

Catalog

2017/2018



THINK! Development and production of customized products



Liquid handling products



Labware for general lab applications



Life science products for microbiology and biotechnology



Cryo products for deep-freeze applications

ratiolab[®]
disposables for sciences

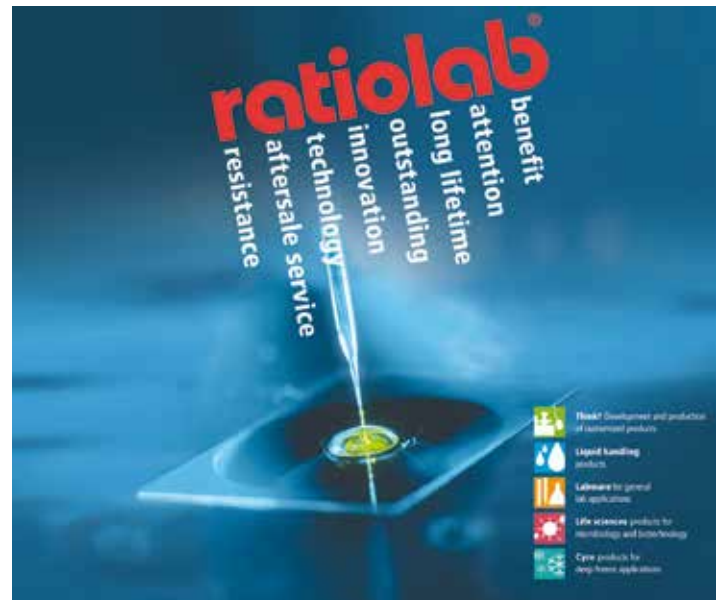
Dear business partner,

for more than 40 years ratiolab® develops, produces and distributes high-quality and innovative plastic consumables for laboratories.

Our customers in the fields of medical, research and industry are constantly developing themselves.

Ratiolab has set itself the goal to accompany this trend innovatively and successfully.

Not at least because of the acquisition of the company Slamed Ing. GmbH, Frankfurt, ratiolab® has expanded the product range of liquid handling products and analyzers.



The scope of the ratiolab team is completed by competence, helpfulness and service.

This makes ratiolab® a successful partner of the national and international laboratory distributors.

The ratiolab® team is happy to support you with "help and advice".

Sincerely yours

A handwritten signature in blue ink, appearing to read 'J. Frauendörfer'.

Johannes Frauendörfer
Managing Director



THINK! Development and production of customized products

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Life science products for
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Our Company



THINK! Development and production of customized products



Liquid handling products



Labware for general lab applications



Life science products for microbiology and biotechnology



Cryo products for deep-freeze applications

What ratiolab® offers and solutions

For over 40 years now we have – in close cooperation with our customers– been developing professional solutions for laboratory routine and for research, science and industry.

We supply everything that facilitates daily work routines, increases accuracy and improves process safety – in fact, those items that help to make the laboratory all that more efficient!

Please contact us, if you have a product idea or a product wish to make your work easier. Our staff will take care of a solution.



On a daily basis, thousands of laboratory items are produced from high quality plastics using tools of the highest precision in state-of-the-art automatic injection-molding machines. If so desired, we can develop packaging forms suitable for automatic processing to your own specifications; we can also package your wares according to your hygiene standards and can customize these to international requirements, even in small series.

Increasingly, new demands are being made of disposable products. Here, we are available to research and industry for the development of individual, customized products. We can accompany the user right from the first mutual

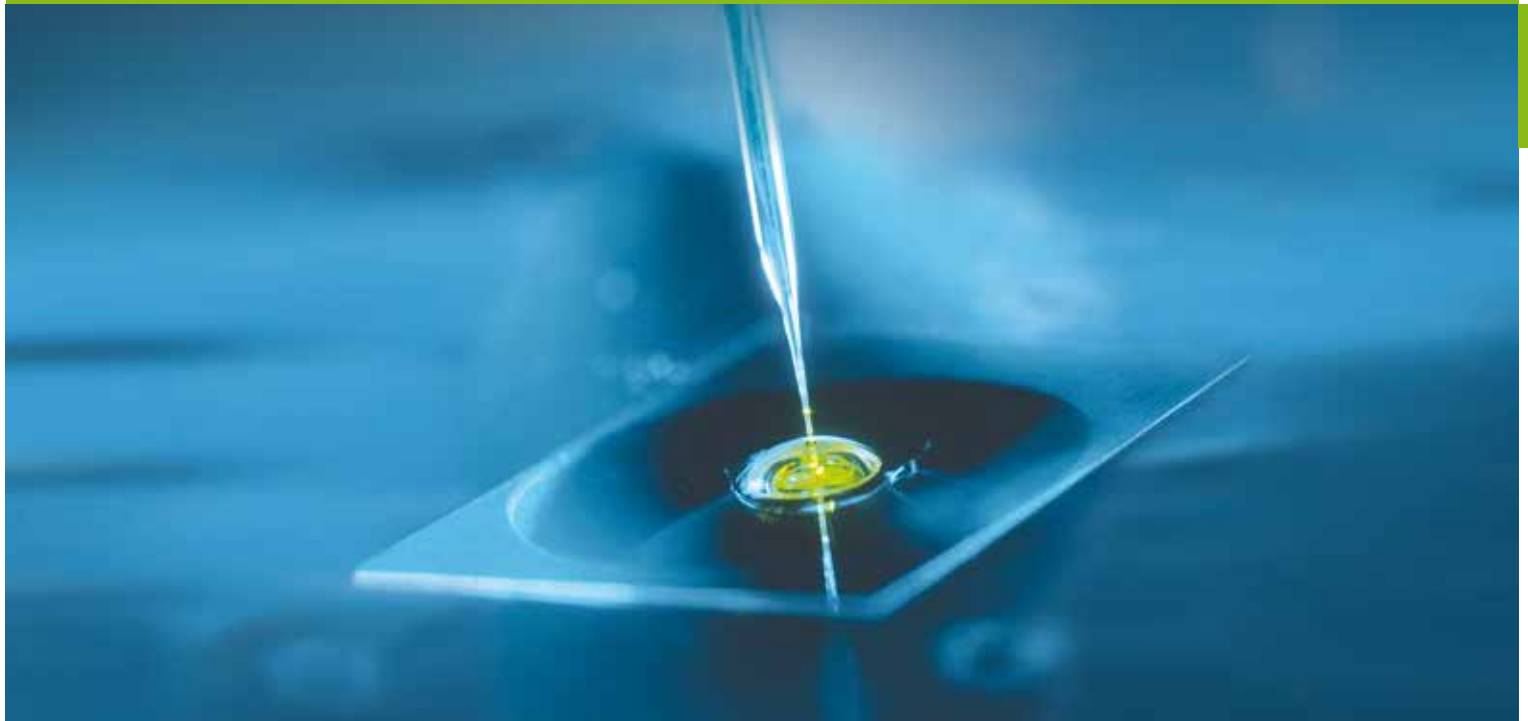
idea through CAD, construction, the production of prototypes to the efficient production and packaging of the finished product.

Our Quality Management System is of course certificated according to DIN EN ISO 9001, ISO 13485; for only uniform high quality products guarantee the accuracy and reproducibility you require in your labs.

The plant, administration and warehouse are located in Dreieich near Frankfurt am Main, Germany. Sales in Germany and worldwide in over 30 countries is via qualified laboratory suppliers. ratiolab® is also present at all important national and international trade fairs.



Think!



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Liquid handling products



Labware for general lab applications



Life science products for microbiology and biotechnology



Cryo products for deep-freeze applications

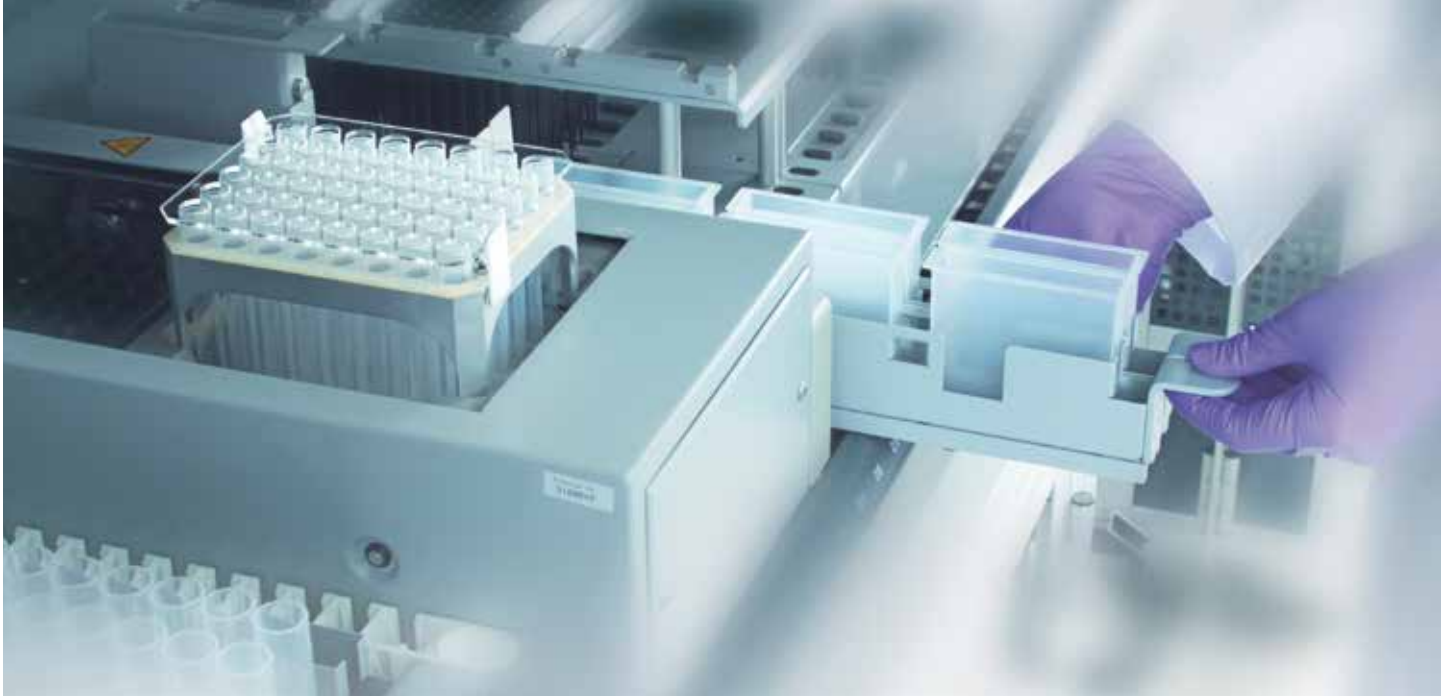
Think!



We can make your ideas become reality!

Laboratory disposables made of plastic for research, science and industry are much in demand. Frequently, however, tasks have to be performed where standard products are just not good enough.

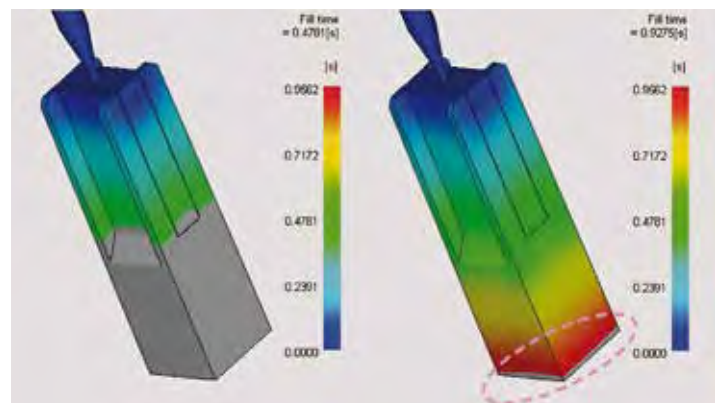
Here, individual solutions are required – whether for special pipet tips, non-standard cuvettes, customized magazines or even items that do not exist ...



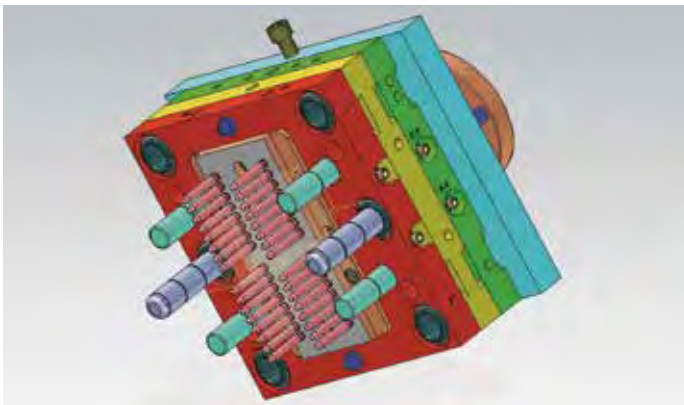
1. Joint development.

Your ideas coupled with our know-how – in this constellation, a solution is not far away. Together, we can develop the product* you require for the specific task in hand – from the initial specifications to the first sketches to ultimate CAD construction. And from the first prototype to series production using state-of-the-art processing, where even three-dimensional products can be created directly from a data base.

* such as these sample extraction tubes and reagent vessels for an innovative system for testing stored blood for viruses.



Think!



2. Intelligent tool design.

Intelligently designed tools play a decisive role in the quality and profitability of products produced by them. We have over 30 years of experience in this field; we thus know precisely how tools have to be designed for the production of particularly thin-walled products, how quality can be improved by the integration of contour cooling and how stroke frequency can be increased in injection molding. And, in urgent situations, tooling can be created at short notice.





3. Perfection in production.

We have state-of-the-art injection-molding machines. In addition to our own products, we can produce yours – in series of thousands or hundreds of thousands, in uniform high quality – using plastic materials of the highest quality.

4. Flexibility in packaging.

We can design the desired packaging for your products, whether environmentally friendly manual packs, practical refill systems or racks suitable for automated processes. We can package the products according to your hygiene requirements and individualize them, even in small quantities.



5. Reliable logistics.

We have a large, well-organized warehouse facility. On a daily basis, we pick and dispatch numerous orders throughout the world. You can rely on us to do the same with your products. We can hold them on call for delivery to you or your customers.



Liquid handling



Think! Development and production of customized products



Liquid handling products



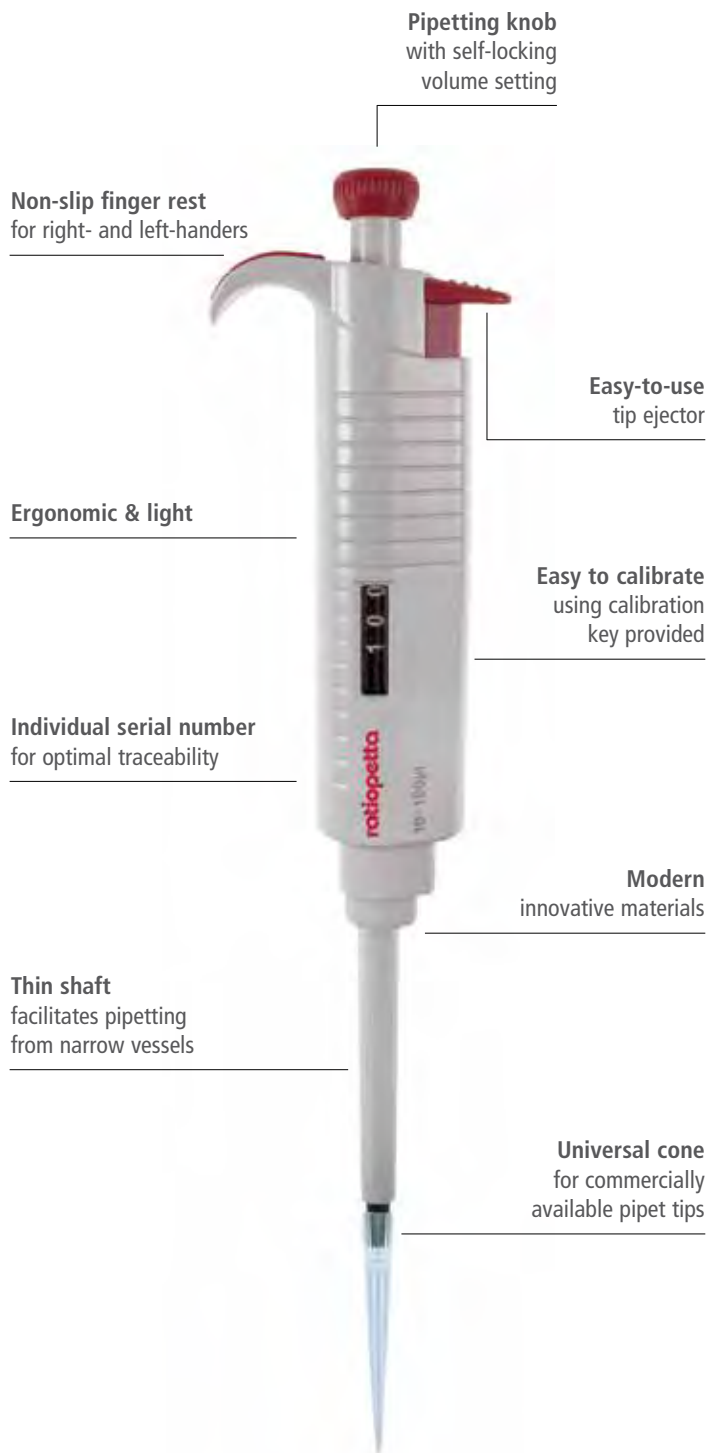
Labware for general lab applications



Life science products for microbiology and biotechnology



Cryo products for deep-freeze applications



ratiopetta®

Pipetting is one of the most frequently used applications in laboratories. This is not only where precision and reliability are important, users also need products that are ergonomic, light and convenient. The new ratiopetta® from ratiolab® meets these demands while offering outstanding value for money.

Product properties

- obtainable in volumes from 0.1 µl – 5000 µl
- full autoclavable, 20 min, 121°C
- universal cone for standard pipet tips
- easy volume setting by smooth-running setting ring
- fatigue-free work possible for the analyst over longer pipetting series
- touch-sensitive pressure points for pipetting and discharging
- modern, innovative materials
- individual checking according to ISO8655/DIN12650
- delivery includes a test certificate
- individual serial numbers
- suitable for right- and left-handers
- easy to calibrate
- corrosion-resistant piston and tip ejector
- 2 years guarantee

Delivery includes:

- pipet
- certificate of calibration
- operating instructions
- bench rack
- calibration key
- lubricant

Matching pipet tips can be found on pages 20-25.





Single-channel Precision Pipet ratiopetta®

CE IVD

Volume Range μl	Accuracy* $< \pm \%$	Precision* $< \%$	Quantity per Pack	Order No.
0.1 – 2.5	3.00	3,00	1	47 80 025
0.5 – 10	1.50	1.50	1	47 80 010
2.0 – 20	1.20	1,00	1	47 80 020
10 – 100	1.00	0.40	1	47 80 100
20 – 200	0.80	0.40	1	47 80 200
100 – 1000	0,70	0.25	1	47 81 000
1000 – 5000	0.60	0.30	1	47 85 000

8-channel Precision Pipet ratiopetta®

CE IVD

Volume Range μl	Accuracy* $< \pm \%$	Precision* $< \%$	Quantity per Pack	Order No.
0.5 – 10	2.50	2.50	1	47 80 018
5.0 – 50	1.50	1.00	1	47 80 058
50 – 300	1.00	0.50	1	47 80 308

12-channel Precision Pipet ratiopetta®

CE IVD

Volume Range μl	Accuracy* $< \pm \%$	Precision* $< \%$	Quantity per Pack	Order No.
0.5 – 10	2.50	2.50	1	47 80 012
5.0 – 50	1.50	1.00	1	47 90 052
50 – 300	1.00	0.50	1	47 90 302

Matching pipet tips can be found on pages 20-25.

Pipettor stands ratiopetta®

- for the clearly laid out storing of up to 5 pipettors of different brands with finger rest
- compatible with most multi-channel-pipettors with finger rest

Product	Quantity per Pack	Order No.
pipettor stand for ratiopetta®	1	94 20 024

* Three measurements were carried out for all the pipets: minimum, maximum and mean volumes. The data shown are based on the mean volumes. On request, we can provide you with all of the results that were measured for your pipet. Please let us know the order number and the serial number of your Ratiopetta.

Pipetting Reservoirs

Pipetting reservoirs

The ratiolab® pipet reservoirs made of white polystyrene (PS) are ideal for the repetitive filling of single and multi-channel pipets. Because of the innovative design, these disposable items are both space-saving and stackable. Their broad edges give them a firm and safe stand. They are thus an uncomplicated and clean alternative to reusable reservoirs. The ratiolab® pipet reservoirs are produced in Germany and the material is recyclable.

This new product line is available in four application-oriented versions:

Version -Figure- 1

- single reservoir with max. volume = 50 ml
- angled bottom for practically complete withdrawal of sample and hence economical in use
- groove graduations at 10, 15, 20 and 25 ml
- labeling area

Version -Figure- 2

- extra large single reservoir with max. volume 100 ml
- graduations at 50 and 100 ml
- conical bottom for economy due to minimum loss of medium

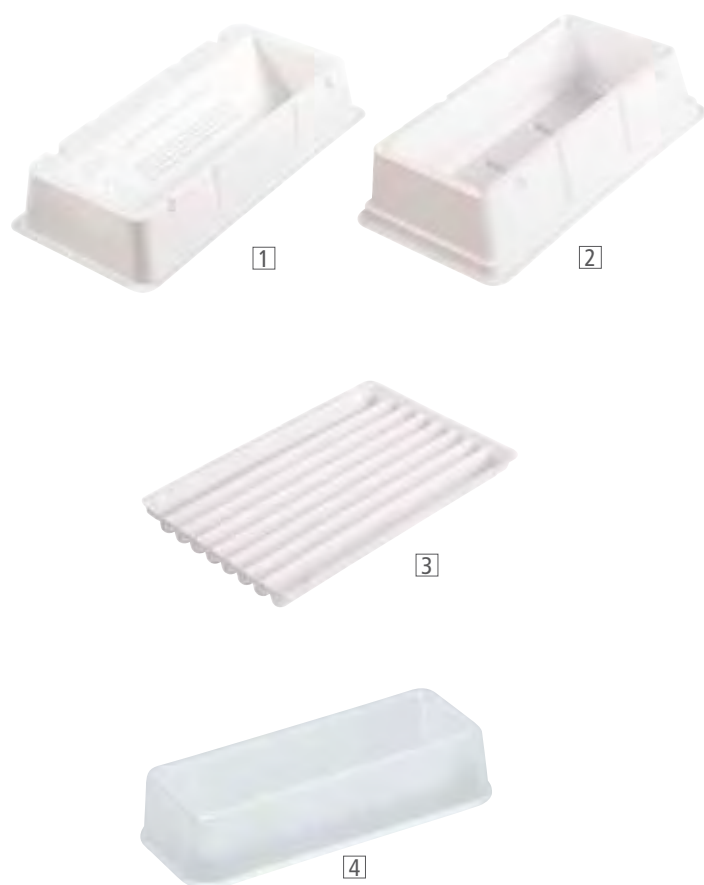
Version -Figure- 3

- specially designed for use with 8-channel pipets
- 8 separate channels of 6 ml volume (= 48 ml total)

Version -Figure- 4

- polypropylene (PP)
- max. volume = 50 ml
- autoclavable

Versions 1–3 are available gamma-sterilized or non-sterile.



Pipetting reservoirs made of PS

Volume	Fig. No.	Sterilized	Quantity per Pack	Order No.
50 ml	1	–	bags 20 x 5	94 20 018
50 ml	1	■	bags 20 x 5	94 25 518
100 ml	2	–	bags 20 x 5	94 20 017
100 ml	2	■	bags 20 x 5	94 25 517

Pipetting reservoirs made of PS for 8-channel precision pipetting

Volume	Fig. No.	Sterilized	Quantity per Pack	Order No.
6 ml	3	–	bag 1 x 100	94 20 016
6 ml	3	■	bag 1 x 100	94 25 516

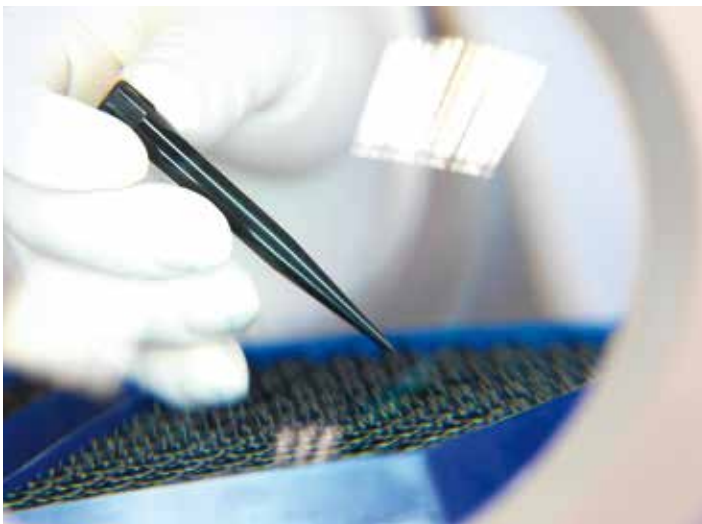
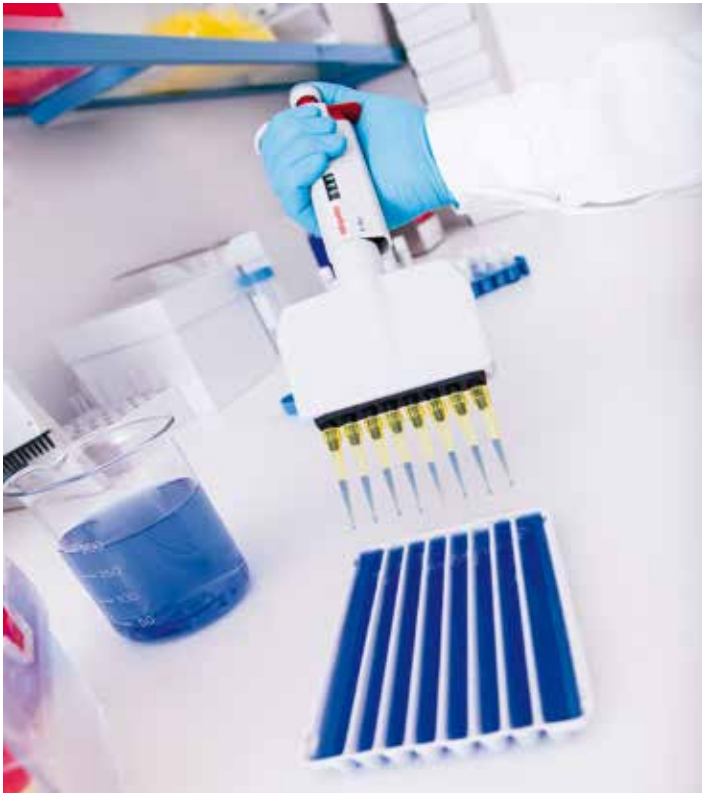
Pipetting reservoirs made of PP

Volume	Fig. No.	Sterilized	Quantity per Pack	Order No.
50 ml	4	–	10	94 20 019

Pipet Tips

Pipet tips

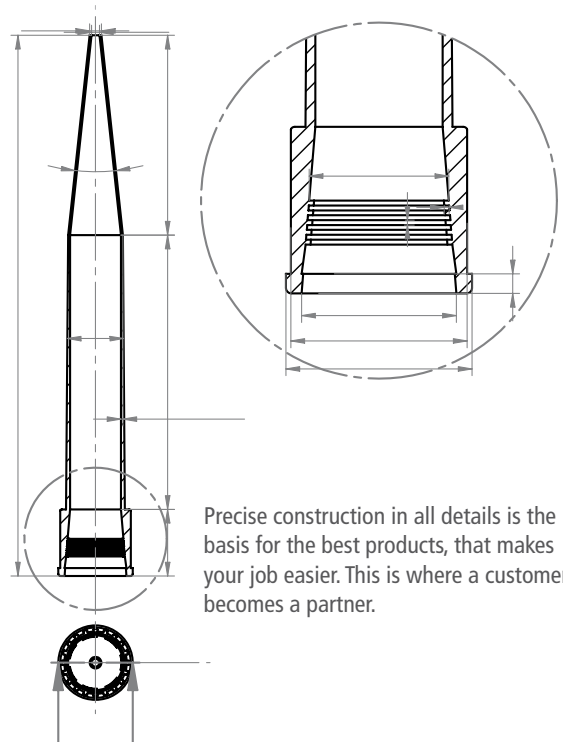
ratiolab® pipet tips are ideal for all commercially available pipets. Their uniform high quality and precision make today's pipets fully effective. Together with specially developed Multitrack, Refill System and the ratiolab® Multibox® with the associated pipet tips in Multitray®, they make pipetting much simpler and safe, also in the most sensitive applications. Our pipet tips are perfectly fit for manual or electronic, single or multichannel pipets.



Precision in each and every detail – a guarantee for highest quality.

- made of high quality polypropylene
- tight fit due to the precisely fitting cone
- optimal handling due to the stable shape
- autoclavable
- guaranteed dust-free due to special ionization treatment
- available pre-sterilized or non-sterile
- excellent transparency due to high quality surfaces
- minimal residual wetting due to controlled quality of raw materials
- excellent volume accuracy due to precise tip orifice
- practice-oriented tip volumes
- aroject® tips with special filters made of hydrophobic HD-PE as aerosol barrier and for protection against contamination
- suitable for all commonly used pipet types

This is why ratiolab® pipet tips always provide perfect results.



Precise construction in all details is the basis for the best products, that makes your job easier. This is where a customer becomes a partner.

Pipet Tips System and Refill System



Pipet Tips System

Multirack

The new ratiolab® Multiracks provide even more time saving, perfect hygienic conditions and simple operation.

- the pipet tips are placed on a robust matrix, in a 8 x 12 format for all tips up to 300 µl, and in a 6 x 10 format for tip size 100 – 1200 µl
- the tips can be picked-up by 1, 8 or 12-channel pipettors as well as by pipetting robots contamination-free and without any hand contact
- the Multiracks are durable and steady, and the hinged cover can be opened up to 180°
- after work, the Multibox® can be closed firmly by means of a click closure to protect the tips from dust
- the Multiracks are completely autoclavable at 121 °C, 20 min
- Multiracks are available in sterile and non-sterile packs

Order information on the pages 21-25.

Pipet Tips Refill System

Multibox®plus and -ultra/MultiTray® System

The new ratiolab® Multibox®plus and -ultra/MultiTray® system simplifies the handling of pipet tips and provides more safety.

MultiTray®, the dust-proof refill packs made of plastics for ratiolab® pipet tips, hold the tips in plastic matrices. Up to five plastic matrices filled with tips are stacked on top of each other in the space saving MultiTray®. For tips up to 300 µl the matrices contain 96 pipet tips in the 8 x 12 standard format. All 100 – 1200 µl tips are in a 6 x 10 format on the matrices. The matrices can simply be removed from the Multibox® with the two finger tabs.

The MultiTray® matrices fit securely into the Multibox®plus and -ultra with a soft click. The framework of the Multibox®plus and -ultra provides full support for the MultiTray® matrices – resulting in convenient and safe tip pick-up, even with 8- and 12-channel pipetors. For tip removal the dustproof, hinged cover of the Multibox®plus and -ultra may be opened completely or partially by using the additional sliding mechanism. For cleaning the cover can be removed.

The ratiolab® Multibox®plus and -ultra/MultiTray® system is space- and cost-saving. It clearly reduces the amount of waste, and it provides more convenient and safe pipetting and sterilization.



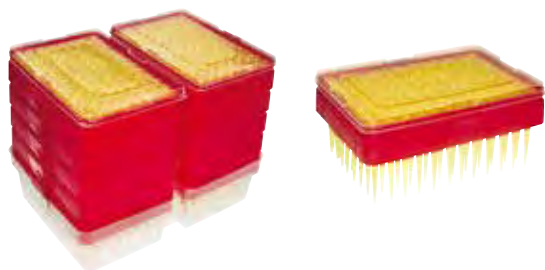
Pipet Tips Refill System

Multibox® plus and -ultra for MultiTray® pipet tips

Reusable pipet tip boxes for the ratiolab® MultiTray® refill systems.

- Multibox® plus, PC, with dust-proof hinged and sliding lid, completely removable
- Multibox® ultra, PP, with hinged lid
- can be autoclaved several times at 121 °C, 20 min
- quantity per pack: 1 pc.
- deliver: Multibox®plus or -ultra without MultiTray® and without pipet tips

Product	Fig. No.	Volume	Order No.
ratiolab® Multibox® plus, PC, empty, for all MultiTray® pipet tips	1	up to 1200 µl	80 10 161
ratiolab® Multibox® ultra PP, empty, for all MultiTray® pipet tips	2	up to 300 µl	80 30 160
ratiolab® Multibox® ultra PP, empty, for all MultiTray® pipet tips	3	up to 1200 µl	80 30 170



MultiTray® for Multibox®plus and Multibox®ultra

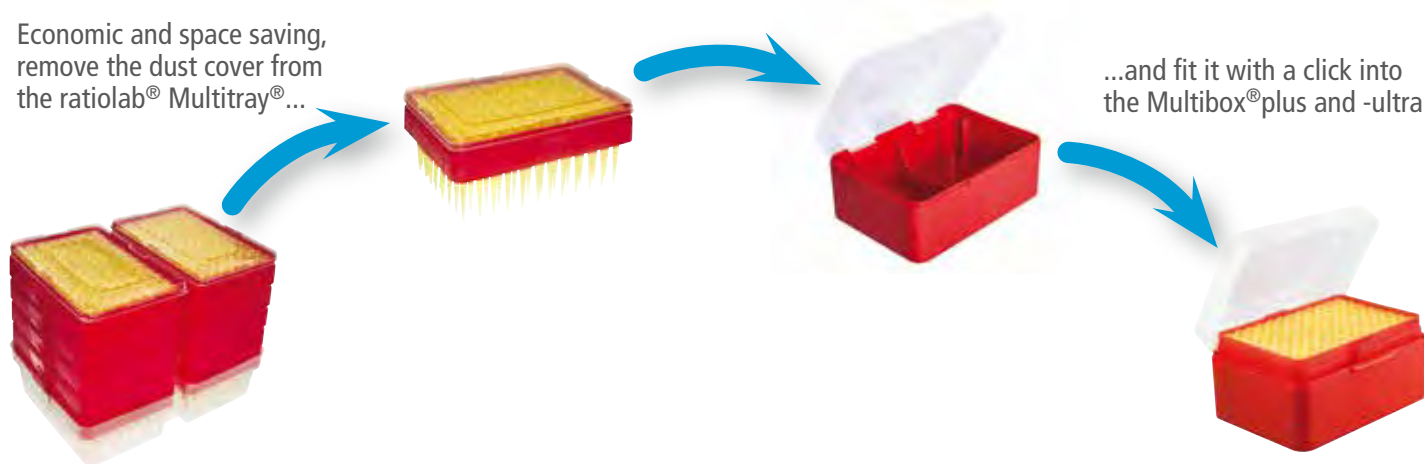
- dust-proof refill pack with several plastic matrices filled with tips
- the most functional, environmentally-friendly, space and cost-saving packaging

Order information on the pages 21-25.

Economic and space saving, remove the dust cover from the ratiolab® Multitray®...

...lift a single dust-proof tip matrix,...









...and fit it with a click into the Multibox®plus and -ultra



Pipet Tips

Pipet Tips








CE IVD

Typ	Volume Range μ l	Length mm	Packaging	Fig. No.	Quantity per Pack	Order No.
Crystal pipet tip "E", for all commonly used pipets, ratiopetta® 	0,5-20	45,80	bag 1 x 1000	1	1000	25 00 170
			Multiracks 10 x 96	2	960	25 13 172
			Multiracks, sterilized 10 x 96	2	960	25 53 172
			MultiTray® 10 x 96	3	960	25 30 172
Crystal pipet tip "G", for Gilson Pipetman®/Neo® 	0,1-10	38,30	bag 1 x 1000	1	1000	25 00 190
			Multiracks 10 x 96	2	960	25 13 192
			Multiracks, sterilized 10 x 96	2	960	25 53 192
			MultiTray® 10 x 96	3	960	25 30 192
Crystal pipet tip xl, for all commonly used pipets, ratiopetta® 	0,1-10	45,50	bag 1 x 1000	1	1000	21 00 500
			Multiracks 10 x 96	2	960	25 13 502
			Multiracks, sterilized 10 x 96	2	960	25 53 502
			MultiTray® 10 x 96	3	960	25 30 173
Yellow pipet tip "E", for all commonly used pipets, ratiopetta® 	1-200	49,50	bag 1 x 1000	1	1000	21 00 600
			Multiracks 10 x 96	2	960	21 13 602
			Multiracks, sterilized 10 x 96	2	960	21 53 602
			MultiTray® 10 x 96	3	960	21 30 602
Colorless pipet tip "E", for all commonly used pipets, ratiopetta® 	1-200	49,50	bag 1 x 1000	1	1000	24 00 600
			Multiracks 10 x 96	2	960	24 13 602
			Multiracks, sterilized 10 x 96	2	960	24 53 602
			MultiTray® 10 x 96	3	960	24 30 602
Yellow pipet tip "universal", for all commonly used pipets, ratiopetta® 	1-250	51,20	bag 1 x 1000	1	1000	25 00 160
			Multiracks 10 x 96	2	960	25 13 162
			Multiracks, sterilized 10 x 96	2	960	25 53 162
			MultiTray® 10 x 96	3	960	25 30 162
Colorless pipet tip "universal", for all commonly used pipets, ratiopetta® 	1-250	50,00	bag 1 x 1000	1	1000	25 00 163
			Multiracks 10 x 96	2	960	25 13 163
			Multiracks, sterilized 10 x 96	2	960	25 53 163
			MultiTray® 10 x 96	3	960	25 30 163
Pipet tip "Oxford", for Oxford® pipets 	1-200	65,30	bag 1 x 1000	1	1000	25 00 110

Pipet Tips

Pipet Tips

CE IVD

Typ	Volume Range µl	Length mm	Packaging	Fig. No.	Quantity per Pack	Order No.
Pipet tip "MLA", for MLA® pipets	1-200	47,50	bag 1 x 1000	1	1000	25 00 140
						
Pipet tip "wide bore", for all commonly used pipets, ratiopetta®	1-200	50,50	bag 1 x 1000	1	1000	21 00 553
						
Blue pipet tip "E", for all commonly used pipets, ratiopetta®	100-1200	70,94	bag 1 x 1000	1	1000	21 00 610
			Multiracks 10 x 60	2	600	21 13 612
			Multiracks, sterilized 10 x 60	2	600	21 53 612
			MultiTray® 16 x 60	3	960	21 30 612
						
Colorless pipet tip "E", for all commonly used pipets, ratiopetta®	100-1200	70,94	bag 1 x 1000	1	1000	24 00 610
			Multiracks 10 x 60	2	600	24 13 612
			Multiracks, sterilized 10 x 60	2	600	24 53 612
			MultiTray® 16 x 60	3	960	24 30 612
						
Pipet tip "MLA", for MLA® pipets	100-1000	86,30	bag 1 x 1000	1	1000	25 00 150
						
Pipet tip "wide bore", for all commonly used pipets, ratiopetta®	100-1000	85,40	bag 1 x 1000	1	1000	21 00 555
						
Pipet Tip Dr. Lange, for Pipets Dr. Lange®	100-1000	86,30	bag 1 x 1000	1	1000	25 00 130
						

1



2










3



Pipet Tips

Pipet Tips

CE IVD

Typ	Volume Range μ l	Length mm	Packaging	Fig. No.	Quantity per Pack	Order No.
Colorless pipet tip "ES", for Pipets Eppendorf Reference®, Socorex Calibra®	500-2500	115,00	bag 1 x 250	1	250	25 00 180
						
Pipet Tip "Finntip", for Pipets Thermo Scientific Finntip® F1 and F2, Pipets Dr. Lange®	1000-5000	147,60	collapsible box 1 x 75	4	75	24 00 620
			bag 1 x 1000	1	1000	24 00 622
			bag 1 x 3000	1	3000	24 00 623
			bag 1 x 500	1	500	24 00 624
			rack 1 x 50	5	50	24 10 620
						
Pipet Tip "Makro", for Pipets Gilson Pipetman®/Neo®	1000-5000	119,70	bag 1 x 250	1	250	24 00 630
			rack 1 x 50	6	50	24 10 630
						
Pipet Tip "Makro II", for Pipets Biohit Proline®	1000-5000	126,00	bag 1 x 300	1	300	24 00 650
			rack 1 x 50	5	50	24 10 650
						
Pipet Tip "Makro II", for Pipets Biohit Proline®	1000-5000	133,30	bag 1 x 300	1	300	24 00 653
			rack 1 x 50	5	50	24 10 653
						
Pipet Tip "Finntip", for Pipets Thermo Scientific Finntip® F1 and F2	2000-10000	150,20	bag 1 x 100	1	100	24 00 640
			rack 1 x 25	5	25	24 10 640
						
Pipet Tip, for Pipets Biohit mLINE® Pipet and Gilson Pipetman®	1000-10000	153,60	bag 1 x 100	1	100	24 00 642
						

1



4



5



6



aeroject® ultra Pipet Tips

free of DNA, DNase,
pyrogens and ATP









aeroject® ultra tips – Pipet Tips with Aerosol Barrier

CE IVD

Pipet tips with special filters, to effectively prevent the pipettor shaft from contamination with aerosols and liquids to be sucked into the pipettor.

- sterilized
- free of RNase-, DNase-, DNA-, pyrogens and ATP
- free of human DNA and PCR inhibitors
- pipet tips and aerosol filters made of ultra-hydrophobic HD-PE
- minimized retention due to special surface treatment
- perfect and tight fit on all major pipettor brands
- aeroject® ultra 17 70 010 and 17 71 000xl with extended length for operation with narrow vessels and reduced risk of cross-contamination
- packed in plastic racks with hinged lids

Typ	Volume Range μ l	Length mm	Packaging	Quantity per Pack	Order No.
Pipet Tip aeroject® ultra tips xl, for all commonly used pipets, ratiopetta®	0,1-10	45,20	Racks 10 x 96	960	17 70 010
					
Pipet Tip aeroject® ultra tips, for all commonly used pipets, ratiopetta®	0,1-20	50,80	Racks 10 x 96	960	17 70 020
					
Pipet Tip aeroject® ultra tips, for all commonly used pipets, ratiopetta®	1-100	50,80	Racks 10 x 96	960	17 70 100
					
Pipet Tip aeroject® ultra tips, for all commonly used pipets, ratiopetta®	1-200	50,80	Racks 10 x 96	960	17 70 200
					
Pipet Tip aeroject® ultra tips, for all commonly used pipets, ratiopetta®	100-1.000	70,10	Racks 10 x 60	600	17 71 000
					
Pipet Tip aeroject® ultra tips, for all commonly used pipets, ratiopetta®	100-1.000	86,00	Racks 10 x 96	960	17 71 000xl
					

Serological Pipets



Serological Pipets

Glass-clear polystyrene (PS).

- free of RNase-, DNase-, DNA-, pyrogens
- sterile, individually packed
- packed plastic/paper
- weldless and from one mold – hence more accurate and stable and with minimal residual wetting
- permanent black-embossed graduations
- with color-coded cotton-wool plug for convenient identification, standard color code
- negative graduation for additional capacity
- 5, 10 and 25 ml pipets with scales for dispensed and the residual volumes

Positive Volume ml	Fig. No.	Negative Volume ml	Graduation ml	Length mm	Quantity per Pack	Order No.
1	1	0.3	0.01	271.50	500	31 01 011
1.1	–	–	0.5 – 1 – 1.1	273.50	500	31 01 012
2	2	0.4	0.02	273.50	500	31 02 011
2.2	–	–	0.5 – 1 – 2 – 2.1 – 2.2	273.50	500	31 02 012
5	3	3	0.1	295.00	250	31 05 011
5 short	4	3	0.1	221.00	200	31 05 013
5 wide tip	5	3	0.1	295.00	250	31 05 014
5 open end	6	3	0.1	295.00	250	31 05 114
10	7	3	0.1	295.00	200	31 10 011
10 short	8	3	0.1	223.00	100	31 10 013
10 wide tip	9	3	0.1	295.00	200	31 10 014
10 open end	10	3	0.1	295.00	200	31 10 114
25	11	2.6	0.2	345.00	100	31 25 011
50	12	5	0.5	323.00	100	31 50 011

Pipetting Aids

ratiolab® Accupetta Electronic Pipetting Aid

CE IVD

- can fill 25 ml pipet in less than 4 seconds
- safety valve and hydrophobic filters provide double protection against fluid penetration
- two different speed modes – high & low along with gravity drain
- the pump speed can also be fine-tuned by varying finger pressure on operating knobs for better control of speed
- cadmium-free environment-friendly NiMH batteries
- intelligent charger prevents over-charging/heating of batteries
- low battery indicator, power 2 x 1.2 V/1000 mAh
- battery service life: 8 hours continuous use
- battery charging time: 2 – 3 hours
- volumetric range: plastic or glass pipets from 0.1 ml to 100 ml
- 1 year guarantee

Order No. 32 00 300 Accupetta contains:

- 1x Accupetta
- 2x Rechargeable battery
- 1x Adapter for battery charger
- 2x Spare filter 0,45 µm
- 1x Wall mount for Accupetta

Product	Quantity per Pack	Order No.
ratiolab® Accupetta	1	32 00 300
Accessories:		
Spare silicone pipet adapter	1	32 00 301
Spare filter hydrophobic, non-sterile, 0.2 µm	1	32 00 302
Spare filter hydrophobic, non-sterile, 0.45 µm	1	32 00 303
Battery for Accupetta, set of 2	1	32 00 306
Battery charger for Accupetta	1	32 00 309
Adapter for battery charger	1	32 00 311
Wall mount for Accupetta	1	32 00 312



Pasteur-Plast Pipets

Pasteur-plast pipets

Pasteur-plast pipets render liquid handling simple and safe. Cross-contamination and carry-over simply cannot occur so that tedious clean-ups are unnecessary. In addition, there is no danger of glass breakage with the resulting danger of infectious material escaping. The pasteur-plast pipets are made of transparent polyethylene. They are inert to biological fluids and most acids. The low affinity of the surface reduces the loss of cells and valuable proteins through binding.

- soft, elastic bulb
- unbreakable – thus reduced risk of glass injury
- burr-free orifice for neat, clean and precise dispensing
- only external graduated pasteur-plast pipets with clearly visible embossed graduations
- sterile pasteur-plast pipets are gas-sterilized and individually packaged
- BSE-free
- can be used for food
- made of LD-PE
- usable up to medium temperature 70°C



Especially for urine analysis









Volume ml	Fig. No.	Graduation	Length mm	Max. Ø mm	Drop Volume µl	Drops per ml	Sterilized	Quantity per Pack	Order No.
0.1	1	–	84	2.70	–	–	–	1000	26 00 260
0.2	2	–	130	4.15	30	33	–	500	26 00 145
0.5	3	■	87	4.40	40	25	–	1.000	26 00 125
1.0 capillary	4	–	104	4.73	20	50	–	400	26 00 155
1.0	5	■	150	4.85	33	30	–	500	26 00 171
1.0	5	■	150	4.85	33	30	■	500 x 1	26 55 171
1.0	5	■	150	4.85	33	30	■	50 x 10	26 56 171
1.0	6	■	138	5.20	40	25	–	500	26 00 119
1.0 capillary	7	■	144	4.90	14	70	–	500	26 00 181
1.0 capillary	7	■	144	4.90	14	70	■	500 x 1	26 55 181
1.2	8	–	63	2.74	40	25	–	500	26 00 160
1.3	9	–	140	4.25	40	25	–	500	26 00 220
1.5	10	■	230	4.87	45	22	–	400	26 00 120
1.5	10	■	230	4.87	45	22	■	250 x 1	26 55 120

Pasteur-Plast Pipets



Volume ml	Fig. No.	Graduation	Length mm	Max. Ø mm	Drop Volume µl	Drop per ml	Sterilized	Quantity per Pack	Order No.
2.0	11	■	153	7.18	45	22	–	500	26 00 135
2.0	11	■	153	7.18	45	25	■	500 x 1	26 55 135
2.0	11	■	153	7.18	45	25	■	50 x 10	26 56 135
2.5	12	■	150	7.58	30	33	–	500	26 00 131
2.5	12	■	150	7.58	30	33	■	500	26 55 131
3.0 Macro	13	■	155	8.15	40	25	–	500	26 00 111
3.0 Macro	13	■	155	8.15	40	25	■	500 x 1	New 26 55 111
3.0 Macro	13	■	155	8.15	40	25	■	50 x 10	26 56 111
3.0 Micro	14	–	152	3.23	33	30	–	500	26 00 151
3.0 Micro	14	–	152	3.23	33	30	■	500 x 1	26 55 151
4.0	15	–	87	2.32	35	30	–	500	New 26 00 165
4.0	16	–	150	7.90	40	25	–	500	26 00 216
6.0 Macro	17	–	149	6.40	50	22	–	400	26 00 206
6.0 Macro	17	–	149	6.40	50	22	■	400 x 1	26 55 206
10.0	18	–	170	4.25	56	18	–	200	26 00 190
10.0	19	–	300	8.20	45	22	–	100	26 00 195

Dispenser Tips

	Volume setting				
	1	2	3	4	5
 1	1	2	3	4	5µl
 2	10	20	30	40	50µl
 3	25	50	75	100	125µl
 4	50	100	150	200	250µl
 5	0.25	0.5	0.75	1.0	1.25ml
 6	0.5	1.0	1.5	2.0	2.5ml
 7	1	2	3	4	5ml
 8					

Dispenser Tips

CE IVD

For serial pipettings

Dispenser Tips fit onto ratiolab® dispettea and Eppendorf Multipipette® 4780, Ritter Dispenser and Distriman (Gilson). Not autoclavable.

8 Adapters for 25 ml and 50 ml Dispenser Tips must be ordered separately.

Volume ml	Fig. No.	Description	Quantity per Pack	Order No.
0.5	1	non-sterile	100	29 00 101
1.25	2	non-sterile	100	29 00 102
2.5	3	non-sterile	100	29 00 103
5.0	4	non-sterile	100	29 00 104
12.5	5	non-sterile	100	29 00 105
25	6	non-sterile	50	29 00 109
50	7	non-sterile	25	29 00 106
Adapter	8	non-sterile	10	29 00 107

0.5	1	sterile, individually packed	100	29 10 101
1.25	2	sterile, individually packed	100	29 10 102
2.5	3	sterile, individually packed	100	29 10 103
5.0	4	sterile, individually packed	100	29 10 104
12.5	5	sterile, individually packed	100	29 10 105
25	6	sterile, individually packed	25	29 10 109
50	7	sterile, individually packed	25	29 10 106
Adapter	8	sterile, individually packed	5	29 10 107

Dispetta Dispenser



Dispetta Pipettor for Serial Dispensing

CE IVD

Convenient and robust instrument for serial dispensing with Dispenser Tips.

Five volume settings combined with seven Dispenser Tips sizes result in 35 different volumes from 10 µl to 5 ml.

The Dispenser Tip is filled similar to a syringe. After preselecting the dispensing volume the pipet button has to be pressed for each dispensing step.

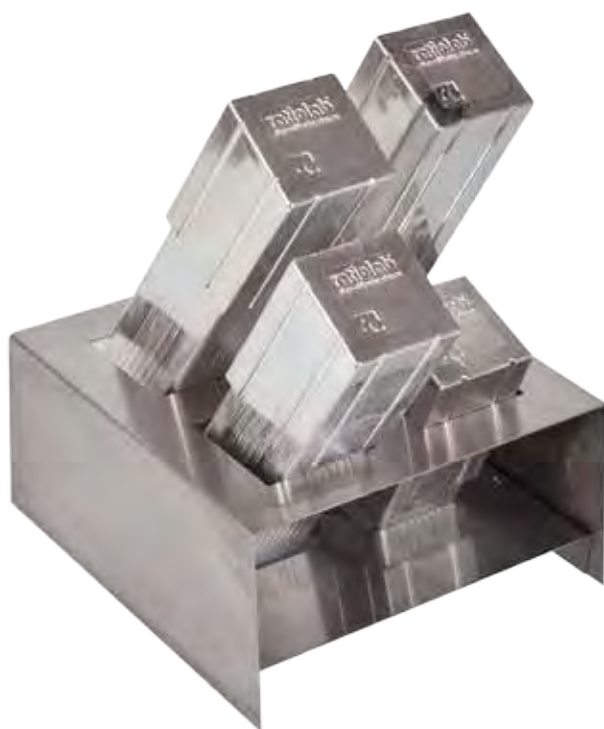
- ergonomic design and light weight for convenient handling
- smooth and fatigue-free operation even with long series
- precise and convenient volume setting
- clearly visible volume adjustment, optimized readability
- table with volume scale fixed directly onto the instrument
- precise gear mechanism for accurate and reproducible pipettings
- safe, rapid and easy exchange of Dispenser Tips
- maintenance-free
- long life due to robust design
- manual dispenser without electronic parts
- 2 years guarantee

Product	Quantity per Pack	Order No.
ratiolab® dispetta dispenser	1	29 80 200

Sterilizing Pipet Box



Sterilizing Pipet Box



Sterilizing Pipet Box

Aluminium.

Pipet boxes with optimized easy handling in every day's work. The cylindrical pipet boxes are the best option for autoclaving various glass items with a length from 150 to 480 mm like mixing rods, pasteur-, volumetric and graduated pipets.

- autoclaving: the new construction guarantees the entrance of steam into the container and optimizes the process of autoclaving
- opening and closing: soft sliding performance of top section onto the base section makes working easy
- base- and top section are filled with a silicon layer at the bottom as shock absorber to protect the glass items from splintering
- the sterilizing pipet boxes are available in 4 various lengths
- bottom: inside dimensions: 60 x 60 mm, external dimensions: 62 x 62 mm
- top: inside dimensions: 62,75 x 62,75 mm, outer dimensions: 68,70 x 68,70 mm

Stainless steel holder for 4 ratiolab® pipet box

- for practical storage up to 4 pipette boxes
- space-saving and safe storage of pipette boxes
- size D x W x H: 265 x 250 x 120 mm

Product	Length mm	Quantity per Pack	Order No.
Pipet box	160-200	1	31 70 200
Pipet box	235-305	1	31 70 305
Pipet box	315-385	1	31 70 385
Pipet box	315-485	1	31 70 485
Pipet box holder	-	1	New 31 70 100

Labware



Think! Development and production of customized products



Liquid handling products



Labware for general lab applications



Life science products for microbiology and biotechnology



Cryo products for deep-freeze applications

Cuvets

Disposable cuvettes have long replaced cuvettes once normally made of glass. New plastics coupled with modern methods of production allow photometric measurement well into the UV range.

Ultra-precision molds with several cavities – one per cuvette – are used for producing ratiolab® Q-VETTES and ratiolab® CUVETTES under controlled room conditions. Thus, in any one injection molding run several cuvettes are produced

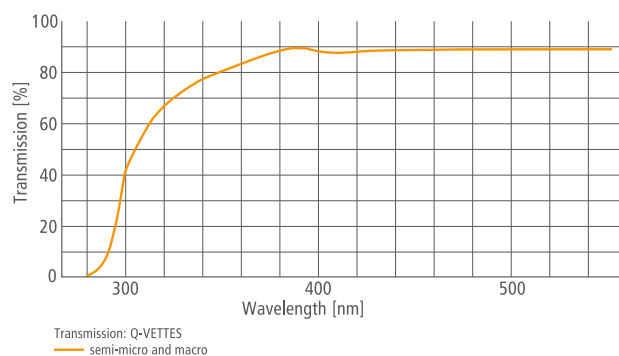
simultaneously. In order to prevent deviations in extinction coefficient values from occurring in any one run due to increased stray light, the cuvettes are automatically sorted according to their numbered cavities of origin. Each package shows the corresponding local production number of the cuvettes position in the net. So all cuvettes inside one styrofoam box are technical wise identical. Any measurement done with those identical cuvettes insures a high accuracy.



Q-VETTES

The new generation of cuvettes with clearly improved photometric properties. The optimized form and the small wall thickness of the cuvettes provides increased heat transfer resulting in more constant sample temperatures during photometric measurements.

- glass-clear polystyrene (PS)
- applicable wavelength range 340 to 900 nm
- very low variation of extinction values
- excellent optical transmission range
- cavity-sorted production
- path length 10 mm
- outer dimensions 12.5 x 12.5 x 45 mm
- supplied in practical styrofoam racks: 100 net identical cuvettes in a styrofoam box with closable lid



Product	Material	Volume ml	Packaging	Quantity per Pack	Order No.
ratiolab® Q-VETTES semi-micro	PS	1.6	styrofoam racks 10 x 100	1000	27 12 120
ratiolab® Q-VETTES macro	PS	4.0	styrofoam racks 10 x 100	1000	27 11 110

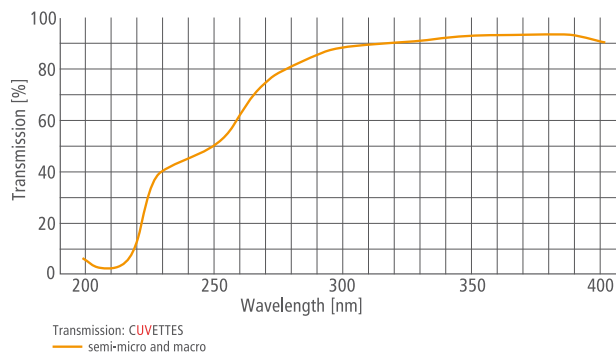


CUVETTES

For photometric measurements even in the UV range 220 nm

Due to the special plastic material and the excellent manufacturing process the cuvettes can also be used in photometric ranges reserved for UV glass cuvettes in the past.

- applicable wavelength range 220 to 900 nm
- very low variation of extinction values
- excellent optical transmission range
- cavity-sorted production
- path length 10 mm
- outer dimensions 12.5 x 12.5 x 45 mm
- supplied in practical styrofoam racks: 100 net identical cuvettes in a styrofoam box with a resealable cover



Product	Material	Volume ml	Packaging	Quantity per Pack	Order No.
ratiolab® CUVETTES semi-micro	UV	1.6	styrofoam rack 1 x 100	100	27 22 120
ratiolab® CUVETTES macro	UV	4.0	styrofoam rack 1 x 100	100	27 22 110



UV Micro Cuvets

For photometric measurements of proteins, ssDNA, dsDNA, RNA and oligonucleotides.

- application wavelength range 260 nm to 900 nm.
- suitable for measurements at 260 nm, 280 nm and within visible wavelength range
- applicable with low volumes from 70 µl
- path length 10 mm
- outer dimensions 12.5 x 12.5 x 45 mm
- two different center heights of 8.5 and 15 mm facilitate the application without any adaptor in all most commonly used spectro-photometers like Eppendorf® WPA, Analytik Jena, Biochrom and others.
- round caps 2812010 for safe closing and sample storage until -20°C
- supplied in practical styrofoam racks: 100 net identical cuvettes in a styrofoam box with a resealable cover

Product	Material	Center height mm	Volume µl	Packaging	Quantity per Pack	Order No.
CUVETTES micro	UV	8,5	70-850	styrofoam rack 1 x 100	100	27 22 130
CUVETTES micro	UV	15	70-550	styrofoam rack 1 x 100	100	27 22 131

Cuvets



Cuvets of PMMA

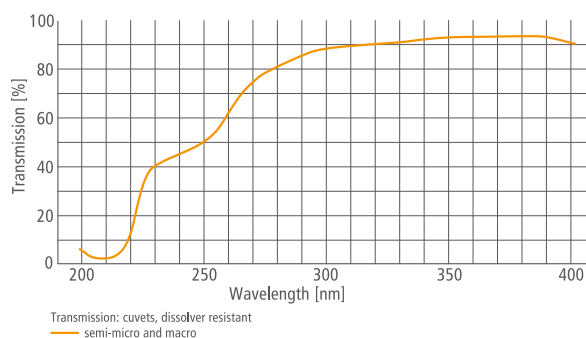
- cuvettes of polymethylmethacrylate (PMMA)
- applicable wavelength range 300 to 900 nm
- very low variation of extinction values
- excellent optical transmission range
- path length 10 mm
- outer dimensions 12.5 x 12.5 x 45 mm
- supplied in practical styrofoam racks: 100 net identical cuvettes in a styrofoam box with a resealable cover

Product	Material	Volume ml	Packaging	Quantity per Pack	Order No.
ratiolab® semi-micro cuvettes	PMMA	1.6	styrofoam racks 10 x 100	1000	28 10 100
ratiolab® macro cuvettes	PMMA	4.0	styrofoam racks 10 x 100	1000	28 11 110

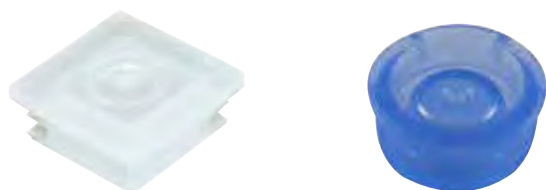


Cuvets, Solvent Resistant

- resistant against polar solvents
- applicable wavelength range 220 to 900 nm
- very low variation of extinction values
- excellent optical transmission range
- cavity-sorted production
- embossed areas aside the measuring fields reduces the risks of damaging the cuvette by the cuvette holder.
- path length 10 mm
- outer dimensions 12.5 x 12.5 x 45 mm
- supplied in practical styrofoam racks: 100 net identical cuvettes in a styrofoam box with a resealable cover



Product	Material	Volume ml	Packaging	Quantity per Pack	Order No.
ratiolab® semi-micro cuvettes	solvent resistant	1.6	styrofoam rack 1 x 100	100	27 25 120
ratiolab® macro cuvettes	solvent resistant	4.0	styrofoam rack 1 x 100	100	27 25 110



Stopper for Cuvets

Polypropylene (PP), or polyethylene (PE).

- solvent resistant
- stopper 2812010 suitable to UV-Cuvets Micro 2722130 and 2722131

Type	Material	Color	Packaging	Quantity per Pack	Order No.
for all ratiolab® Cuvets	PP	natural	bag 1 x 1000	1000	28 12 011
for UV-Cuvets micro	PE	blue	bag 1 x 100	100	New 28 12 010

Multicell Cuvets

Multicell Cuvets of PMMA

Ratiolab 12-cavity multicell cuvetts – suitable for Thermo Scientific analysers: Arena 20, 20XT, 30 and 60.

Arena applications cover processes from food / beverage industry, biochemical and pharmaceutical tests.

Fields of analysing:

- food (milk, meat, honey)
- beverages (wine, beer, juice)
- customised applications

CE IVD



Product	Material	Packaging	Quantity per Pack	Order No.
12-cavity multicell cuvetts	PMMA	40 packs of 25	1000	New 28 12 012

Analysis Beakers and Scintillation Vessels

Analysis Beakers

CE IVD*

Clear polystyrene (PS).

- high-precision design for use with robotic analytical systems Technicon T1 / T2; Gemaec G1 / Hitachi H1



Product	Fig. No.	Volume ml	Packaging	Quantity per Pack	Order No.
analysis beakers Technicon T1	1	2.0	1 x 1000	1000	57 00 110
analysis beakers Technicon T2	2	3.5	1 x 1000	1000	57 00 120
analysis beakers Gemaec G1	3	0.5	1 x 1000	1000	57 00 200
analysis beakers Hitachi H1	4	3.0	1 x 1000	1000	57 00 401

*except 5700120, 5700200



Scintillation Vessels

Natural polyethylene (HD-PE).

- high-precision design for use with robotic analytical systems
- insert tubes with special leakproof cap
- convenient opening and closing

Product	Fig. No.	Volume ml	Ø x H mm	Packaging	Quantity per Pack	Order No.
scintillation bottles with cap	1	20	27 x 60	cardboard box 1 x 1000	1000	58 10 100
caps for scintillation bottles	–	–	–	bag 1 x 1000	1000	58 10 10D
insert tubes with caps for scintillation bottles	2	5	14 x 56	cardboard box 2 x 1000	2000	58 10 110

Cell Counter Vials and Centrifuge Tubes



Cell Counter Vials

Cell counter vials made of clear polystyrene (PS).

- high-precision design for use with robotic analytical systems

Product	Fig. No.	Volume ml	Material	Packaging	Quantity per Pack	Order No.
for Coulter® and Hycel® cell counter systems						
Cell Counter Vial 1 with lid	1	25	PS	PS-tray 20 x 50	1000	55 15 010
Cell Counter Vial 1 with lid	1	25	PS	bags 4 x 250	1000	55 15 040
Cell Counter Vial 1 without lid	–	25	PS	bags 4 x 250	1000	55 15 041
lids for Cell Counter Vial 1	–	–	PE	bag 1 x 1000	1000	55 15 04D
for cell counter systems with cylindrical containers, e.g. Al® and Linson®						
Cell Counter Vial 2 without lid	2	20	PS	bag 1 x 1000	1000	55 15 051
stoppers for Cell Counter Vial 2, Ø 22 mm	–	–	PP	bag 1 x 1000	1000	55 15 052
Cell Counter Vial 3 with lid	3	13	PS	bags 4 x 500	2000	55 15 060
Cell Counter Vial 3 without lid	–	13	PS	bags 4 x 500	2000	55 15 061
lids for Cell Counter Vial 3	–	–	PE	bag 1 x 1000	1000	55 15 06D



Centrifuge Tubes

Polypropylene (PP).

- with round, conical bottom or self standing
- centrifuge tubes with red cap available with printed graduations and frosted writing field
- available non-sterile or sterile
- with red screw cap or closure

CE IVD*

Volume ml	Fig No.	Bottom	Centrifugable g	Sterilized	Ø x H mm	Packaging	Quantity per Pack	Order No.
12	1	round	30000	–	18 x 98	bag 1 x 100	100	38 14 020
15	2	conical	3000	–	17 x 120	bags 30 x 25	750	33 00 005
15	2	conical	3000	■	17 x 120	bags 30 x 25	750	33 00 006
50	3	conical	3000	–	30 x 115	bags 12 x 25	300	33 00 001
50	3	conical	3000	■	30 x 115	bags 12 x 25	300	33 00 002
50	4	self-standing	3000	–	30 x 115	bags 10 x 25	250	33 00 003
50	4	self-standing	3000	■	30 x 115	bags 10 x 25	250	33 00 004

*except 3814020

Microcentrifuge Tubes

CE IVD*

Microcentrifuge Tubes

Polypropylene (PP) or translucent Polyethylene (LD-PE).

- autoclavable with opened cap at 121 °C, 20 min, (except 5615400)
- natural color or different colors for comfortable identification
- tight sealing cap
- safe and easy to be opened and closed
- 5615005 and 5615106: free of DNase-, RNase-, pyrogens-, Human DNA-, PCR inhibitors



Volume ml	Fig. No.	Material	Cap	Color	Packaging	Quantity per Pack	Order No.
0.4 Beckman	1	PE	■	natural	1 x 1000	1000	56 15 400
0.5	2	PP	■	natural	1 x 1000	1000	56 15 030
1.5	3	PP	■	natural	2 x 500	1000	56 15 000
1.5	–	PP	■	yellow	2 x 500	1000	56 15 001
1.5	–	PP	■	green	2 x 500	1000	56 15 002
1.5	–	PP	■	red	2 x 500	1000	56 15 003
1.5	–	PP	■	blue	2 x 500	1000	56 15 004
1.5	3	PP	■	natural	1 x 1000	1000	New 56 15 005
1.5	4	PP	–	natural	1 x 1000	1000	56 15 020
2.0	5	PP	■	natural	1 x 1000	1000	56 15 101
2.0	5	PP	■	natural	1 x 1000	1000	New 56 15 106

*except 5615030

Safety-Cap Microcentrifuge tubes

Polypropylene (PP).

The new cap sealing of test tubes ensures an extreme tightness which is essential for applications with valuable samples, radioactive materials and DNA.

- autoclavable with opened cap at 121 °C, 20 min
- 0,5 ml and 1,5 ml centrifugable up to 30.000g
- 2,0 ml centrifugable up to 20.000g
- free of DNase-, RNase-, PCR Inhibitors
- free of endotoxin-, human DNA and ATP
- produced in microbiologically controlled clean room ISO Class 8 146441-1
- optimal tightness due to tight serration at the cap and tight channel at the tube; thereby a low evaporation is guaranteed
- secured shut due to form-closed cap lock; accidental opening of the lid during incubation is not possible
- high chemical resistance
- labeling areas on the cap and tube
- graduated for easy determination of the volume

The additional safety lock prevents uncontrolled opening of the tubes.



Volume ml	Fig. No.	Packaging	Quantity per Pack	Order No.
0,5	1	2 x 500	1000	56 15 038
1,5	2	1 x 1000	1000	56 15 008
2,0	3	2 x 500	1000	56 15 108

free of DNase/RNase,
DNA and ATP

Microcentrifuge Tubes and Micro Centrifuge

free of DNase, RNase
and pyrogens

CE IVD

Microcentrifuge tubes with screw cap and O-Ring Seal

Polypropylene (PP).

- with conical bottom or additional self-standing
- sterilized
- centrifugable up to approx. 25.000 g
- temperature-resistant from -80°C to $+121^{\circ}\text{C}$
- autoclavable up to $+121^{\circ}\text{C}$
- \varnothing x H: 13.1 x 48 mm
- re-sealable bags



Volume ml	Fig. No.	Bottom	Labeling Area	Sterilized	Packaging	Quantity per Pack	Order No.
0.5	1	self-standing	–	■	2 x 500	1000	56 16 021
0.5	2	conical	–	■	2 x 500	1000	56 16 023
1.5	3	self-standing	■	■	2 x 500	1000	56 16 022
1.5	4	conical	■	■	2 x 500	1000	56 16 027
2.0	5	self-standing	■	■	2 x 500	1000	56 16 026
2.0	6	conical	■	■	2 x 500	1000	56 16 025



Micro Centrifuge for PCR Strips and Microcentrifuge Tubes

Space- and energy-saving micro centrifuge with adequate power for routine centrifugations.

- speed 7000/min, max RCF 2680 x g
- lid must be closed for operation mode
- safety: the lid can only be opened when the rotor is not rotating
- rapid start and stop within seconds
- power supply AC100-240V/50Hz/60Hz
- diameter 150 mm, height 117 mm, weight 0.5 kg
- 1 year guarantee
- supplied complete with two rotors:
 - rotor 1 for: 8 microcentrifuge tubes 0.5 ml till 2.0ml
 - rotor 2 for: 16 microcentrifuge tubes 0.2 ml or two pcr strips of 8 tubes 0.2 ml

Product	Quantity per Pack	Order No.
Micro Centrifuge with two rotors	1	71 00 007

Test Tubes and Stoppers

CE IVD*

Test Tubes

Clear polystyrene (PS) or translucent polypropylene (PP).



Product	Fig. No.	Ø x H mm	Material	Volume ml	Bottom	Packaging	Quantity per Pack	Order No.
RIA tubes	1	11 x 70	PS	4	round	bags 4 x 250	1000	35 14 040
coagulometer tubes	2	12 x 55	PS	4	round	bag 1 x 1000	1000	30 14 030
test tubes	3	12 x 75	PS	5	round	bag 1 x 1000	1000	35 14 030
test tubes	4	12 x 75	PP	5	round	bag 1 x 1000	1000	35 14 031
test tubes	3	13 x 75	PS	5.1	round	bag 1 x 1000	1000	35 14 032
test tubes	4	13 x 75	PP	5.1	round	bag 1 x 1000	1000	35 14 033
test tubes	5	16 x 100	PS	12	round	bag 1 x 1000	1000	37 14 010
test tubes	6	16 x 100	PP	12	round	bag 1 x 1000	1000	38 14 010
test tubes	7	18 x 105	PS	12	conical	bag 1 x 1500	1500	35 20 000
test tubes	8	18 x 105	PS	12	round	bag 1 x 1500	1500	36 22 000

*except 3014030, 3714010

Stoppers for test tubes, Ø 11 – 12 mm

Polyethylene (PE).

- very tight seal due to 2 sealing rings
- available in natural and 4 more colors
- fit to test tube: figure 1-5



Color	Packaging	Quantity per Pack	Order No.
natural	bag 1 x 1000	1000	35 14 900
blue	bag 1 x 1000	1000	35 14 90B
green	bag 1 x 1000	1000	35 14 90G
red	bag 1 x 1000	1000	35 14 90R
yellow	bag 1 x 1000	1000	35 14 90Y

Stoppers for test tubes, Ø 16 – 17 mm

Polyethylene (PE).

- very tight seal due to 2 sealing rings
- available in natural and 4 more colors
- fit to test tube: figure 6-7



Color	Packaging	Quantity per Pack	Order No.
natural	bag 1 x 1000	1000	39 14 900
blue	bag 1 x 1000	1000	39 14 90B
green	bag 1 x 1000	1000	39 14 90G
red	bag 1 x 1000	1000	39 14 90R
yellow	bag 1 x 1000	1000	39 14 90Y

Multistand Rack and Rack for Microcentrifuge Tubes



Multistand Rack

Polyoxymethylen (POM).

With the ratiolab® Multistand you have the opportunity to use it with several microcentrifuge tubes, cryo tubes and test tubes with different diameters through the patented holder to fix safely.

- for tubes Ø 10 to Ø 17 mm
- dishwasher safe
- max. working temperature: 90 °C



The special designed inner clamps (patent) fixes the test tubes centric and vertical at any time.



Color	Positions	W x D x H mm	Quantity per Pack	Order No.
white	5 x 5	105 x 105 x 42	1	37 12 101

Rack for Microcentrifuge Tubes

Polypropylene (PP).

Ideal for the secure handling of reaction vessels. Space-saving on the laboratory bench due to its narrow form. Practical side grips.

- 5 x 16 wells for 1.5 and 2.0 ml reaction vessels
- autoclavable at 121 °C
- temperature-resistant from – 80 °C to +121 °C
- 225 mm x 65 mm x 28 mm (LxWxH)

Color	For micro tubes	Positions	Quantity per Pack	Order No.
green	1.5 – 2.0 ml	5 x 16	5	37 12 006
pink	1.5 – 2.0 ml	5 x 16	5	37 12 008
blue	1.5 – 2.0 ml	5 x 16	5	37 12 005
orange	1.5 – 2.0 ml	5 x 16	5	37 12 007
yellow	1.5 – 2.0 ml	5 x 16	5	37 12 009



Multipurpose Containers

sterilized available
on request



Multipurpose container

Polypropylene (PP).

The best round containers for sampling or storing of liquids, paste or powder medicine.

- for easy identification and the option to mark them with a pen the containers are white
- suitable for freezer storage
- open autoclavable at 121 °C
- supplied: container with separate screw-cap, non-sterile
- can be used for food

Volume ml	Ø mm	Height mm	Packaging	Quantity per Pack	Order No.
35	38	48	cardboard box 1 x 350	350	New 59 26 035
60	45	57	cardboard box 1 x 350	350	New 59 26 060
125	57	68	cardboard box 1 x 350	350	New 59 26 125
375	81	99	cardboard box 1 x 120	120	New 59 26 375
500	97	92	cardboard box 1 x 160	160	New 59 26 500
1000	113	129	cardboard box 1 x 80	80	New 59 26 998
1250	113	161	cardboard box 1 x 70	70	New 59 26 999

sterilized available
on request



Multipurpose container

Polypropylene (PP).

The best round containers for sampling or storing of liquids, paste or powder medicine.

- for easy identification and the option to mark them with a pen the containers are white
- suitable for freezer storage
- open autoclavable at 121 °C
- supplied: container with separate screw-cap, non-sterile

Volume ml	Fig. No.	Ø mm	Height mm	Packaging	Quantity per Pack	Order No.
50	1	35	74	cardboard box 1 x 200	200	59 23 050
250	2	65	90	cardboard box 1 x 100	100	59 23 250
500	3	90	86	cardboard box 1 x 72	72	59 23 500

Multipurpose Containers and Wide-neck Bottles



Multipurpose container

Polypropylene (PP).
Closure made of high quality polyethylene (HD-PE).

The best round containers for sampling or storing of liquids, paste or powder medicine.

- for easy identification and the option to mark them with a pen the containers are white
- suitable for freezer storage
- with originality seal ring on the closure
- supplied: container with separate screw-cap, non-sterile
- can be used for food

Volume ml	Ø mm	Height mm	Packaging	Quantity per Pack	Order No.
100	62	53	cardboard box 1 x 150	150	New 59 27 100
250	77	74	cardboard box 1 x 120	120	New 59 27 250
500	100	92	cardboard box 1 x 70	70	New 59 27 500
1000	116	130	cardboard box 1 x 30	30	New 59 27 999



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Wide-neck bottle, square bottom

High quality polyethylene (HD-PE).

- color: natural, translucent
- for easy identification the closure is made of blue polypropylene
- with originality seal ring on the closure
- 250 ml and 500 ml bottle with UN approval 3H1/x0.8/S
- supplied: bottle and separate closure, non-sterile

Volume ml	Fig. No.	Neck Ø mm	Height mm	W x D mm	Packaging	Quantity per Pack	Order No.
50	1	28	88	36 x 36	cardboard box 1 x 100	100	59 24 050
250	2	45	129	59 x 59	cardboard box 1 x 100	100	59 24 250
500	3	54	162	75 x 75	cardboard box 1 x 50	50	59 24 500

Multi Purpose Beaker System and Multi Purpose bottles



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Multi Purpose Beakers

Glass-clear polystyrene (PS).

- volume 100 ml, with graduation
- self-adhesive film cover, leakproof and easily labelled
- comfortable sampling, the film cover can be pierced with pipet tips
- practical packaging, 50 multi purpose beakers are stacked in PE-bags for use with the beaker dispenser

Product	Packaging	Quantity per Pack	Order No.
ratiolab® multi-purpose beakers with cover	bags 20 x 50	1000	59 21 170
ratiolab® multi-purpose beakers without cover	bags 20 x 50	1000	59 21 171
self-adhesive film covers for beakers	bag 1 x 500	500	59 21 160

Beaker Tray and Beaker Dispenser for Multi Purpose Beakers

Beaker Tray: Robust plastics with easy-to-clean surface.

- for 10 ratiolab® multi purpose beakers

Beaker Dispenser: Robust plastics with easy-to-clean surface.

- for 50 ratiolab® multi purpose beakers
- for individual beaker dispensing
- glass-clear dispenser door for refills makes stock visible
- separate side box for stocking of self-adhesive film covers

Product	Fig. No.	Quantity per Pack	Order No.
ratiolab® beaker tray	1	1	59 21 200
ratiolab® beaker dispenser	2	1	59 21 190

Multi Purpose bottles

Polyethylene, blue translucent (PE).

- inclusive lid with nonwoven fabric liner
- with graduations, light protection
- wide neck diameter 80 mm
- Volume: 2.5 l

Product	Packaging	Quantity per Pack	Order No.
Multi purpose bottle 2.5 l with self-adhesive labels	cardboard box 1 x 60	60	59 22 250
lids for Multi purpose bottle 2.5 l	bag 1 x 100	100	59 22 204
self-adhesive labels for Multi purpose bottle 2.5 l	bag 1 x 100	100	59 22 253

Multi Purpose Beakers and Cleanibag System

CE IVD

Multi Purpose beakers with screw-caps

Polypropylene (PP) or polystyrene (PS).

For sampling, transport and storage of solid, pasty and liquid samples.

- with red screw-cap
- supplied in non-sterile or sterile, individually packed



Volume ml	Fig. No.	Material	Graduation and Labeling area	Sterilized	Height with cap, mm	Ø cap, outer, mm	Packaging	Quantity per Pack	Order No.
30	1	PP	–	–	47	43	cardboard box 1 x 1000	1000	59 21 173
30	1	PP	–	■	47	43	bags 500 x 1	500	59 21 174
60	2	PP	■	–	66	43	cardboard box 1 x 600	600	59 21 175
60	2	PP	■	■	66	43	bags 500 x 1	500	59 21 176
120	3	PP	■	–	73	63	cardboard box 1 x 500	500	59 21 182
120	3	PP	■	■	73	63	bags 250 x 1	250	59 21 183
200	4	PP	–	–	80	64	cardboard box 1 x 200	200	59 21 185
200	4	PP	–	■	80	64	bags 150 x 1	150	59 21 184
200	5	PS	–	■	82	64	bags 150 x 1	150	59 21 188



Cleanibag System

All-purpose PE bags with self-adhesive strip for clinical and laboratory use.

- self-adhesive strip, sticks on smooth and clean surfaces (e.g. walls, work benches, beds, bedside tables)
- residue-free on removable

On request: other sizes, including for intensive care, bags with custom-made imprint

W x H mm	Volume approx. l	Packaging	Quantity per Pack	Order No.
200 x 300	1.5	cardboard box 1 x 1000	1000	70 00 250
300 x 300	6.5	cardboard box 1 x 1000	1000	70 00 260
300 x 450	8	cardboard box 1 x 1000	1000	70 00 270

Autoclavable Bags BIOHAZARD

Indicator patch



Autoclavable bags BIOHAZARD red – Warning Instruction and sterilization indicator patch

Polyethylene (PE).

Distinctive red autoclavable bags for easy identification, for the disposal of contaminated labware.

- rectangle white indicator patch field turns into dark when autoclaved
- with BIOHAZARD symbol and safety imprint in English, German, French and Spanish languages
- autoclavable at 121 °C, for autoclaving, the bag must not be completely closed
- practical bench-top stand, plastic-coated, with 3 rubber feet only in large bagy autoclaving

W x H mm	Volume approx. l	Film Thickness	Packaging	Quantity per Pack	Order No.
210 x 290	1.5	20 µm	cardboard box 10 x 100	1000	70 02 110
Set consisting of bench-top stand and 100 red waste disposal bags 210 x 290 mm				1	70 01 410

Autoclavable bags BIOHAZARD – Warning Instruction and sterilization indicator patch

Polypropylene (PP).

Autoclavable disposable waste bag of very strong PP-film with a broad seam at the bottom, for the sterilization and disposal of hazardous and contaminated labware.

- rectangle white indicator patch field turns into dark when autoclaved
- with BIOHAZARD symbol and safety imprint in English, German, French and Spanish language
- autoclavable at 134 °C, for autoclaving, the bag must not be completely closed



W x H mm	Volume approx. l	Film Thickness	Packaging	Quantity per Pack	Order No.
300 x 500	8	50 µm	cardboard box 1 x 100	100	New 70 02 105
300 x 500	8	50 µm	cardboard box 1 x 500	500	70 02 100
400 x 780	38	50 µm	cardboard box 1 x 100	100	New 70 02 155
400 x 780	38	50 µm	cardboard box 1 x 500	500	70 02 150
600 x 800	60	50 µm	cardboard box 1 x 100	100	New 70 02 205
600 x 800	60	50 µm	cardboard box 1 x 500	500	70 02 200
700 x 1100	110	50 µm	cardboard box 1 x 75	75	New 70 02 305
700 x 1100	110	50 µm	cardboard box 1 x 350	350	70 02 300



Autoclavable bags BIOHAZARD red – Warning Instruction and sterilization indicator patch

Polypropylene (PP).

Distinctive red autoclavable bags for easy identification, for the disposal of contaminated labware.

- rectangle white indicator patch field turns into dark when autoclaved
- with BIOHAZARD symbol and safety imprint in German, English and French language
- autoclavable at 134 °C, for autoclaving, the bag must not be completely closed
- marking maximum filling

W x H mm	Volume approx. l	Film Thickness	Packaging	Quantity per Pack	Order No.
400 x 780	38	50 µm	cardboard box 1 x 500	500	New 70 03 210
600 x 800	60	50 µm	cardboard box 1 x 500	500	New 70 03 220

Autoclavable Bags



Autoclavable bags BIOHAZARD yellow – Warning Instruction and sterilization indicator patch

Polyethylene (HD-PE).

Autoclavable disposable waste bag of very strong PE-film with a broad seam at the bottom, for the sterilization and disposal of hazardous and contaminated labware.

- rectangle white indicator patch field turns into dark when autoclaved
- with BIOHAZARD symbol and safety imprint in German, English and French language
- autoclavable at 121 °C, for autoclaving, the bag must not be completely closed
- marking maximum filling

W x H mm	Volume approx. l	Film Thickness	Packaging	Quantity per Pack	Order No.
300 x 500	8	50 µm	cardboard box 1 x 500	500	70 03 100
600 x 800	60	50 µm	cardboard box 1 x 500	500	70 03 120

Autoclavable bags, Standard

Bags of very strong PP-film with a broad seam at the bottom, for the disposal of contaminated labware.

- autoclavable at 134 °C, for autoclaving, the bag must not be completely closed
- only for bag size 200 x 300 mm and 300 x 500 mm: practical bench-top stand, plastic-coated, with 3 rubber feet



W x H mm	Volume approx. l	Film Thickness	Packaging	Quantity per Pack	Order No.
200 x 300	2.5	50 µm	dispenser 1 x 100	100	70 01 000
300 x 500	8	50 µm	cardboard box 1 x 500	500	70 01 100
400 x 780	38	50 µm	cardboard box 1 x 500	500	70 01 150
600 x 800	60	50 µm	cardboard box 1 x 500	500	70 01 200
600 x 800	60	50 µm	cardboard box 1 x 100	100	70 01 210
600 x 800	60	100 µm	cardboard box 1 x 125	125	70 01 212
700 x 1100	110	50 µm	cardboard box 1 x 350	350	70 01 300
700 x 1100	110	50 µm	cardboard box 1 x 75	75	70 01 310
700 x 1100	110	100 µm	cardboard box 1 x 75	75	70 01 311
bench-top stand for waste disposal bags 200 x 300 mm, High 25 cm				1	70 01 400
Set consisting of bench-top stand and 100 waste disposal bags (standard) 200 x 300 mm				1	70 01 401
bench-top stand for waste disposal bags 300 x 500 mm, High 35 cm				1	70 01 430
Set consisting of bench-top stand and 100 waste disposal bags (standard) 300 x 500 mm				1	70 01 415

Autoclavable bags, High Transparency

Bags of very strong PP-film with a broad seam at the bottom, for the disposal of contaminated labware.

- autoclavable at 121 °C, for autoclaving, the bag must not be completely closed
- only for bag size 200 x 300 mm and 300 x 500 mm: practical bench-top stand, plastic-coated, with 3 rubber feet



W x H mm	Volumen approx. l	Film Thickness	Packaging	Quantity per Pack	Order No.
200 x 300	2.5	50 µm	dispenser 1 x 100	100	70 01 005
300 x 500	8	50 µm	cardboard box 1 x 500	500	70 01 105
400 x 780	38	50 µm	cardboard box 1 x 500	500	70 01 155
600 x 800	60	50 µm	cardboard box 1 x 500	500	70 01 205
700 x 1100	110	50 µm	cardboard box 1 x 350	350	70 01 305
bench-top stand for waste disposal bags 200 x 300 mm, High 25 cm				1	70 01 400
Set consisting of bench-top stand and 100 waste disposal bags (high transparency) 200 x 300 mm				1	70 01 405
bench-top stand for waste disposal bags 300 x 500 mm, High 35 cm				1	70 01 430
Set consisting of bench-top stand and 100 waste disposal bags (high transparency) 300 x 500 mm				1	70 01 420

Petri Dishes, Inoculating Loops, Incubator



Petri Dishes

CE IVD

Transparent polystyrene (PS).
Uncoated, with vents. Sterilized or clean as produced.

Ø x H mm	Description	Packaging	Quantity per Pack	Order No.
60 x 14	with vents	50 x 10	500	90 50 006
60 x 14	sterilized, with vents	50 x 10	500	90 50 106
90 x 15	with vents	25 x 20	500	90 50 000
90 x 15	sterilized, with vents	25 x 20	500	90 50 100
147 x 18	with vents	11 x 20	220	90 50 004
147 x 18	sterilized, with vents	11 x 20	220	90 50 104
65 x 14	with triple vents with compartments	25 x 20	500	90 50 005
65 x 14	sterilized, with triple vents with compartments	25 x 20	500	90 50 105



Inoculating Loops

CE IVD

Made of polystyrene (PS).

- hexagonal handle for safe handling
- beta-sterile
- sterile, individually packed in easy to open peel-packs

Product	Packaging	Quantity per Pack	Order No.
1 µl inoculating loops	100 peel-packs of 20	2000	70 20 100
10 µl inoculating loops	100 peel-packs of 20	2000	70 20 200



Thermocult Incubator

CE

Compact incubator for bacteriology. Fixed temperature setting at 35 ± 2°C, adjustable up to 42°C, with built-in control thermometer. Glass-clear plastic door for visual control. The incubator can be placed on work benches or set up on walls.

- inside size (W x D x H): 210 x 145 x 110 mm, for up to 20 tissue cultures or 8 petri dishes
- outside size (W x D x H): 300 x 170 x 150 mm
- weight: approx. 1.3 kg, power: 230 V, 30 W
- shelf available separately
- 2 year guarantee

Product	Quantity per Pack	Order No.
Thermocult Incubator	1	90 22 000
shelf	1	90 22 001

Ear Tips, Ear Funnels



Ear Tips, Ear Funnels



Hygienic and safe disposable products. Once attached, they remain fixed on most commonly used otoscopes. Ergonomic and smoothly formed. No sharp edges.

Ear Tips

Made of high quality polystyrene (PS).

- for Heine K180®, Mini 3000®, Beta 200®, KaWe Piccolight C®, Riester ri-mini® otoscopes
- high precision
- the hygienic disposable alternative

Ø mm	Color	Packaging	Quantity per Pack	Order No.
2.5	black	bags 20 x 50	1000	10 20 340
2.5	black	bags 2 x 500	1000	10 20 350
2.5	black	bag 1 x 1000	1000	10 20 330
2.5	grey	bags 20 x 50	1000	10 20 250
2.5	grey	bags 2 x 500	1000	10 20 260
2.5	grey	bag 1 x 1000	1000	10 20 230
4.0	black	bags 20 x 50	1000	10 20 341
4.0	black	bags 2 x 500	1000	10 20 351
4.0	black	bag 1 x 1000	1000	10 20 331
4.0	grey	bags 20 x 50	1000	10 20 251
4.0	grey	bags 2 x 500	1000	10 20 261
4.0	grey	bag 1 x 1000	1000	10 20 231

Ear Funnels

Made of high quality polystyrene (PS).

- for Heine Beta 100® otoscopes
- high precision
- the hygienic disposable alternative

Ø mm	Color	Packaging	Quantity per Pack	Order No.
2.5	black	bag 1 x 1000	1000	10 20 240
2.5	black	bags 2 x 500	1000	10 20 243
2.5	black	bags 20 x 50	1000	10 20 540
4.0	black	bag 1 x 1000	1000	10 20 241
4.0	black	bags 2 x 500	1000	10 20 242
4.0	black	bags 20 x 50	1000	10 20 541

® registered trade mark

Life Science



Think! Development and production of customized products



Liquid handling products



Labware for general lab applications



Life science products for microbiology and biotechnology



Cryo products for deep-freeze applications

Micro Test Plates

96-Well Micro Test Plates, volume approx. 300 µl

Clear polystyrene (PS) or translucent polypropylene (PP).

- with U-, F-, or V-bottom
- SBS standard micro test plate format
- 8 x 12 wells alphanumerically coded
- wells with raised rims for reduced cross-contamination and effective sealing with Ratiolab cover films (see on page 67)
- precise design, perfectly shaped for use with automatic systems
- optimum space for precise positioning
- space-saving and stackable
- polypropylene plates may be sealed with heat-sealing films without deformation



PS



PP



Bottom	Material	Sterilized	Packaging	Quantity per Pack	Order No.
U	PS	–	bags 10 x 10	100	60 18 111
U	PS	■	individually in bags 100 x 1	100	60 18 113
U	PP	–	bags 10 x 10	100	60 18 121
U	PP	■	individually in bags 100 x 1	100	60 18 123
F	PS	–	bags 10 x 10	100	60 18 211
F	PS	■	individually in bags 100 x 1	100	60 18 213
F	PP	–	bags 10 x 10	100	60 18 221
F	PP	■	individually in bags 100 x 1	100	60 18 223
V	PS	–	bags 10 x 10	100	60 18 311
V	PS	■	individually in bags 100 x 1	100	60 18 313
V	PP	–	bags 10 x 10	100	60 18 321
V	PP	■	individually in bags 100 x 1	100	60 18 323

Micro Test Plates, Spot Test Plates



96-Well Micro Test Plates, volume approx. 300 µl

Polypropylene (PP) or polystyrene (PS).

- with U-bottom or with F-bottom
- SBS standard micro test plate format
- 8 x 12 wells alphanumerically coded
- wells with raised rims for reduced cross-contamination and effective sealing with Ratiolab cover films (see on page 67)
- precise design, perfectly shaped for use with automatic systems
- optimum space for bar code labels on the side walls
- space-saving and stackable
- surface untreated

Bottom	Material	Color	Packaging	Quantity per Pack	Order No.
U	PP	black	bags 10 x 10	100	60 18 710
U	PS	black	bags 10 x 10	100	60 18 711 New
U	PP	white	bags 10 x 10	100	60 18 712 New
U	PS	white	bags 10 x 10	100	60 18 713 New
F	PP	black	bags 10 x 10	100	60 18 717 New
F	PS	black	bags 10 x 10	100	60 18 718 New
F	PP	white	bags 10 x 10	100	60 18 719 New
F	PS	white	bags 10 x 10	100	60 18 720 New

Lids for Micro Test Plates

Optional in highly transparent polystyrene (PS) or polypropylene (PP).

Material	Sterilized	Packaging	Quantity per Pack	Order No.
PS	–	bags 10 x 10	100	60 18 402
PS	■	individually in bags 100 x 1	100	60 18 401
PP	–	bags 10 x 10	100	60 18 422
PP	■	individually in bags 100 x 1	100	60 18 421

Spot test plates

Polystyrene (PS), white.

- No. of moulds 12
- L x W x H: 135 x 109 x 10 mm

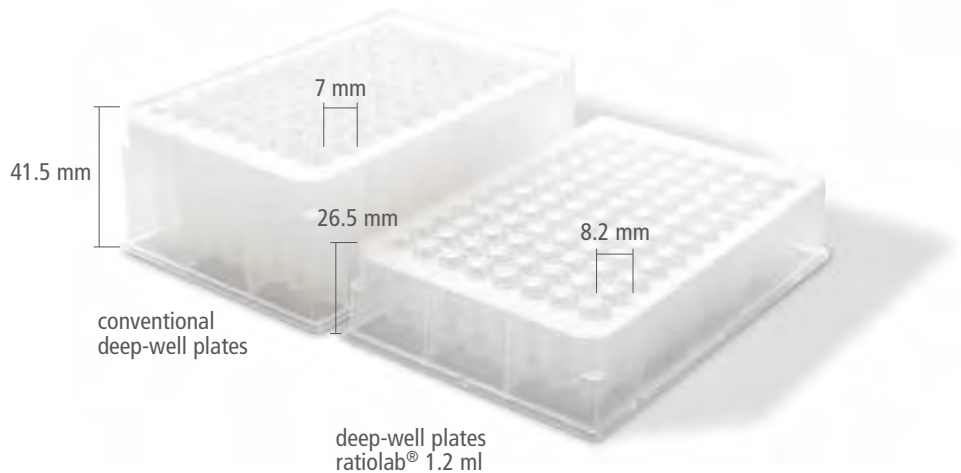
Ø Mould mm	Packaging	Quantity per Pack	Order No.
20	bag 1 x 100	100	60 18 060 New

Deep-Well-Plates

Low-Profile Deep-Well Plates (96)

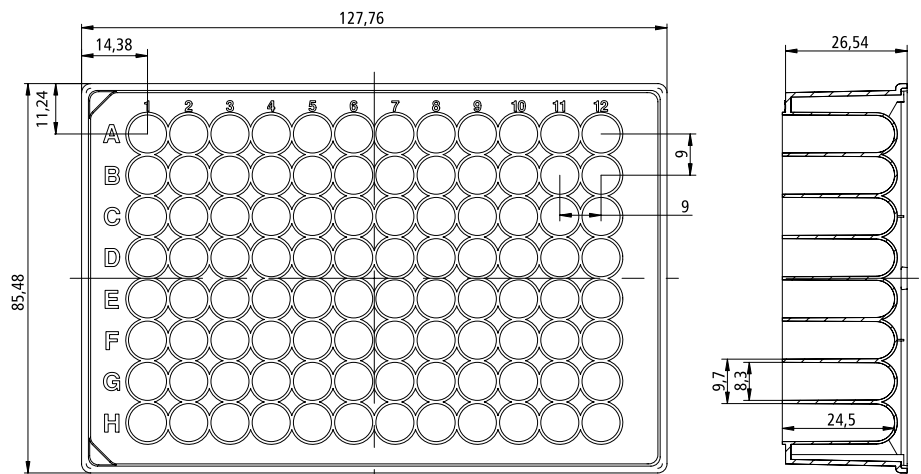
These 1.2 ml low-profile deep-well plates are ideal for pharmaceuticals, biotechnology and diagnostics. Of the same standard dimensions (Society for Biomolecular Sciences – SBS), they are one-third lower than standard deep-well plates (96). They thus require less space! Requiring some 30% less space, they help to optimize warehouse space, hence lowering costs – especially for expensive cryo-storage applications.

The cavities are some 20% larger than conventional plates. Thus, when used with robots, they provide additional security. The chimney form of the wells reliably prevents cross-contamination. Their precise, true-to-size form makes them highly suitable for high-throughput screening (HTS).



Clear polypropylene (PP).

- about half as high as conventional deep-well plates at 1.2 ml fill volume
- SBS standard micro test plate format
- well with significantly larger cross section
- wells with raised rims for reduced cross-contamination
- improved visual control due to clear polypropylene
- autoclavable at 121 °C, 20 min
- temperature resistant to – 80 °C
- 8 x 12 wells with alphanumeric code in micro test plate format
- optimally sealing with Ratiolab cover films (see on page 67)
- precise design, for use in automatic pipetting systems for High Throughput Screening (HTS)
- optimum space for bar code labels on the side walls
- space-saving and stackable



Deep-Well-Plates

Deep-Well-Plates

Translucent polypropylene (PP), surface with very low protein binding.



Volume per Well ml	Fig No.	Well	Bottom	Packaging	Quantity per Pack	Order No.
1.2 Low Profile	1	96	U	bags 10 x 5	50	81 01 012
1.2	2	96	U	bags 10 x 5	50	60 20 121
2.0	3	96	V	bags 10 x 5	50	60 20 221
3.5	4	48	U	bag 1 x 24	24	60 20 231
4.6	5	48	U	bag 1 x 24	24	60 20 241

New
New

Closures for Deep-Well-Plates



Closures for 96-Well Deep-Well-Plates Low Profile, 1.2 ml

Made of thermo-plastic elastomer (TPE).

- suitable to 81 01 012
- autoclavable at 121 °C, 20 min

Product	Fig. No.	Material	Packaging	Quantity per Pack	Order No.
96-well-cover mats	1	TPE	cardboard box 10 x 10	100	81 01 101

Closures for 96-Well Deep-Well-Plates

Made of thermo-plastic elastomer (TPE) or ethylene vinyl acetate (EVA).

- closures 82 00 008 and 82 00 009 suitable to Deep-Well-Plate 60 20 121
- closures 82 00 010 suitable to Deep-Well-Plate 60 20 221

Product	Fig. No.	Material	Packaging	Quantity per Pack	Order No.
1.2 ml 8-well-cover strips	2	TPE	bag 1 x 1000	1000	82 00 008
1.2 ml 96-well-cover mats	3	TPE	bags 10 x 10	100	82 00 009
2.2 ml 96-well-cover mats*	4	EVA	bags 50 x 1	50	82 00 010

*for 96-square well plates

Reagent Reservoirs

Reagent Reservoirs

Translucent polypropylene (PP).

- for use in manual and automated liquid handling area
- autoclavable at 121°C, 20 min only 6025000



1



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Volume per Well ml	Fig No.	Well	Packaging	Quantity per Pack		Order No.
195	1	1	bags 2 x 5	10	New	60 25 000
22	2	8	bags 2 x 5	10	New	60 25 020
15	3	12	bags 2 x 5	10	New	60 25 010

Micro-Tubes System

Micro-Tubes System

This is a highly practical system for processing small volumes. The reusable Micro-Rack is the work station and takes 96 micro-tubes in the standard 8 x 12 SBS microplate format. It is a stable and robust system and has a dust-tight lid. A sloping edge helps the positioning of the refill unit. The side edges can be labeled with a barcode. The rack is excellently suited to use in automatic dosing and robotic systems.

The 0.65 and 1.2 ml micro-tubes can be supplied as single, strips of 8 or in 96-well format as a refill system for 8 x 12 plates.

The tubes are closable either with an 8-lid strip or an 8 x 12 closure mat.

- the Micro-Tubes are autoclavable for 20 min at 121 °C
- temperature-resistant to – 80 °C



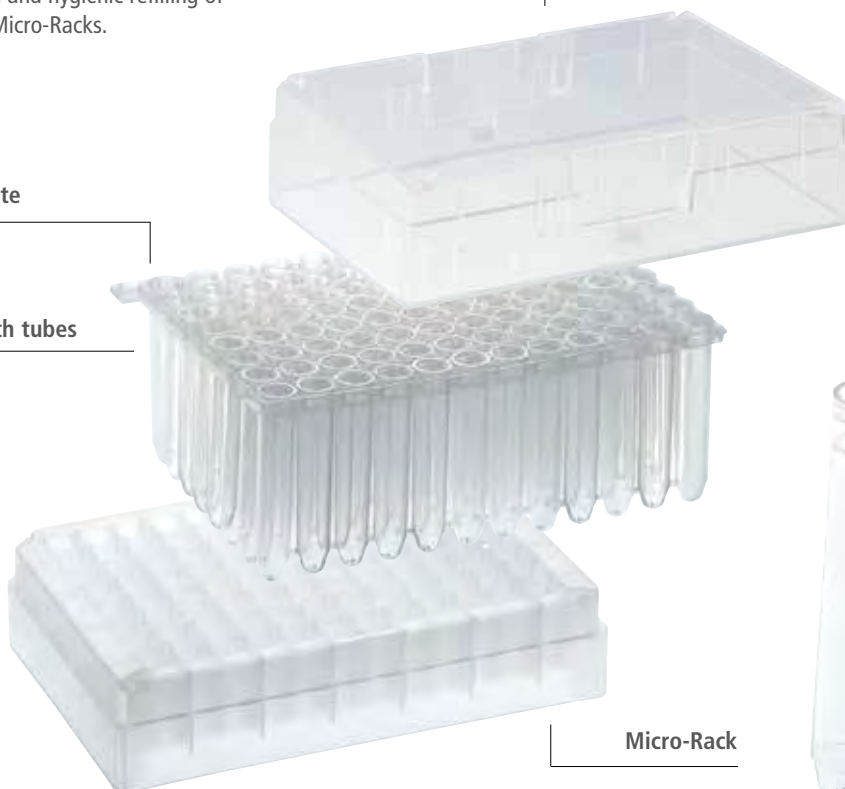
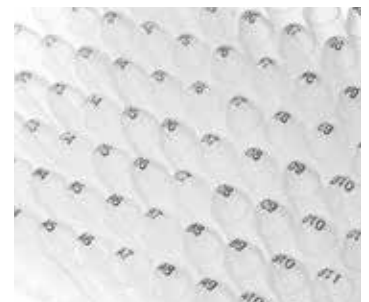
The refill system ensures easy, rapid and hygienic refilling of the Micro-Racks.

Lid

Plate

with tubes

The tubes can be removed singly and are numbered on the bottom.



Micro-Rack



Micro-Tubes 1.2 ml

Micro-Tubes System



Micro-Tubes

Translucent polypropylene (PP) with very low protein binding.

- available as individual Micro-Tubes or Micro-Tube-Strips of 8 tubes for use with Micro-Racks
- volume 0.65 or 1.2 ml with round bottom

Product	Volume ml	Bottom	Packaging	Quantity per Pack	Order No.
ratiolab® Micro-Tubes, individual	0.65	round	bags 5 x 1000	5000	82 00 021
ratiolab® Micro-Tubes, individual	1.2	round	bags 5 x 1000	5000	82 00 001
ratiolab® Micro-Tube-Strips of 8 tubes	0.65	round	bags 5 x 120	600	82 00 022
ratiolab® Micro-Tube-Strips of 8 tubes	1.2	round	bags 5 x 120	600	82 00 002



Micro-Racks, loaded or empty

Micro-Racks, tray and lid of translucent polypropylene (PP).

- available as empty racks or equipped with coded or non-coded Micro-Tubes
- pressure-tested tightness of the Micro-Tubes
- stackable, for the use with stacker instruments

Product	Volume ml	Bottom	Packaging	Quantity per Pack	Order No.
ratiolab® Micro-Racks, loaded, non-coded	0.65	round	50 Micro-Racks of 96 Micro-Tubes	50	82 00 023
ratiolab® Micro-Racks, loaded, coded	0.65	round	50 Micro-Racks of 96 Micro-Tubes	50	82 00 024
ratiolab® Micro-Racks, empty	0.65	–	50 Micro-Racks for 96 Micro-Tubes	50	82 00 027
ratiolab® Micro-Racks, loaded, non-coded	1.2	round	50 Micro-Racks of 96 Micro-Tubes	50	82 00 003
ratiolab® Micro-Racks, loaded, coded	1.2	round	50 Micro-Racks of 96 Micro-Tubes	50	82 00 004
ratiolab® Micro-Racks, empty	1.2	–	50 Micro-Racks for 96 Micro-Tubes	50	82 00 007



Micro-Tubes Refill System for Micro-Racks

The Micro-Tubes are placed on an 8 x 12 tray and packed in an environmentally friendly cardboard box. The loaded tray can easily be moved from the cardboard box into the empty Micro-Rack.

- available with coded or non-coded Micro-Tubes
- for the very efficient, hygienic, and fast loading of Micro-Racks
- convenient handling and reduced waste
- pressure-tested tightness of the Micro-Tubes

Product	Volume ml	Bottom	Packaging	Quantity per Pack	Order No.
Micro-Tubes Refill-System for Micro-Racks					
ratiolab® Refill with 96 Micro-Tubes, non-coded	0.65	round	50 Refills of 96 Micro-Tubes	50	82 00 025
ratiolab® Refill with 96 Micro-Tubes, coded	0.65	round	50 Refills of 96 Micro-Tubes	50	82 00 026
ratiolab® Refill with 96 Micro-Tubes, non-coded	1.2	round	50 Refills of 96 Micro-Tubes	50	82 00 005
ratiolab® Refill with 96 Micro-Tubes, coded	1.2	round	50 Refills of 96 Micro-Tubes	50	82 00 006
Closures for ratiolab® Micro-Tubes					
8-cap-Strips			bag 1 x 1000	1000	82 00 008
8 x 12 cover mats			bag 10 x 10	100	82 00 009

Further cover films see on page 67.



PCR Tubes

Pure polypropylene (PP).

- rapid and homogeneous heat transfer due to consistently ultrathin wall design
- perfect fit, compatible with all major brands of thermocyclers due to precise production
- DNase-, RNase-, DNA and endotoxin-free
- variety of tight closures available to reduce sample evaporation

PCR Tubes, single

- volume 0.2 or 0.5 ml
- with attached cap, flat or domed
- caps designed for tight sealing, easy to open and to close

Volume ml	Fig. No.	Cap	Packaging	Quantity per Pack	Order No.
0.2	1	flat	bag 1 x 1000	1000	86 10 006
0.2	2	domed	bag 1 x 1000	1000	86 10 001
0.5	3	flat	bag 1 x 1000	1000	86 10 007
0.5	4	domed	bag 1 x 1000	1000	86 10 005

PCR Strips of 8 Tubes

- volume 0.2 ml
- with attached domed cap strips or for use with detached 8-cap strips
- caps designed for tight sealing, easy to open and to close

Volume ml	Fig. No.	Caps	Packaging	Quantity per Pack	Order No.
with attached individual caps					
8 x 0.2	5	flat	bag 1 x 125	125	86 10 040
8 x 0.2	6	domed	bag 1 x 125	125	86 10 039
for separate cap strips					
8 x 0.2	7	without	bag 1 x 125	125	86 10 002
cap strips					
8-cap-strips	8	flat	bag 1 x 125	125	86 10 015
8-cap-strips	9	domed	bag 1 x 125	125	86 10 003

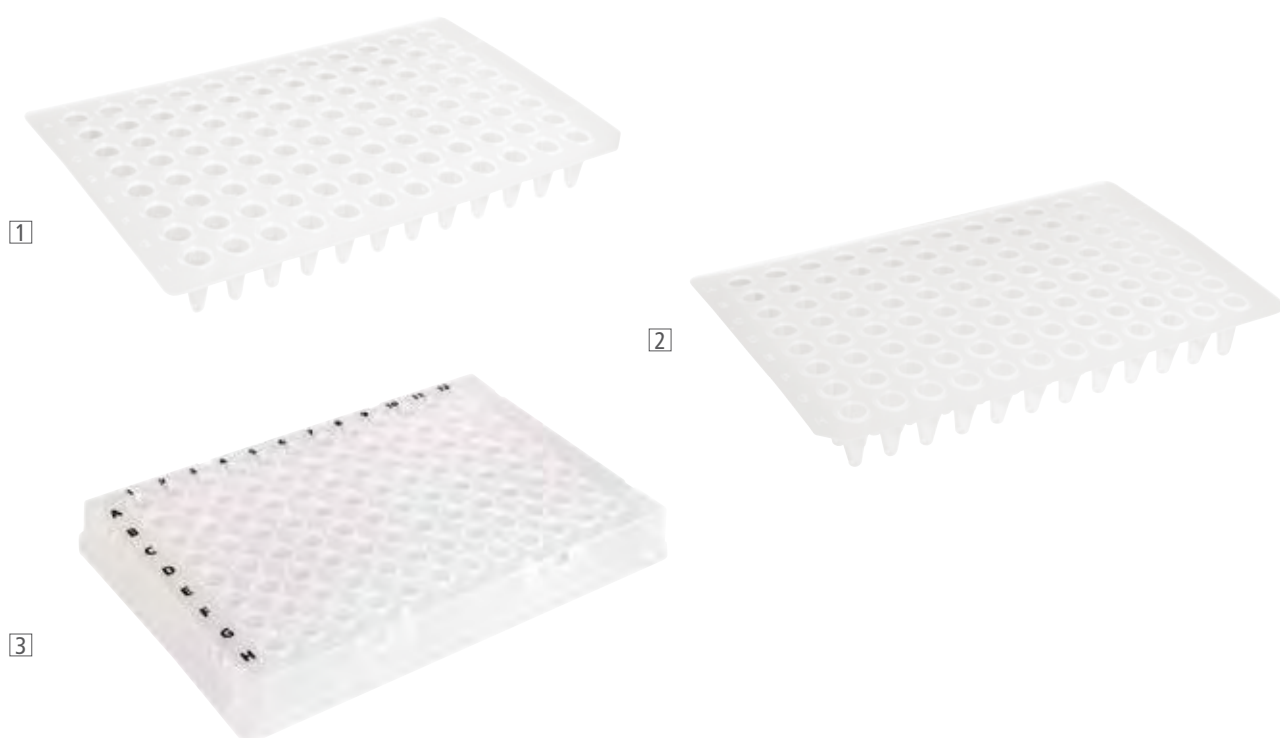
PCR Plates

96-well PCR Plates

These plates conform fully to the highest requirements of PCR (Polymerase Chain Reaction). They are made of polypropylene and are characterized by their very thin but uniform walls. In this way, optimal heat transfer in short cycle times is achieved. The smooth inside walls of the cavities minimize the binding of enzymes and nucleic acids.

The plates are free of DNA, DNase and RNase. They are available optionally without or with edges (the latter to minimize cross-contamination).

- working volumes 0.2 ml
- alphanumeric coding for optimal sample identification
- available in three versions for various PCR systems



Volume ml	Fig. No.	Description	Packaging	Quantity per Pack	Order No.
96 x 0.2	1	without rim, low form	bags 10 x 10	100	86 10 014
96 x 0.2	2	without rim, high form	bags 10 x 10	100	86 10 010
96 x 0.2	3	with rim, high form	bags 4 x 25	100	86 10 011

PCR Accessories and Micro Centrifuge



96-Well PCR-Rack

Polypropylene (PP).

Work and storage rack for 0.2 and 0.5 ml PCR tubes, PCR strips, and PCR segments.

- 8 x 12 positions, micro test plate format
- autoclavable
- available in five colors for the convenient identification of different types of samples
- transparent lids available in two different heights

Product	Material	Quantity per Pack	Order No.
PCR-Rack white	PP	10	61 14 100
PCR-Rack yellow	PP	10	61 14 101
PCR-Rack green	PP	10	61 14 103
PCR-Rack red	PP	10	61 14 104
PCR-Rack blue	PP	10	61 14 102
lid for PCR-Racks, 14 mm high	PP	10	61 14 110
lid for PCR-Racks, 28 mm high	SAN*	10	61 14 111

*Styrol-Acrylnitril

Floating Cryo Racks

Ideal for the thawing out or cooling of samples in PCR tubes and PCR strips. The loaded racks remain floating. The tubes fit firmly in the racks and keep them well positioned in the bath.

Product	Quantity per Pack	Order No.
Floating Cryo Racks for 10 PCR tubes	10	61 14 200
Floating Cryo Racks for 4 PCR strips of 8 tubes	10	61 14 201

Micro Centrifuge for PCR Strips and Microcentrifuge Tubes



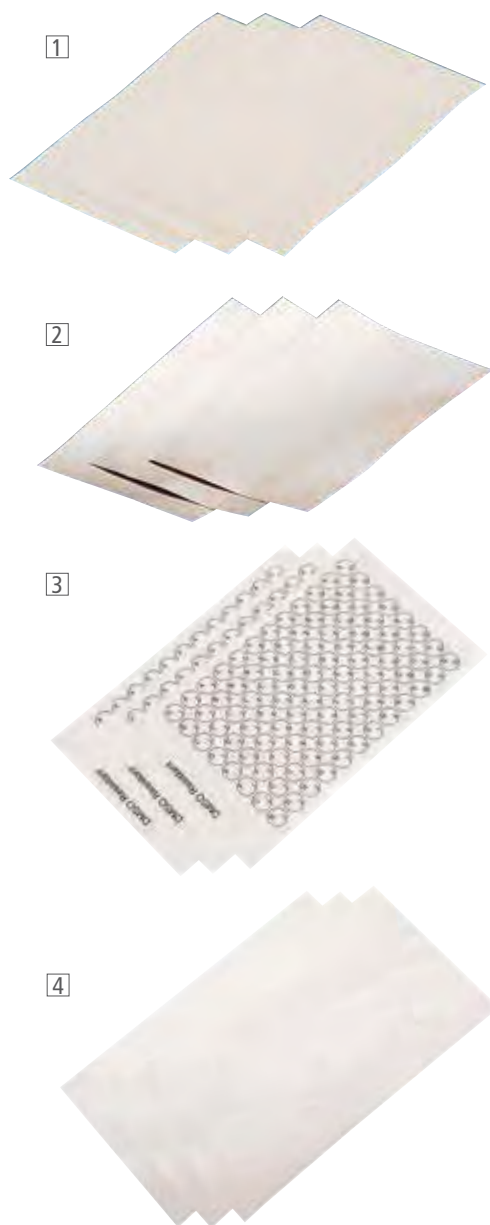
Space- and energy-saving micro centrifuge with adequate power for routine centrifugations.

- speed 7000/min, max RCF 2680 x g
- lid must be closed for operation mode
- safety: the lid can only be opened when the rotor is not rotating
- rapid start and stop within seconds
- power supply AC100-240V/50Hz/60Hz
- diameter 150 mm, height 117 mm, weight 0.5 kg
- 1 year guarantee
- supplied complete with two rotors:
 - rotor 1 for: 8 microcentrifuge tubes 0.5 ml till 2.0ml
 - rotor 2 for: 16 microcentrifuge tubes 0.2 ml or two pcr strips of 8 tubes 0.2 ml



Product	Quantity per Pack	Order No.
Micro Centrifuge with two rotors	1	71 00 007

Cover Films for Micro Test and PCR Plates



Cover Films

For micro test plates, deep-well plates, micro test tubes and PCR plates.

- self-adhesive
- for manual operation
- temperature resistant from – 80 to + 120 °C*
- adhesive with high solvent resistance, specially resistant against DMSO*
- all films of SBS standard format

1 Polyethylene peeling cover film

- low-cost film for polystyrene plates
- can be removed without any residues
- ideal for the storage of plates at room temperature

2 Aluminum universal cover film

- can be easily removed
- ideal for piercing
- for polystyrene and polypropylene plates
- also for use with micro-racks and critical PCR plates

3 Piercing-foil with cavity circle 96-well

- each cavity is marked by a circle and a numerical printing
- prepierced in each cavity optimizes opening by tip
- self closing film reduces the risk of cross-contamination

4 Gas permeable peeling film

- SBS-Standard
- liquid tight
- high permeability
- for use from -5°C to +60°C

Polypropylen peeling cover film

- can be removed without any residues and repeatedly used
- very suitable for PCR plates
- lower limit for photometer plates 276 nm

Further films on request.

Product	Fig. No.	Material	Packaging	Quantity per Pack	Order No.
polyethylene peeling cover film	1	PE	pack 1 x 100	100	60 18 610
aluminum universal cover film	2	AL	pack 1 x 100	100	60 18 611
piercing-foil with cavity circle 96-well	3	PP	pack 1 x 100	100	60 18 619
gas permeable peeling film	4	PP	pack 1 x 50	50	60 18 618
polypropylene peeling cover film	-	PP	pack 1 x 100	100	60 18 612

PE = Polyethylene
AL = Aluminium
PP = Polypropylene

*except order number 60 18 610

Cryo



Think! Development and production of customized products



Liquid handling products



Labware for general lab applications



Life science products for microbiology and biotechnology



Cryo products for deep-freeze applications

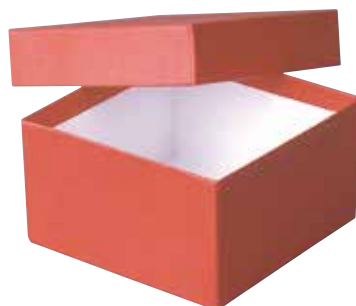
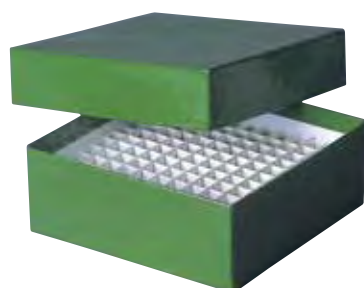
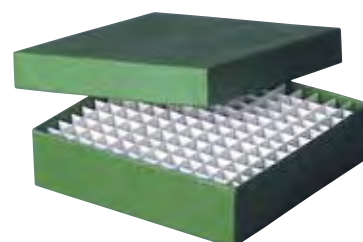
Cryo Boxes, Cardboard, Format 133 x 133 mm

Cryo Boxes, Cardboard, Format 133 x 133 mm

Ultra low temperature-resistant cardboard.

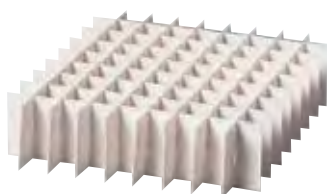
other sizes available on request

- temperature-resistant down to – 80°C
- available with a water-repellent finish or with a waterproof plastic coating
- highest flexibility: Cryo Boxes can be combined with different Grid Inserts for tubes from dia. 6 mm to dia. 28,5 mm
- the Cryo Boxes can be used for larger vessels when grid is removed



Color	Quantity per Pack	Height 32 mm Order No.	Height 50 mm Order No.	Height 75 mm Order No.	Height 100 mm Order No.	Height 130 mm Order No.
Water-repellant standard coating						
white	10	51 31 321	51 31 501	51 31 751	51 31 001	51 31 131
blue	10	51 31 322	51 31 502	51 31 752	51 31 002	51 31 132
red	10	51 31 323	51 31 503	51 31 753	51 31 003	51 31 133
green	10	51 31 324	51 31 504	51 31 754	51 31 004	51 31 134
yellow	10	51 31 325	51 31 505	51 31 755	51 31 005	51 31 135
With waterproof plastic coating						
white	10	51 32 321	51 32 501	51 32 751	51 32 001	51 32 131
blue	10	51 32 322	51 32 502	51 32 752	51 32 002	51 32 132
red	10	51 32 323	51 32 503	51 32 753	51 32 003	51 32 133
green	10	51 32 324	51 32 504	51 32 754	51 32 004	51 32 134
yellow	10	51 32 325	51 32 505	51 32 755	51 32 005	51 32 135

Cryo Boxes, Cardboard, Format 133 x 133 mm, Cryo Labels



Grid Inserts for Cryo Boxes, Format 133 x 133 mm

Ultra low temperature-resistant cardboard.

- for sample storage
- temperature-resistant down to -80°C
- water-repellent finish
- packaging in practical folding boxes

other sizes
available on request

Grid	Quantity per Pack	For Tube Dia. mm	Height of Grids 25 mm Order No.	Height of Grids 30 mm Order No.	Height of Grids 40 mm Order No.	Height of Grids 65 mm Order No.
4 x 4	10	28.0	51 20 214	51 20 215	51 20 216	51 20 217
5 x 5	10	23.0	51 20 124	51 20 125	51 20 126	51 20 127
6 x 6	10	19.0	51 20 134	51 20 135	51 20 136	51 20 137
7 x 7	10	16.0	51 20 144	51 20 145	51 20 146	51 20 147
8 x 8	10	14.0	51 20 154	51 20 155	51 20 156	51 20 157
9 x 9	10	11.5	51 20 165	51 20 166	51 20 167	51 20 168
10 x 10	10	10.5	51 20 175	51 20 174	51 20 176	51 20 177
12 x 12	10	8.5	51 20 185	51 20 184	51 20 186	51 20 187
13 x 13	10	8.0	51 20 194	51 20 195	51 20 196	51 20 197
14 x 14	10	7.0	51 20 204	51 20 205	51 20 206	51 20 207
16 x 16	10	6.0	51 20 225	51 20 226	51 20 227	51 20 228



Cryo Boxes and Grid Inserts, Cardboard, 1/2-Format 130 x 62 mm

Ultra low temperature-resistant cardboard, white.

- for sample storage even at ultra low temperatures
- temperature-resistant down to -80°C
- water-repellent finish

Product	Grid	W x D x H mm	For Tube Dia. mm	Quantity per Pack	Order No.
1/2-format Cryo Boxes, cardboard	–	130 x 62 x 50	–	10	51 31 506
1/2-format Grid Inserts	8 x 4	124 x 58 x 30	14.0	10	51 20 218
1/2-format Grid Inserts	10 x 5	124 x 58 x 30	10.5	10	51 20 128



Rainbow Cryo labels

For customizing the white Cryo Boxes, the Rainbow Cryo labels are available in modern colors: red, yellow, green, blue, purple.

- temperature-resistant down to -150°C
- 50 labels per pack, divided into 5 colors, 10 pieces from each color

Product	L x W mm	Quantity per Pack	Order No.
Rainbow Cryo labels	200 x 40	5 x 10	51 20 002

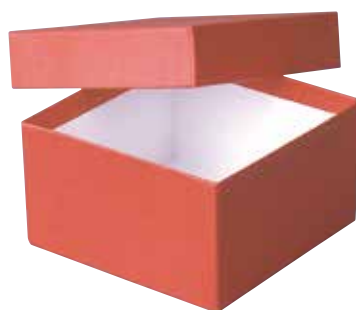
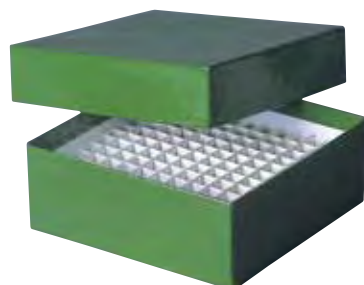
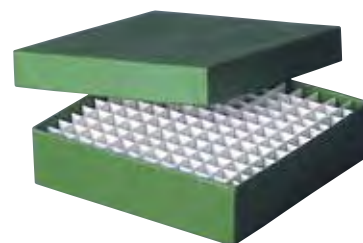
Cryo Boxes, Cardboard, Format 136 x 136 mm

Cryo Boxes, Cardboard, Format 136 x 136 mm

Ultra low temperature-resistant cardboard.

other sizes available on request

- for sample storage even at ultra low temperatures
- optional with special water-repellant or waterproof coatings
- temperature resistant down to -80°C
- highest flexibility: Cryo Boxes can be combined with different Grid Inserts for tubes from dia. 6 mm to dia. 28,5 mm
- the Cryo Boxes can be used for larger vessels when grid is removed



Color	Quantity per Pack	Height 32 mm Order No.	Height 50 mm Order No.	Height 75 mm Order No.	Height 100 mm Order No.	Height 130 mm Order No.
Water-repellant standard coating						
white	10	51 41 321	51 41 501	51 41 751	51 41 001	51 41 131
blue	10	51 41 322	51 41 502	51 41 752	51 41 002	51 41 132
red	10	51 41 323	51 41 503	51 41 753	51 41 003	51 41 133
green	10	51 41 324	51 41 504	51 41 754	51 41 004	51 41 134
yellow	10	51 41 325	51 41 505	51 41 755	51 41 005	51 41 135
With waterproof plastic coating						
white	10	51 42 321	51 42 501	51 42 751	51 42 001	51 42 131
blue	10	51 42 322	51 42 502	51 42 752	51 42 002	51 42 132
red	10	51 42 323	51 42 503	51 42 753	51 42 003	51 42 133
green	10	51 42 324	51 42 504	51 42 754	51 42 004	51 42 134
yellow	10	51 42 325	51 42 505	51 42 755	51 42 005	51 42 135

Cryo Boxes, Cardboard, Format 136 x 136 mm, Cryo-Code-Card



Grid Inserts for Cryo Boxes, Format 136 x 136 mm

Ultra low temperature-resistant cardboard.

- for sample storage
- temperature-resistant down to -80°C
- water-repellent finish

other sizes available on request

Grid	Quantity per Pack	For Tube Dia. mm	Height of Grids 25 mm Order No.	Height of Grids 30 mm Order No.	Height of Grids 40 mm Order No.	Height of Grids 65 mm Order No.
4 x 4	10	28.5	51 20 210	51 20 211	51 20 212	51 20 213
5 x 5	10	23.5	51 20 121	51 20 120	51 20 122	51 20 123
6 x 6	10	19.5	51 20 131	51 20 130	51 20 132	51 20 133
7 x 7	10	16.5	51 20 143	51 20 140	51 20 142	51 20 141
8 x 8	10	14.5	51 20 152	51 20 150	51 20 151	51 20 153
9 x 9	10	12.0	51 20 163	51 20 160	51 20 161	51 20 162
10 x 10	10	11.0	51 20 173	51 20 170	51 20 172	51 20 171
12 x 12	10	9.0	51 20 182	51 20 180	51 20 181	51 20 183
13 x 13	10	8.5	51 20 190	51 20 193	51 20 191	51 20 192
14 x 14	10	7.5	51 20 202	51 20 203	51 20 201	51 20 200
16 x 16	10	6.5	51 20 221	51 20 222	51 20 223	51 20 224



Cryo Boxes and Grid Inserts, Cardboard, 1/2-Format 134 x 67 mm and 1/4-Format 75 x 75 mm

Ultra low temperature-resistant cardboard, white.

- for sample storage even at ultra low temperatures
- temperature-resistant down to -80°C
- water-repellent finish

Product	Grid	W x D x H mm	For Tube Dia. mm	Quantity per Pack	Order No.
Water-repellant standard coating					
1/2-format Cryo Boxes, cardboard	–	134 x 67 x 50	–	10	51 60 028
1/2-format Grid Inserts	8 x 4	128 x 63 x 30	14.5	10	51 20 219
1/2-format Grid Inserts	10 x 5	128 x 63 x 30	11.0	10	51 60 029
1/4-format Cryo Boxes, cardboard	–	75 x 75 x 50	–	10	51 60 035
1/4-format Grid Inserts	5 x 5	68 x 68 x 30	11.0	10	51 60 036
With waterproof plastic coating					
1/2-format Cryo Boxes, cardboard	–	134 x 67 x 50	–	10	New 51 62 028
1/2-format Cryo Boxes, cardboard	–	134 x 67 x 75	–	10	New 51 62 751



Cryo-Code-Card

The innovative Cryo-Code-Card (cardboard) marks each position of a cryo-box with a number for identification where the sample is stored. The Cryo-Code-Card has to be placed on the bottom of a 133 x 133 or 136 x 136 mm cardbox underneath the grid (9 x 9 or 10 x 10).

Product	Positions	Quantity per Pack	Order No.
Cryo-Code-Card 9 x 9	81	10	51 20 089
Cryo-Code-Card 10 x 10	100	10	51 20 090

Cryo Boxes, Cardboard, Format 148 x 148 x 130 mm, Format 136 x 136 x 75 mm



Cryo Boxes, Cardboard, Format 148 x 148 x 130 mm

Ultra low temperature-resistant cardboard.

- for sample storage even at ultra low temperatures
- with waterproof plastic coatings
- temperature resistant down to – 80 °C
- highest flexibility: Cryo Boxes can be combined with different grid inserts for tubes dia. 17 mm or dia. 30 mm
- the Cryo Boxes can be used for larger vials when grid is removed
- suitable for centrifuge tubes: product no. 33 00 001 to 33 00 006

other sizes
available on request

Color	Grid	For Tubes Ø x H mm	Quantity per Pack	Order No.
white	4 x 4	30 x 115	5	51 44 130
white	6 x 6	17 x 120	5	51 44 131



Cryo Boxes, Cardboard, Format 136 x 136 x 75 mm

Ultra low temperature-resistant cardboard.

- for sample storage even at ultra low temperatures
- with waterproof plastic coatings
- temperature resistant down to – 80 °C
- the Cryo Boxes can be used for larger vials when grid is removed
- suitable for 5 ml microcentrifuge tubes

other sizes
available on request

Color	Grid	For Tubes Ø x H mm	Quantity per Pack	Order No.
white	5 x 5	17 x 60	10	New 51 42 756

Cryo Boxes with Slip Lid, PP, Format 133 x 133 mm



2-in-1 Cryo Boxes with Slip Lid, PP, Format 133 x 133 mm

High quality polypropylene (PP). Available in natural and other colors.

The specialty: the boxes are adjustable in height. The red cryo box shows the fixed position of 75 mm. The blue cryo box shows the variable lid position (rotated 90 °) with the variable height from 50 mm to 75 mm.

The boxes are available in 6 modern colors, with a numerical coding and corresponding vents for draining condensed water.

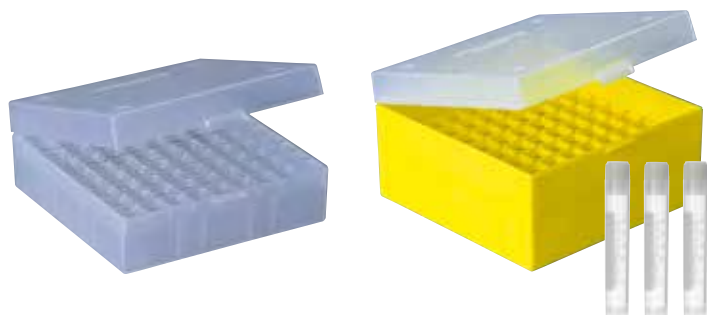
The 6 x 6 until 10 x 10 grid accommodates space from 36 to 100 tubes.

- autoclavable, temperature-resistant from -90°C to + 121°C
- grids are available: 6 x 6, 7 x 7, 8 x 8, 9 x 9, 10 x 10
- numerically coded



	Grid For tube Dia.	6 x 6 19.0 mm	7 x 7 17.0 mm	8 x 8 15.0 mm	9 x 9 13.0 mm	10 x 10 11.5 mm
Color	Quantity per Pack	Order No.	Order No.	Order No.	Order No.	Order No.
natural	5	53 20 410	53 20 310	53 20 210	53 20 010	53 20 110
yellow	5	53 20 411	53 20 311	53 20 211	53 20 011	53 20 111
red	5	53 20 412	53 20 312	53 20 212	53 20 012	53 20 112
green	5	53 20 413	53 20 313	53 20 213	53 20 013	53 20 113
blue	5	53 20 414	53 20 314	53 20 214	53 20 014	53 20 114
black	5	53 20 415	53 20 315	53 20 215	53 20 015	53 20 115
mixed	5	53 20 416	53 20 316	53 20 216	53 20 016	53 20 116

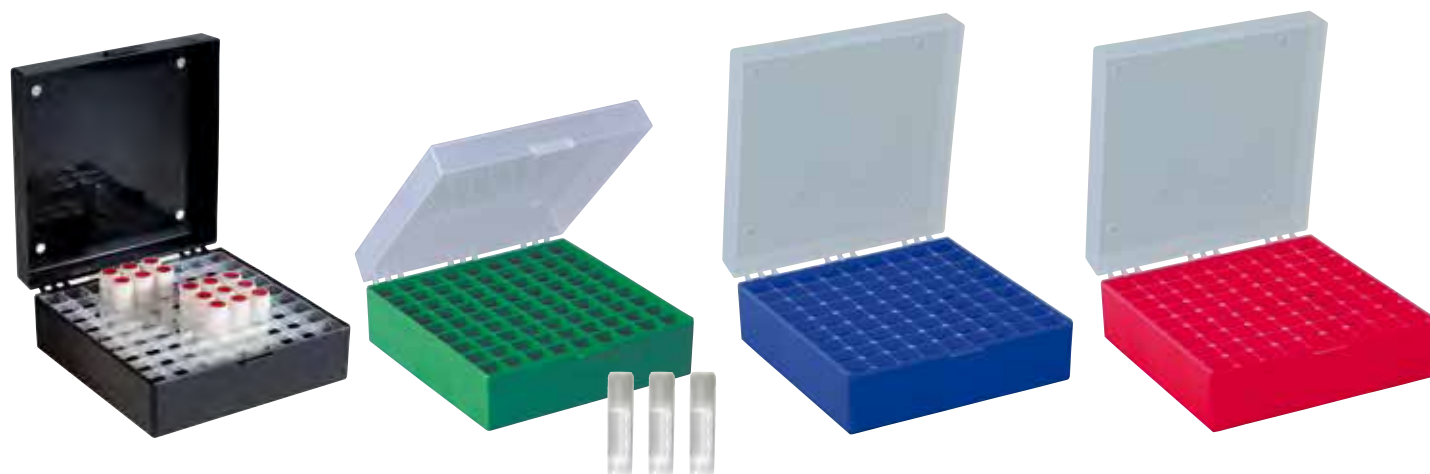
Cryo Boxes with Grids, PP, Format 133 x 133 mm



Cryo Boxes with Grids, PP, Format 133 x 133 mm

The boxes themselves are made of high quality polypropylene in natural or other colors. They are available with heights of 52 or 75 mm.

- autoclavable, temperature-resistant from -90°C to $+121^{\circ}\text{C}$
- 81 places, 9 x 9 grid, numerically coded
- robust hinge with safe snap-on lid
- stackable for safe transport
- drain bores at the bottom for dew liquids
- removable grid inserts
- Cryo Boxes can also be used for larger vials by removing the grid inserts



Product	W x D x H mm	For Tube Dia. mm	Grid	Quantity per Pack	Order No.
for Cryo Tubes 1.2 – 2 ml					
natural	133 x 133 x 52	12.8	9 x 9	5	51 20 010
yellow	133 x 133 x 52	12.8	9 x 9	5	51 20 011
red	133 x 133 x 52	12.8	9 x 9	5	51 20 012
green	133 x 133 x 52	12.8	9 x 9	5	51 20 013
blue	133 x 133 x 52	12.8	9 x 9	5	51 20 014
black	133 x 133 x 52	12.8	9 x 9	5	51 20 015
for Cryo Tubes 3 – 4 ml					
natural	133 x 133 x 75	12.8	9 x 9	5	51 20 020
yellow	133 x 133 x 75	12.8	9 x 9	5	51 20 021
red	133 x 133 x 75	12.8	9 x 9	5	51 20 022
green	133 x 133 x 75	12.8	9 x 9	5	51 20 023
blue	133 x 133 x 75	12.8	9 x 9	5	51 20 024
black	133 x 133 x 75	12.8	9 x 9	5	51 20 025

Cryo Boxes and Grid Inserts, PP, Format 133 x 133 mm

Cryo Boxes and Grid Inserts, PP, Format 133 x 133 mm

The boxes themselves are made of high quality polypropylene in natural or other colors. They are available with heights of 52 or 75 mm. These ratiolab® Cryo Boxes are particularly practical and flexible due to their removable grid inserts.

The separate naturally-colored inserts are available in five sizes and can thus be used with sample vessels of differing diameters. The inserts fit all ratiolab® Cryo Boxes. Cleaning of the boxes and the inserts is much simpler than with Cryo Boxes with permanently fitted inserts.

- autoclavable, temperature-resistant from – 90 °C to + 121 °C
- robust hinge with safe snap-on lid
- stackable for safe transport
- drain bores at the bottom for dew liquids
- Cryo Boxes can also be used for larger vials by removing the grid inserts



Product	W x D x H mm	For Tube Dia. mm	Quantity per Pack	Order No.
Cryo Boxes without Grid Insert				
natural	133 x 133 x 52		5	52 20 010
yellow	133 x 133 x 52		5	52 20 011
red	133 x 133 x 52		5	52 20 012
green	133 x 133 x 52		5	52 20 013
blue	133 x 133 x 52		5	52 20 014
black	133 x 133 x 52		5	52 20 015
natural	133 x 133 x 75		5	52 20 020
yellow	133 x 133 x 75		5	52 20 021
red	133 x 133 x 75		5	52 20 022
green	133 x 133 x 75		5	52 20 023
blue	133 x 133 x 75		5	52 20 024
black	133 x 133 x 75		5	52 20 025
Grid Inserts				
6 x 6	133 x 133 x 30	20.5	5	52 20 100
7 x 7	133 x 133 x 30	17.3	5	52 20 101
8 x 8	133 x 133 x 30	15.8	5	52 20 102
9 x 9	133 x 133 x 30	12.8	5	52 20 103
10 x 10	133 x 133 x 30	11.2	5	52 20 104

Cryo Boxes with Grids, PC, Format 132 x 132 mm and 76 x 76 mm

CE IVD

Cryo Boxes with Grids, PC, Format 132 x 132 mm and 76 x 76 mm

Made of high quality colored polycarbonate (PC).
For use with liquid nitrogen.

- autoclavable, temperature-resistant from – 190 °C to + 121 °C
- 81 or 100 places, 9 x 9 resp. 10 x 10 grids
- 1/4-format with 25 places, 5 x 5 grid
- numerically coded
- stackable for safe transport
- drain bores at the bottom for dew liquids
- Cryo Boxes can also be used for larger vials by removing the grid inserts



Color	Fig No.	W x D x H mm	Grid	Quantity per Pack	Order No.
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for Cryo Tubes 1.2 – 2 ml

blue	1	132 x 132 x 52	9x9	5	51 50 001
green	1	132 x 132 x 52	9x9	5	51 50 002
red	1	132 x 132 x 52	9x9	5	51 50 003
yellow	1	132 x 132 x 52	9x9	5	51 50 004

for Cryo Tubes 1.2 – 2 ml

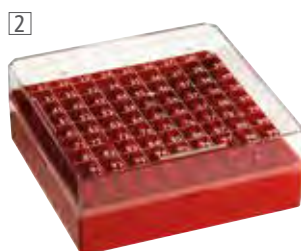
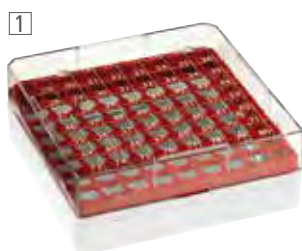
blue	2	132 x 132 x 52	10x10	5	51 50 011
green	2	132 x 132 x 52	10x10	5	51 50 012
red	2	132 x 132 x 52	10x10	5	51 50 013
yellow	2	132 x 132 x 52	10x10	5	51 50 014
white	2	132 x 132 x 52	10x10	5	51 50 015

for Cryo Tubes 3 – 5 ml

blue	3	132 x 132 x 94	9x9	4	51 50 021
green	3	132 x 132 x 94	9x9	4	51 50 022
red	3	132 x 132 x 94	9x9	4	51 50 023
yellow	3	132 x 132 x 94	9x9	4	51 50 024

1/4-format, for Cryo Tubes

blue	4	76 x 76 x 52	5x5	8	51 50 031
green	4	76 x 76 x 52	5x5	8	51 50 032
red	4	76 x 76 x 52	5x5	8	51 50 033
yellow	4	76 x 76 x 52	5x5	8	51 50 034



Cryo Boxes with 2D Barcode and Grids, PC, Format 132 x 132 mm

CE IVD



Cryo Boxes with 2D Barcode and Grids, PC, Format 132 x 132 mm

Made of high quality colored polycarbonate (PC).
For use with liquid nitrogen.

- to store the Cryo-Tubes 2D
- automatic identification of each box and its positioning through:
 - Laser engraved Code 128 on the side of the lower part of the rack
 - 2D datamatrix code, on the bottom of the box
- each pack of boxes is supplied with a vial picker
- autoclavable, temperature-resistant from -190°C to $+121^{\circ}\text{C}$
- 81 or 100 places, 9 x 9 resp. 10 x 10 grids
- numerically coded
- stackable for safe transport
- scanner and software on request

Color	W x D x H mm	Grid	Quantity per Pack	Order No.
for Cryo Tubes 1.2 – 2 ml				
blue	132 x 132 x 52	9x9	1	51 50 051
green	132 x 132 x 52	9x9	1	51 50 052
red	132 x 132 x 52	9x9	1	51 50 053
yellow	132 x 132 x 52	9x9	1	51 50 054
white	132 x 132 x 52	10x10	1	51 50 055

for Cryo Tubes 3 – 5 ml				
blue	132 x 132 x 94	9x9	1	51 50 061
green	132 x 132 x 94	9x9	1	51 50 062
red	132 x 132 x 94	9x9	1	51 50 063
yellow	132 x 132 x 94	9x9	1	51 50 064
white	132 x 132 x 94	10x10	1	51 50 065

Cryo Tubes with 2D Barcode

CE IVD

Cryo Tubes with 2D Barcode

Polypropylene with highest translucence. For the storing and conservation of tissue cultures and biological samples e.g. sera, blood and spermata. For applications to – 190°C in the gaseous phase of liquid nitrogen or in freezers. The tubes are produced in a class 7 clean room (class 10000) according to DIN ISO 13485:2004, ISO 14644 and 14698 (Federal Standard 209).

- sterilized by beta-radiation according to EN ISO 11137
- non-cytotoxic
- non-haemolytic
- free of human DNA
- free of PCR inhibitors
- lid with integrated sealing function; no additional silicone O-ring
- internal conical bottom for complete emptying

- white graduations for precise measurement
- white lettering for sample identification
- available with internal or external threads
- equipped with base for using with one hand
- packaged in PE bags of 50 tubes in boxes
- cap design for automatic decapper
- Datamatrix Code inserted in the bottom, sequential and corresponding to the Code "128" printed into two reading directions on the tube body
- Code 128 readable by most common readers
- scanner and software on request
- suitable working stations see on page 82
- suitable cryo-boxes see on page 70-79



Volume ml	Description	Ø x Height mm	Packaging	Quantity per Pack	Order No.
Cryo Tubes with Male Thread					
2.0	self standing	12.3 x 47	10 x 50	500	51 10 121
5.0	self standing	12.3 x 90	10 x 50	500	51 10 151
Cryo Tubes with Female Thread					
2.0	self standing	12.3 x 47	10 x 50	500	51 10 021
5.0	self standing	12.3 x 90	10 x 50	500	51 10 053

Cryo Tubes

Cryo Tubes

CE IVD

Polypropylene with highest translucence. For the storing and conservation of tissue cultures and biological samples e.g. sera, blood and spermata. For applications to – 190°C in the gaseous phase of liquid nitrogen or in freezers. The tubes are produced in a class 7 clean room (class 10000) according to DIN ISO 13485:2004, ISO 14644 and 14698 (Federal Standard 209).

- sterilized by beta-radiation according to EN ISO 11137
- free of PCR inhibitors

- lid with integrated sealing function; no additional silicone O-ring
- internal conical bottom for complete emptying
- white graduations for precise measurement
- white lettering for sample identification
- available with internal or external threads
- equipped with base for using with one hand
- 2.0 ml, 4.0 ml and 5.0 ml tubes available also with round bottom
- packaged in PE bags of 50 tubes in boxes

- suitable working stations see on page 82
- suitable cryo-boxes see on page 70-79

free of DNA, DNase,
pyrogens and ATP



Volume ml	Description	Ø x Height mm	Packaging	Quantity per Pack	Order No.
Cryo Tubes with Male Thread					
1.2	self standing	12.3 x 41	20 x 50	1000	51 10 112
2.0	round base	12.3 x 46	20 x 50	1000	51 10 120
2.0	self standing	12.3 x 47	20 x 50	1000	51 10 122
3.0	self standing	12.3 x 71	20 x 50	1000	51 10 130
4.0	self standing	12.3 x 75	20 x 50	1000	51 10 140
5.0	self standing	12.3 x 90	20 x 50	1000	51 10 150
Cryo Tubes with Female Thread					
1.2	self standing	12.3 x 43	20 x 50	1000	51 10 013
2.0	round base	12.3 x 47	20 x 50	1000	51 10 025
2.0	self standing	12.3 x 48	20 x 50	1000	51 10 024
4.0	self standing	12.3 x 76	20 x 50	1000	51 10 041
4.0	round base	12.3 x 75	20 x 50	1000	51 10 042
5.0	self standing	12.3 x 91	20 x 50	1000	51 10 051
5.0	round base	12.3 x 90	20 x 50	1000	51 10 052

Cryo Tubes Accessories

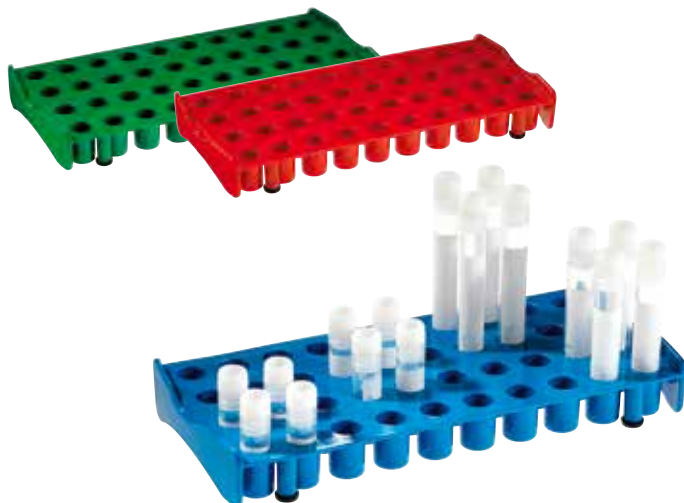


Color Coding Cap Inserts for Cryo Tubes

CE IVD

Polypropylene. For cryo tubes 1.2 to 5.0 ml.
Packed in PE-bags with 1000 pcs.

Color	Quantity per Pack	Order No.
white	1000	51 10 001
red	1000	51 10 002
blue	1000	51 10 003
green	1000	51 10 004
yellow	1000	51 10 005



Work Stations for 40 Cryo Tubes

CE IVD

High quality polypropylene.

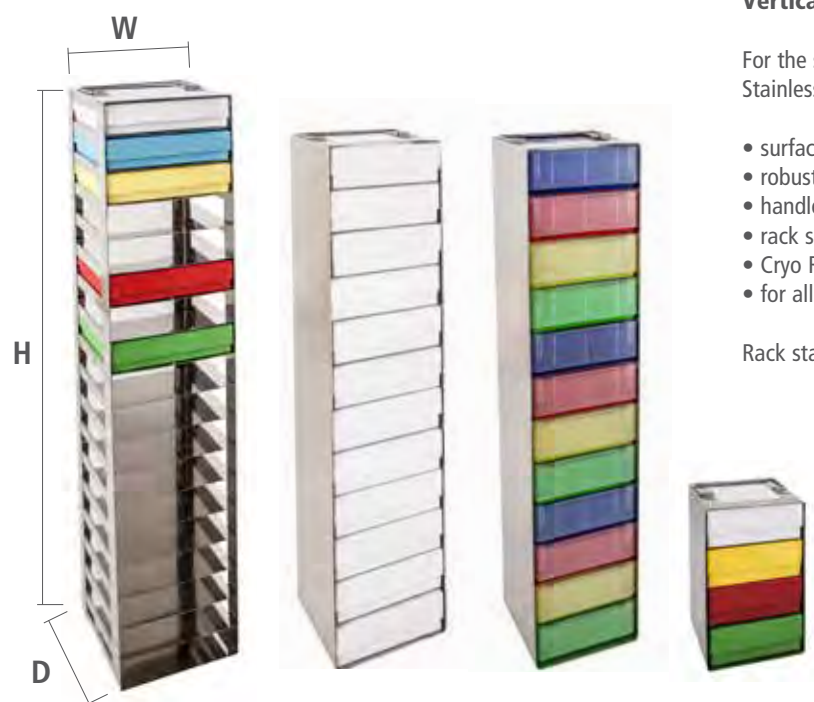
For 40 Cryo Tubes 1.2 to 5 ml with 12.5 mm outer diameter. Cryo Tubes with self standing base are automatically locked in the Work Station and can easily be screwed and unscrewed with one hand.

- with non-slip feet, the Work Stations stand safely on laboratory benches
- autoclavable
- size (W x L x H) 100 x 220 x 30 mm



Color	Quantity per Pack	Order No.
green	5	53 00 400
red	5	53 00 200
blue	5	53 00 100

Racks for Freezer Chests



Vertical Racks, stainless steel

For the storing of Cryo Boxes in freezer chests.
Stainless steel.

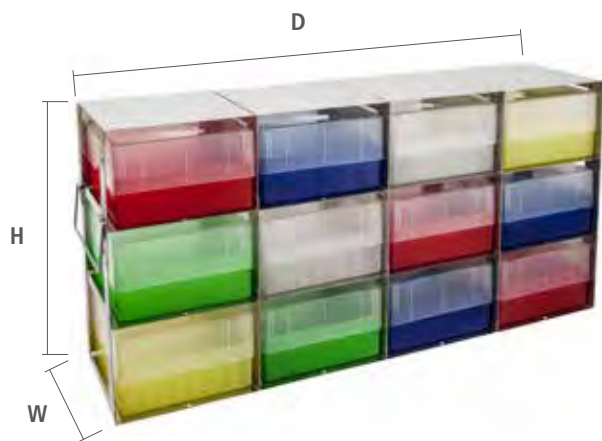
- surfaces for perfect cleaning
- robust construction
- handles for convenient transport
- rack size includes the holder
- Cryo Racks can be supplied with shelf sizes for any standard Cryo Boxes
- for all Cryo Boxes format 130 x 130; 133 x 133 and 136 x 136 mm

Rack standard sizes are listed in the tables below:

other sizes
available on request

Number of Shelves horizontal x vertical	Rack Size D x W x H mm	for Cryo Boxes Height			Quantity per Pack	Order No.
		32 mm	50 mm	75 mm		
Racks for Freezer Chests						
1 x 4	140 x 140 x 222	–	■	–	1	54 00 041
1 x 6	140 x 140 x 482	–	–	■	1	54 00 028
1 x 7	140 x 140 x 385	–	■	–	1	54 00 042
1 x 7	140 x 140 x 561	–	–	■	1	54 00 029
1 x 8	140 x 140 x 441	–	■	–	1	54 00 027
1 x 8	140 x 140 x 641	–	–	■	1	54 00 030
1 x 9	140 x 140 x 495	–	■	–	1	54 00 026
1 x 9	140 x 140 x 720	–	–	■	1	54 00 031
1 x 10	140 x 140 x 550	–	■	–	1	54 00 000
1 x 11	140 x 140 x 406	■	–	–	1	54 00 032
1 x 11	140 x 140 x 604	–	■	–	1	54 00 023
1 x 12	140 x 140 x 443	■	–	–	1	54 00 033
1 x 12	140 x 140 x 659	–	■	–	1	54 00 025
1 x 13	140 x 140 x 479	■	–	–	1	54 00 034
1 x 13	140 x 140 x 713	–	■	–	1	54 00 001
1 x 14	140 x 140 x 516	■	–	–	1	54 00 035
1 x 15	140 x 140 x 552	■	–	–	1	54 00 036
1 x 16	140 x 140 x 589	■	–	–	1	54 00 037
1 x 17	140 x 140 x 625	■	–	–	1	54 00 038
1 x 18	140 x 140 x 662	■	–	–	1	54 00 024

Racks for Freezer Cabinets



Horizontal Racks, stainless steel

For the storing of Cryo Boxes in freezer cabinets and chests.
Stainless steel.

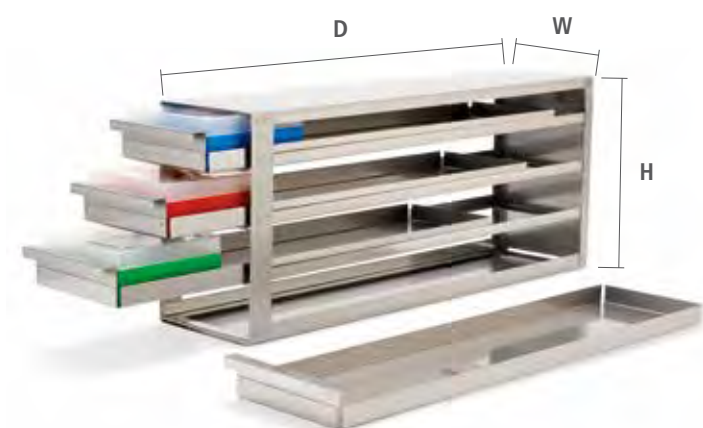
- surfaces for perfect cleaning
- robust construction
- handles for convenient transport
- Cryo Racks can be supplied with shelf sizes for any standard Cryo Boxes
- for all Cryo Boxes format 130 x 130; 133 x 133 and 136 x 136 mm

Rack standard sizes are listed in the tables below:

**other sizes
available on request**

Number of Shelves horizontal x vertical	Rack Size D x W x H mm	for Cryo Boxes Height			Quantity per Pack	Order No.
		50 mm	75 mm	100 mm		
Racks for Freezer Cabinets						
3 x 3	424 x 140 x 165	■	–	–	1	54 00 007
3 x 4	424 x 140 x 219	■	–	–	1	54 00 009
3 x 5	424 x 140 x 274	■	–	–	1	54 00 022
4 x 2	566 x 140 x 164	–	■	–	1	54 00 011
4 x 3	566 x 140 x 240	–	■	–	1	54 00 006
4 x 3	566 x 140 x 314	–	–	■	1	54 00 040
4 x 4	566 x 140 x 219	■	–	–	1	54 00 004
4 x 4	566 x 140 x 319	–	■	–	1	54 00 005
4 x 5	566 x 140 x 274	■	–	–	1	54 00 003
4 x 6	566 x 140 x 328	■	–	–	1	54 00 002

Racks for Freezer Cabinets



Drawer Rack, stainless steel

For the storing of Cryo Boxes.
Stainless steel.

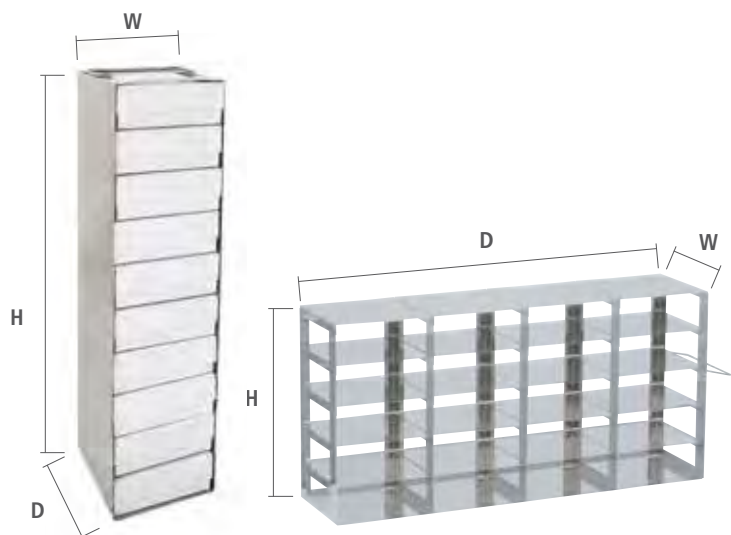
- cabinet slide-ins without pull-out stop
- easy-to-clean polished surface
- robust design
- for all Cryo Boxes format 130 x 130; 133 x 133 and 136 x 136 mm

Rack standard sizes are listed in the tables below:

other sizes
available on request

Number of Shelves horizontal x vertical	Rack Size D x W x H mm	for Cryo Boxes Height		Quantity per Pack	Order No.
		50 mm	75 mm		
Racks for Freezer Cabinets					
4 x 4	556 x 141 x 225	■	–	1	54 00 046
4 x 5	556 x 141 x 280	■	–	1	54 00 045
5 x 5	690 x 141 x 280	■	–	1	New 54 00 048
4 x 6	556 x 141 x 335	■	–	1	54 00 047
4 x 3	556 x 141 x 250	–	■	1	54 00 019
4 x 4	556 x 141 x 335	–	■	1	54 00 066

Racks for Freezer Cabinets and Freezer Chests



Racks, aluminium

For the storing of Cryo Boxes in freezer chests.
Made of aluminium.

The high quality Ratiolab Aluminium racks show a reduction of 30% in weight, in comparison to a similiary stainless steele rack. This makes the handling of the aluminium racks, especially in chest freezers, more convinient for the user. Fast adaption to the ambient temperature is based on a modern design. Fine welding technology guarantees a robust construction.

- light weight
- with handels
- can be supplied with any shelf hight on request
- for all Cryo Boxes format 130 x 130; 133 x 133 and 136 x 136 mm

Rack standard sizes are listed in the tables below:

other sizes
available on request

Number of Shelves horizontal x vertical	Rack Size D x W x H mm	for Cryo Boxes Height 50 mm	Quantity per Pack	Order No.
Racks for Freezer Chests				
1 x 10	140 x 140 x 550	■	1	54 01 000
Racks for Freezer Cabinets				
4 x 6	566 x 140 x 328	■	1	54 01 002
4 x 5	566 x 140 x 274	■	1	54 01 003

Racks in special dimensions and design



1

Racks in special dimensions and design

Being specialized in design, construction and production of storage and cryo-racks we are proud to offer you our service. Provide us with the dimensions you request and our CAD-team will create the design for you. Those products are in example:

- Blood bag canisters for storage of blood bags in ultra freezers (see fig.1)

other sizes
available on request



2

- Blood bag frames for blood bag canisters in ultra freezers (see fig 2)



3

- special spring clip holder keeps cryo boxes at their compartment (see fig 3)

Please send your request directly to our mailaccount tech@ratiolab.com or contact us by phone.

Technical information



Think! Development and production of customized products



Liquid handling products



Labware for general lab applications



Life science products for microbiology and biotechnology



Cryo products for deep-freeze applications

Chemical resistance of plastics

The plastics used are classified as follows with respect to chemical resistance:

+ Excellent chemical resistance

Constant contact with medium gives rise to no damage to the plastic within 30 days. The plastic can, however, remain resistant over a number of years.

0 Partial to good chemical resistance

Constant contact with the medium gives rise to minor damage within a period of 7-30 days; such damage is in fact partially reversible (e.g. swelling, softening, less mechanical firmness, discoloration).

— Low chemical resistance

Not suitable for constant contact with medium. Damage may occur immediately (e.g. less mechanical firmness, deformation, discoloration, cracks, dissolution).

Chemical resistance of plastics with groups of substances at 20 °C	PP	PS	HD-PE	LD-PE
Alcohols, aliphatic	+	+	+	+
Ether	0	—	0	0
Aldehydes	+	—	+	0
Ester	0	—	0	0
Hydrocarbons, aliphatic	+	—	+	0
Hydrocarbons, aromatic	0	—	+	0
Hydrocarbons, halogenated	0	—	0	0
Ketones	0	—	0	0
Alkalis	+	+	+	+
Acids, strong or concentrated	+	0	+	+
Acids, weak or diluted	+	0	+	+
Oxidizing acids, oxidizing agents	—	—	—	—

These carefully selected recommendations from the literature or from manufacturers are intended to inform and guide. However, the user is obliged to check suitability for the applications intended.

Chemical	PP		PS		HD-PE		LD-PE	
	20 °C	50 °C	20 °C	50 °C	20 °C	50 °C	20 °C	50 °C
Acetaldehyde	+	—	—	—	+	0	+	—
Acetic acid (glacial), 100 %	+	0	—	—	+	+	+	0
Acetic acid, 96 %	+	+	0	0	+	+	+	+
Acetic anhydride	0	0	—	—	0	0	—	—
Acetone	+	+	—	—	+	+	+	0
Acetonitrile	+	0	—	—	+	0	+	0
Acetophenone	0	0	—	—	0	0	—	—
Acetylacetone	+	—	—	—	+	—	+	—
Acetylchloride	+	—	—	—	+	—	+	—
Acrylic acid	+	—	—	—	+	—	+	—
Acrylonitrile	0	—	—	—	+	+	+	+
Adipic acid	+	+	+	+	+	+	+	+
Allyl alcohol	+	+	+	0	+	+	+	+
Aluminum chloride	+	+	+	+	+	+	+	+
Aluminum hydroxide	+	+	0	0	+	+	+	+
Amino acids	+	+	+	+	+	+	+	+
Ammonium chloride	+	+	+	+	+	+	+	+
Ammonium fluoride	+	+	+	+	+	+	+	+
Ammonium hydroxide, 30 % (Ammonia)	+	+	0	—	+	+	+	+
Ammonium sulfate	+	+	+	+	+	+	+	+
n-Amyl acetate	0	—	—	—	+	0	0	—
Amyl alcohol (Pentanol)	+	+	0	0	+	+	+	+
Amyl chloride (Chloropentane)	—	—	—	—	—	—	—	—

Chemical resistance of plastics

Chemical	PP		PS		HD-PE		LD-PE	
	20°C	50°C	20°C	50°C	20°C	50°C	20°C	50°C
Aniline	+	+	-	-	+	+	+	0
Barium chloride	+	+	+	+	+	+	+	+
Benzaldehyde	+	+	-	-	+	+	+	+
Benzene (Benzol)	+	0	-	-	+	+	0	-
Benzine (Gasoline)	0	0	-	-	+	+	0	-
Benzoyl chloride	+	0	-	-	+	+	0	-
Benzyl alcohol	0	-	-	-	0	-	0	-
Benzylamine	0		-	-	0		0	-
Benzylchloride			-	-				
Boric acid, 10 %	+	+	+	+	+	+	+	+
Bromine	-	-	-	-	-	-	-	-
Bromobenzene	-	-	-	-	-	-	-	-
Bromoform	-	-	-	-	-	-	-	-
Bromonaphthalene			-	-				
Butanediol	+	+	-	-	+	+	+	+
1-Butanol	+	+	0	-	+	+	+	+
Butylamine			-	-				
n-Butyl acetate	0	0	-	-	+	+	0	0
Butyl methyl ether	+	0	-	-	0	-	0	-
Butyric acid	-	-	-	-	0	-	-	-
Calcium carbonate	+	+	+	+	+	+	+	+
Calcium chloride	+	+	+	+	+	+	+	+
Calcium hydroxide	+	+	+	0	+	+	+	+
Calcium hypochlorite	+	+	+	+	+	+	+	+
Calomel	+	+	+	0	+	+	+	+
Carbon disulfide	-	-	-	-	-	-	-	-
Carbon tetrachloride	-	-	-	-	0	-	-	-
Chloro naphthalene								
Chloroacetaldehyde, 45 %			-	-				
Chloroacetic acid	+	+	-	-	+	+	+	+
Chloroacetone			-	-				
Chlorobenzene	0	-	-	-	-	-	-	-
Chlorobutane	0	-	-	-	0	-	0	-
Chloroform	-	-	-	-	+	0	-	-
Chlorosulfonic acid								
Chromic acid, 10 %	+	+	-	-	+	+	+	+
Chromic acid, 50 %	0	0	-	-	+	0	+	0
Chromosulfuric acid	-	-	0	0	+	-	+	-
Copper sulfate	+	+	+	+	+	+	+	+
Cresol	0	0	-	-	0	-	-	-
Cumene (isopropyl benzene)	0	-	-	-	+	0	0	-
Cyclohexane	0	-	-	-	0	-	0	-
Cyclohexanone	0	-	-	-	0	-	-	-
Cyclopentane	0	-	-	-	0	-	-	-
Decane	0				0	-		
1-Decanol	+		0		+			
Dibenzylether	+		-	-	+			
Dibromoethane								
Dibutyl phthalate	+	0	-	-	0	-	0	-
Dichloroacetic acid	0	-	0	-	0	0	0	-
Dichlorobenzene	0	-	-	-	0	-	0	-
Dichloroethane	0	-			0	-	0	-
Dichloromethane	0	-	-	-	0	-	0	-
Diesel oil (Heating oil)	+	0	-	-	+	0	0	-
Diethanolamine	0		-	-	0			
1.2 Diethylbenzene	-	-	-	-	0	-	-	-

Chemical resistance of plastics

Chemical	PP		PS		HD-PE		LD-PE	
	20 °C	50 °C	20 °C	50 °C	20 °C	50 °C	20 °C	50 °C
Diethylether	0	-	-	-	0	-	-	-
Diethylamine	0	-	0	0	0	-	-	-
Diethylene glycol	+	+	0	-	+	+	+	+
Dimethyl sulfoxide (DMSO)	+	+	-	-	+	+	+	+
Dimethylaniline			-	-				
Dimethylformamide (DMF)	+	+	-	-	+	+	+	+
1.4 Dioxane	+	0	-	-	+	+	+	0
Diphenyl ether			-	-				
Ethanol	+	+	-	-	+	+	+	+
Ethanolamine	+							
Ethyl acetate	+	0	-	-	+	+	+	+
Ethyl methyl ketone	+	0	-	-	0	-	0	-
Ethylbenzene	-	-	-	-	-	-	-	-
Ethylene glycol (glycol)	+	+	+	+	+	+	+	+
Ethylene oxide	0	-	-	-	0	0	0	0
Fluoroacetic acid			-	-				
Formaldehyde, 40 %	+	+	-	-	+	+	+	+
Formamide	+	+			+	+	+	+
Formic acid, 100 %	+	+	+	0	+	+	+	+
Glycerol	+	+	+	+	+	+	+	+
Glycolic acid, 50 %	+	+			+	+	+	+
Heating oil (Diesel oil)	+	0	-	-	+	0	0	-
Heptane	0	0	-	-	0	0	0	-
Hexane	+	0	0	-	+	0	0	-
Hexanoic acid								
Hexanol	+	+			+	+	+	+
Hydriodic acid	+	+			+	+	+	+
Hydrobromic acid	+	+	0	-	+	+	+	+
Hydrochloric acid, 10 %	+	+	+	+	+	+	+	+
Hydrochloric acid, 20 %	+	+	+	+	+	+	+	+
Hydrochloric acid, 37 %	+	+	0	0	+	+	+	+
Hydrofluoric acid, 40 %	+	+	+	+	+	+	+	+
Hydrofluoric acid, 70 %	+	0	-	-	+	0	+	-
Hydrogen peroxide, 35 %	+	+	+	+	+	+	+	+
Isoamyl alcohol	+	+			+	+	+	+
Isobutanol	+	+	0	0	+	+	+	+
Isooctane			0					
Isopropanol (2-propanol)	+	+	0	0	+	+	+	+
Isopropyl ether	-	-	-	-	-	-	-	-
Lactic acid	+	+	+	+	+	+	+	+
Lugol's solution (iodine-potassium iodide solution)	+	+	0	-	-	-	-	-
Mercury	+	+	+	+	+	+	+	+
Methanol	+	+	0	-	+	+	+	0
Methoxybenzene			-	-				
Methyl formate			-	-				
Methyl propyl ketone	+	0	-	-	+	+	+	0
Methylene chloride	0	-	-	-	0	-	0	-
Mineral oil (engine oil)	+	+	+		+	+	+	0
Monochloroacetic acid	+	+	-	-	+	+	+	+
Nitric acid, 10 %	+	+	-	-	+	+	+	+
Nitric acid, 30 %	0	-	-	-	0	-	0	0
Nitric acid, 70 %	-	-	-	-	-	-	-	-
Nitrobenzene	-	-	-	-	0	-	-	-
Nitrohydrochloric acid	0	-	0	-	-	-	-	-
Oleic acid			-	-				
Oxalic acid	+	+	+	+	+	+	+	+

Chemical resistance of plastics

Chemical	PP		PS		HD-PE		LD-PE	
	20 °C	50 °C	20 °C	50 °C	20 °C	50 °C	20 °C	50 °C
Ozone	0	–	0	0	0	–	0	–
n-Pentane								
Peracetic acid								
Perchloric acid	+	–	–	–	+	–	+	–
Perchloroethylene	–	–	–	–	–	–	–	–
Petroleum	0	–	–	–	0	–	0	–
Petroleum ether			–	–			0	
Phenol	+	+	–	–	+	+	+	0
Phenylethanol	0				0			
Phenylhydrazine	0				0			
Phosphoric acid, 85 %	+	+	+	0	+	+	+	+
Piperidine	+				+			
Potassium chloride	+	+	0	0	+	+	+	+
Potassium dichromate								
Potassium hydroxide	+	+	0	0	+	+	+	+
Potassium permanganate	+	+	+	+	+	+	+	+
Propanol	+	+	0		+	+	+	+
Propionic acid	+	0	0	–	+	0	0	–
Propylene glycol (propanediol)	+	+	+	+	+	+	+	+
Pyridine	0	0	–	–	+	0	+	0
Salicylaldehyde	+	+	–	–	+	+	+	+
Salicylic acid	+	+	+	+	+	+	+	+
Silver acetate	+	+	0	0	+	+	+	+
Silver nitrate	+	+	0	0	+	+	+	+
Sodium acetate	+	+	+	+	+	+	+	+
Sodium chloride	+	+	+	+	+	+	+	+
Sodium dichromate	+	+	+	0	+	+	+	+
Sodium fluoride	+	+	+	+	+	+	+	+
Sodium hydroxide, 30 %	+	+	+	+	+	+	+	+
Sulfuric acid, 60 %	+	+	–	–	+	+	+	+
Sulfuric acid, 98 %	–	–	–	–	0	–	0	–
Tartaric acid	+	+	+	+	+	+	+	+
Tetrachloroethylene								
Tetrahydrofuran (THF)	0	–	–	–	0	–	0	–
Tetramethylammonium hydroxide								
Toluene	0	–	–	–	0	0	0	–
Trichloroacetic acid	0	–	0	–	0	0	0	–
Trichlorobenzene	–	–	–	–	–	–	–	–
Trichloroethane	–	–	–	–	0	–	–	–
Trichloroethylene	–	–	–	–	0	–	–	–
Trichlorotrifluoroethane			–	–				
Triethanolamine			–	–				
Triethylene glycol	+	+	+	0	+	+	+	+
Trifluoroacetic acid (TFA)			–	–				
Trifluoro ethane			–	–				
Tripropylene glycol	+	+	+	+	+	+	+	+
Turpentine	–	–	–	–	0	–	0	–
Urea	+	+	+	+	+	+	+	+
Xylene	–	–	–	–	0	–	0	–
Zinc chloride, 10 %	+	+	+	+	+	+	+	+
Zinc sulfate, 10 %	+	+	+	+	+	+	+	+

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our products, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, not the suitability of the products for a specific purpose.

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