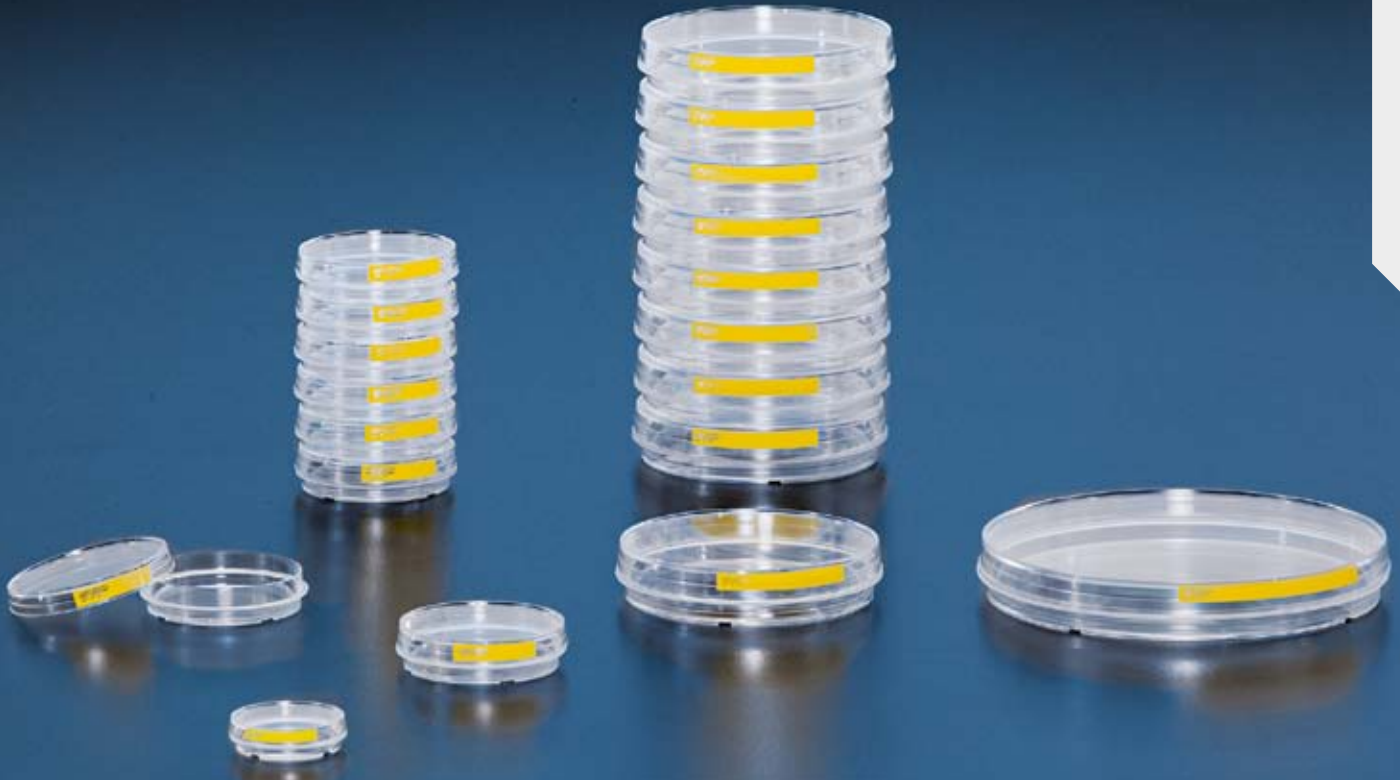
## Optimal gas exchange with lowest evaporation

Type	Product-No.	Number Wells pcs	Growth Area cm <sup>2</sup>	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	15.53	33.9	128 x 86 x 22	PS	1	126
	92012	12	3.466	F	5.96	21.0	128 x 86 x 22	PS	1	126
	92024	24	1.864	F	3.18	15.4	128 x 86 x 22	PS	1	126
	92048	48	0.875	F	1.49	10.6	128 x 86 x 22	PS	1	126
	92096	96	0.322	F	0.36	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	15.53	33.9	128 x 86 x 22	PS	4	72
	92412	12	3.466	F	5.96	21.0	128 x 86 x 22	PS	4	72
	92424	24	1.864	F	3.18	15.4	128 x 86 x 22	PS	4	72
	92448	48	0.875	F	1.49	10.6	128 x 86 x 22	PS	4	72
	92696	96	0.322	F	0.36	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 <sup>2</sup>	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	15.53	33.9	128 x 86 x 22	PS	1	42
	92112	12	3.466	F	5.96	21.0	128 x 86 x 22	PS	1	42
	92124	24	1.864	F	3.18	15.4	128 x 86 x 22	PS	1	42
	92148	48	0.875	F	1.49	10.6	128 x 86 x 22	PS	1	42
	92196	96	0.322	F	0.36	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 cm<sup>2</sup>



### Features of the Tissue Culture Dish:

- Surface activation of the growth area enhancing optimal proliferation of the cells.
- Side walls of dish not surface activated
- Gripping ring with serrated edges prevent accidental dropping of the dish bottom
- Lateral yellow inscription field on the lid
- Stacking ring on the lid and corresponding on the base result 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 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 <sup>2</sup>	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 cm<sup>2</sup> and 69 cm<sup>2</sup> respectively
- Special lamella grid support and premium PES filter membrane, pore size of 0.22 µm with low protein binding capacity result 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, top 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 <sup>2</sup>	Volume ml	Pore Size µm	Dimensions l x w x h mm	Material	Qty/ Bag pcs	Qty/ Case pcs
	99150	49	set	0.22	93 x 93 x 103	PS/PES	1	18
	99155	49	top	0.22	90 x 89 x 57	PS/PES	1	36
	99157	-	flask	-	93 x 93 x 63	PS	1	24
	99250	49	set	0.22	93 x 93 x 145	PS/PES	1	12
	99255	49	top	0.22	90 x 89 x 75	PS/PES	1	24
	99257	-	flask	-	93 x 93 x 87	PS	1	24
	99500	49	set	0.22	93 x 93 x 214	PS/PES	1	10
	99505	49	top	0.22	90 x 89 x 110	PS/PES	1	21
	99507	-	flask	-	93 x 93 x 121	PS	1	36
	99950	69	set	0.22	111 x 111 x 285	PS/PES	1	9
	99955	69	top	0.22	108 x 108 x 143	PS/PES	1	12
	99957	-	flask	-	111 x 111 x 160	PS	1	20

## 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 a 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 a 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 <sup>2</sup>	Pore Size µm	Dimensions Ø x 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
- Caps that cannot be over-tightened
- Graduations all the way down to 0.1 ml and 0.5 ml respectively
- 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.

### Centrifugal Acceleration (gx)

The **limit** on "gx" is influenced by:

- type of rotor (diameter)
- speed / revolution per minute

The **maximum** on "gx" depends on:

- material of tubes
- centrifugation probe (for ex. 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 rack 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 120	15'500	PP	40	800
	91016	13	round, short	17.1 x 105	15'500	PP	40	800
	91017	15	round, long	17.1 x 120	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	360
	91056	50	round	30.0 x 115	15'500	PP	20	360
	91115	15	conical	17.1 x 120	1'700	PS	40	800
	99017	18 x 15 ml / 10 x 50 ml	rack "S"	209 x 98 x 62	-	PP	1	45
	99019	30 x 15 ml / 20 x 50 ml	rack "L"	209 x 172 x 62	-	PP	1	30

## Centrifuge tube 15 ml / 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 120	4.0	PP	40	360
	91054	50	conical	30.0 x 115	3.0	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 gx	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
- Single-handed operation with the use of the cryogenic rack #99016 with locking system in the grooves
- Color-coding inserts
- 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. If you still decide to store in liquid nitrogen, TPP recommends use of additional wrapping such as welded tubes. 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"	-	133 x 133 x 95	PP	1	10
	99015	box "S"	-	133 x 133 x 45	PP	1	20
	99016	rack	-	219 x 109 x 26	PP	1	12

Colored inserts for cryo tubes are available in:

blue, yellow, green, lilac, red and white

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, tissue culture tubes 20, 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 stable even in lowest temperatures
- Single handling of lid even after multiple usage

### Cryo Rack

- Fits 40 x cryo tubes
- Ready-mounted rubber feet
- 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. Rack "S" filled with 15 ml tubes
3. Rack for Bioreactor 600 or 450
4. Black alpha-numeric scale

Type	Product-No.	Capacity	Dimensions Ø x h	Material	Qty/ Bag	Qty/ Case
		pcs	mm		pcs	pcs
	99013	Bioreactors 3 x 450 / 600	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	Cryo 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 <sup>2</sup> / 20 cm <sup>2</sup> 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

## 3-B Product "Clean Room"

Safety in grade clean aseptic room with TPP



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

With the standard packaging, contamination adhering to the outside of the bag could be unintentionally carried into clean room areas. The 3-B packaging system prevents contamination from reaching highly sensitive production areas, thus significantly increasing safety for handling substances in a sterile environment.

### Features of 3-B products:

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



1. Cryo tubes in 3-B
2. Pipettes in 3-B



### Step 1

Open bag 3 and pull out sterile bag 2

Transfer bag 2 to sluice



### Step 2

Open bag 2 in sluice and carefully pull out sterile bag

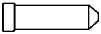



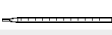

Transfer bag 1 to gowning area

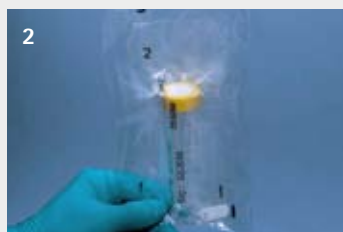


### Step 3

Open bag 1 in aseptic room

Use product

Type	Product-No.	Version
	3-B	TPP standard order number plus prefix 3, triple bagged
	389020	TPP standard order number, for ex. 89020 plus prefix 3, 3-B cryo tube 2 ml
	390026	TPP standard order number, for ex. 90026 plus prefix 3, 3-B tissue culture flask 25 cm <sup>2</sup>
	391050	TPP standard order number, for ex. 91050 plus prefix 3, 3-B centrifuge tube 50 ml
	394005	TPP standard order number, for ex. 94005 plus prefix 3, 3-B serological pipette 5 ml
	399250	TPP standard order number, for ex. 99250 plus prefix 3, 3-B vacuum filtration "rapid"-Filtermax 250 ml



1. Filtermax in 3-B
2. Tube in 3-B
3. Flask in 3-B

## Quality Assurance

### Quality Management

TPP is ISO 9001:2008 certified. The quality standard is audited and confirmed by re-certification processes regularly. The certificate can be downloaded at [www.tpp.ch](http://www.tpp.ch).

### Quality Control: from Raw Material to the ready TPP Product

TPP provides their end users with the highest quality in tissue culture plastics through the detailed oriented design and manufacturing processes. This intricate monitoring is possible with the complex quality assurance system. Products are dispatched only when all criteria are fulfilled. 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 arrange 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](http://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  $10^{-3}$ .



#### Expiry Date

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 more accept guarantee claims.



#### Lot Number

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



#### Single Use

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



#### Caution

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



#### Certificate

Quality certificate from TPP can be generated online at [www.tpp.ch](http://www.tpp.ch).

## Quality Standards

### Production

TPP products are manufactured in a clean room environment.

### Free from pyrogens and detectable endotoxins

Endotoxins belong to the pyrogens, substances that are eliciting fever. They can influence 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 with few exceptions. Exact data are available from the quality certificates that can be generated under [www.tpp.ch](http://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 organism. 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 DIN EN ISO 11137.

### Growth treatment

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

### Free from cytotoxic substances

Cytotoxic substances are cell poisons that have the ability to weaken or even kill cells. All TPP tissue culture products are free from cytotoxic substances. TPP tests this regularly conforming DIN EN ISO 10993-5.

### Leaching

Leaching signifies the slow compounds dissolving (leaching) from plastic ware into buffer and solvents. TPP avoids this by using ultra-pure raw-material that is certified to be free of chemical softeners and additive. Recycled and by this potentially contaminated raw material never is processed with TPP products. All raw materials conform to Pharmacopoeia USP Class VI. Additionally optimized molds that work without any slip agents are used during the production process.

## Raw Materials

TPP processes only the highest grades of raw materials. No stripping agents or softeners are employed.

TPP products are free from animal components and therefore free from TSE/BSE.

### Polyethylene

Heat Resistance	70 - 80 °C / cannot be autoclaved
Low-Temperature Resistance	-40 °C
Optical Properties	Opaque
Mechanical Properties	Low tensile strength and surface hardness

### Polypropylene

Heat Resistance	100 - 120 °C / can be autoclaved
Low-Temperature Resistance	-190 °C
Optical Properties	Transparent, but not crystal clear
Mechanical Properties	High fracture strength, dimensionally stable, high stiffness

### Polystyrene

Heat Resistance	60 - 75 °C / cannot be autoclaved
Low-Temperature Resistance	-40 °C
Optical Properties	Crystal clear, shiny surface / 90 % transparency index (no transperence at <330 nm, for ex. UV-light)
Mechanical Properties	Low fracture ductility, not suitable for use at high centrifugal loads

## Disposal

The materials are pure hydrocarbon compounds and therefore neutral to the environment. No harmful substances are generated during controlled burning.

Resistance to chemicals	Polyethylene (PE)	Polypropylene (PP)	Polystyrene (PS)
1,4-Dioxane	±	±	
2-Butanol	±	±	±
2-Methoxyethanol	±	±	
2-Propanol	±	±	
A			
Acetaldehyde	±	±	
Acetic acid	±	±	
Acetic acid 5%	±	±	
Acetic acid 50%	±	±	
Acetic acid glacial	±	±	
Acetone	±	±	
Acetonitrile	±	±	
Acetophenone	±	±	
Adipic Acid	±	±	
Allyl alcohol	±	±	
Aluminium chloride	±	±	
Amino acids	±	±	
Ammonia	±	±	
Ammonia ;			
Ammonium			
Ammonium			
Amyl acetyl			
Amyl alcohol			
Aniline			
Aqua regia			
Aqua regia			
Arsenic ac			
B			
Benzaldehyd			
Benzene			
Benzyl acetyl			
Boric acid			
Butyl acetyl			
C			
N			

Resistance to chemicals	Polyethylene (PE)	Polypropylene (PP)	Polystyrene (PS)
Decahydronaphthalene	±	±	
Dibutylphthalate	±	±	
Dibutyl sebacate	±	±	
Dichlorine dioxide	±	±	
Dichlorine glycol	±	±	
Dichloroethyl	±	±	

Resistance to chemicals	Polyethylene (PE)	Polypropylene (PP)	Polystyrene (PS)
Magnesium chloride aq			
Mercuric chloride			
Mercury			
Methanol 100%			
Methoxyethyl Oleate			
Methyl alcohol			
Methylene chloride			



## 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 highest protection during transportation and reduce the damage occurring to the fragile tissue culture products. TPP recommends the use of protection cases when shipping the 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 well-managed forests and other controlled sources. The one-way pallets conform to the international, phytosanitary directives (ISPM 15 standard).

### Icons displayed on the TPP cases



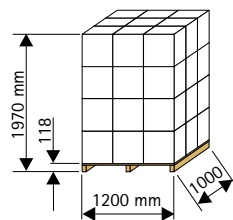
Breakable



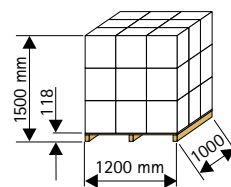
Protect against humidity



Do not expose to direct sunlight



Land/sea freight



Air freight



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

Page 4 Tissue Culture Flask 25 – 300 cm<sup>2</sup>

Type	Product-No.	Growth Area cm <sup>2</sup>	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 6 Tissue Culture Flask with Re-Closable Lid 115 – 150 cm<sup>2</sup>

Type	Product-No.	Growth Area cm <sup>2</sup>	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 7 Tissue Culture Flask 25 – 300 cm<sup>2</sup> with Peel-Off Foil

Type	Product-No.	Growth Area cm <sup>2</sup>	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-offl	PS	3	18	1/2	2.2
	90303	300	peel-offl	PS	2	8	1/2	1.9
	90551	150	peel-off, straight opening	PS	3	18	1/2	2.2
	90553	150	peel-off as of 2017: 90153	PS	3	18	1/2	2.3
	90653	115	peel-off, barrier	PS	3	18	1/2	2.3

Page 8 Clipmax 10 cm<sup>2</sup> Chamber Slide

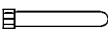


Type	Product-No.	Growth Area cm <sup>2</sup>	Version	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	70010	10	filter, clip	PS/COP	1	5	1/16	0.8

## Page 9 «VENT» or Filter Screw Cap






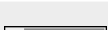
Type	Product-No.	Version	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	90825	Vent screw cap for 25 cm <sup>2</sup> flask	PP	10	40	1/16	0.3
	90826	Filter screw cap for 25 cm <sup>2</sup> flask	PP	10	40	1/16	0.3
	90850	Vent screw cap for 150 / 300 cm <sup>2</sup> flask	PP	10	40	1/16	0.3
	90856	Filter screw cap for 150 / 300 cm <sup>2</sup> flask	PP	10	40	1/16	0.3
	90875	Vent screw cap for 75 cm <sup>2</sup> flask	PP	10	40	1/16	0.3
	90876	Filter screw cap for 75 cm <sup>2</sup> flask	PP	10	40	1/16	0.3

Tissue Culture Flat Tube 10 cm<sup>2</sup> and Tissue Culture Tube 20 cm<sup>2</sup> Page 10

Type	Product-No.	Growth Area cm <sup>2</sup>	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

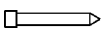

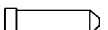





## Cell Scraper and Cell Spatula Page 12

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	PP	1	150	1/4	1.4







## TubeSpin® Bioreactor 15 - 600 ml Page 14

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
	787050	conical, barcode	50	PP	20	180	1/2	3.2
	87050	conical	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

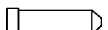


## Rack and Consumables for TubeSpin® Bioreactor Page 15

Type	Product-No.	Version	Capacity pcs	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	87605	screw cap "solid" for 450/600	-	PE	5	40	1/16	0.6
	87606	screw cap "filter" for 450/600	-	PE	5	40	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 16

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



## Page 17 Shaker Plate for TubeSpin® Bioreactor 600



Type	Product-No.	Version	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	87611	Kühner plate 32	Alu	1	1	spec.	11.0
	87612	Kühner plate 20	Alu	1	1	spec.	6.0
	87613	Kühner plate 16	Alu	1	1	spec.	5.0
	87631	Infors Multitron plate 32	Alu	1	1	spec.	11.0
	87633	Infors Minitron plate 16	Alu	1	1	spec.	5.0

## Page 18 PCV Packed Cell Volume Tube



Type	Product-No.	Version	Volume ml	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	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

## Page 19 "easy read" Measuring Device



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

## Page 20 Serological Pipette Standard 1 – 25 ml



Type	Product-No.	Volume ml	Color	Material	Qty/ Case pcs	Case Size	Weight/ Case kg
	94001	1	yellow	PS	400	1/4	2.1
	94002	2	green	PS	300	1/4	2.0
	94005	5	blue	PS	200	1/4	2.5
	94010	10	orange	PS	200	1/4	3.0
	94024	25	red	PS	100	1/4	2.5

## Page 21 Serological Pipette with Reservoir 25 – 70 ml















Type	Product-No.	Volume ml	Reservoir ml	Color	Material	Qty/ Case pcs	Case Size	Weight/ Case kg
	94525	25	15	red	PS	60	1/4	1.5
	94550	50	20	purple	PS	50	1/4	1.5

## Page 22 Turbo-Fix Pipette Aid















Type	Product-No.	Version	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	94700	EU adapter	PA/POM	1	1	1/4	1.6
	94701	USA/Japan adapter	PA/POM	1	1	1/4	1.6
	94702	UK adapter	PA/POM	1	1	1/4	1.6

## Turbo-Fix Consumables Page 23

Type	Product-No.	Version	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	94750	"Stabifix" nose piece, set	various	1	1	spec.	spec.
	94751	wall mount	PE	1	1	spec.	spec.
	94752	replacement filter, 0.45 µm, blue	various	1	1	spec.	spec.
	94753	replacement filter, 0.22 µm, red	various	1	1	spec.	spec.
	94754	pipette mount in "Stabifix"	silicone	1	1	spec.	spec.
	94755	filter rubber in "Stabifix"	silicone	1	1	spec.	spec.
	94756	battery	lithium polymere	1	1	spec.	spec.
	94757	battery compartment lid	PA	1	1	spec.	spec.
	94758	housing	PA	1	1	spec.	spec.
	94760	mains adapter, EU	various	1	1	spec.	spec.
	94761	mains adapter, USA/Japan	various	1	1	spec.	spec.
	94762	mains adapter, UK	various	1	1	spec.	spec.









## Tissue Culture Test Plate 6 - 96 wells Page 24





Type	Product-No.	Number Wells pcs	Growth Area cm <sup>2</sup>	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, small packaging unit Page 25

Type	Product-No.	Number Wells pcs	Growth Area cm <sup>2</sup>	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

Tissue Culture Dish 40 - 150 cm<sup>2</sup> Page 26

Type	Product-No.	Growth Area cm <sup>2</sup>	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 28 Vacuum Filtration "rapid"-Filtermax 150 – 1000 ml



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

## Page 29 Syringe Filter 0.22 µm and 0.45 µm



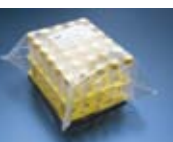
Type	Product-No.	Filtration Area cm <sup>2</sup>	Pore Size µm	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	99722	6	0.22	PET	1	200	1/4 (5 x box)	1.8
	99745	6	0.45	PET	1	200	1/4 (5 x box)	1.8

## Page 30 Centrifuge Tube 13 – 50 ml



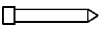

Type	Product-No.	Volume ml	Version	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	91015	15	conical	PP	40	800	1/1	6.5
	91016	13	round, short	PP	40	800	1/1	6.6
	91017	15	round, long	PP	40	800	1/1	6.6
	91019	13	flat	PP	40	800	1/1	6.2
	91050	50	conical	PP	20	360	1/1	6.0
	91051	50	conical, self-standing	PP	20	360	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	18 x 15 ml / 10 x 50 ml	rack "S"	PP	1	45	1/2	4.6
	99019	30 x 15 ml / 20 x 50 ml	rack "L"	PP	1	30	1/2	5.0

## Page 31 Rack filled with Centrifuge Tubes 15 ml or 50 ml



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








Centrifuge Tube 15 ml / 50 ml, small unit packaging Page 31

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



Cryo Tube 1.2 - 5 ml








Page 32

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
	99801	white	PP	600	3600	1/16	0.6
	99802	blue	PP	600	3600	1/16	0.6
	99803	yellow	PP	600	3600	1/16	0.6
	99804	green	PP	600	3600	1/16	0.6
	99805	lilac	PP	600	3600	1/16	0.6
	99806	red	PP	600	3600	1/16	0.6






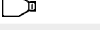
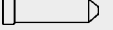

Rack and Box Page 34

Type	Product-No.	Capacity pcs	Material	Qty/ Bag pcs	Qty/ Case pcs	Case Size	Weight/ Case kg
	99013	Bioreactors 3 x 450 / 600	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	Cryo tubes 18 x 15 ml / 10 x 50 ml	PP	1	45	1/2	4.6
	99018	Tissue culture tubes 8 x 10 cm <sup>2</sup> / 20 cm <sup>2</sup> 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

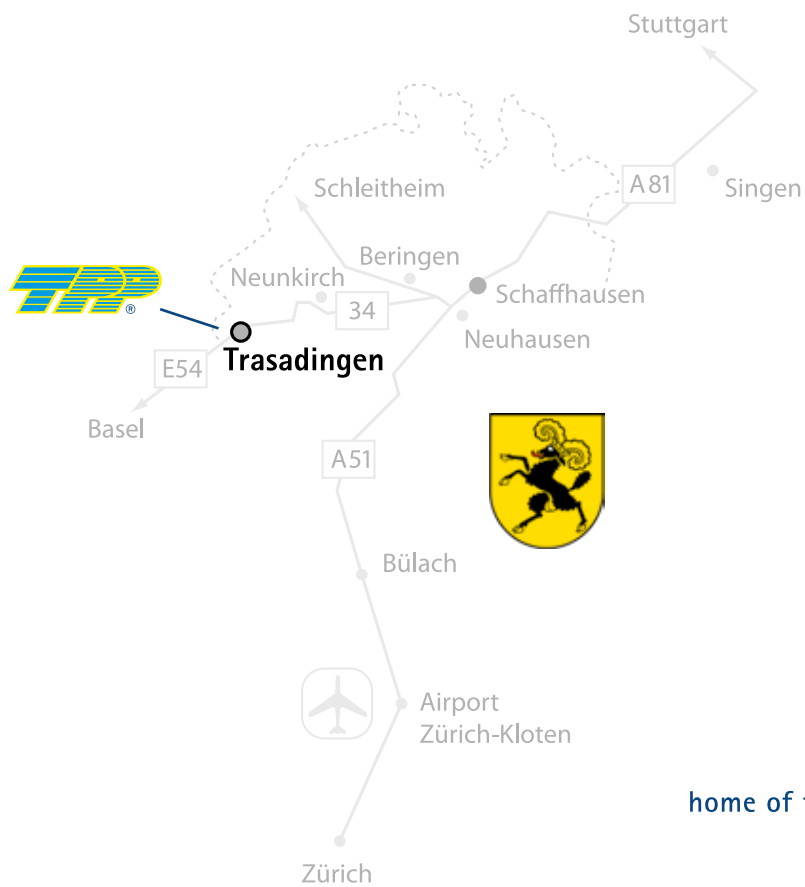
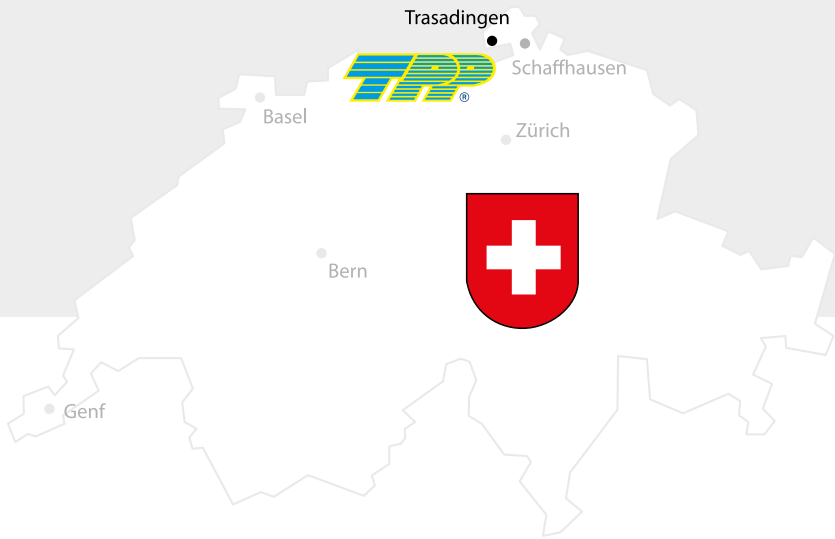


3-B Product "Clean Room"

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Type	Product-No.	Version
	3-B	TPP standard order number plus prefix 3, triple bagged
	389020	TPP standard order number, for ex. 89020 plus prefix 3, 3-B cryo tube 2 ml
	390026	TPP standard order number, for ex. 90026 plus prefix 3, 3-B tissue culture flask 25 cm <sup>2</sup>
	391050	TPP standard order number, for ex. 91050 plus prefix 3, 3-B centrifuge tube 50 ml
	394005	TPP standard order number, for ex. 94005 plus prefix 3, 3-B serological pipette 5 ml
	399250	TPP standard order number, for ex. 99250 plus prefix 3, 3-B vacuum filtration "rapid"-Filtermax 250 ml





home of tissue culture



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