

Catalog

2014



THINK! Development and production of customized products



Liquid handling products



Labware for general lab applications



Life sciences products for microbiology and biotechnology



Cryo products for deep-freeze applications

ratiolab[®]
disposables for sciences



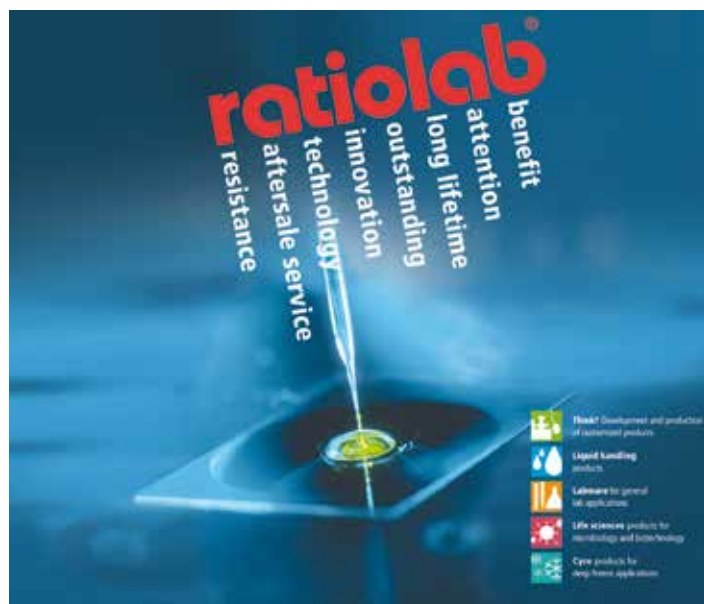
Dear valued business partners,

For over 40 years, the name ratiolab® stands for developing, manufacturing and sale of high-quality, innovative disposables for laboratories in the fields of medicine, research and industry.

Every day we face the challenge of growing consistently with our customers, who research and work mainly in highly innovative business fields, and offering them new products for their activities. This is also reflected in the current edition of our catalogue 2014, which you now have in your hands.

Our values are the standard we follow in business dealings with our customers, suppliers and co-workers.

We hope you enjoy looking through the new ratiolab® catalogue 2014.



The ratiolab® team will be on hand with help and advice for any ideas and questions you might have.

Sincerely yours


Johannes Frauendörfer
Managing Director

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of customized products

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Our Company



THINK! Development and production of customized products



Liquid handling products



Labware for general lab applications



Life sciences products for microbiology and biotechnology



Cryo products for deep-freeze applications

What ratiolab® offers

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!



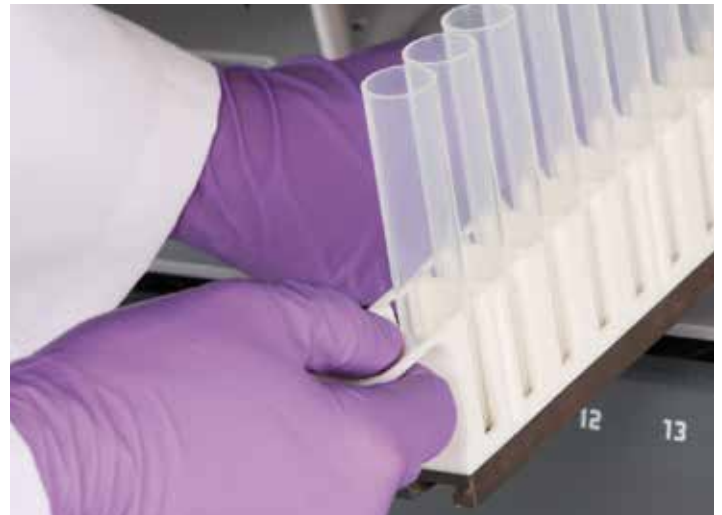
On a daily basis, thousands of laboratory items are produced from high-quality plastics using tools of the highest precision in state-of-the-art automatic injection-molding machines. If so desired, we can develop packaging forms suitable for automatic processing to your own specifications; we can also 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

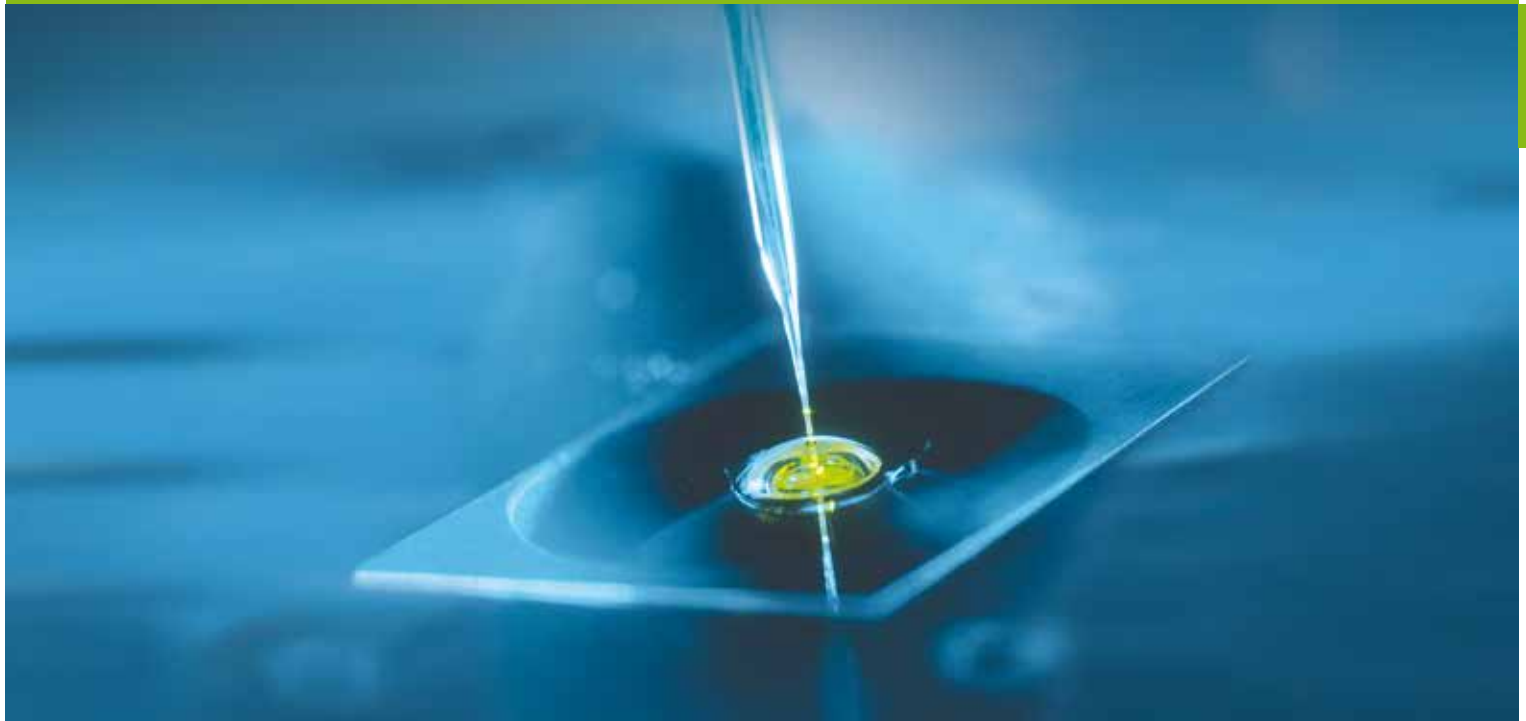
idea through CAD, construction, the production of prototypes to the efficient production and packaging of the finished product.

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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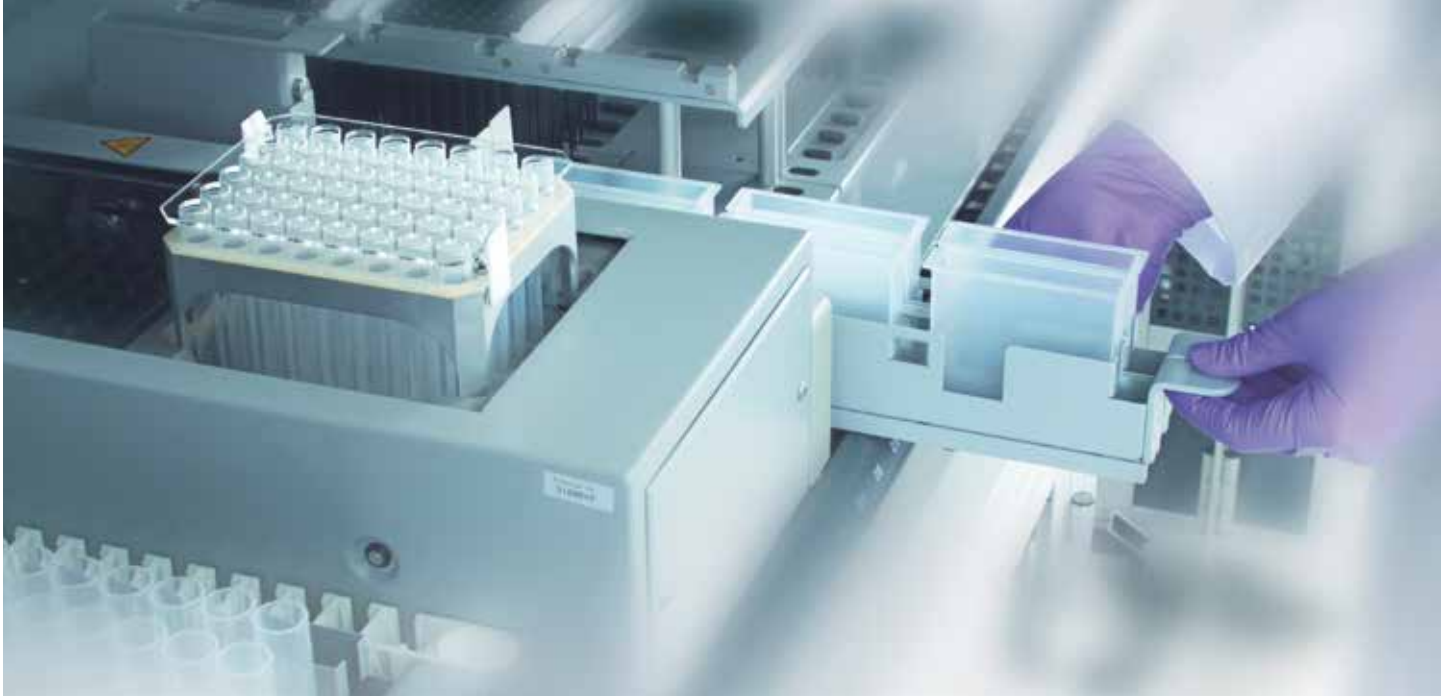
Think!



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.

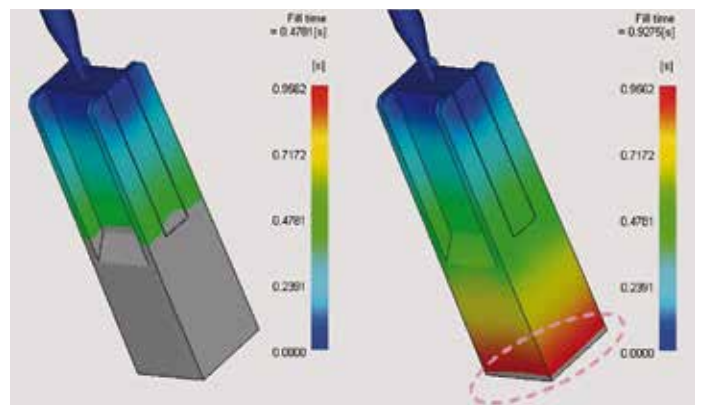
Here, individual solutions are required – whether for special pipet tips, non-standard cuvettes, customized magazines or even items that do not exist ...



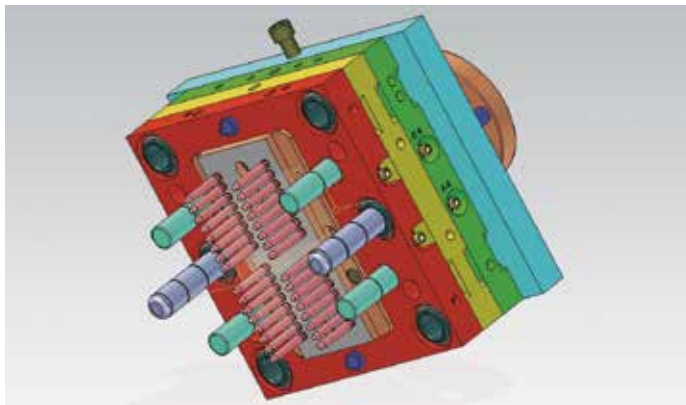
1. Joint development.

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



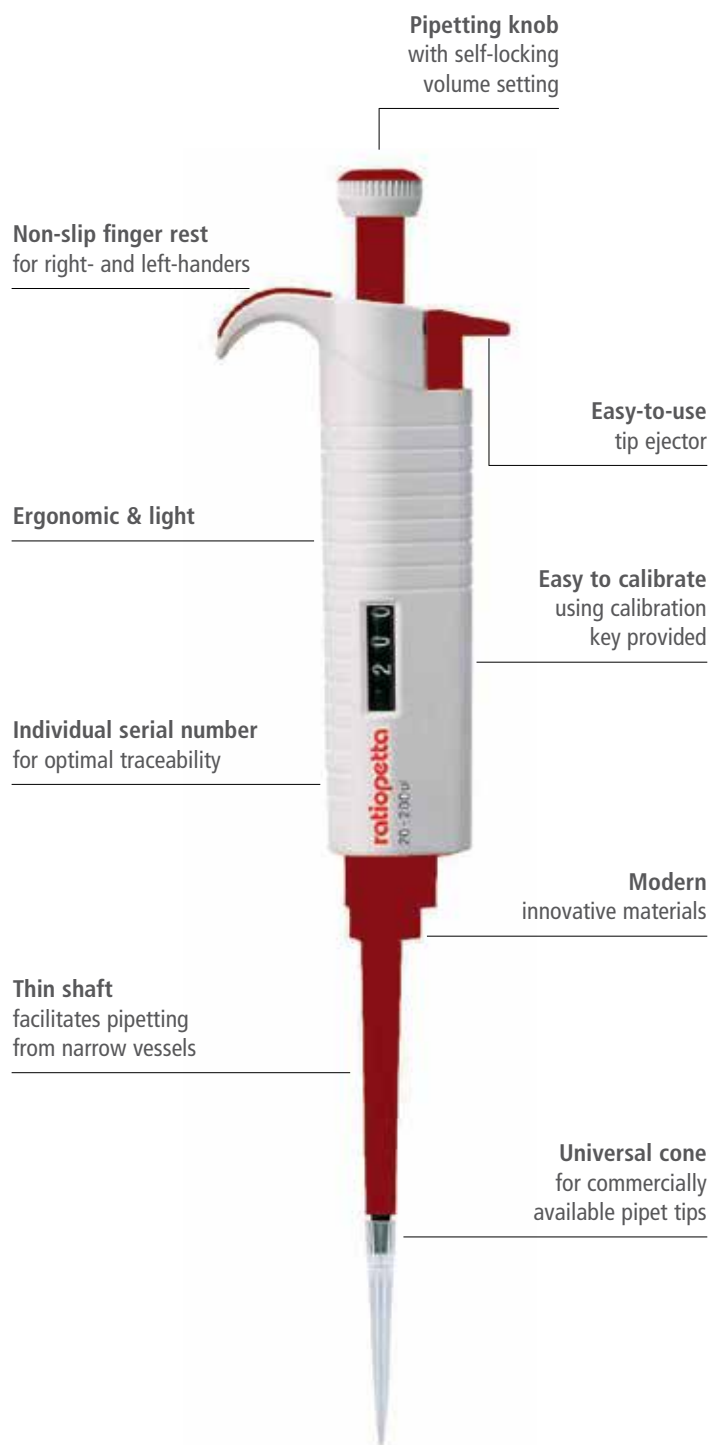
Labware for general lab applications



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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
- 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 prior to delivery
- delivery includes a test certificate
- individual serial numbers
- suitable for right- and left-handers
- easy to calibrate
- corrosion-resistant piston and tip ejector
- 1 year guarantee

Delivery includes:

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



Single-channel Precision Pipet ratiopetta®



Volume Range µl	Accuracy* < ± %	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®



Volume Range µl	Accuracy* < ± %	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®



Volume Range µl	Accuracy* < ± %	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



[1]

Pipettor stands

Pipettor stands Labrack and ratiopetta®

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

Product	Fig. No.	Quantity per Pack	Order No.
pipettor stand Labrack	[1]	1	94 20 020
pipettor stand for ratiopetta®	[2]	1	94 20 024



[2]

* 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.

ratiolab® Pipetting Reservoirs

Pipetting reservoirs

The new ratiolab® pipet reservoirs made of white polystyrene (PS) are ideal for the repetitive filling of single and multi-channel pipets. Compact in 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 1

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

Version 2

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

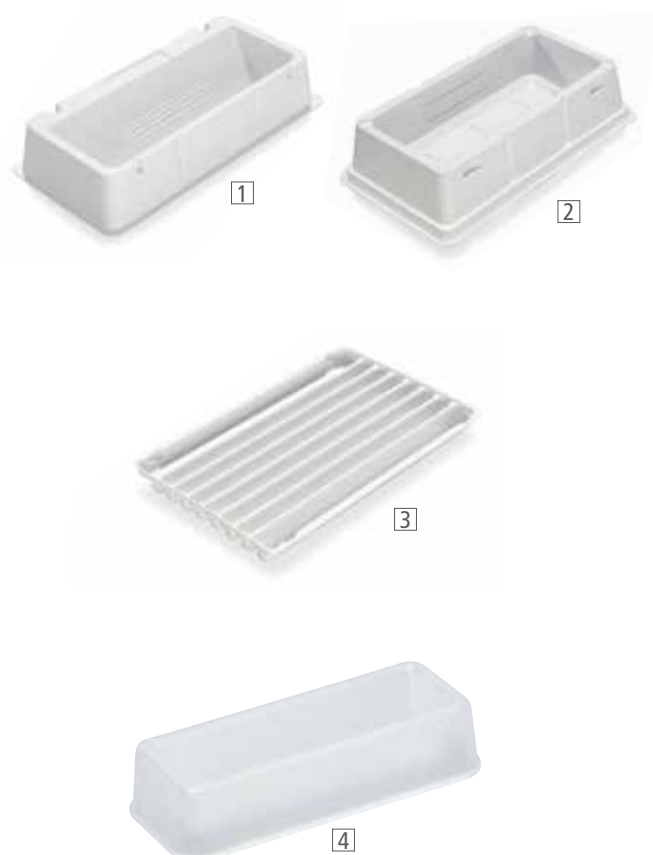
Version 3

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

Version 4

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

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

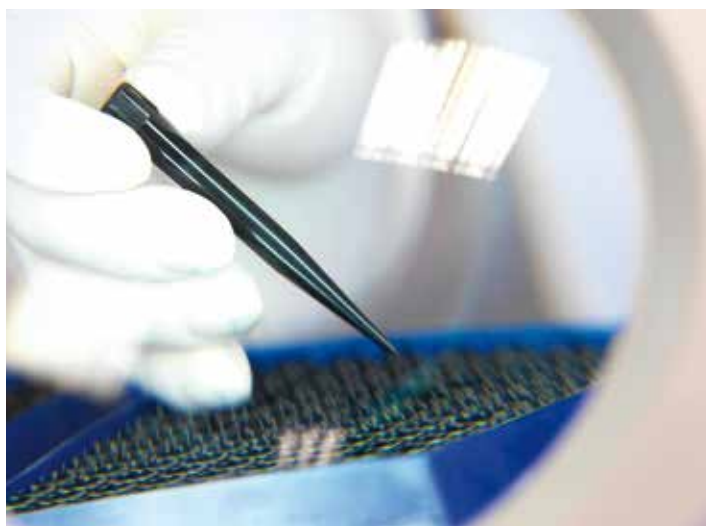
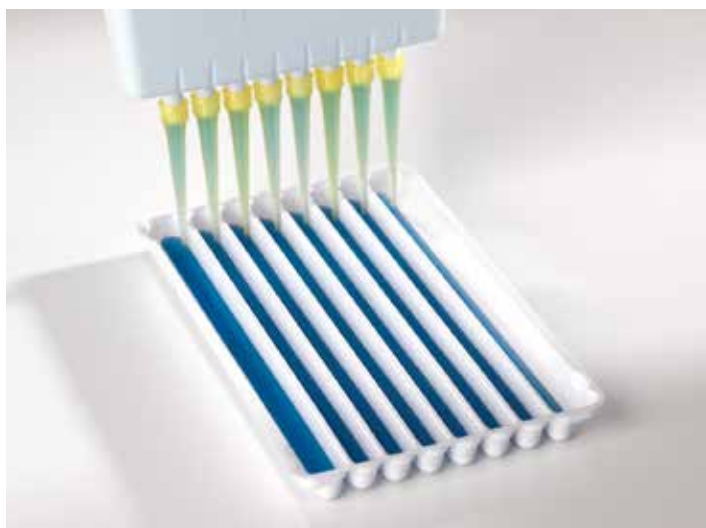
Pipetting reservoirs made of PP

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

ratiolab® Pipet Tips

ratiolab® pipet tips

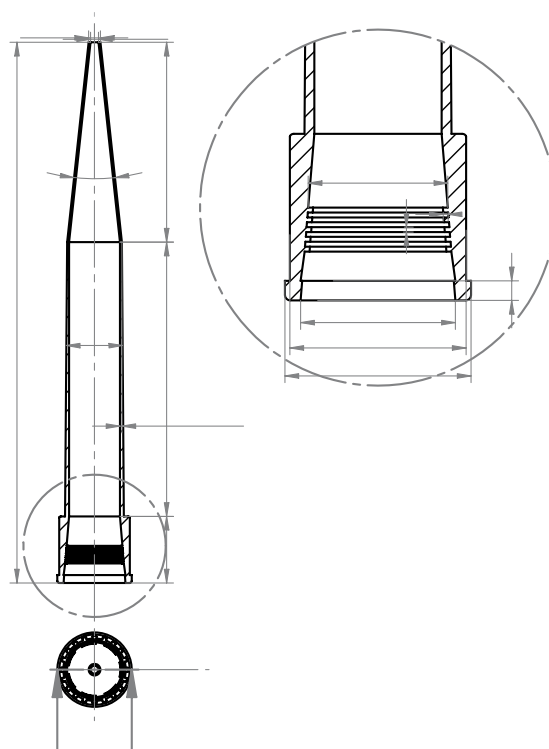
ratiolab® pipet tips are ideal for all commercially available pipets. Their uniform high quality and precision make today's pipets fully effective. Together with specially developed racks and refill systems and the ratiolab® Multibox, they make pipetting that much simpler and safe, also in the most sensitive of applications.



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 non-deforming 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 used
- excellent volume accuracy due to precise tip orifice
- practice-oriented tip volumes
- aerosol® tips with special filters made of hydrophobic PE-HD as aerosol barrier and for secure protection against contamination
- suitable for all commonly used pipet types

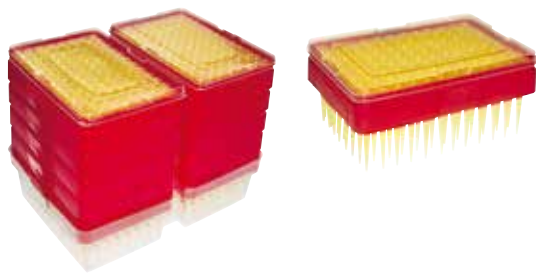
This is why ratiolab® pipet tips always provide perfect results.





ratiolab® 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 – 1000 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



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



ratiolab® 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
 - Sales unit: 1 pcs.



Product	Fig. No.	Volume	Order No.
ratiolab® Multibox® plus, PC, empty, for all MultiTray® pipet tips	1	up to 1000 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 1000 µl	80 30 170

ratiolab® Pipet Tips System



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

MultiTray®, the dust-proof refill packs made of transparent 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 – 1000 µl tips are in a 6 x 10 format on the matrices. The matrices can simply be removed from the MultiTray® 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 dust-proof, hinged cover of the Multibox®plus und -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.

ratiolab® Pipet Tips



Volume Range µl	Packaging	Fig. No.	Quantity per Pack	Order No.
Crystal pipet tip "E" – volumes 0.5 – 20 µl, for all commonly used pipets 	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", volumes 0.1 – 10 µl, for Gilson® Pipetman®/Neo 	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, volumes 0.1 – 10 µl, for all commonly used pipets 	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", volumes 1 – 200 µl, for all commonly used pipets 	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", volumes 1 – 200 µl, for all commonly used pipets 	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", volumes 1 – 250 µl, for all commonly used pipets 	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" – volumes 1 – 250 µl, for all commonly used pipets 	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 "extended", volumes 1 – 200 µl, for Thermo Scientific Finntip F1 and F2 	bag 1 x 400	1	400	24 00 700
	Racks 10 x 96	2	960	24 10 702
Pipet tip "Oxford", volumes 1 – 200 µl, for Oxford pipets 	bag 1 x 1000	1	1000	25 00 110

Volume Range μ l	Packaging	Fig. No.	Quantity per Pack	Order No.
Pipet tip "MLA", volumes 1 – 200 μ l, for MLA pipets	bag 1 x 1000	1	1000	25 00 140
Pipet tip "wide bore", volumes 1 – 200 μ l, for all commonly used pipets	bag 1 x 1000	1	1000	21 00 553
Colorless pipet tip "universal", volumes 1 – 300 μ l, for all commonly used pipets	bag 1 x 1000	1	1000	23 00 650
	Multiracks 10 x 96	2	960	23 13 652
	Multiracks, sterilized 10 x 96	2	960	23 53 652
	MultiTray® 10 x 96	3	960	23 30 652
Blue pipet tip "E", volumes 100 – 1000 μ l, for all commonly used pipets	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", volumes 100 – 1000 μ l, for all commonly used pipets	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", volumes 100 – 1000 μ l, for MLA pipets	bag 1 x 1000	1	1000	25 00 150
Pipet tip "wide bore", volumes 100 – 1000 μ l, for all commonly used pipets	bag 1 x 1000	1	1000	21 00 555

1



2



3



ratiolab® Pipet Tips



Volume Range µl	Packaging	Fig. No.	Quantity per Pack	Order No.
Pipet Tip Dr. Lange, volumes 100 – 1000 µl, for Pipets Dr. Lange	bag 1 x 1000	1	1000	25 00 130
				
Pipet Tip "Oxford", volumes 250 – 1000 µl, for Pipets Oxford	bag 1 x 1000	1	1000	25 00 120
				
Colorless pipet tip "ES", volumes 500 – 2500 µl, for Pipets Eppendorf® Reference® and Socorex® Calibra	bag 1 x 250	1	250	25 00 180
				
Pipet Tip "Finntip", volumes 1000 – 5000 µl, for Pipets Thermo Scientific Finntip F1 and F2, Pipets Dr. Lange	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	1	24 10 620
Pipet Tip "Makro", volumes 1000 – 5000 µl, for Pipets Gilson® Pipetman®/Neo	bag 1 x 250	1	250	24 00 630
	Rack 1 x 50	6	1	24 10 630
Pipet Tip "Makro II", volumes 1000 – 5000 µl, for Pipets Biohit® proline	bag 1 x 300	1	300	24 00 650
	Rack 1 x 50	5	1	24 10 650
Pipet Tip "Finntip", volumes 2000 – 10000 µl, for Pipets Thermo Scientific Finntip F1 and F2	bag 1 x 100	1	100	24 00 640
	Rack 1 x 25	5	1	24 10 640
Pipet Tip, volumes 1000 – 10000 µl, for Pipets Biohit Mine Pipet and Gilson® Pipetman®	bag 1 x 1000	1	1000	24 00 642
				

1



4



5



6



ratiolab® aeroject® ultra Pipet Tips



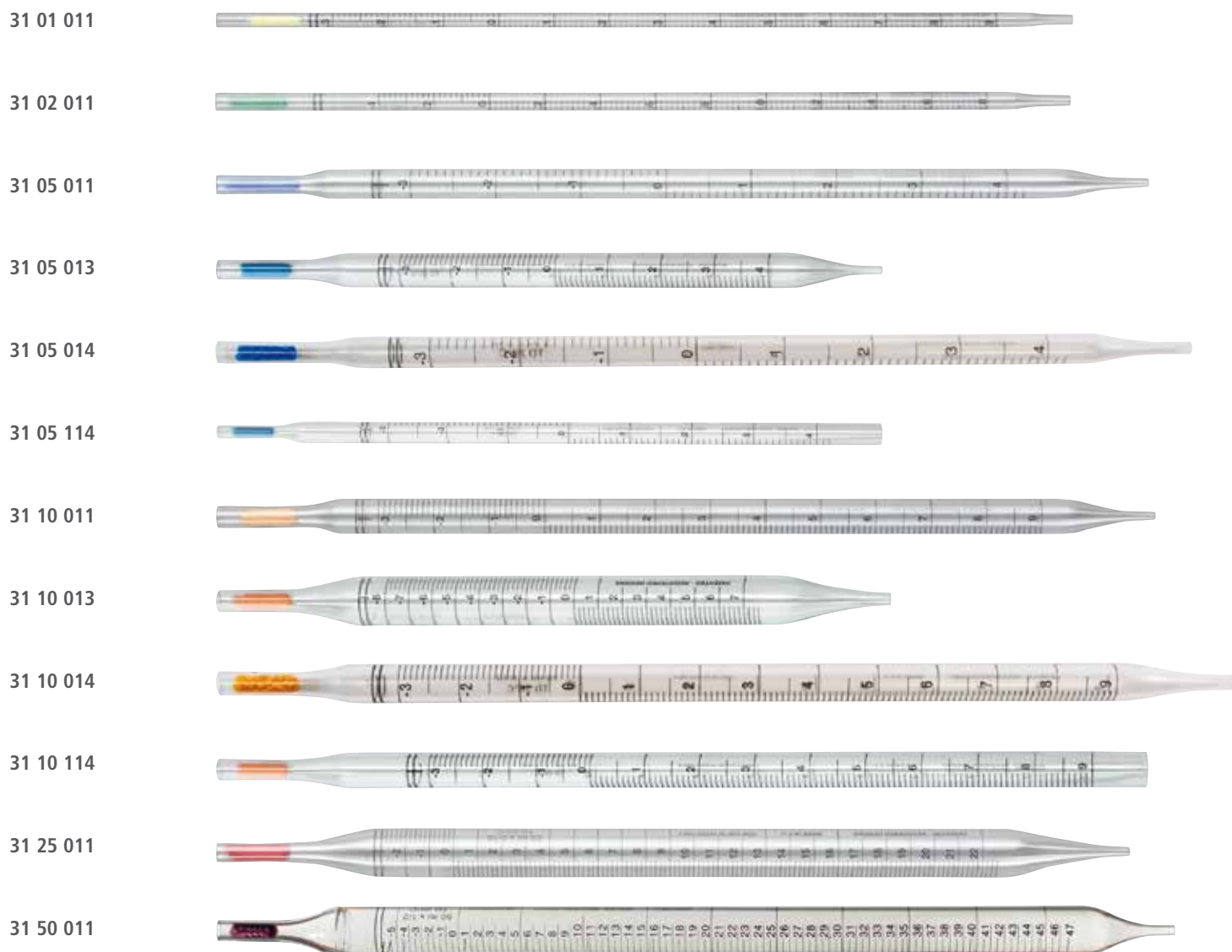
ratiolab® aeroject® ultra tips – Pipet Tips with Aerosol Barrier

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

- sterilized
- certified RNase- and DNase-free
- pipet tips and aerosol filters made of ultra-hydrophobic PE-HD
- minimized retention due to special surface treatment
- perfect and tight fit on all major pipettor brands
- aeroject® ultra 10 µl xl with extended length for operation with narrow vessels and reduced risk of cross-contamination
- packed in plastic racks with hinged lids
- 10 to 200 µl tips packed acc. to 8 x 12 micro test plate footprint
- 100 – 1000 µl in 6 x 10 format

Volume Range µl	Packaging	Quantity per Pack	Order No.
Pipet Tip aeroject® ultra tips xl, 0,1 – 10 µl, for all commonly used pipets	Racks 10 x 96	960	17 70 010
			
Pipet Tip aeroject® ultra tips, 1 – 20 µl, for all commonly used pipets	Racks 10 x 96	960	17 70 020
			
Pipet Tip aeroject® ultra tips, 1 – 100 µl, for all commonly used pipets	Racks 10 x 96	960	17 70 100
			
Pipet Tip aeroject® ultra tips, 1 – 200 µl, for all commonly used pipets	Racks 10 x 96	960	17 70 200
			
Pipet Tip aeroject® ultra tips, 100 – 1000 µl, for all commonly used pipets	Racks 10 x 60	600	17 71 000
			

Serological Pipets



Serological Pipets

Glass-clear polystyrene (PS).

- free from pyrogen, sterile, individually packed
- 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	Negative Volume ml	Graduation ml	Sterilized	Quantity per Pack	Order No.
1	0.3	0.01	■	500	31 01 011
1.1	–	0.5 – 1 – 1.1	■	500	31 01 012
2	0.4	0.02	■	500	31 02 011
2.2	–	0.5 – 1 – 2 – 2.1 – 2.2	■	500	31 02 012
5	3	0.1	■	250	31 05 011
5 short	3	0.1	■	200	31 05 013
5 wide tip	3	0.1	■	250	31 05 014
5 open end	3	0.1	■	250	31 05 114
10	3	0.1	■	200	31 10 011
10 short	3	0.1	■	100	31 10 013
10 wide tip	3	0.1	■	200	31 10 014
10 open end	3	0.1	■	200	31 10 114
25	2.6	0.2	■	100	31 25 011
50	5	0.5	■	100	31 50 011

Pipetting Aids

ratiolab® Accupetta Electronic Pipetting Aid

- can fill 25 ml pipet in under 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

Order No. 32 00 300 contains:

- 2x 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
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 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
- graduated pasteur-plast pipets with clearly visible embossed graduations
- sterile pasteur-plast pipets are gas-sterilized and individually packaged
- made of PE-HD
- can be used for food

26 00 260



26 00 145



26 00 155



26 00 171

26 55 171

26 56 171



26 00 119



26 00 181

26 55 181



26 00 160



26 00 120

26 55 120



Volume ml	Graduation	Length mm	Drop Volume µl	Drops per ml	Sterilized	Quantity per Pack	Order No.
0.1	–	84			–	1000	26 00 260
0.2	–	130	30	33	–	500	26 00 145
1.0 capillary	–	104	20	50	–	400	26 00 155
1.0	■	150	33	30	–	500	26 00 171
1.0	■	150	33	30	■	500 x 1	26 55 171
1.0	■	150	33	30	■	50 x 10	26 56 171
1.0	■	138	40	25	■	500 x 1	26 00 119
1.0 capillary	■	144	14	70	–	500	26 00 181
1.0 capillary	■	144	14	70	■	500 x 1	26 55 181
1.2	–	63	40	25	–	500	26 00 160

New

Pasteur-Plast Pipets

26 00 135
26 55 135
26 56 135



26 00 131



26 00 111
26 55 111
26 56 111



26 00 151
26 55 151



26 00 216



26 00 206
26 55 206



26 00 190



26 00 195



Volume ml	Graduation	Length mm	Drop Volume µl	Drop per ml	Sterilized	Quantity per Pack	Order No.
1.5	–	230	45	22	–	400	26 00 120
1.5	–	230	45	22	■	250 x 1	26 55 120
2.0	■	153	45	22	–	500	26 00 135
2.0	■	153	45	25	■	500 x 1	26 55 135
2.0	■	153	45	25	■	50 x 10	26 56 135
2.5	■	150	30	33	–	500	26 00 131
3.0 macro	■	155	40	25	–	500	26 00 111
3.0 macro	■	155	40	25	■	500 x 1	26 55 111
3.0 macro	■	155	40	25	■	50 x 10	26 56 111
3.0 micro	–	155	33	30	–	500	26 00 151
3.0 micro	–	155	33	30	■	500 x 1	26 55 151
4.0	–	150	40	25	–	500	26 00 216
6.0 macro	–	149	50	22	–	400	26 00 206
6.0 macro	–	149	50	22	■	400 x 1	26 55 206
10.0	–	170	56	18	–	200	26 00 190
10.0	–	300	45	22	–	100	26 00 195

ratiolab® Dispenser Tips and Dispenser



ratiolab® Dispenser Tips

CE IVD

For serial pipettings.

Dispenser-Tips fit onto ratiolab® dispetta and Eppendorf Multipipette® 4780.

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

Volume ml	Description	Quantity per Pack	Order No.
0.5	non-sterile	100	29 00 101
1.25	non-sterile	100	29 00 102
2.5	non-sterile	100	29 00 103
5.0	non-sterile	100	29 00 104
12.5	non-sterile	100	29 00 105
25	non-sterile	50	29 00 109
50	non-sterile	25	29 00 106
Adapter	non-sterile	10	29 00 107

0.5	sterile, individually packed	100	29 10 101
1.25	sterile, individually packed	100	29 10 102
2.5	sterile, individually packed	100	29 10 103
5.0	sterile, individually packed	100	29 10 104
12.5	sterile, individually packed	100	29 10 105
25	sterile, individually packed	25	29 10 109
50	sterile, individually packed	25	29 10 106
Adapter	sterile, individually packed	5	29 10 107

ratiolab® dispetta Pipettor for Serial Dispensing

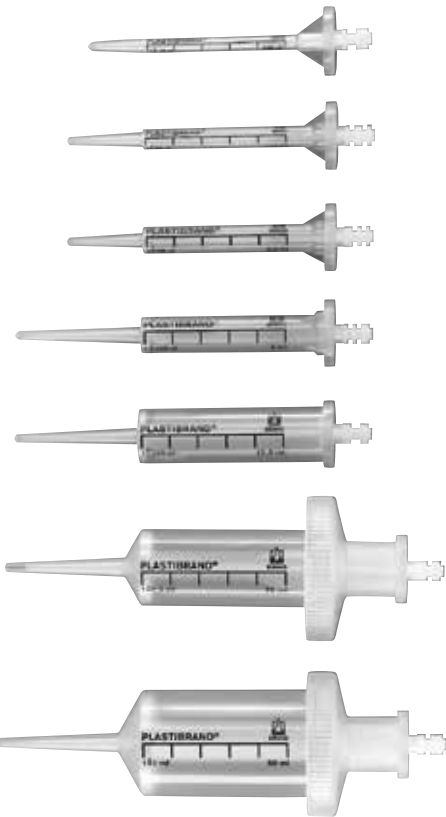
CE IVD

Convenient and robust instrument for serial dispensing with Dispenser Tips. Five volume settings combined with seven Dispenser Tip sizes result in 35 different volumes from 10 µl to 5 ml. The Dispenser Tip is filled similar to a syringe. Step-by-step dispensing is possible by pressing the dispenser button.

- 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

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

Dispenser Tips and Dispenser



PD-Dispenser-Tips with Typ-Code

CE IVD

For serial pipettings.

The volume of the Dispenser Tip is automatically identified by the pipetting device (Handy-Step® electronic only). PD-Dispenser Tips fit onto ratiolab® dispetta, Brand Handy-Step® and Handy-Step® electronic and Eppendorf Multipette® 4780.

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

Volume ml	Description	Quantity per Pack	Order No.
0.5	non-sterile	100	29 00 201
1.25	non-sterile	100	29 00 202
2.5	non-sterile	100	29 00 203
5.0	non-sterile	100	29 00 204
12.5	non-sterile	100	29 00 205
25	non-sterile	50	29 00 209
50	non-sterile	25	29 00 206
Adapter	non-sterile	10	29 00 207

0.5	sterile, individually packed	100	29 10 201
1.25	sterile, individually packed	100	29 10 202
2.5	sterile, individually packed	100	29 10 203
5.0	sterile, individually packed	100	29 10 204
12.5	sterile, individually packed	100	29 10 205
25	sterile, individually packed	25	29 10 209
50	sterile, individually packed	25	29 10 206
Adapter	sterile, individually packed	5	29 10 207

HandyStep® electronic Pipettor for Serial Dispensing

CE

Hand-held dispenser with micro processor-controlled precision. For serial dispensing, most convenient to operate.

- automatic tip size registration when using PD-Tips with type code
 - fits almost any dispenser tips
 - variable volume adjustment from 1 µl to 50 ml
 - digital LCD display for volume, number of steps, operation speed, mode and battery charging level
 - three operation modes: dispensing, auto dispensing, pipetting
 - in the auto dispensing mode the processor calculates the mean operation frequency from three manually operated dispensings and continues the operation automatically
 - three operation speeds can be chosen for liquids with different viscosity and density
 - easy programming by an intuitive guided menu
 - no out-of-function intervals due to exchangeable batteries, which can be charged by the instrument or separately
 - quality-controlled and individually certified, serial number included
- Scope of delivery: HandyStep® with NiMH battery, charger with dispenser stand and power supply 230 V/50 Hz.

Product	Quantity per Pack	Order No.
HandyStep® Handdispenser complete	1	47 50 002
power supply 230 V/50 Hz	1	47 50 003
charger stand without power supply	1	47 50 004
NiMH-battery	1	47 50 005

Labware



Think! Development and production of customized products



Liquid handling products



Labware for general lab applications



Life sciences products for microbiology and biotechnology



Cryo products for deep-freeze applications

ratiolab® Cuvets

Disposable cuvetts have long replaced cuvetts 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 cuvetts are produced

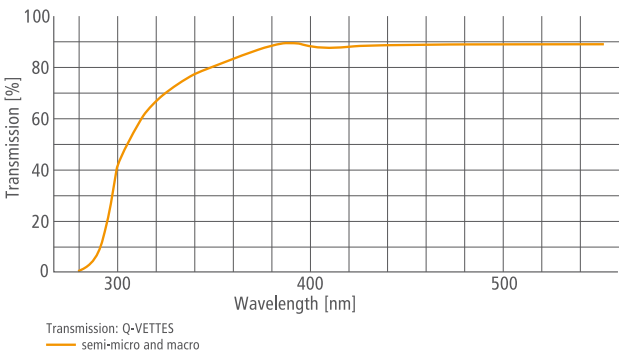
simultaneously. In order to prevent deviations in extinction coefficient values from occurring in any one run due to increased stray light, the cuvetts are automatically sorted according to their numbered cavities of origin. Each package contains only cuvetts that have been produced in any one cavity. The corresponding cavity number is noted on each package. Thus, even for extensive analyses, the same cuvetts can be used.



ratiolab® Q-VETTES

The new generation of cuvetts with clearly improved photometric properties. The new optimized form and the small wall thickness of the cuvetts 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 polystyrene boxes: 100 cuvetts in a polystyrene box with closable lid



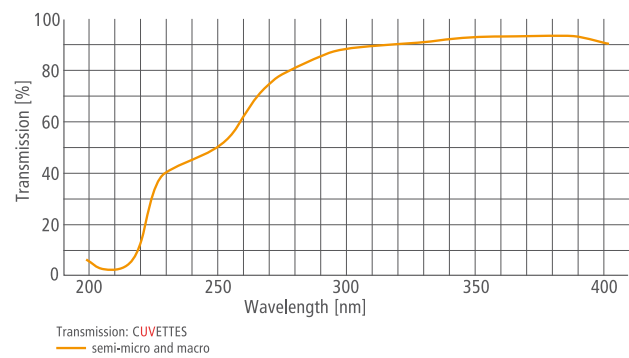
Product	Description	Volume ml	Packaging	Quantity per Pack	Order No.
ratiolab® Q-VETTES semi-micro	PS	1.6	styrofoam racks 10 x 100	1000	27 12 120
ratiolab® Q-VETTES macro	PS	4.0	styrofoam racks 10 x 100	1000	27 11 110



ratiolab® CUVETTES

For photometric measurements even in the UV range. 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 cuvettes in a styrofoam box with a resealable cover



Product	Description	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



ratiolab® Cuvets of PMMA

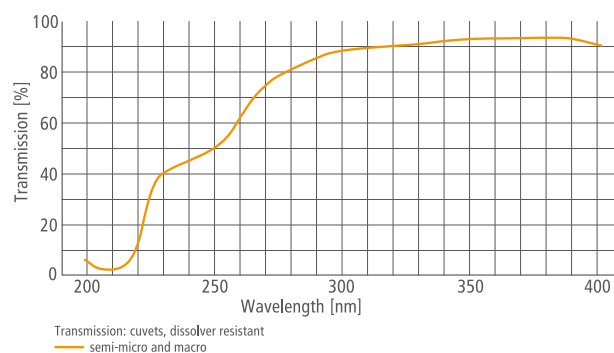
- cuvettes of polymethylmethacrylate (PMMA)
- applicable wavelength range 300 to 900 nm
- very low variation of extinction values
- excellent optical transmission range
- path length 10 mm
- outer dimensions 12.5 x 12.5 x 45 mm
- supplied in practical styrofoam racks: 100 cuvettes in a styrofoam box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

Product	Description	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



ratiolab® 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
- path length 10 mm
- outer dimensions 12.5 x 12.5 x 45 mm
- supplied in practical styrofoam racks: 100 cuvettes in a styrofoam box with a resealable cover



Product	Description	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

- for all ratiolab® cuvettes
- packed in 1 plastic bag of 1000 pieces

Type	Packaging	Quantity per Pack	Order No.
Stoppers for cuvettes	1 x 1000	1000	28 12 011

Analysis Beakers and Scintillation Vessels

Analysis Beakers

Clear polystyrene (PS).

- high-precision design for use with robotic analytical systems



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 Gemsac 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
beakers for flame photometers	5	6.0	1 x 1000	1000	57 00 660



Scintillation Vessels

Natural polyethylene (PE-LD).

- 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

Test Tubes and Stoppers

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	bag 1 x 1000	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	5	12 x 75	PS	4.5	conical	bag 1 x 1000	1000	37 14 040
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	6	16 x 100	PS	12	round	bag 1 x 1000	1000	37 14 010
test tubes	7	16 x 100	PP	12	round	bag 1 x 1000	1000	38 14 010
test tubes	8	17 x 103	PS	12	conical	bag 1 x 1000	1000	37 14 020
test tubes	9	18 x 105	PS	12	conical	bag 1 x 1500	1500	35 20 000
test tubes	10	18 x 105	PS	12	round	bag 1 x 1500	1500	36 22 000

Stoppers, Ø 11 – 12 mm

Polyethylene (PE).

- very tight seal due to 2 sealing rings
- available in natural and 4 more colors



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, Ø 16 – 17 mm

Polyethylene (PE).

- very tight seal due to 2 sealing rings
- available in natural and 4 more colors



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

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-Coun-Tainer 1 with lid	1	25	PS	PS-tray 20 x 50	1000	55 15 010
Cell-Coun-Tainer 1 with lid	1	25	PS	bags 4 x 250	1000	55 15 040
Cell-Coun-Tainer 1 without lid	–	25	PS	bags 4 x 250	1000	55 15 041
lids for Cell-Coun-Tainer 1	–	–	PE	bag 1 x 1000	1000	55 15 04D
for cell counter systems with cylindrical containers, e.g. Al® and Linson®						
Cell-Coun-Tainer 2 without lid	2	20	PS	bag 1 x 1000	1000	55 15 051
stoppers for Cell-Coun-Tainer 2, Ø 22 mm	–	–	PP	bag 1 x 1000	1000	55 15 052
Cell-Coun-Tainer 3 with lid	3	13	PS	bags 4 x 500	2000	55 15 060
Cell-Coun-Tainer 3 without lid	–	13	PS	bags 4 x 500	2000	55 15 061
lids for Cell-Coun-Tainer 3	–	–	PE	bag 1 x 1000	1000	55 15 06D



Centrifuge Tubes

Polypropylene (PP).

- with round, conical bottom or stand alone
- centrifuge tubes with blue cap available with printed graduations and field frosted for writing
- supplied in non-sterile or sterile
- with blue screw cap or closure

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

Microcentrifuge Tubes

Microcentrifuge Tubes

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

- natural color or different colors for comfortable identification
- tight sealing cap
- safe and easy to be opened and closed



Volume ml	Fig. No.	Cap	Material	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	4	—	PP	natural	1 x 1000	1000	56 15 020
2.0	5	■	PP	natural	1 x 1000	1000	56 15 101
2.0	—	—	PP	natural	1 x 1000	1000	56 15 102

ratiolab® 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.
- Centrifugable up to 30000g
- Free of RNase-, DNase-, DNA-, pyrogens
- 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



Volume ml	Cap	Material	Color	Packaging	Quantity per Pack	Order No.
1.5	■	PP	natur	1 x 1000	1000	56 15 008

New

Microcentrifuge Tubes and Micro Centrifuge

Microcentrifuge tubes with screw cap and O-Ring Seal

Polypropylene (PP).

- with conical bottom or self-standing
- sterilized
- centrifugable up to approx. 25.000 g
- temperature-resistant from -80°C to $+121^{\circ}\text{C}$
- autoclavable up to $+121^{\circ}\text{C}$



Volume ml	Fig. No.	Bottom	Labeling Area	Sterilized	Packaging	Quantity per Pack	Order No.
0.5	1	self-standing	—	■	5 x 200	1000	56 16 021
0.5	2	conical	—	■	5 x 200	1000	56 16 023
1.5	3	self-standing	■	■	5 x 200	1000	56 16 022
1.5	4	conical	■	■	5 x 200	1000	56 16 027
2.0	5	self-standing	■	■	5 x 200	1000	56 16 026
2.0	6	conical	■	■	5 x 200	1000	56 16 025



Micro Centrifuge for PCR Strips and Microcentrifuge Tubes

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

- for 16 PCR 0.2 ml tubes, two PCR 0.2 ml strips of 8 tubes, 0.2 ml or 8 microcentrifuge tubes 0.5 to 2.0 ml
- 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
- supplied with two rotors for two PCR strips of 8 tubes, 0.2 ml and 8 microcentrifuge tubes 0.5 to 2.0 ml

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

Racks and Microscope Slide Boxes



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. Non-slip and stable due to the four rubber studs on the base.

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

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

Microscope Slide Boxes

Transparent colored polystyrene (PS).

For 50 or 100 microscope slides 76 x 26 mm. Index-Card in lid. Index numbering corresponds to the embossed numbers on the bottom of the box.

- stackable
- 50 capacity with dustproof lid
- 100 capacity with dustproof hinged lid



Color	W x D x H mm	Positions	Packaging	Order No.
blue	170 x 83 x 30	50	1	36 10 501
green	170 x 83 x 30	50	1	36 10 502
yellow	170 x 83 x 30	50	1	36 10 503
red	170 x 83 x 30	50	1	36 10 504
white	170 x 83 x 30	50	1	36 10 505
orange	170 x 83 x 30	50	1	36 10 506
mint	170 x 83 x 30	50	1	36 10 507
black	170 x 83 x 30	50	1	36 10 508
violet	170 x 83 x 30	50	1	36 10 509
blue	210 x 166 x 30	100	1	36 11 001
green	210 x 166 x 30	100	1	36 11 002
yellow	210 x 166 x 30	100	1	36 11 003
red	210 x 166 x 30	100	1	36 11 004
white	210 x 166 x 30	100	1	36 11 005

ratiolab® Multistand Rack



ratiolab® Multistand Rack

Polyamide (PA).

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



Color	Positions	W x D x H mm	Packaging	Order No.
white	5 x 5	105 x 105 x 42	1	New 37 12 101

ratiolab® Cleanibag System and Autoclavable bags



ratiolab® 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 L mm	Volume ca. 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 – Warning Instruction and sterilization indicator field.

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.

- with BIOHAZARD sticker and safety imprint in English – French – German language
- autoclavable at 134 °C, for autoclaving, the bag must not be completely closed

W x L mm	Volume ca. l	Film Thickness	Packaging	Quantity per Pack	Order No.
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 500	500	70 02 150
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 350	350	70 02 300

ratiolab® Waste Disposal Bag

ratiolab® Waste Disposal Bag, 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
- practicable bench-top stand, plastic-coated, with 3 rubber feet, for bag size 200 x 300 mm



W x L mm	Volume ca. 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				1	70 01 400
Set consisting of bench-top stand and 100 waste disposal bags (standard) 200 x 300 mm				1	70 01 401

ratiolab® Waste Disposal Bag, 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
- practicable bench-top stand, plastic-coated, with 3 rubber feet, for bag size 200 x 300 mm



W x L 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 01 005
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				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

ratiolab® Uri-Lab Multi-Purpose Beaker System and Multi-Purpose bottles



ratiolab® Uri-Lab Multi-Purpose Beakers

Glass-clear polystyrene (PS).

- volume 100 ml
- self-adhesive film cover, leakproof and easily labelled
- comfortable sampling, the film cover can be pierced with pipet tips
- practicable packaging, 50 multi-purpose beakers are stacked in PE-bags for use with the Uri-Lab Beaker Dispenser

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

ratiolab® Beaker Tray and Beaker Dispenser for Uri-Lab Multi-Purpose Beakers

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

- for 10 ratiolab® multi-purpose beakers Uri-Lab

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

- for 50 ratiolab® multi-purpose beakers Uri-Lab
- 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 Uri-Lab	1	1	59 21 200
ratiolab® beaker dispenser Uri-Lab	2	1	59 21 190

Multi-Purpose bottles

Polyethylene, blue translucent (PE).

- lid with nonwoven fabric liner
- with graduations, light protection
- wide neck diameter 80 mm
- 2 sizes, 2 and 2.5 l

Product	Packaging	Quantity per Pack	Order No.
Multi-purpose bottles 2 l with white inscription	cardboard box 1 x 72	72	59 22 200
Multi-purpose bottles 2.5 l with self-adhesive labels	cardboard box 1 x 60	60	59 22 250
lids for Multi-purpose bottles 2 and 2.5 l	bag 1 x 100	100	59 22 204
self-adhesive labels for Multi-purpose bottles 2.5 l	bag 1 x 100	100	59 22 253

Multi-Purpose Beakers

Multi-Purpose beakers with screw-caps

Polypropylene (PP) or polystyrene (PS).

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



Volume ml	Fig. No.	Material	Graduation and Labeling area	Sterilized	Packaging	Quantity per Pack	Order No.
30	1	PP	—	—	cardboard box 1 x 1000	1000	59 21 173
30	1	PP	—	■	bags 1000 x 1	1000	59 21 174
60	2	PP	■	—	cardboard box 1 x 600	600	59 21 175
60	2	PP	■	■	bags 500 x 1	500	59 21 176
120	3	PP	■	—	cardboard box 1 x 500	500	59 21 182
120	3	PP	■	■	bags 250 x 1	250	59 21 183
200	4	PP	—	—	cardboard box 1 x 200	200	59 21 185
200	4	PP	—	■	bags 150 x 1	150	59 21 184
200	5	PS	—	■	bags 150 x 1	150	New 59 21 188

Petri Dishes, Inoculating Loops and Needles, Incubator



Petri Dishes

Transparent polystyrene (PS).

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, Needles, Spatulas

Made of polystyrene (PS).

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

Product	Packaging	Quantity per Pack	Order No.
1 µl inoculating loops	2 boxes of 50 peel-packs of 20	2000	70 20 100
10 µl inoculating loops	2 boxes of 50 peel-packs of 20	2000	70 20 200



ratiolab® thermocult Incubator

Compact incubator for bacteriology. Fixed temperature setting at $35 \pm 2^\circ\text{C}$. With built-in control thermometer. Glass-clear door for visual control. The incubator can be placed on work benches or be mounted on walls or underneath cabinets.

- 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: 220 V, 30 W

Product	Quantity per Pack	Order No.
ratiolab® thermocult	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

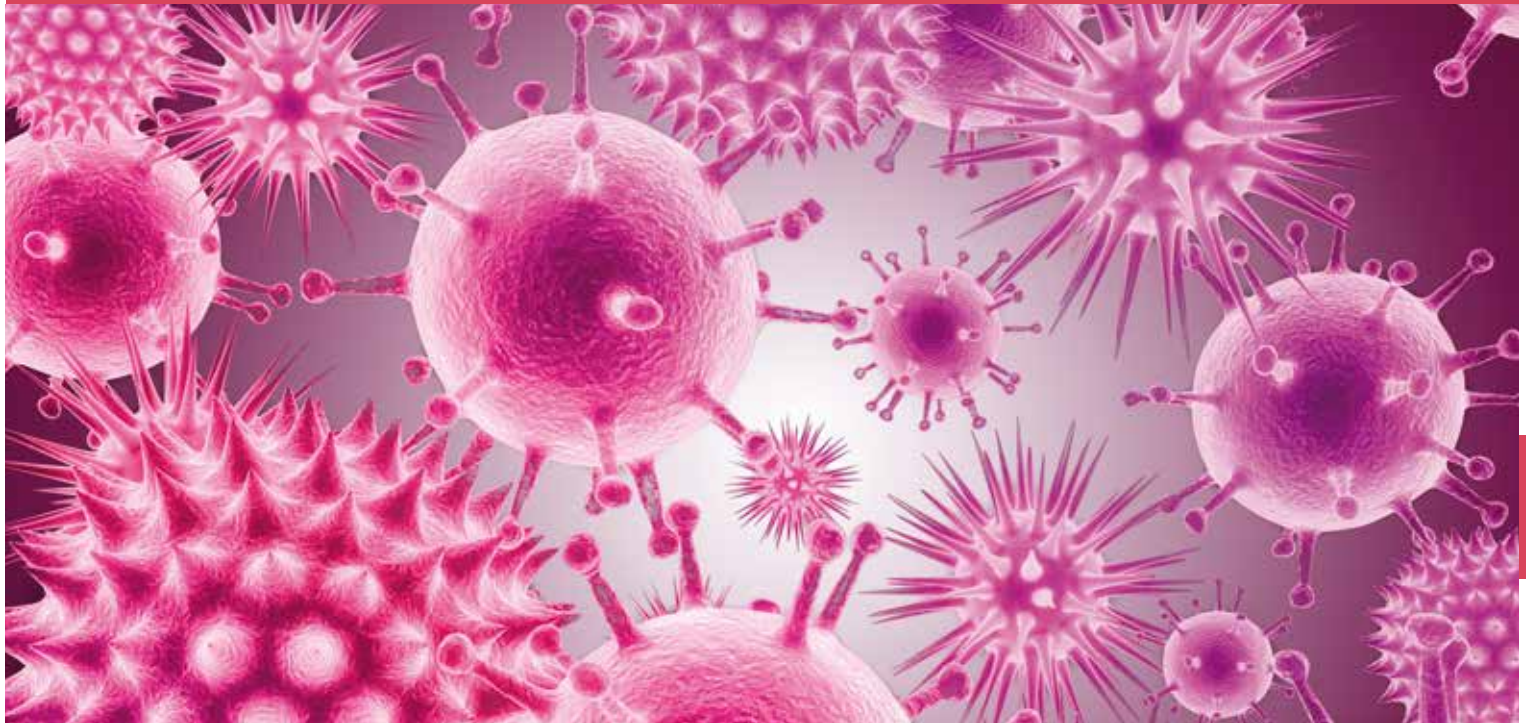
Made of high-quality polystyrene (PS).

- 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-Sciences



Think! Development and production of customized products



Liquid handling products



Labware for general lab applications



Life sciences 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
- 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



96-Well Luminescence Plates, volume approx. 300 µl

Polypropylene (PP).

- with U-, 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
- precise design, perfectly shaped for use with automatic systems
- optimum space for bar code labels on the side walls
- space-saving and stackable

Bottom	Color	Packaging	Quantity per Pack	Order No.
U	black	bags 10 x 10	100	60 18 710
F	white	bags 10 x 10	100	60 18 720



384-Well Micro Test Plates, volume approx. 100 µl

Clear polystyrene (PS).

- with F-bottom
- SBS standard micro test plate format
- 16 x 24 wells alphanumerically coded
- precise design, perfectly shaped for use with automatic systems
- optimum space for bar code labels on the side walls
- space-saving and stackable

Bottom	Material	Packaging	Quantity per Pack	Order No.
F	PS	bags 10 x 10	100	60 18 511



Lids for Micro Test Plates

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

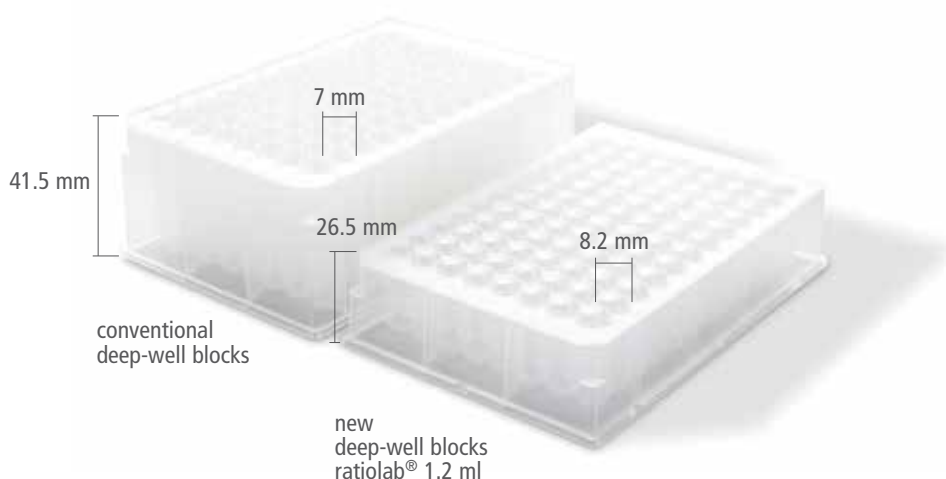
Material	Sterilized	Packaging	Quantity per Pack	Order No.
PS	—	bags 10 x 10	100	60 18 402
PS	■	individually in bags 100 x 1	100	60 18 401
PP	—	bags 10 x 10	100	60 18 422
PP	■	individually in bags 100 x 1	100	60 18 421

Deep-Well-Blocks

ratiolab® low-profile deep-well blocks (96)

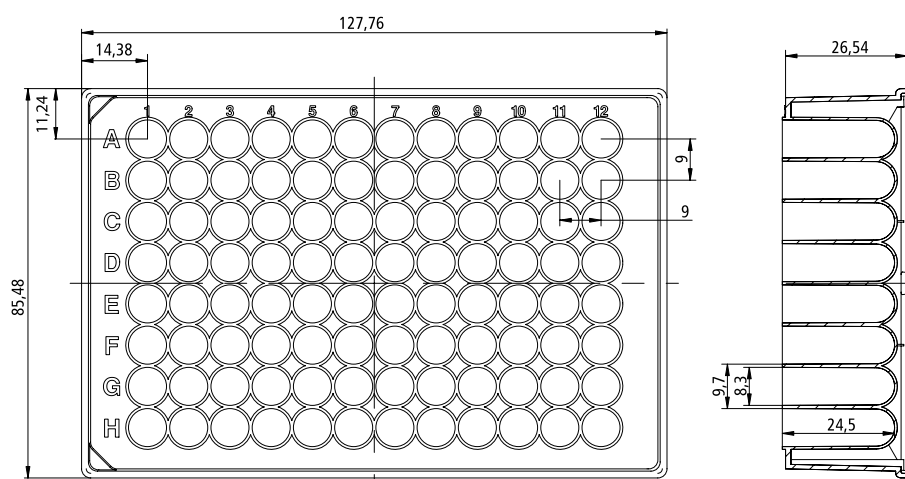
These 1.2 ml low-profile deep-well blocks are ideal for pharmaceuticals, biotechnology and diagnostics. Of the same standard dimensions (Society for Biomolecular Sciences – SBS), they are one-third lower than standard deep-well plates (96). They thus require less space! Requiring some 30 % less space, 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 blocks
- 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 sealable
- 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-Blocks



1



2



3



4

96-Deep-Well-Blocks

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

Volume per Well ml	Fig. No.	Bottom	Packaging	Quantity per Pack	Order No.
0.3	1	U	bags 10 x 10	100	60 20 003
0.3		V	bags 10 x 10	100	60 21 003
1.2	2	U	bag 1 x 50	50	81 01 012
1.2 *	3	U	bags 10 x 5	50	60 20 121
2.2	4	U	bags 10 x 5	50	60 20 221

* free of DNA, RNA

Closures for ratiolab® 96-Well Deep Well Blocks, 1.2 ml

Made of thermo-plastic elastomer (TPE).

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



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

Closures for 96-Well Deep Well Blocks

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

- suitable to 60 20 121 and 60 20 221



1

2

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

ratiolab® Micro-Tubes System

The ratiolab® 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.

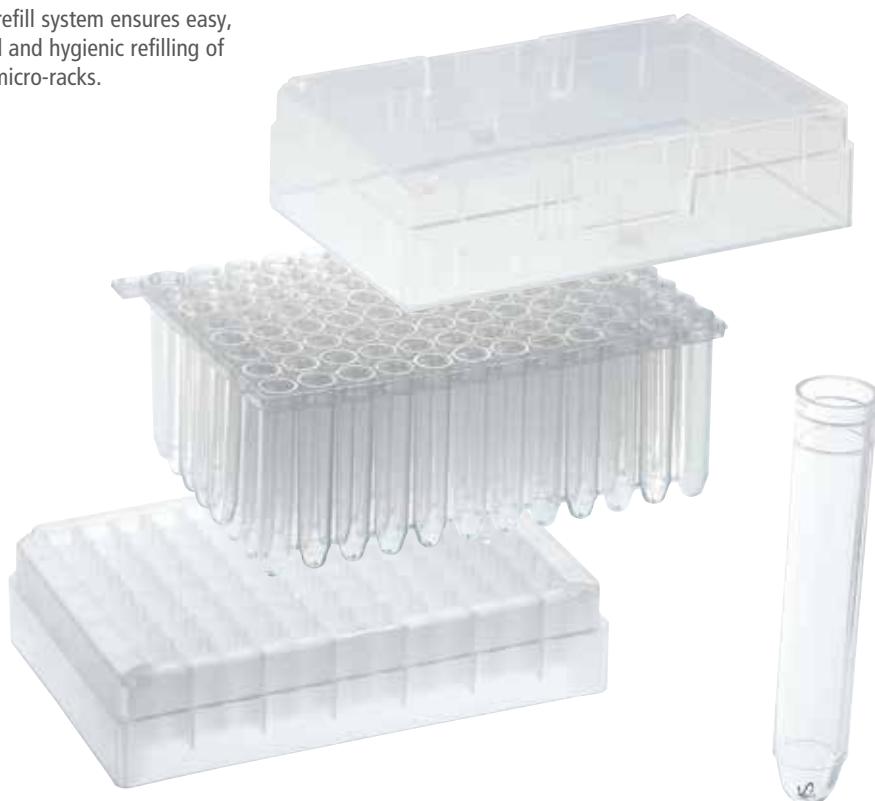
The 0.65 and 1.2 ml micro-tubes can be supplied as single, strips of 8 or in 96-well format as a refill system for 8 x 12 plates.

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

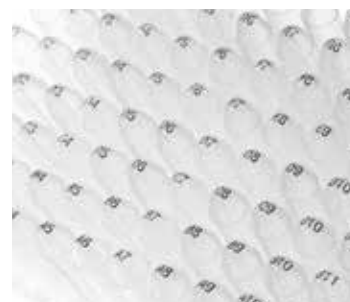
- the micro-tubes are autoclavable for 20 min at 121 °C
- temperature-resistant to – 80 °C



The refill system ensures easy, rapid and hygienic refilling of the micro-racks.



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



ratiolab® Micro-Tubes System



ratiolab® 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



ratiolab® 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



ratiolab® 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.
ratiolab® Refill with 96 Micro-Tubes, non-coded	0.65	round	50 Refills à 96 Micro-Tubes	50	82 00 025
ratiolab® Refill with 96 Micro-Tubes, coded	0.65	round	50 Refills à 96 Micro-Tubes	50	82 00 026
ratiolab® Refill with 96 Micro-Tubes, non-coded	1.2	round	50 Refills à 96 Micro-Tubes	50	82 00 005
ratiolab® Refill with 96 Micro-Tubes, coded	1.2	round	50 Refills à 96 Micro-Tubes	50	82 00 006

ratiolab® Micro-Tubes System



Closures for ratiolab® Micro-Tubes

For the air-tight sealing of 0.65 and 1.2 ml ratiolab® Micro-Tubes.
For sampling processes and filling the closures can be pierced with needles.

Product	Material	Packaging	Quantity per Pack	Order No.
8-Cap Strips	TPE	bag 1 x 1000	1000	82 00 008
8 x 12 cover mats	TPE	bags 10 x 10	100	82 00 009
aluminum universal cover film	Al	Pack 1 x 100	100	60 18 611

TPE = Thermo-plastic elastomer
Al = Aluminum



Cryo Boxes for ratiolab® Micro-Racks

White, robust cardboard box, water repellent.

- temperature-resistant to – 80 °C

For	Type	Packaging	Quantity per Pack	Order No.
2 x 2 Micro-Racks	standard	10	10	51 49 001
1 x 3 Micro-Racks	standard	10	10	51 49 002

PCR* Tubes



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- and DNA-free
- variety of tight closures available to reduce sample evaporation

Volume ml	Caps	Packaging	Quantity per Pack	Order No.
0.2	domed	bag 1 x 1000	1000	86 10 001
0.2	flat	bag 1 x 1000	1000	86 10 006
0.5	domed	bag 1 x 1000	1000	86 10 005
0.5	flat	bag 1 x 1000	1000	86 10 007

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



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	1	domed	bag 1 x 125	125	86 10 039
8 x 0.2	1	flat	bag 1 x 125	125	86 10 040
for separate cap strips					
8 x 0.2	2	without	bag 1 x 125	125	86 10 002
cap strips					
8-cap strips	3	domed	bag 1 x 125	125	86 10 003
8-cap strips	3	flat	bag 1 x 125	125	86 10 015

* The Polymerase Chain Reaction (PCR) is a patented process by Hoffmann-La Roche.

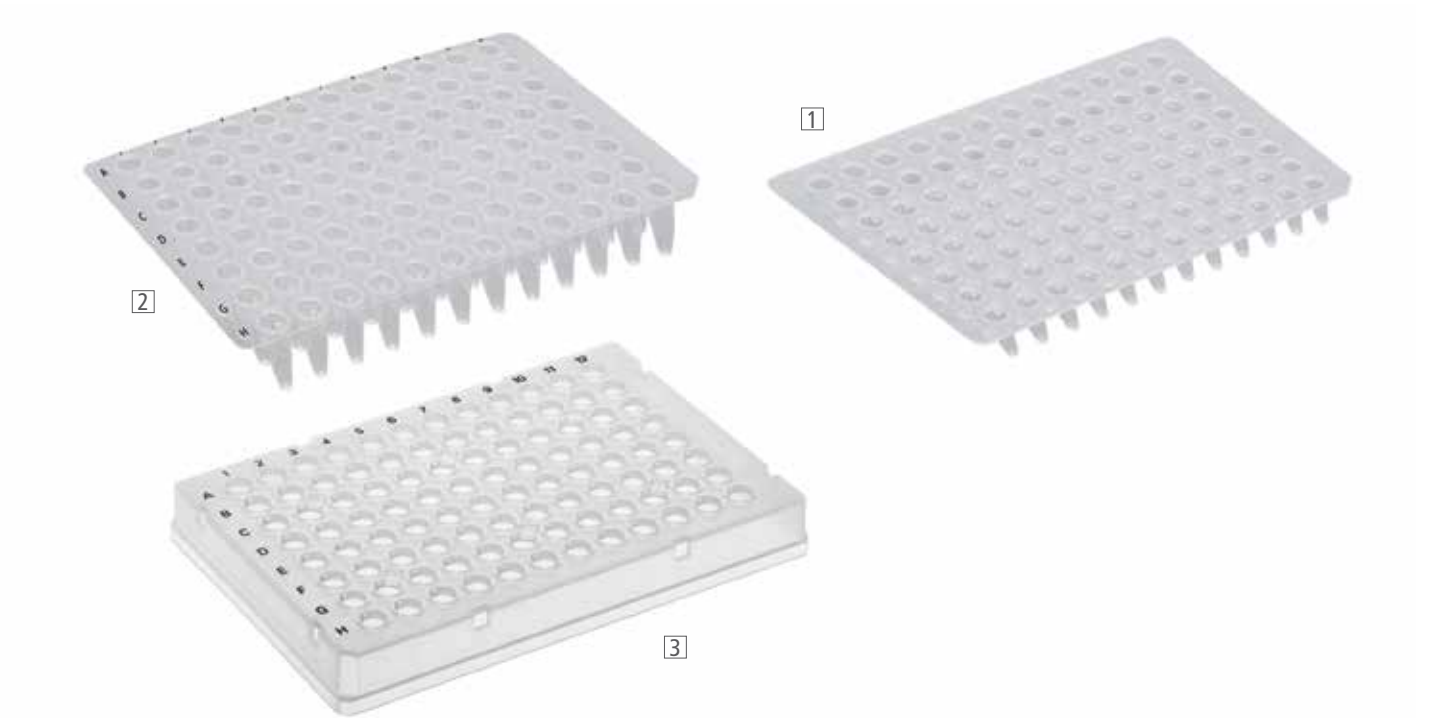
PCR* Plates

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 bonding of enzymes and nucleic acids.

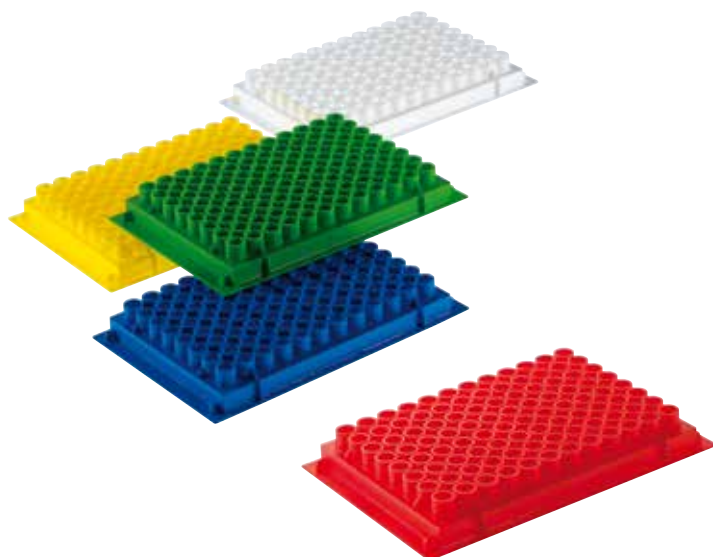
The plates are free of DNA, DNase and RNase. They are available optionally without or with edges (the latter to minimize cross-contamination).

- 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 4 x 25	100	86 10 010
96 x 0.2	3	with rim, high form	bags 4 x 25	100	86 10 011

* The Polymerase Chain Reaction (PCR) is a patented process by Hoffmann-La Roche.

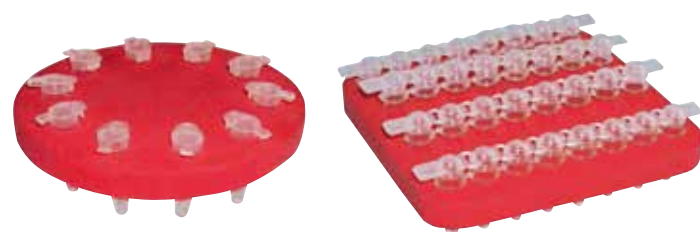


96-Well PCR Racks

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
- 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 blue	PP	10	61 14 102
PCR-rack green	PP	10	61 14 103
PCR-rack red	PP	10	61 14 104
lid for PCR racks, 14 mm high	PP	10	61 14 110
lid for PCR racks, 28 mm high	SAN	10	61 14 111



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



Micro Centrifuge for PCR Strips and Microcentrifuge Tubes

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

- for 16 PCR 0.2 ml tubes, two PCR 0.2 ml strips of 8 tubes, 0.2 ml or 8 microcentrifuge tubes 0.5 to 2.0 ml
- 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
- supplied with two rotors for two PCR strips of 8 tubes, 0.2 ml and 8 microcentrifuge tubes 0.5 to 2.0 ml

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

Cover Films for Micro Test and PCR* Plates



Cover Films and Film Dispenser

For micro test plates, deep-well blocks, 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

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

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

Polypropylene Peeling Cover Films

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

Film Dispenser

- manually operated
- for the safe and tight sealing of plates

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
polypropylene peeling cover film		PP	Pack 1 x 100	100	60 18 612
film dispenser	3	–	1	1	60 18 613

PE = Polyethylene
AL = Aluminium
PP = Polypropylene

* except order number 60 18 610

* The Polymerase Chain Reaction (PCR) is a patented process by Hoffmann-La Roche.

Cryo



Think! Development and production of customized products



Liquid handling products



Labware for general lab applications



Life sciences products for microbiology and biotechnology



Cryo products for deep-freeze applications

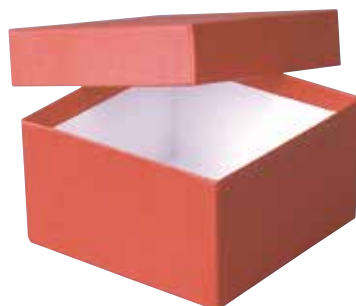
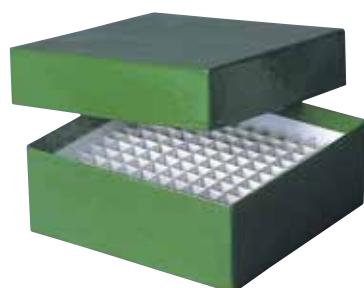
ratiolab® Cryo Boxes, Cardboard, Format 133 x 133 mm

ratiolab® Cryo Boxes, Cardboard, Format 133 x 133 mm

Ultra low temperature-resistant cardboard.

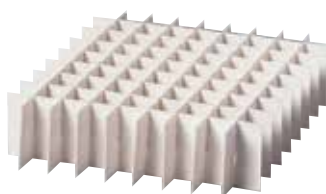
other sizes
available on request

- 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
- the Cryo Boxes can be used for larger vessels if the 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

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



ratiolab® Grid Inserts for Cryo Boxes, Format 133 x 133 mm

Ultra low temperature-resistant cardboard.

other sizes available on request

- for sample storage even at ultra low temperatures
- temperature-resistant down to – 80 °C
- water-repellent finish
- packaging in practical folding boxes

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



ratiolab® 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



ratiolab® 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

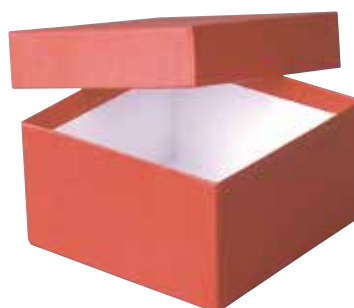
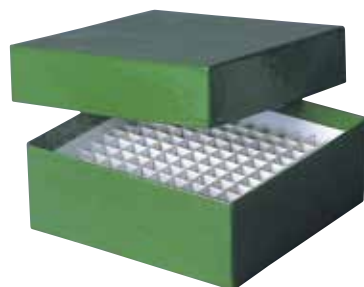
ratiolab® Cryo Boxes, Cardboard, Format 136 x 136 mm

ratiolab® Cryo Boxes, Cardboard, Format 136 x 136 mm

Ultra low temperature-resistant cardboard.

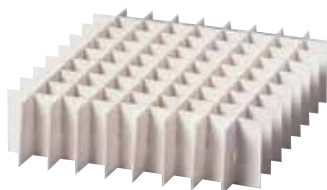
other sizes
available on request

- 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
- the Cryo Boxes can be used for larger vessels if the 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

ratiolab® Cryo Boxes, Cardboard, Format 136 x 136 mm, Cryo Labels



ratiolab® Grid Inserts for Cryo Boxes, Format 136 x 136 mm

Ultra low temperature-resistant cardboard.

other sizes available on request

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

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



ratiolab® 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.
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



ratiolab® 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

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

ratiolab® 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 and easily adaptable from 50 mm to 75 mm if needed.

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

The 6 x 6 until 10 x 10 grid accommodates space for 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
- stackable for safe transport

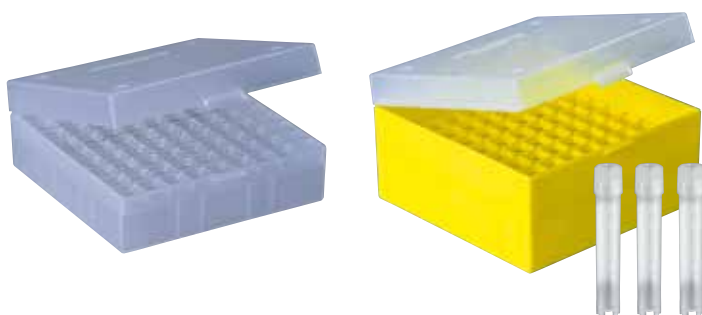


	Grid For tube Dia.	6 x 6 19.0 mm	7 x 7 17.0 mm	8 x 8 15.0 mm	9 x 9 13.0 mm	10 x 10 11.5 mm
Color	Quantity per Pack	Order No.	Order No.	Order No.	Order No.	Order No.
natural	5	53 20 410	53 20 310	53 20 210	53 20 010	53 20 110
yellow	5	53 20 411	53 20 311	53 20 211	53 20 011	53 20 111
red	5	53 20 412	53 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

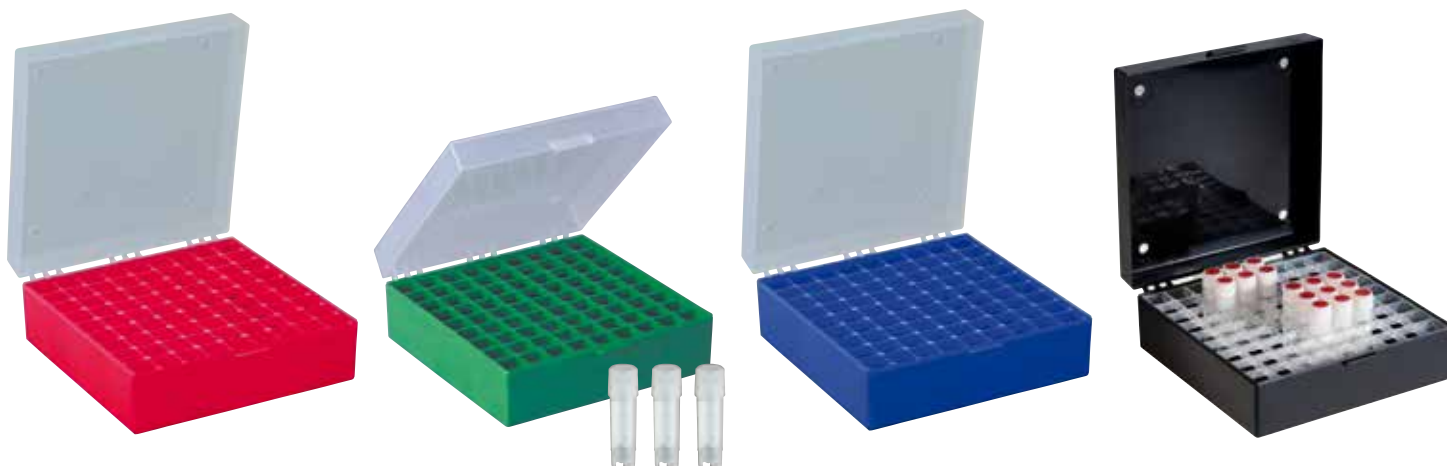
ratiolab® Cryo Boxes with Grids, PP, Format 133 x 133 mm

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

High quality polypropylene. Available in natural and other colors.



- autoclavable, temperature-resistant from – 90 °C to + 121 °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 vessels by removing the grid inserts



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

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



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

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

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 vessels 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

ratiolab® Cryo Boxes with Grids, PC, Format 132 x 132 mm



ratiolab® Cryo Boxes with Grids, PC, Format 132 x 132 mm

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

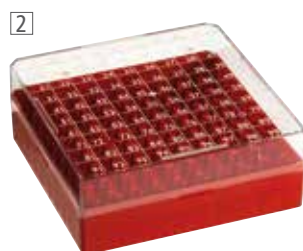
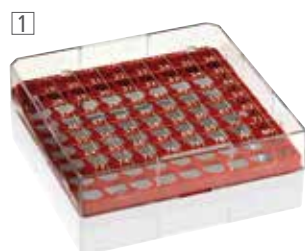
- autoclavable, temperature-resistant from – 190 °C to + 121 °C
- 81 or 100 places, 9 x 9 resp. 10 x 10 grids
- 1/4-format with 25 places, 5 x 5 grid
- numerically coded
- stackable for safe transport
- drain bores at the bottom for dew liquids
- Cryo Boxes can also be used for larger vessels by removing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

Color	Fig No.	W x D x H mm	Quantity per Pack	Grid	Order No.
for Cryo Tubes 1.2 – 2 ml					
blue	1	132x132x52	5	9x9	51 50 001
green	1	132x132x52	5	9x9	51 50 002
red	1	132x132x52	5	9x9	51 50 003
yellow	1	132x132x52	5	9x9	51 50 004

for Cryo Tubes 1.2 – 2 ml					
blue	2	132x132x52	5	10x10	51 50 011
green	2	132x132x52	5	10x10	51 50 012
red	2	132x132x52	5	10x10	51 50 013
yellow	2	132x132x52	5	10x10	51 50 014
white	2	132x132x52	5	10x10	51 50 015

for Cryo Tubes 3 – 5 ml					
blue	3	132x132x94	4	9x9	51 50 021
green	3	132x132x94	4	9x9	51 50 022
red	3	132x132x94	4	9x9	51 50 023
yellow	3	132x132x94	4	9x9	51 50 024

1/4-format, for Cryo Tubes					
blue	4	76x76x52	8	5x5	51 50 031
green	4	76x76x52	8	5x5	51 50 032
red	4	76x76x52	8	5x5	51 50 033
yellow	4	76x76x52	8	5x5	51 50 034



Cryo Tubes

Cryo Tubes

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

- 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 containing 100 tubes in boxes
- each tube and package is labeled with expiry date



free of DNA, DNase, pyrogens and ATP

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

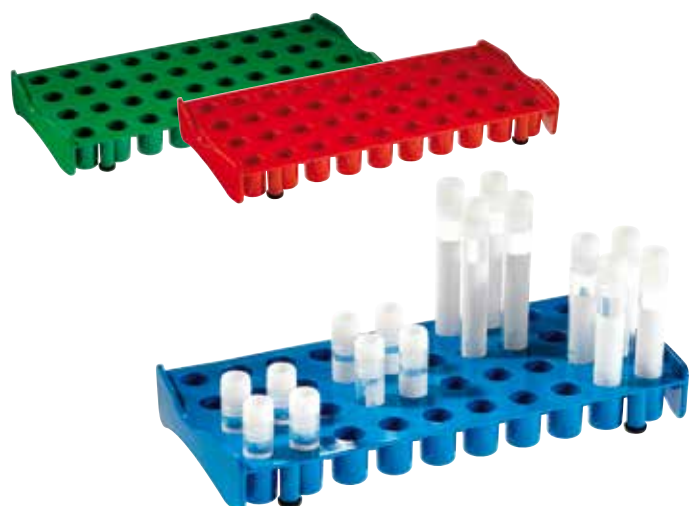
Cryo Tubes Accessories



Color Coding Cap Inserts for Cryo Tubes

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

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 100 x 220 x 30 mm



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

Cryo Racks for Freezer Chests



Cryo Racks, stainless steel

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

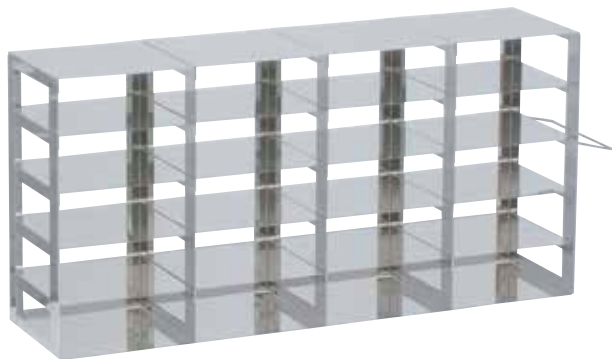
- polished surfaces for perfect cleaning
- robust construction
- handles for convenient transport
- Cryo Racks can be supplied with shelf sizes for any standard Cryo Boxes

Cryo Rack standard sizes are listed in the tables below.

other sizes
available on request

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

Cryo Racks for Freezer Cabinets



Cryo Racks, stainless steel

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

- polished surfaces for perfect cleaning
- robust construction
- handles for convenient transport
- Cryo Racks can be supplied with shelf sizes for any standard Cryo Boxes

other sizes
available on request

Cryo Rack standard sizes are listed in the tables below.

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



Stainless steel slide-in units

For the storing of Cryo Boxes. Stainless steel.

- cabinet slide-ins without pull-out stop
- easy-to-clean polished surface
- robust design

other sizes
available on request

Cryo Rack standard sizes are listed in the tables below.

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

Technical information



Think! Development and production
of customized products



Liquid handling
products



Labware for general
lab applications



Life sciences 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	PE-HD	PE-LD
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 20 °C 50 °C		PS 20 °C 50 °C		PE-HD 20 °C 50 °C		PE-LD 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		PE-HD		PE-LD	
	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		PE-HD		PE-LD	
	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		PE-HD		PE-LD	
	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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51 31 755	66	51 42 133	68	53 00 100	75	54 00 031	76	59 21 184	47	70 01 212	45
51 32 001	66	51 42 134	68	53 00 200	75	54 00 032	76	59 21 185	47	70 01 300	45
51 32 002	66	51 42 135	68	53 00 400	75	54 00 033	76	59 21 188	47	70 01 305	45
51 32 003	66	51 42 321	68	53 20 010	70	54 00 034	76	59 21 190	46	70 01 310	45
51 32 004	66	51 42 322	68	53 20 011	70	54 00 035	76	59 21 200	46	70 01 311	45
51 32 005	66	51 42 323	68	53 20 012	70	54 00 036	76	59 22 200	46	70 01 400	45
51 32 131	66	51 42 324	68	53 20 013	70	54 00 037	76	59 22 204	46	70 01 401	45
51 32 132	66	51 42 325	68	53 20 014	70	54 00 038	76	59 22 250	46	70 01 405	45
51 32 133	66	51 42 501	68	53 20 015	70	54 00 040	77	59 22 253	46	70 02 100	44
51 32 134	66	51 42 502	68	53 20 016	70	54 00 041	76	60 18 111	52	70 02 150	44
51 32 135	66	51 42 503	68	53 20 110	70	54 00 042	76	60 18 113	52	70 02 200	44
51 32 321	66	51 42 504	68	53 20 111	70	54 00 045	77	60 18 121	52	70 02 300	44
51 32 322	66	51 42 505	68	53 20 112	70	54 00 046	77	60 18 123	52	70 20 100	48
51 32 323	66	51 42 751	68	53 20 113	70	54 00 047	77	60 18 211	52	70 20 200	48
51 32 324	66	51 42 752	68	53 20 114	70	54 00 066	77	60 18 213	52	71 00 006	41
51 32 325	66	51 42 753	68	53 20 115	70	55 15 010	39	60 18 221	52	71 00 006	62
51 32 501	66	51 42 754	68	53 20 116	70	55 15 040	39	60 18 223	52	80 10 161	20
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