

Catalog 2019/2020



THINK! Development and production of customized products



Slamed Pipets and Analysers



Liquid handling products



Labware for general lab applications



Life science products for microbiology and biotechnology



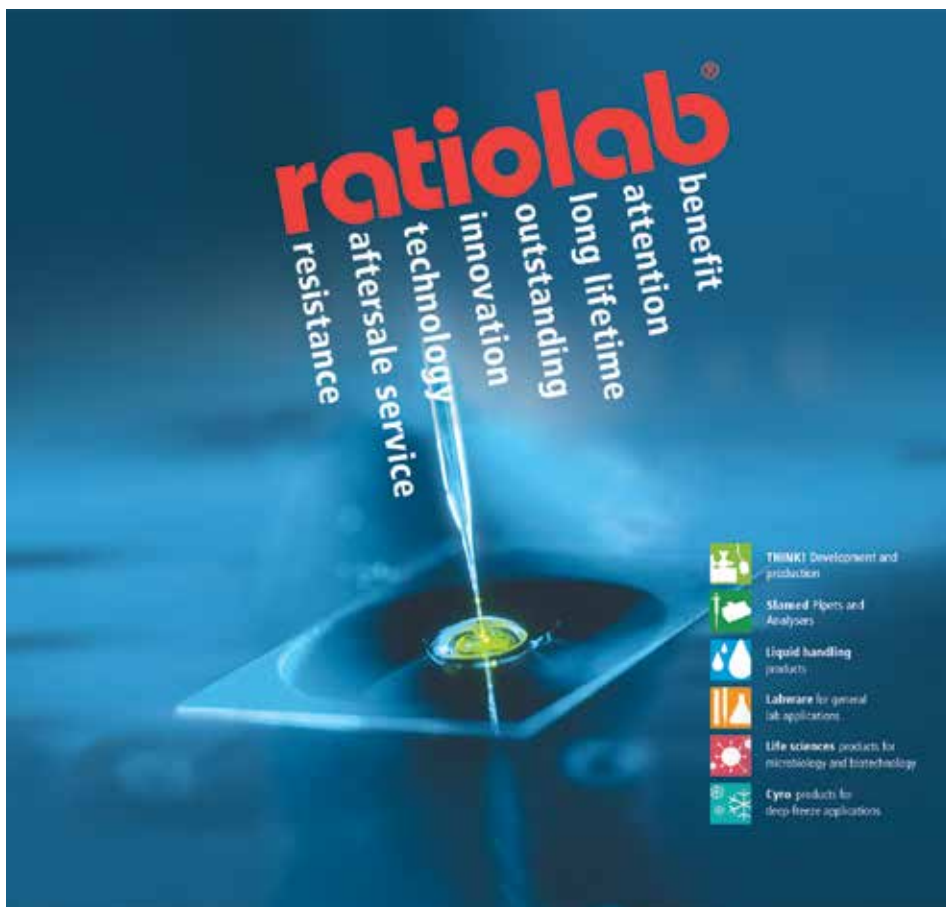
Cryo products for deep-freeze applications

ratiolab[®]
disposables for sciences

ratiolab® was established in 1975 in Dreieich-Buchsschlag nearby Frankfurt. Since then, ratiolab® develops and produces high-quality plastic products for the laboratory and medicine.

Users from research, medical, science and industry appreciate and trust our products worldwide. These are characterized by a constantly high quality as well as a high level of efficiency and innovation.

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!





THINK! Development and production of customized products

| | |
|--|----|
| We can make your ideas become reality! | 10 |
| Joint development | 11 |
| Joint development | 11 |
| Intelligent tool design | 12 |
| Perfection in production | 13 |
| Reliable logistics | 13 |



Slamed Pipets and Analysers

| | |
|---------------------------------|----|
| Single-channel pipet L | 16 |
| Single-channel pipet OLV | 17 |
| Single-channel pipet CP | 18 |
| Multichannel pipet ME/MT | 19 |
| Pipet stand New | 19 |
| ratiopetta® Pipet | 20 |
| Micro Centrifuge | 22 |
| Incubator | 22 |
| Digital Burette DB | 23 |
| Bottle-Top dispenser | 23 |
| Dispetta Dispenser | 24 |
| Pipetting Aids | 25 |
| Coagulometer K-3003 Chrom | 26 |
| Coagulometer CC-4000 | 27 |



Liquid handling products

| | |
|--|----|
| Pipetting Reservoirs | 30 |
| Pipet Tips | 31 |
| Pipet Tips System and Refill System Multirack, MultiTray®, Multibox® plus and Multibox® ultra | 32 |
| Pipet Tips | 34 |
| aerject® ultra Pipet Tips. | 37 |
| ratiolab® Premium Tips New | 38 |
| ratiolab® aerject® Premium Tips with Filter New | 39 |
| Serological Pipets. | 40 |
| Dispenser Tips | 41 |
| Pasteur-Plast Pipets | 42 |
| Sterilizing Pipet Box. | 45 |



Labware for general lab applications

| | |
|--|----|
| Cuvets | 48 |
| Multicell Cuvets | 51 |
| Analysis Beakers | 52 |
| Scintillation Vessels | 52 |
| Cell Counter Vials | 53 |
| Centrifuge Tubes | 53 |
| Microcentrifuge Tubes | 54 |
| Test Tubes | 56 |
| Stoppers. | 56 |
| Multistand Rack. | 57 |
| Rack for Centrifuge Tubes New | 57 |
| Rack for Microcentrifuge Tubes | 57 |
| Autoclavable Bags | 58 |

| | |
|-----------------------------------|----|
| Ear Tips | 61 |
| Ear Funnels | 61 |
| Multipurpose Beakers | 62 |
| Multi Purpose Beaker System | 62 |
| Multi Purpose Bottles | 63 |
| Petri Dishes | 63 |
| Inoculating Loops | 63 |
| Multipurpose Container | 64 |
| Multipurpose Container | 65 |
| Wide-neck bottle | 65 |



Life science products for
microbiology and biotechnology

| | |
|---|----|
| Micro Test Plates | 68 |
| Micro Test Plates | 69 |
| Spot Test Plates | 69 |
| Deep-Well-Plates | 70 |
| Closures for Deep-Well-Plates | 72 |
| Reagent Reservoirs | 72 |
| Cover Films for Micro Test and PCR Plates | 73 |
| Micro-Tubes System | 74 |
| PCR Tubes | 76 |
| PCR Plates | 77 |
| PCR-Racks | 77 |



Cryo products for
deep-freeze applications

| | |
|---|----|
| Cryo Boxes, Cardboard, Format 133 x 133 mm, Grid Inserts | 80 |
| Cryo Boxes, Cardboard, Format 130 x 62 mm | 81 |
| Rainbow Cryo Labels | 81 |
| Cryo Boxes, Cardboard, Format 136 x 136 mm Grid Inserts | 82 |
| Cryo Boxes, Cardboard, Format 134 x 67 mm; 75 x 75 mm | 83 |
| Format 136 x 136 x 75 mm; 148 x 148 x 130 mm | 83 |
| Cryo Boxes with Slip Lid, PP, Format 133 x 133 mm | 84 |
| Cryo Boxes with Grids, PP, Format 133 x 133 mm | 85 |
| Cryo Boxes and Grid Inserts, PP, Format 133 x 133 mm | 86 |
| Cryo Boxes with Grids, PC, Format 132 x 132 mm; 76 x 76 | 87 |
| Cryo Tubes | 88 |
| Cryo Tubes Accessories | 89 |
| Cryo Racks for Freezer Chests | 90 |
| Cryo Racks for Freezer Cabinets | 91 |
| Cryo Racks Special Production | 93 |

**Technical
information**

| | |
|--|-----|
| Chemical resistance of plastics | 96 |
| Order Number Index | 100 |

Our Company



THINK! Development and production of customized products



Slamed Pipets and Analysers



Liquid handling products



Labware for general lab applications



Life science products for microbiology and biotechnology



Cryo products for deep-freeze applications

ratiolab® offers and solutions

Beside standardized consumables made from plastic, which you can find in our catalogues, ratiolab offers the individual development and production of plastic products.

This professional attitude results in products and solutions that laboratories in research, science and industry require in their daily work.

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



Quality Management

Our Quality Management System is certificated according to DIN EN ISO 9001:2015 and EN ISO 13485:2016; for only uniform high quality products guarantee the accuracy and reproducibility required in laboratories.



ratiolab® subsidiaries:

- In **Dreieich-Buchschlag, Germany**, the headquarters with development, sales, logistics and administration. Here a built-up area of 2.500 m² is available.
- In **Szada, Hungary**, the highly modern production of plastic injection mouldings is located. Here an area of overall 6.500 m² is available.
- In **Vác, Hungary**, our operation for assembly, refining and packaging is located.
- In **Dubai, United Arab Emirates** we have a distribution office for the MENA region.

Our approximately 60 employees are the basis foundations for our sustainable success. Their competence, motivation and a high degree of social competence are the guarantees for our future growth. Our team lives our values every day.



Dreieich-Buchschlag, Germany



Dreieich-Buchschlag, Germany

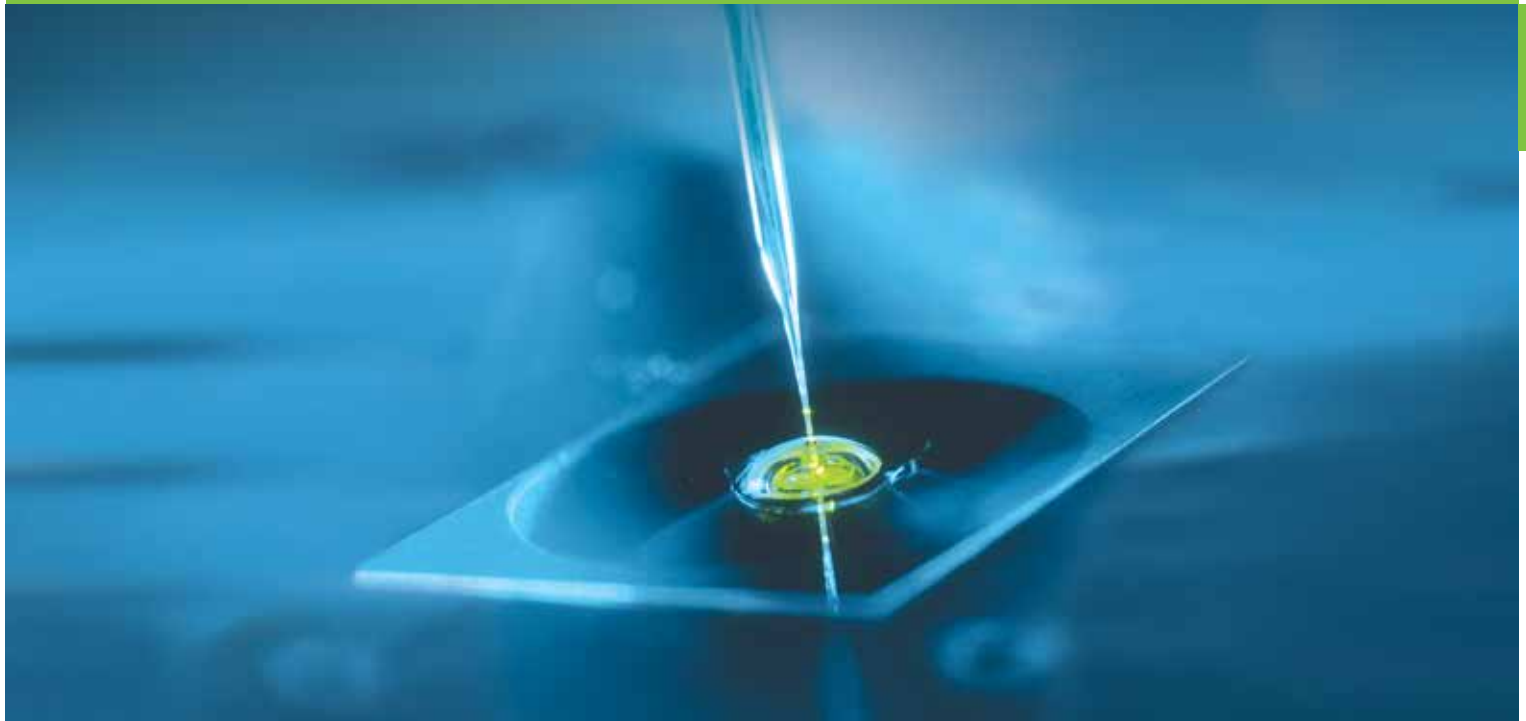


Szada, Hungary



Szada, Hungary

Think!



Think! Development and production of customized products



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Labware for general lab applications



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Cryo products for deep-freeze applications

Think!

We give reality to your ideas!

Disposable items often have to be individual and demanding just like your future application areas. Here we focus on our area „Think“ and develop high quality and individual plastic articles together with our clients.

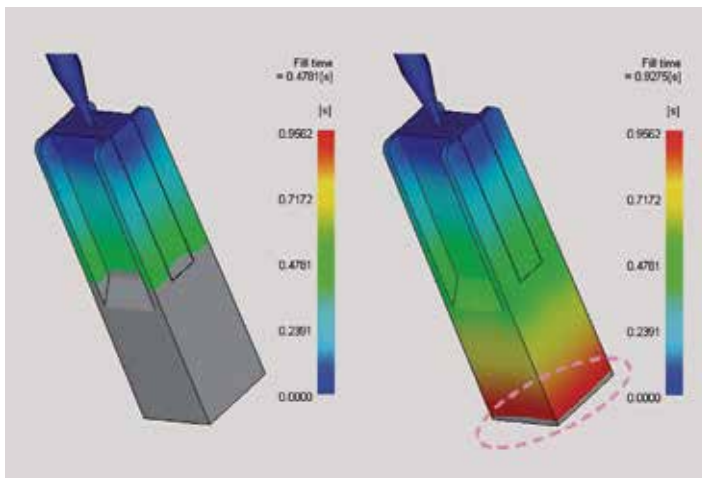
Therefore our entire know-how, years of experience and most modern technique are available to you. Our service spectrum includes the following sectors:



Development and design

We develop our products according to your ideas and requirements together with you. It is our aim to provide you with a design suitable and cost-conscious construction, considering your customer standards.

- consulting and know-how transfer through common workshops
- preparation of specifications on the basis of your requirements
- 3D-CAD construction using most modern programs
- prototyping – Production of first- and hand samples in 3D print and other selected procedures
- preparation of initial sample reports using 3D measuring machines



Tool and mold construction

Intelligently designed tools play a decisive role in the successful series production of the products. Specifically for consumables, which are manufactured in large numbers, factors such as process stability and long tool lifetime play a significant role.

- production of tools for the plastics processing
- fixture construction
- maintenance and repairing of tools



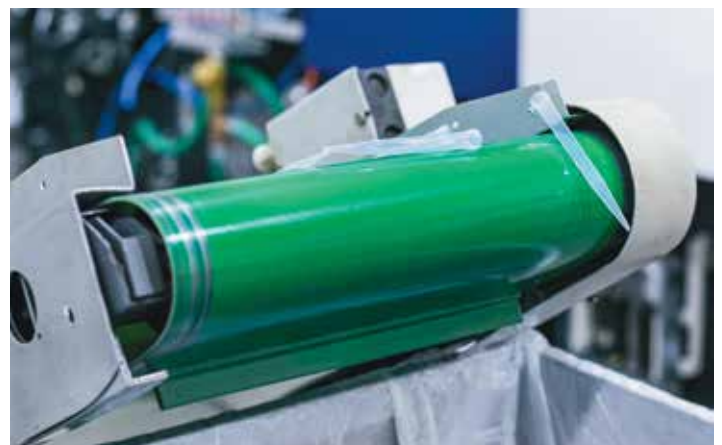
Think!

Plastics production

We produce complex and precise plastic products, from small to large series, with a highly modern machine park, in a controlled dust-free environment, in a 3-shift-production in our subsidiary in Szada.

Automated removals, as well as the subsequent handling of the products, are also our competency.

- plastic injection molding with a tonnage of 25-160 to. locking force
- most modern extraction systems ensure the secure handling of the products
- highly automated handling systems for efficient processing of the products in high quantities and rapid cycles



Assembly

Our assembly is situated in our subsidiary in Vác. Here we offer low-volume and large-volume production for the following services:

- quality controls
- packaging of bulk substances as well as the manual placement of packaging equipment
- pad-printing
- ultrasonic welding of plastic products



Logistics

We have a large, well-organized warehouse facility. Every day we pick and dispatch numerous shipments all over the world. We are happy to organize the shipping to you or directly to your customers!



Dreieich-Buchschlag, Germany



Szada, Hungary

Slamed



Think! Development and production of customized products



Slamed Pipets and Analysers



Liquid handling products



Labware for general lab applications



Life science products for microbiology and biotechnology



Cryo products for deep-freeze applications

Single-channel pipet L



Pipet L

CE IVD

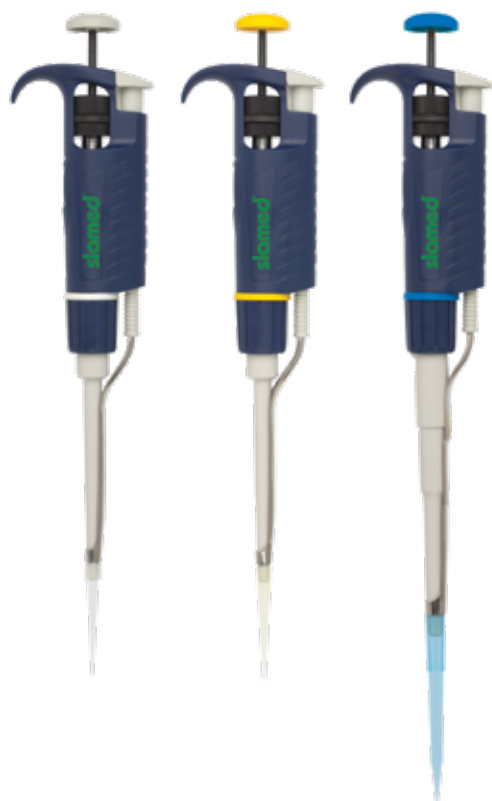
The Pipet L meets all the demands for sterile liquid handling in microbiological and molecularbiological laboratories. It is fully autoclavable and resistant to UV-light. Easy volume setting by turning the pushbutton avoids jamming the gloves in the knurled screw.

Low spring forces of pipetting stroke and tip ejector accommodate the daily work without hand fatigue. With ten pipet models the volume range is covered from 0.1 µl up to 10 ml.

- perfect measuring results
- fully autoclavable and UV-light resistant
- volume settings by pushbutton
- grooved handle reduces the influence of hand warmth
- fatigue free operation because of ergonomic designed handle and reduced spring forces
- adjustable length of tip ejector enables the use of any brand of pipet tips
- maintenance free: components are manufactured from stainless steel and chemical resistant plastic
- filters in the shafts protect the 5 ml and 10 ml pipets against overfilling and contamination
- 3 years warranty

| Volume range µl | Model | Accuracy max. vol % | Precision < % | Quantity per Pack | Order No. |
|-----------------|--------|---------------------|---------------|-------------------|-----------|
| 0.1-2 | L2 | +1.5 | 0.7 | 1 | 47 70 001 |
| 0.5-10 | L10 | +0.5 | 0.4 | 1 | 47 70 002 |
| 2-20 | L20 | +0.8 | 0.3 | 1 | 47 70 003 |
| 5-50 | L50 | +0.8 | 0.4 | 1 | 47 70 004 |
| 10-100 | L100 | +0.8 | 0.2 | 1 | 47 70 005 |
| 20-200 | L200 | +0.6 | 0.2 | 1 | 47 70 006 |
| 50-250 | L250 | +0.6 | 0.3 | 1 | 47 70 007 |
| 100-1000 | L1000 | +0.6 | 0.15 | 1 | 47 70 008 |
| 1000-5000 | L5000 | +0.5 | 0.15 | 1 | 47 70 009 |
| 1000-10000 | L10000 | +0.5 | 0.2 | 1 | 47 70 010 |

Single-channel pipet OLV



Pipet OLV

CE IVD

The adjustable Pipet OLV is a robust and reliable tool for sample handling in medical and chemical laboratories.

The volume range of samples from 0.1 µl up to 10 ml is covered by ten pipets models. An ergonomic shaped handle and low spring forces contribute to reducing hand fatigue.

- perfect measuring results
- clear reading of the counter display
- grooved handle reduces the influence of the hand warmth
- less hand fatigue because of ergonomic design and low spring forces
- adjustable length of tip ejector
- maintenance free: components are manufactured of stainless steel, chemical and UV-light resistant components
- filters protect the 5 and 10 ml pipets against overfilling and contamination
- 3 years warranty

| Volume range µl | Model | Accuracy max. vol % | Precision < % | Quantity per Pack | Order No. |
|-----------------|----------|---------------------|---------------|-------------------|-----------|
| 0.1-2.0 | OLV2 | 1.5 | 0.7 | 1 | 47 70 011 |
| 0.5-10 | OLV10 | 0.5 | 0.4 | 1 | 47 70 012 |
| 2-20 | OLV20 | 0.8 | 0.3 | 1 | 47 70 013 |
| 5-50 | OLV50 | 0.8 | 0.4 | 1 | 47 70 014 |
| 10-100 | OLV100 | 0.8 | 0.2 | 1 | 47 70 015 |
| 20-200 | OLV200 | 0.6 | 0.2 | 1 | 47 70 016 |
| 50-250 | OLV250 | 0.6 | 0.3 | 1 | 47 70 017 |
| 100-1000 | OLV1000 | 0.6 | 0.15 | 1 | 47 70 018 |
| 1000-5000 | OLV5000 | 0.5 | 0.15 | 1 | 47 70 019 |
| 1000-10000 | OLV10000 | 0.5 | 0.2 | 1 | 47 70 020 |

Single-channel pipet CP



Pipet CP

CE IVD

Fixed volume pipet with tip ejector. For every laboratory in every field. Highest performance for the best price.

33 Pipet CP models within the range 2 to 1000 µl.

- excellent precision and accuracy in measurement of liquids
- ergonomic design of handle for easy and pleasant work
- easy removal of tip ejector when working with narrow test tubes
- piston made of chemically resistant material
- built in special system eliminating pipetting error
- maintenance free
- fully autoclavable
- individual quality certificate with each unit
- the pipet is made of materials resistant to corrosive agents
- 3 years warranty

| Volume range µl | Model | Accuracy < ± % | Precision < % | Quantity per Pack | Order No. |
|-----------------|--------|----------------|---------------|-------------------|-----------|
| 2 | CP2 | 3.0 | 1.5 | 1 | 47 70 031 |
| 5 | CP5 | 2.0 | 1.0 | 1 | 47 70 032 |
| 7 | CP7 | 1.5 | 0.7 | 1 | 47 70 033 |
| 10 | CP10 | 1.2 | 0.5 | 1 | 47 70 034 |
| 15 | CP15 | 1.0 | 0.5 | 1 | 47 70 035 |
| 20 | CP20 | 0.9 | 0.4 | 1 | 47 70 036 |
| 25 | CP25 | 0.9 | 0.4 | 1 | 47 70 037 |
| 30 | CP30 | 0.9 | 0.3 | 1 | 47 70 038 |
| 40 | CP40 | 0.9 | 0.3 | 1 | 47 70 039 |
| 44.7 | CP44.7 | 0.9 | 0.3 | 1 | 47 70 040 |
| 50 | CP50 | 0.9 | 0.3 | 1 | 47 70 041 |
| 60 | CP60 | 0.9 | 0.3 | 1 | 47 70 042 |
| 70 | CP70 | 0.9 | 0.3 | 1 | 47 70 043 |
| 75 | CP75 | 0.9 | 0.3 | 1 | 47 70 044 |
| 80 | CP80 | 0.9 | 0.3 | 1 | 47 70 045 |
| 90 | CP90 | 0.9 | 0.3 | 1 | 47 70 046 |
| 100 | CP100 | 0.9 | 0.3 | 1 | 47 70 047 |
| 120 | CP120 | 0.8 | 0.3 | 1 | 47 70 048 |
| 150 | CP150 | 0.7 | 0.3 | 1 | 47 70 049 |
| 200 | CP200 | 0.6 | 0.2 | 1 | 47 70 050 |
| 200 | CP200A | 0.6 | 0.2 | 1 | 47 70 051 |
| 220 | CP220 | 0.6 | 0.2 | 1 | 47 70 052 |
| 250 | CP250 | 0.6 | 0.2 | 1 | 47 70 053 |
| 300 | CP300 | 0.6 | 0.2 | 1 | 47 70 054 |
| 400 | CP400 | 0.6 | 0.2 | 1 | 47 70 055 |
| 450 | CP450 | 0.6 | 0.2 | 1 | 47 70 056 |
| 500 | CP500 | 0.6 | 0.2 | 1 | 47 70 057 |
| 600 | CP600 | 0.6 | 0.2 | 1 | 47 70 058 |
| 700 | CP700 | 0.6 | 0.2 | 1 | 47 70 059 |
| 750 | CP750 | 0.6 | 0.2 | 1 | 47 70 060 |
| 800 | CP800 | 0.6 | 0.2 | 1 | 47 70 061 |
| 900 | CP900 | 0.6 | 0.2 | 1 | 47 70 062 |
| 1000 | CP1000 | 0.6 | 0.2 | 1 | 47 70 063 |

Multichannel pipet ME/MT and Pipet stand

Multichannel pipet ME/MT

CE IVD

The fully autoclavable Pipets ME/MT are specially designed for working with gloves under sterile conditions.
The volume range from 1µl to 300 µl is covered by 4 models each in the 8- and 12-channel versions.

The patented manifold system ensures individual tight sealing of the pipet tips on each channel.

- perfect measuring results
- fully autoclavable and UV-light resistant
- volume settings by pushbutton avoids snatching the gloves
- ergonomic design, handle can be turned to an individual convenient position
- patented system makes manual corrections of the tip sealing redundant
- maintenance free: components are manufactured from stainless steel or chemical resistant plastics
- each pipet comes with quality certificate, holder and calibration key
- 3 years warranty

8-channel-pipet ME

| Volume range µl | Model | Accuracy max. vol % | Precision < % | Quantity per Pack | Order No. |
|-----------------|-------|---------------------|---------------|-------------------|-----------|
| 1-10 | ME10 | 2.0 | 1.2 | 1 | 47 70 064 |
| 5-50 | ME50 | 1.6 | 0.6 | 1 | 47 70 065 |
| 20-200 | ME200 | 1.0 | 0.6 | 1 | 47 70 066 |
| 50-300 | ME300 | 1.0 | 0.6 | 1 | 47 70 067 |

12-channel-pipet MT

| Volume range µl | Model | Accuracy max. vol % | Precision < % | Quantity per Pack | Order No. |
|-----------------|-------|---------------------|---------------|-------------------|-----------|
| 1-10 | MT10 | 2.0 | 1.2 | 1 | 47 70 068 |
| 5-50 | MT50 | 1.6 | 0.6 | 1 | 47 70 069 |
| 20-200 | MT200 | 1.0 | 0.6 | 1 | 47 70 070 |
| 50-300 | MT300 | 1.0 | 0.6 | 1 | 47 70 071 |

Pipet stand slamed®

Convenient and safe storage of pipets.

- rotating stand for up to 6 pipets
- pipet stand made of plexiglas for multichannel pipets and up to 4 pipets

| Product | Fig. No. | Quantity per Pack | Order No. |
|------------------------------------|----------|-------------------|---------------|
| Pipet stand for 6 pipets | 1 | 1 | New 94 20 025 |
| Pipet stand for 4 pipets | 2 | 1 | New 94 20 026 |
| Pipet stand for multichannel pipet | 3 | 1 | New 94 20 027 |





ratiopetta®

CE IVD

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 ratiopetta® from ratiolab® meets these demands while offering outstanding value for money.

Product properties

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

Delivery includes:

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

Matching pipet tips can be found on pages 34-39.





Single-channel Precision Pipet ratiovetta®

CE IVD

| Volume Range μl | Accuracy* $< \pm \%$ | Precision* $< \%$ | Quantity per Pack | Order No. |
|----------------------------|----------------------|-------------------|-------------------|-----------|
| 0.1 – 2.5 | 3.00 | 3.00 | 1 | 47 80 025 |
| 0.5 – 10 | 1.50 | 1.50 | 1 | 47 80 010 |
| 2.0 – 20 | 1.20 | 1.00 | 1 | 47 80 020 |
| 10 – 100 | 1.00 | 0.40 | 1 | 47 80 100 |
| 20 – 200 | 0.80 | 0.40 | 1 | 47 80 200 |
| 100 – 1000 | 0.70 | 0.25 | 1 | 47 81 000 |
| 1000 – 5000 | 0.60 | 0.30 | 1 | 47 85 000 |

8-channel Precision Pipet ratiovetta®

CE IVD

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

12-channel Precision Pipet ratiovetta®

CE IVD

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

Matching pipet tips can be found on pages 34-39.

Pipettor stands ratiovetta®

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

| Product | Quantity per Pack | Order No. |
|--------------------------------|-------------------|-----------|
| pipettor stand for ratiovetta® | 1 | 94 20 024 |

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

Micro Centrifuge and Thermocult Incubator



Micro Centrifuge for PCR Strips and Microcentrifuge Tubes



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

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

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



Thermocult Incubator



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

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

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

5-Channel Coagulometer CC-4000

Coagulometer CC-4000

CE IVD

We present 5 channels coagulometer CC-4000, which executes all basic coagulational determination by chronometrical method, method of the usage of chrom substrate and immunochemical method (D-dimer).

Range of Determinations:

1. Basic coagulology:

- PT (time, index PT, index Quick, INR, Fibrinogen with PT)
- APTT (time, ratio)
- TT (time, ratio)
- Fibrinogen (Clauss method - g/l, mg/dl)
- Factors.

2. Chrome substrate:

- AT III (% activity)
- Plasminogen
- Protein C
- Alfa-2-antiplasmin (α_2 -AP)

3. D-Dimer

- (μ g/l)

For all determinations the tested material (sample) is taken and prepared as in case of the typical coagulational determinations.

- measurements: length of the light wave: 405 nm, „micro-method“ - 50 μ l of the sample and the reagents
- automatic reading of the result
- automatic zero rotation
- storage of 4000 final results, 34 various calibration curves and referential values in the memory supply after the disconnection
- automatic systems of the turbidity compensation (the possibility of the determination of lipemic, hemolysed and icteric plasmas)
- compensation of the sample and cuvette fogging
- short period of the determination for substrata and D-dimer: 30-180s
- programming of the measures, types of results and prints
- display: graphic in English, 4 stop-watches of the incubation, built-in clock with date-marker, „Stand-by“ functions
- printer: built-in quick thermal printer 110 mm, printing of the summary, field results, calibration curves, course of the reaction, control and norms time, indexation of the beyond standards
- interfaces RS232 for the connection with computer's network
- connector USB for barcode leader
- dimensions and weight: 43 x 37 x 12 cm, 5 kg
- 2 years warranty

| Product | Quantity per Pack | Order No. |
|----------------------|-------------------|-----------|
| Coagulometer CC-4000 | 1 | 90 22 028 |
| Test cuvetts | 1000 | 90 22 030 |



Digital Burette DB



Digital Burette DB



A Digital Burette, which meets the demands of modern titration practice:

- fast titration, because the operator himself controls the velocity of the piston stroke
- exact titration with the resolution 0.01 ml and accuracy of 0.2%
- large titration volume range up to 99.99 ml
- the internal memory can store up to 500 measuring values of serial titration
- refilling and air purging performance without loss of reagent.
- push button selection for either „Titration“ or „Dispense“ function
- titration display: 99.99 ml
- temperature: 15-40°C

Remarks: Not to be used with hyxdrofluoric acid or solutions which are aggressive to Platinum-Irydium, PTFE, FEP or Tefzel. Avoid crystallising or corpuscular liquids.

| Volume ml | Subdivision ml | Accuracy % | Precision % | Quantity per Pack | Order No. |
|--------------|-------------------|---------------|----------------|----------------------|--------------|
| 50 | 0.01 | 0.2 | 0.1 | 1 | 29 70 014 |

Bottle-top Dispenser



Bottle-Top Dispenser

Bottle-Top Dispenser for accurate and rapid dispensing of small and large volumes directly from any original reagent bottle.

The precise bottle dosing apparatus with outparallax errors in volume adjustment.

Six models within the range 0.25ml to 100 ml

- easy and reliable volume adjustment, protected against unintended alteration
- the valve block is 360° rotatable
- 100% drip free system for your safety at work: just turn the discharge tube at 180° to drain it and avoid the further uncontrolled flow of liquid
- fully autoclavable at 121°C, can be completely disassembled for cleaning
- the components directly in contact with the reagent are made of chemical resistant materials: platinum spring, ceramic valve balls, PTFE piston, borosilicate glass 3.3 cylinder
- use for nearly all liquids
- do not use for PTFE swelling solvents, hydrofluoric acid, chemical solutions which react with platinum-iridium alloys
- each device is tested individually and delivered with conformity certificate

| Volume settings ml | Model | Subdivision ml | A < ± % | P < % | Quantity per Pack | Order No. |
|--------------------|-------|----------------|---------|-------|-------------------|-----------|
| 0.25-2.5 | D1 | 0.05 | 0.012 | 0.002 | 1 | 29 70 001 |
| 0.5-5 | D2 | 0.10 | 0.03 | 0.005 | 1 | 29 70 002 |
| 1-10 | D3 | 0.20 | 0.06 | 0.01 | 1 | 29 70 003 |
| 2.5-25 | D4 | 0.50 | 0.15 | 0.025 | 1 | 29 70 004 |
| 5-50 | D5 | 1.00 | 0.3 | 0.05 | 1 | 29 70 005 |
| 10-100 | D6 | 2.00 | 0.5 | 0.1 | 1 | 29 70 006 |

A = Accuracy, P = Precision

Dispetta Dispenser



Dispetta Pipettor for Serial Dispensing

CE IVD

The convenient and robust instrument for serial dispensing with Dispenser Tips.

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

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

- ergonomic design and lightweight 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 a volume scale fixed directly onto the instrument
- precise gear mechanism for accurate and reproducible pipetting
- safe, rapid and easy exchange of Dispenser Tips
- maintenance-free
- long life due to robust design
- manual dispenser without electronic parts
- 2 years guarantee

Suitable dispenser tips see on page 41.

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

Pipetting Aids

ratiolab® Accupetta Electronic Pipetting Aid

CE IVD

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

Order No. 32 00 300 Accupetta contains:

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

Suitable serological pipets see on page 40.

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



Liquid handling



Think! Development and production of customized products



Slamed Pipets and Analysers



Liquid handling products



Labware for general lab applications



Life science products for microbiology and biotechnology



Cryo products for deep-freeze applications

Pipetting Reservoirs

Pipetting reservoirs

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

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

Version -Figure- 1

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

Version -Figure- 2

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

Version -Figure- 3

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

Version -Figure- 4

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

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

Pipetting reservoirs made of PS

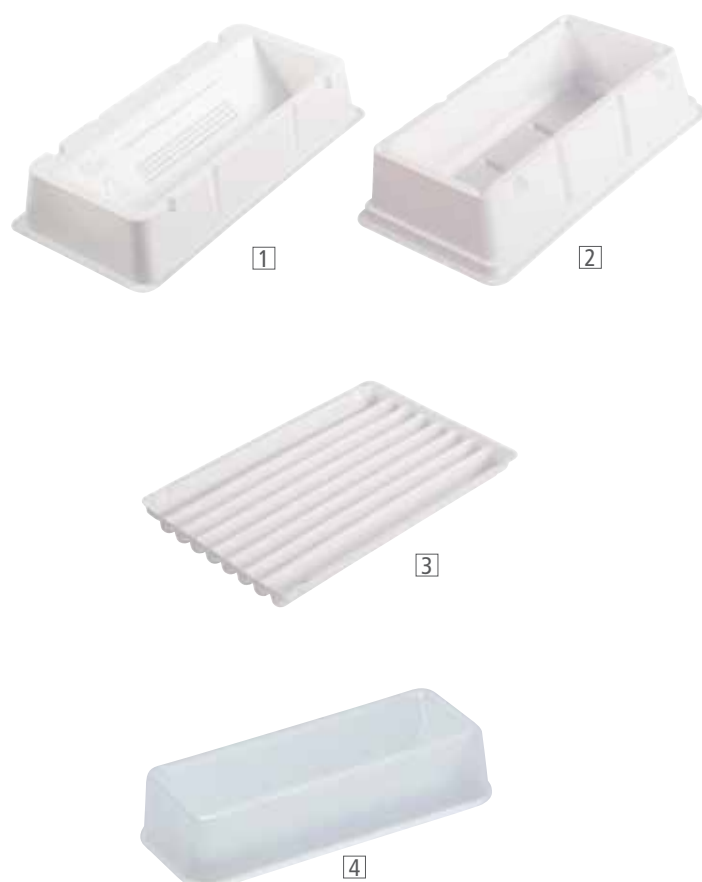
| Volume | Fig. No. | Sterilized | Quantity per Pack | Order No. |
|--------|----------|------------|-------------------|-----------|
| 50 ml | [1] | – | bags 20 x 5 | 94 20 018 |
| 50 ml | [1] | ■ | bags 20 x 5 | 94 25 518 |
| 100 ml | [2] | – | bags 20 x 5 | 94 20 017 |
| 100 ml | [2] | ■ | bags 20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

Pipetting reservoirs made of PS for 8-channel precision pipetting

| Volume | Fig. No. | Sterilized | Quantity per Pack | Order No. |
|--------|----------|------------|-------------------|-----------|
| 6 ml | [3] | – | bags 20 x 5 | 94 20 016 |
| 6 ml | [3] | ■ | bags 20 x 5 | 94 25 516 |

Pipetting reservoirs made of PP

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



Pipet Tips

Pipet tips

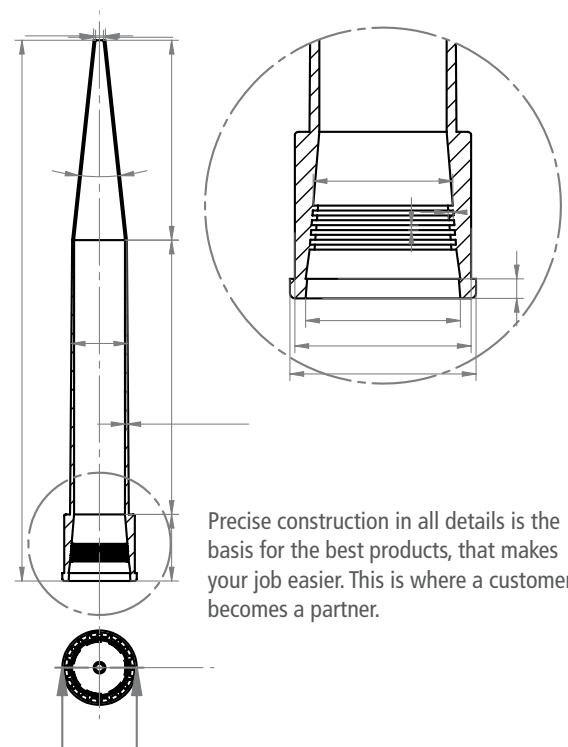
ratiolab® pipet tips are ideal for all commercially available pipets. Their uniform high quality and precision make today's pipets fully effective. Together with specially developed Multitrack, Refill System and the ratiolab® Multibox® with the associated pipet tips in Multitray®, they make pipetting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



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

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

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



Pipet Tips System and Refill System

Pipet Tips System

Multirack

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

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

Order information on the pages 34-36.



Pipet Tips Refill System

Multibox®plus and -ultra/MultiTray® System

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

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

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

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



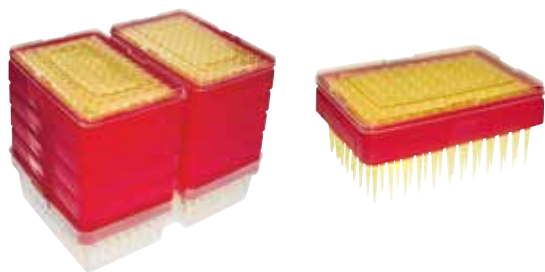
Pipet Tips Refill System



Multibox® plus and -ultra for MultiTray® pipet tips

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

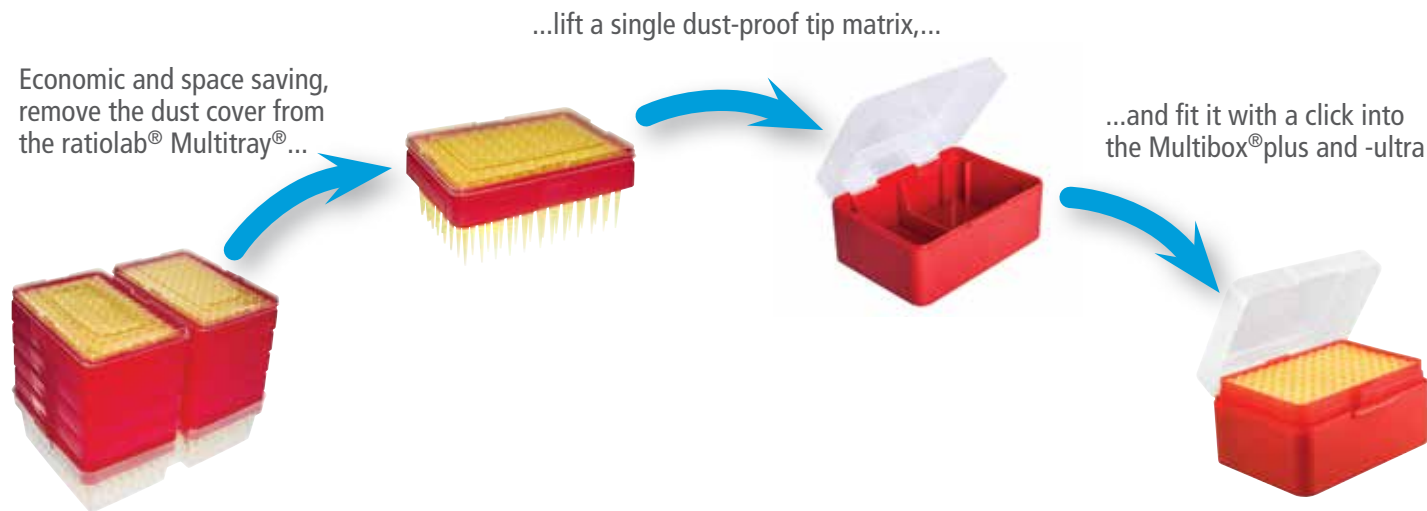
| Product | Fig. No. | Volume | Order No. |
|--|----------|---------------|-----------|
| ratiolab® Multibox® plus, PC, empty, for all MultiTray® pipet tips | 1 | up to 1200 µl | 80 10 161 |
| ratiolab® Multibox® ultra PP, empty, for all MultiTray® pipet tips | 2 | up to 300 µl | 80 30 160 |
| ratiolab®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



MultiTray® for Multibox®plus and Multibox®ultra

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









Order information on the pages 34-36.



Pipet Tips

Pipet Tips

CE IVD








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

On request we can send you the suitability.

Pipet Tips

Pipet Tips

CE IVD

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


On request we can send you the suitability.



Pipet Tips

Pipet Tips

CE IVD

| Type | Volume Range µl | Length mm | Packaging | Fig. No. | Quantity per Pack | Order No. |
|--|-----------------|-----------|-------------------------|----------|-------------------|---------------|
| Colorless pipet tip "ES", for Pipets Socorex Calibra® | 500-2500 | 115,00 | bag 1 x 250 | 1 | 250 | 25 00 180 |
|  | | | | | | |
| Pipet Tip "Finntip", for Pipets Thermo Scientific®, Dr. Lange®, Brand® | 1000-5000 | 147,60 | box 1 x 75 | 4 | 75 | 24 00 620 |
| | | | bag 1 x 1000 | 1 | 1000 | 24 00 622 |
| | | | bag 1 x 3000 | 1 | 3000 | 24 00 623 |
| | | | bag 1 x 500 | 1 | 500 | 24 00 624 |
| | | | rack 1 x 50 | 5 | 50 | 24 10 620 |
| | | | rack, sterilized 1 x 50 | 5 | 50 | New 24 53 620 |
| Pipet Tip "Makro", for Pipets Eppendorf Research® Plus, Gilson®, Pipetman®, ratiopetta® | 1000-5000 | 119,70 | bag 1 x 250 | 1 | 250 | 24 00 630 |
| | | | rack 1 x 50 | 6 | 50 | 24 10 630 |
| | | | rack, sterilized 1 x 50 | 6 | 50 | New 24 53 630 |
| Pipet Tip "Makro II", for Pipets Socorex Accura® | 1000-5000 | 126,00 | bag 1 x 300 | 1 | 300 | 24 00 650 |
| | | | rack 1 x 50 | 5 | 50 | 24 10 650 |
| | | | rack, sterilized 1 x 50 | 5 | 50 | New 24 53 650 |
| Pipet Tip "Makro III", for Pipets Eppendorf Research® plus, | 1000-5000 | 133,30 | bag 1 x 300 | 1 | 300 | 24 00 653 |
| | | | rack 1 x 50 | 5 | 50 | 24 10 653 |
| | | | rack, sterilized 1 x 50 | 5 | 50 | New 24 53 653 |
| Pipet Tip "Finntip", for Pipets Thermo Scientific®, Socorex Acura®, Gilson® | 2000-10000 | 150,20 | bag 1 x 100 | 1 | 100 | 24 00 640 |
| | | | rack 1 x 25 | 5 | 25 | 24 10 640 |
| | | | rack, sterilized 1 x 25 | 5 | 25 | New 24 53 640 |
| Pipet Tip, for Pipets Brand®, Socorex Acura®, Gilson® | 1000-10000 | 153,60 | bag 1 x 100 | 1 | 100 | 24 00 642 |
| | | | rack 1 x 25 | 5 | 25 | New 24 10 642 |
| | | | rack, sterilized 1 x 25 | 5 | 25 | New 24 53 642 |

1



4



5



6



aeroject® ultra Pipet Filter Tips

free of DNA, DNase,
pyrogens and ATP









aeroject® ultra filter tips – Pipet Tips with Aerosol Barrier

CE IVD

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

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

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

ratiolab® Premium Tips

free of RNase, DNase, endotoxin, pyrogens, human DNA, heavy metal and PCR inhibitors







ratiolab® Premium Tips

CE IVD

The Premium Line tips are made of polypropylene. These high quality pipet tips can be exploited when work requires higher standards.

The new premium line pipet tip fits perfectly into the overall pipet.

- made of high quality polypropylene
- tight fit due to the precisely fitting cone
- optimal handling due to the stable shape
- autoclavable
- low sampling loss due to special surface treatment
- sterilized and unsterilized
- certified free of RNase, DNase, endotoxin, pyrogens, human DNA, heavy metal and PCR Inhibitors
- packed in design plastic rack with hinged lid
- easy identification of tip volume by colored plates
- the label contains all necessary specifications and easy readable volume information

| Type | Volume Range µl | Length mm | Packaging | Quantity per Pack | | Order No. |
|---|-----------------|-----------|---------------------------|-------------------|-----|-----------|
| ratiolab® premium tips xl, for all commonly used pipets, ratiopetta®  | 0,1-10 | 45,75 | bag 1 x 1000 | 1000 | New | 17 80 013 |
| | | | Racks 10 x 96 | 960 | New | 17 80 012 |
| | | | Racks, sterilized 10 x 96 | 960 | New | 17 80 011 |
| ratiolab® premium tips, for all commonly used pipets, ratiopetta®  | 1-200 | 53,40 | bag 1 x 1000 | 1000 | New | 17 80 203 |
| | | | Racks 10 x 96 | 960 | New | 17 80 202 |
| | | | Racks, sterilized 10 x 96 | 960 | New | 17 80 201 |
| ratiolab® premium tips, for all commonly used pipets, ratiopetta®  | 100-1.000 | 83,50 | bag 1 x 1000 | 1000 | New | 17 81 003 |
| | | | Racks 6 x 96 | 576 | New | 17 81 002 |
| | | | Racks, sterilized 6 x 96 | 576 | New | 17 81 001 |
| ratiolab® premium tips, for all commonly used pipets, ratiopetta®  | 100-1.250 | 98,20 | bag 1 x 500 | 500 | New | 17 81 253 |
| | | | Racks 6 x 96 | 576 | New | 17 81 252 |
| | | | Racks, sterilized 6 x 96 | 576 | New | 17 81 251 |

ratiolab® aeroject® Premium Tips with Filter

free of RNase, DNase, endotoxin,
pyrogens, human DNA, heavy
metal and PCR inhibitors



ratiolab® aeroject® Premium Tips







CE IVD

The Premium Line filter tips with specially small-pored filters are suitable for highly sensitive applications such as PCR, appropriate to work with infectious and radioactive materials.

The special filter keeps safely back the sample, that was inadvertently absorbed.

The filter tips are free of chemical additives. The high quality polyethylene filter effectively prevents aerosol contamination.

- low sampling loss due to special surface treatment
- sterilized
- certified free of RNase, DNase, endotoxin, pyrogens, human DNA, heavy metal and PCR Inhibitors
- packed in design plastic rack with hinged lid
- easy identification of tip volume by colored plates
- the label contains all necessary specifications and easy readable volume information

| Type | Volume Range µl | Length mm | Packaging | Quantity per Pack | Order No. |
|---|-----------------|-----------|---------------|-------------------|----------------------|
| ratiolab® aeroject® premium tips xl, for all commonly used pipets, ratiopetta®  | 0,1-10 | 45,75 | Racks 10 x 96 | 960 | New 17 80 010 |
| ratiolab® aeroject® premium tips, for all commonly used pipets, ratiopetta®  | 1-20 | 53,40 | Racks 10 x 96 | 960 | New 17 80 020 |
| ratiolab® aeroject® premium tips, for all commonly used pipets, ratiopetta®  | 1-100 | 53,40 | Racks 10 x 96 | 960 | New 17 80 100 |
| ratiolab® aeroject® premium tips, for all commonly used pipets, ratiopetta®  | 1-200 | 53,40 | Racks 10 x 96 | 960 | New 17 80 200 |
| ratiolab® aeroject® premium tips, for all commonly used pipets, ratiopetta®  | 100-1.000 | 83,50 | Racks 6 x 96 | 576 | New 17 81 000 |
| ratiolab® aeroject® premium tips, for all commonly used pipets, ratiopetta®  | 100-1.250 | 98,20 | Racks 6 x 96 | 576 | New 17 81 250 |

Serological Pipets

Serological Pipets









Glass-clear polystyrene (PS).

- free of RNase-, DNase-, DNA-, pyrogens
- non-toxic, TSE/BSE free
- permanent black-embossed graduations
- with color-coded ring for convenient identification, standard color code
- sterile, individually packed
- packed: plastic/paper
- negative graduation for additional capacity
- accuracy is +/- 2-3%.



| Positive Volume ml | Fig. No. | Negative Volume ml | Graduation ml | Lenght mm | Quantity per Pack | Order No. |
|--------------------|----------|--------------------|---------------|-----------|-------------------|-----------|
| 1 | 1 | 0.04 | 0.01 | 279.40 | 1000 | 31 01 011 |
| 2 | 2 | 0.08 | 0.01 | 282.58 | 1000 | 31 02 011 |
| 5 | 3 | 2.5 | 0.1 | 348.15 | 200 | 31 05 011 |
| 10 | 4 | 3.0 | 0.1 | 346.81 | 200 | 31 10 011 |
| 25 | 5 | 7.0 | 0.25 | 310.90 | 200 | 31 25 011 |
| 50 | 6 | 10.0 | 1.0 | 368.17 | 100 | 31 50 011 |

Dispenser Tips

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

Dispenser Tips

CE IVD

For serial pipettings

Dispenser Tips fit onto ratiolab® dispetta and Eppendorf Multipipette® 4780, Ritter Dispenser, Gilson Distriman and Brand HandyStep S. Not autoclavable.

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

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

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

Pasteur-Plast Pipets

Pasteur-plast pipets

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

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



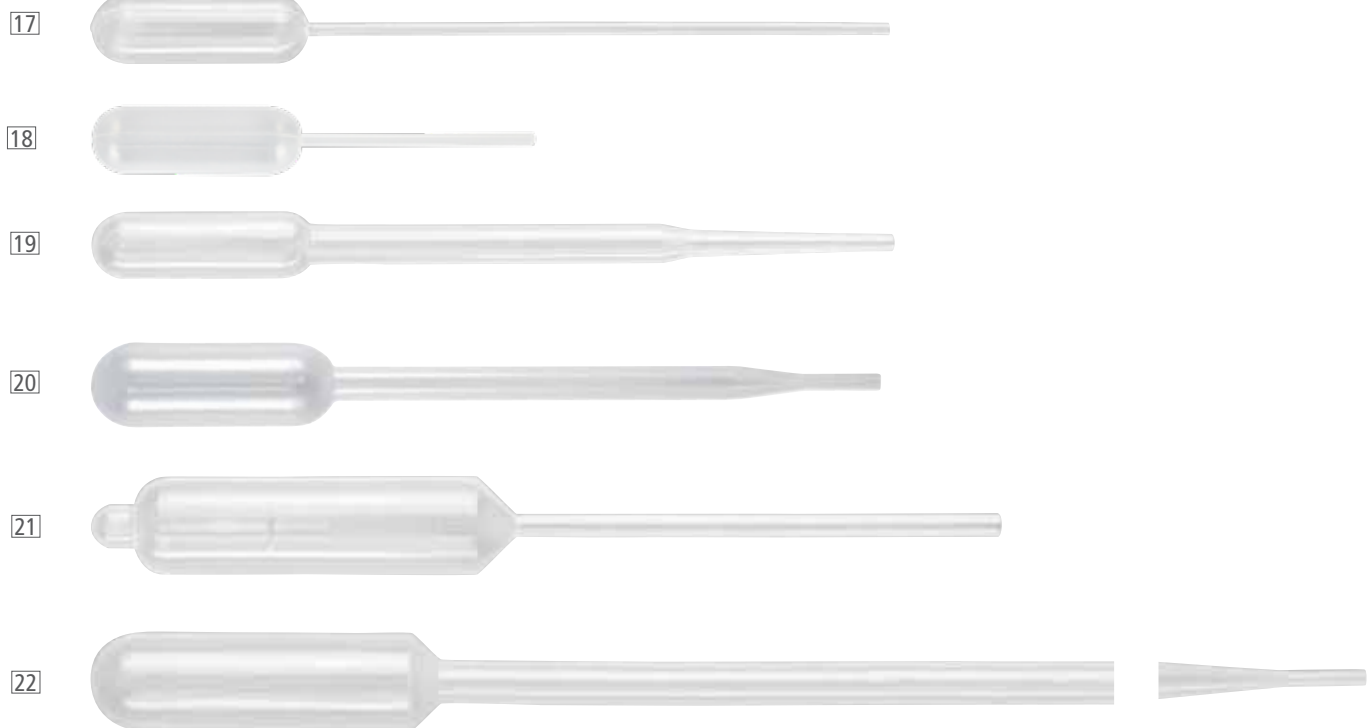
| Volume ml | Fig. No. | Volume without ball (ml) | Vol. with ball (ml) | Scaling/ Volume | Graduation | Length mm | Drops per ml | Sterilized | Quantity per Pack | Order No. |
|---------------|----------|--------------------------|---------------------|-----------------|------------|-----------|--------------|------------|-------------------|-----------|
| 0.1 | 1 | 0.1 | – | – | – | 82 | – | – | 1000 | 26 00 260 |
| 0.2 | 2 | 0.25 | – | – | – | 130 | 40±4 | – | 500 | 26 00 145 |
| 0.5 | 3 | 0.5 | 1.5 | 0.5 | ■ | 85 | 25±3 | – | 1000 | 26 00 125 |
| 0.8 Mini | 4 | 0.8 | 2 | 0.5 | ■ | 112 | 25±3 | – | 1000 | 26 00 230 |
| 0.8 Mini | 4 | 0.8 | 2 | 0.5 | ■ | 112 | 25±3 | ■ | 500 x 1 | 26 55 230 |
| 1.0 Micro | 5 | 1 | 5 | – | – | 149 | 50±5 | – | 500 | 26 00 240 |
| 1.0 Micro | 5 | 1 | 5 | – | – | 149 | 50±5 | ■ | 500 x 1 | 26 55 240 |
| 1.0 Kapillare | 6 | 0.5 | 1.5 | – | – | 104 | 50±5 | – | 400 | 26 00 155 |
| 1.0 | 7 | 1.0 | 5.5 | 1 | ■ | 153 | 30±3 | – | 500 | 26 00 171 |
| 1.0 | 7 | 1.0 | 5.5 | 1 | ■ | 153 | 30±3 | ■ | 500 x 1 | 26 55 171 |
| 1.0 | 7 | 1.0 | 5.5 | 1 | ■ | 153 | 30±3 | ■ | 50 x 10 | 26 56 171 |
| 1.0 | 8 | 1.0 | 3.5 | 1 | ■ | 140 | 25±3 | – | 500 | 26 00 119 |
| 1.0 Kapillare | 9 | 1.0 | 5.5 | 1 | ■ | 150 | 50±5 | – | 500 | 26 00 181 |
| 1.0 Kapillare | 9 | 1.0 | 5.5 | 1 | ■ | 150 | 50±5 | ■ | 500 x 1 | 26 55 181 |

Pasteur-Plast Pipets



| Volume ml | Fig. No. | Volume without ball (ml) | Vol. with ball (ml) | Scaling/ Volume | Graduation | Length mm | Drops per ml | Sterilized | Quantity per Pack | Order No. |
|-----------|----------|--------------------------|---------------------|-----------------|------------|-----------|--------------|------------|-------------------|-----------|
| 1.2 | 10 | 1.2 | – | – | – | 63 | – | – | 500 | 26 00 160 |
| 1.3 | 11 | 1 | – | – | – | 140 | 25±3 | – | 500 | 26 00 220 |
| 1.5 | 12 | 2 | 6 | 1.5 | – | 228 | 22±2 | – | 400 | 26 00 120 |
| 1.5 | 12 | 2 | 6 | 1.5 | – | 228 | 22±2 | ■ | 250 x 1 | 26 55 120 |
| 2.0 | 13 | 2.0 | 5 | 2 | ■ | 152 | 25±3 | – | 500 | 26 00 135 |
| 2.0 | 13 | 2.0 | 5 | 2 | ■ | 152 | 25±3 | ■ | 500 x 1 | 26 55 135 |
| 2.0 | 13 | 2.0 | 5 | 2 | ■ | 152 | 25±3 | ■ | 50 x 10 | 26 56 135 |
| 2.5 | 14 | 2.5 | 6.5 | 2.5 | ■ | 152 | 25±3 | – | 500 | 26 00 131 |
| 2.5 | 14 | 2.5 | 6.5 | 2.5 | ■ | 152 | 25±3 | ■ | 500 x 1 | 26 55 131 |
| 3.0 | 15 | 3 | 7 | 3 | ■ | 160 | 25±3 | – | 500 | 26 00 250 |
| 3.0 Makro | 16 | 3.0 | 7 | 3 | ■ | 158 | 25±3 | – | 500 | 26 00 111 |
| 3.0 Makro | 16 | 3.0 | 7 | 3 | ■ | 158 | 25±3 | ■ | 500 x 1 | 26 55 111 |
| 3.0 Makro | 16 | 3.0 | 7 | 3 | ■ | 158 | 25±3 | ■ | 50 x 10 | 26 56 111 |

Pasteur-Plast Pipets



| Volume ml | Fig. No. | Volume without ball (ml) | Vol. with ball (ml) | Scaling/ Volume | Graduation | Length mm | Drops per ml | Sterilized | Quantity per Pack | Order No. |
|-----------|----------|--------------------------|---------------------|-----------------|------------|-----------|--------------|------------|-------------------|-----------|
| 3.0 Mikro | 17 | 0.1 | 3.7 | – | – | 152 | 30±3 | – | 500 | 26 00 151 |
| 3.0 Mikro | 17 | 0.1 | 3.7 | – | – | 152 | 30±3 | ■ | 500 x 1 | 26 55 151 |
| 4.0 | 18 | 0.05 | 4.05 | – | – | 86 | 30±3 | – | 500 | 26 00 165 |
| 4.0 | 19 | 3 | 7 | – | – | 147 | 25±3 | – | 500 | 26 00 216 |
| 6.0 Makro | 20 | 1.8 | 8.3 | – | – | 148 | 22±2 | – | 400 | 26 00 206 |
| 6.0 Makro | 20 | 1.8 | 8.3 | – | – | 148 | 22±2 | ■ | 400 x 1 | 26 55 206 |
| 10.0 | 21 | 0.6 | 15 | – | – | 169 | 17±2 | – | 200 | 26 00 190 |
| 10.0 | 22 | 7.5 | 23 | – | – | 301 | 25±3 | – | 100 | 26 00 195 |

Sterilizing Pipet Box



Sterilizing Pipet Box

Aluminium.

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

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

Stainless steel holder for 4 ratiolab® pipet box

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

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

Labware



Think! Development and production of customized products



Slamed Pipets and Analysers



Liquid handling products



Labware for general lab applications



Life science products for microbiology and biotechnology



Cryo products for deep-freeze applications

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

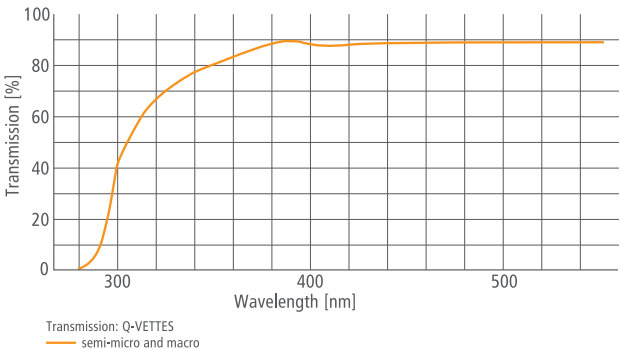
simultaneously. In order to prevent deviations in extinction coefficient values from occurring in any one run due to increased stray light, the cuvetts are automatically sorted according to their numbered cavities of origin. Each package shows the corresponding local production number of the cuvetts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



Q-VETTES

The new generation of cuvetts with clearly improved photometric properties. The 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 styrofoam racks: 100 net identical cuvetts in a styrofoam box with closable lid



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

Cuvets

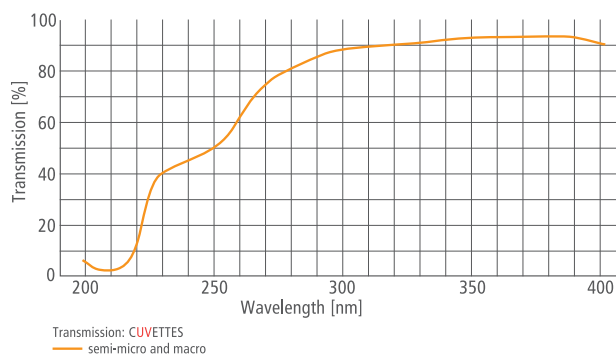


CUVETTES

For photometric measurements even in the UV range 220 nm

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

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



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



UV Micro Cuvets

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

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

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

Cuvets



Cuvets of PMMA

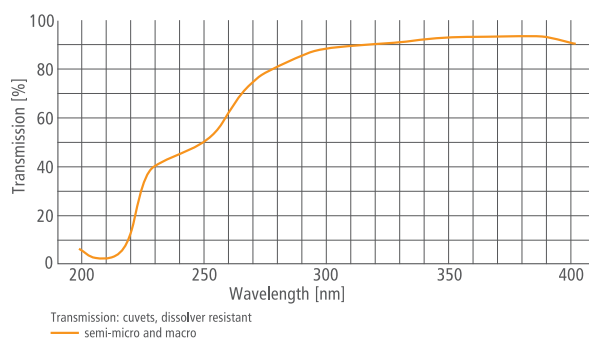
- cuvettes of polymethylmethacrylate (PMMA)
- applicable wavelength range 300 to 900 nm
- very low variation of extinction values
- excellent optical transmission range
- path length 10 mm
- outer dimensions 12.5 x 12.5 x 45 mm
- supplied in practical styrofoam racks: 100 net identical cuvettes in a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

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

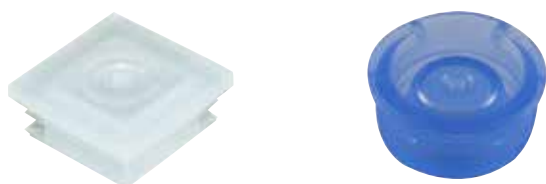


Cuvets, Solvent Resistant

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



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



Stopper for Cuvets

Polypropylene (PP), or polyethylene (PE).

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

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

Multicell Cuvets

Multicell Cuvets of PMMA

CE IVD

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

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

Fields of analysing:

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



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

Analysis Beakers and Scintillation Vessels

Analysis Beakers

CE IVD*

Clear polystyrene (PS).

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



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

*except 5700120, 5700200



Scintillation Vessels

Natural polyethylene (HD-PE).

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

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

Cell Counter Vials and Centrifuge Tubes



Cell Counter Vials

Cell counter vials made of clear polystyrene (PS).

- high-precision design for use with robotic analytical systems

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



Centrifuge Tubes

Polypropylene (PP).

- free of RNase-, DNase-, endoxin-, pyrogen- and ATP*
- with round, conical bottom or self-standing
- centrifuge tubes with red cap available with printed graduations and frosted writing field
- available non-sterile or sterile
- with red screw cap or closure
- temperature withstand -80°C to 121°C

CE IVD*

| Volume ml | Fig No. | Bottom | Centrifugable g | Sterilized | Ø x H mm | Packaging | Quantity per Pack | Order No. |
|-----------|---------|---------------|-----------------|------------|----------|--------------|-------------------|-----------|
| 12 | 1 | round | 30000 | – | 18 x 98 | bag 1 x 100 | 100 | 38 14 020 |
| 15 | 2 | conical | 17000 | – | 17 x 120 | bags 30 x 25 | 750 | 33 00 005 |
| 15 | 2 | conical | 17000 | ■ | 17 x 120 | bags 30 x 25 | 750 | 33 00 006 |
| 50 | 3 | conical | 20000 | – | 30 x 115 | bags 12 x 25 | 300 | 33 00 001 |
| 50 | 3 | conical | 20000 | ■ | 30 x 115 | bags 12 x 25 | 300 | 33 00 002 |
| 50 | 4 | self-standing | 7000 | – | 30 x 115 | bags 10 x 25 | 250 | 33 00 003 |
| 50 | 4 | self-standing | 7000 | ■ | 30 x 115 | bags 10 x 25 | 250 | 33 00 004 |

*except 3814020

Microcentrifuge Tubes

Microcentrifuge Tubes

CE IVD*

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

- autoclavable with opened cap at 121 °C, 20 min, (except 5615400)
- natural color or different colors for comfortable identification
- tight sealing cap
- safe and easy to be opened and closed
- 5615005 and 5615106: free of DNase-, RNase-, pyrogens-, Human DNA-, PCR inhibitors
- 5615005 and 5615106: centrifugable up to 25.000 x g



| Volume ml | Fig. No. | Material | Cap | Color | Packaging | Quantity per Pack | Order No. |
|-------------|----------|----------|-----|---------|-----------|-------------------|-----------|
| 0.4 Beckman | 1 | PE | ■ | natural | 1 x 1000 | 1000 | 56 15 400 |
| 0.5 | 2 | PP | ■ | natural | 1 x 1000 | 1000 | 56 15 030 |
| 1.5 | 3 | PP | ■ | natural | 2 x 500 | 1000 | 56 15 000 |
| 1.5 | 3 | PP | ■ | natural | 1 x 1000 | 1000 | 56 15 005 |
| 1.5 | 4 | PP | ■ | yellow | 2 x 500 | 1000 | 56 15 001 |
| 1.5 | 5 | PP | ■ | green | 2 x 500 | 1000 | 56 15 002 |
| 1.5 | 6 | PP | ■ | red | 2 x 500 | 1000 | 56 15 003 |
| 1.5 | 7 | PP | ■ | blue | 2 x 500 | 1000 | 56 15 004 |
| 1.5 | 8 | PP | — | natural | 1 x 1000 | 1000 | 56 15 020 |
| 2.0 | 9 | PP | ■ | natural | 1 x 1000 | 1000 | 56 15 101 |
| 2.0 | 9 | PP | ■ | natural | 1 x 1000 | 1000 | 56 15 106 |

*except 5615030

Microcentrifuge Tubes

Safety-Cap Microcentrifuge Tubes

CE IVD

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
- certified free of RNase, DNase, human DNA, PCR inhibitors, pyrogens and ATP
- produced in microbiologically controlled clean room ISO 8

free of RNase, DNase, human DNA, PCR inhibitors, ATP and pyrogens

- 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
- temperature of use: -80°C +100°C



The additional safety lock prevents uncontrolled opening of the tubes.



| Volume ml | Fig. No. | Centrifugable g | Sterilized | Packaging | Quantity per Pack | Order No. |
|-----------|----------|-----------------|------------|-----------|-------------------|---------------|
| 0,5 | 1 | 30000 | — | 2 x 500 | 1000 | 56 15 038 |
| 0,5 | 1 | 30000 | ■ | 50 x 1 | 50 | New 56 15 039 |
| 1,5 | 2 | 30000 | — | 1 x 1000 | 1000 | 56 15 008 |
| 1,5 | 2 | 30000 | ■ | 100 x 1 | 100 | New 56 15 009 |
| 2,0 | 3 | 30000 | — | 2 x 500 | 1000 | 56 15 108 |
| 2,0 | 3 | 30000 | ■ | 100 x 1 | 100 | New 56 15 109 |
| 5,0 | 4 | 21000 | — | 1 x 100 | 100 | New 56 15 158 |
| 5,0 | 4 | 21000 | ■ | 50 x 1 | 50 | New 56 15 159 |

free of DNase/RNase, and pyrogens

Microcentrifuge tubes with screw cap and O-Ring Seal

CE IVD

Polypropylene (PP).

- with conical bottom or additional self-standing
- sterilized
- centrifugable up to approx. 25.000 g
- temperature-resistant from -80 °C to +121 °C
- autoclavable up to +121 °C
- Ø x H: 13.1 x 48 mm
- re-sealable bags



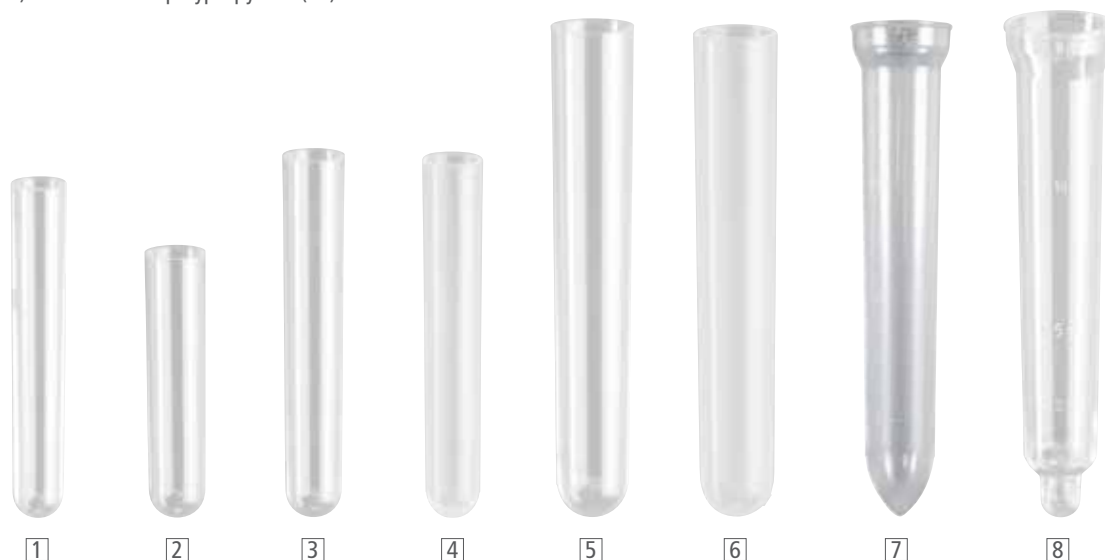
| Volume ml | Fig. No. | Bottom | Labeling Area | Sterilized | Packaging | Quantity per Pack | Order No. |
|-----------|----------|---------------|---------------|------------|-----------|-------------------|-----------|
| 0.5 | 1 | self-standing | — | ■ | 2 x 500 | 1000 | 56 16 021 |
| 0.5 | 2 | conical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

Test Tubes and Stoppers

CE IVD*

Test Tubes

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



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

*except 3014030, 3714010

Stoppers for test tubes, Ø 11 – 12 mm

Polyethylene (PE).

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



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

Stoppers for test tubes, Ø 16 – 17 mm

Polyethylene (PE).

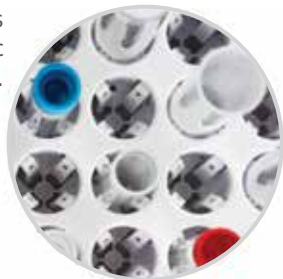
- very tight seal due to 2 sealing rings
- available in natural and 4 more colors
- fit to test tube: figure 5-6



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

Multistand Rack, Rack for Centrifuge Tubes and Rack for Microcentrifuge Tubes

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



Multistand Rack

Polyoxymethylen (POM).

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

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

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

Rack for Centrifuge Tubes

Polypropylene (PP).

Suitable for 15 ml and 50 ml tubes.

- holes are keyed with molded in numbers and letters for easy identification
- ergonomics design facilitates easy handling
- DNase, RNase, and Pyrogen Free
- superior chemicals resistance
- temperature-resistant from – 20 °C to +121 °C
- autoclavable at 121 °C for 20 minutes
- Test Tube Rack is available in yellow & blue color

| Color | For Centrifuge Tube | Positions | Quantity per Pack | Order No. |
|--------|------------------------|-----------|----------------------|--------------|
| blue | 15 ml | 2 x 10 | 4 | 37 12 201 |
| yellow | 15 ml | 2 x 10 | 4 | 37 12 202 |
| blue | 50 ml | 2 x 6 | 4 | 37 12 203 |
| yellow | 50 ml | 2 x 6 | 4 | 37 12 204 |

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.

- for tubes up to Ø 11 mm
- autoclavable at 121 °C
- temperature-resistant from – 80 °C to +121 °C
- 225 mm x 65 mm x 28 mm (LxWxH)

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



Autoclavable Bags, Autoclavable Bags BIOHAZARD



Autoclavable bags, dispenser box

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

- Volume approx. 1.5l, film thickness 50 µm
- for autoclaving, the bag must not be completely closed
- for bag size 200 x 300 mm: practical bench-top stand, plastic-coated, with 3 rubber feet

| W x H mm | Bag | Autoclavable | Packaging | Quantity per Pack | Order No. |
|--|-------------------|--------------|-------------------|-------------------|-----------|
| 200 x 300 | standard | at 134°C | dispenser 1 x 100 | 100 | 70 01 000 |
| 200 x 300 | high transparency | at 121°C | dispenser 1 x 100 | 100 | 70 01 005 |
| bench-top stand for waste disposal bags 200 x 300 mm, High 25 cm | | | | 1 | 70 01 400 |
| Set consisting of bench-top stand and 100 waste disposal bags (standard) 200 x 300 mm | | | | 1 | 70 01 401 |
| Set consisting of bench-top stand and 100 waste disposal bags (high transparency) 200 x 300 mm | | | | 1 | 70 01 405 |

Autoclavable bags, Standard

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

- autoclavable at 134°C, 20 min, for autoclaving, the bag must not be completely closed

| W x H mm | Volume approx. l | Film Thickness | Packaging | Quantity per Pack | Order No. |
|------------|------------------|----------------|-----------------------|-------------------|-----------|
| 300 x 500 | 6 | 50 µm | cardboard box 1 x 500 | 500 | 70 01 100 |
| 400 x 780 | 22 | 50 µm | cardboard box 1 x 500 | 500 | 70 01 150 |
| 600 x 800 | 32 | 50 µm | cardboard box 1 x 500 | 500 | 70 01 200 |
| 600 x 800 | 32 | 50 µm | cardboard box 1 x 100 | 100 | 70 01 210 |
| 600 x 800 | 32 | 100 µm | cardboard box 1 x 125 | 125 | 70 01 212 |
| 700 x 1100 | 72 | 50 µm | cardboard box 1 x 350 | 350 | 70 01 300 |
| 700 x 1100 | 72 | 50 µm | cardboard box 1 x 75 | 75 | 70 01 310 |
| 700 x 1100 | 72 | 100 µm | cardboard box 1 x 75 | 75 | 70 01 311 |

Autoclavable bags, High Transparency

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

- autoclavable at 121 °C, 20 min, for autoclaving, the bag must not be completely closed

| W x H mm | Volumen approx. l | Film Thickness | Packaging | Quantity per Pack | Order No. |
|------------|-------------------|----------------|-----------------------|-------------------|-----------|
| 300 x 500 | 6 | 50 µm | cardboard box 1 x 500 | 500 | 70 01 105 |
| 400 x 780 | 22 | 50 µm | cardboard box 1 x 500 | 500 | 70 01 155 |
| 600 x 800 | 32 | 50 µm | cardboard box 1 x 500 | 500 | 70 01 205 |
| 700 x 1100 | 72 | 50 µm | cardboard box 1 x 350 | 350 | 70 01 305 |

Autoclavable bags BIOHAZARD red – Warning Instruction and sterilization indicator patch

Polyethylene (PE).

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

- rectangle white indicator patch field turns into dark when autoclaved
- with BIOHAZARD symbol and safety imprint in English, German, French and Spanish languages
- autoclavable at 121 °C, 20 min, for autoclaving, the bag must not be completely closed
- practical bench-top stand, plastic-coated, with 3 rubber feet
- only in large bag autoclaving

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



Autoclavable Bags BIOHAZARD



Autoclavable bags BIOHAZARD – Warning Instruction and sterilization indicator patch

Polypropylene (PP).

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

- rectangle white indicator patch field turns into dark when autoclaved
- with BIOHAZARD symbol and safety imprint in English, German, French and Spanish language
- autoclavable at 134 °C, 20 min, for autoclaving, the bag must not be completely closed

| W x H mm | Volume approx. l | Film Thickness | Packaging | Quantity per Pack | Order No. |
|------------|------------------|----------------|-----------------------|-------------------|-----------|
| 300 x 500 | 6 | 50 µm | cardboard box 1 x 100 | 100 | 70 02 105 |
| 300 x 500 | 6 | 50 µm | cardboard box 1 x 500 | 500 | 70 02 100 |
| 400 x 780 | 22 | 50 µm | cardboard box 1 x 100 | 100 | 70 02 155 |
| 400 x 780 | 22 | 50 µm | cardboard box 1 x 500 | 500 | 70 02 150 |
| 600 x 800 | 32 | 50 µm | cardboard box 1 x 100 | 100 | 70 02 205 |
| 600 x 800 | 32 | 50 µm | cardboard box 1 x 500 | 500 | 70 02 200 |
| 700 x 1100 | 72 | 50 µm | cardboard box 1 x 75 | 75 | 70 02 305 |
| 700 x 1100 | 72 | 50 µm | cardboard box 1 x 350 | 350 | 70 02 300 |



Autoclavable bags BIOHAZARD red – Warning Instruction and sterilization indicator patch

Polypropylene (PP).

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

- rectangle white indicator patch field turns into dark when autoclaved
- with BIOHAZARD symbol and safety imprint in German, English and French language
- autoclavable at 134 °C, 20 min, for autoclaving, the bag must not be completely closed
- marking maximum filling (except 7003230)

| W x H mm | Volume approx. l | Film Thickness | Packaging | Quantity per Pack | Order No. |
|------------|------------------|----------------|-----------------------|-------------------|----------------------|
| 300 x 500 | 6 | 50 µm | cardboard box 1 x 500 | 500 | New 70 03 200 |
| 400 x 780 | 22 | 50 µm | cardboard box 1 x 500 | 500 | 70 03 210 |
| 600 x 800 | 32 | 50 µm | cardboard box 1 x 500 | 500 | 70 03 220 |
| 700 x 1100 | 72 | 50 µm | cardboard box 1 x 350 | 350 | New 70 03 230 |

Autoclavable bags BIOHAZARD yellow – Warning Instruction and sterilization indicator patch

Polyethylene (HD-PE).

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

- rectangle white indicator patch field turns into dark when autoclaved
- with BIOHAZARD symbol and safety imprint in German, English and French language
- autoclavable at 121 °C, 20 min, for autoclaving, the bag must not be completely closed
- marking maximum filling (except 7003130)

| W x H mm | Volume approx. l | Film Thickness | Packaging | Quantity per Pack | Order No. |
|------------|------------------|----------------|-----------------------|-------------------|----------------------|
| 300 x 500 | 6 | 50 µm | cardboard box 1 x 500 | 500 | 70 03 100 |
| 400 x 780 | 22 | 50 µm | cardboard box 1 x 500 | 500 | New 70 03 110 |
| 600 x 800 | 32 | 50 µm | cardboard box 1 x 500 | 500 | 70 03 120 |
| 700 x 1100 | 72 | 50 µm | cardboard box 1 x 350 | 350 | New 70 03 130 |



Bench-top stand and Cleanibag System



Bench-top stand for waste disposal bags

Practical bench-top stand, plastic-coated, with 3 rubber feet.

- for bag size 200 x 300 mm and 300 x 500 mm

| Product | Quantity per Pack | Order No. |
|--|-------------------|-----------|
| bench-top stand for waste disposal bags 200 x 300 mm, High 25 cm | 1 | 70 01 400 |
| Set consisting of bench-top stand and 100 waste disposal bags (standard) 200 x 300 mm | 1 | 70 01 401 |
| Set consisting of bench-top stand and 100 waste disposal bags (high transparency) 200 x 300 mm | 1 | 70 01 405 |
| bench-top stand for waste disposal bags 300 x 500 mm, High 35 cm | 1 | 70 01 430 |
| Set consisting of bench-top stand and 100 waste disposal bags (standard) 300 x 500 mm | 1 | 70 01 415 |
| Set consisting of bench-top stand and 100 waste disposal bags (high transparency) 300 x 500 mm | 1 | 70 01 420 |
| Set consisting of bench-top stand and 100 red waste disposal bags 210 x 290 mm | 1 | 70 01 410 |



Cleanibag System

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

- self-adhesive strip, sticks on smooth and clean surfaces
- residue-free on removable

Other sizes available on request.

Self-adhesive

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

Ear Tips and 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

Multi Purpose Beakers and Multi Purpose Beaker System

Multi Purpose beakers with screw-caps

CE IVD

Polypropylene (PP) or polystyrene (PS).

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

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



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

Multi Purpose Beakers

Glass-clear polystyrene (PS).

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

| Product | Packaging | Quantity per Pack | Order No. |
|---|---------------|-------------------|-----------|
| ratiolab® multi-purpose beakers with cover | bags 20 x 50 | 1000 | 59 21 170 |
| ratiolab® multi-purpose beakers without cover | bags 20 x 50 | 1000 | 59 21 171 |
| self-adhesive film covers for beakers | strip 125 x 4 | 500 | 59 21 160 |

Beaker Tray and Beaker Dispenser for Multi Purpose Beakers

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

- for 10 ratiolab® multi purpose beakers

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

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

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

Multi Purpose bottles, Petri Dishes and Inoculating Loops



Multi Purpose bottles

Polyethylene, blue translucent (PE).

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

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



Petri Dishes

CE IVD

Transparent polystyrene (PS).

- uncoated, with vents
- sterilized or clean as produced

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

*external diameter



Inoculating Loops

CE IVD

Made of polystyrene (PS).

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

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

Multipurpose Containers

sterilized available
on request



Multipurpose container

Polypropylene (PP).

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

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

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

sterilized available
on request



Multipurpose container

Polypropylene (PP).

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

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

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

Multipurpose Containers and Wide-neck Bottles



Multipurpose container

Polypropylene (PP).

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

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

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

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



Wide-neck bottle, square bottom

High quality polyethylene (HD-PE).

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

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

Life Science



Think! Development and production of customized products



Slamed Pipets and Analysers



Liquid handling products



Labware for general lab applications



Life science products for microbiology and biotechnology



Cryo products for deep-freeze applications

Micro Test Plates

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

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

- with U-, F-, or V-bottom
- SBS standard micro test plate format
- 8 x 12 wells alphanumerically coded
- wells with raised rims for reduced cross-contamination and effective sealing with Ratiolab cover films (see on page 73)
- precise design, perfectly shaped for use with automatic systems
- optimum space for precise positioning
- space-saving and stackable
- polypropylene plates may be sealed with heat-sealing films without deformation



PS



PP



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

Micro Test Plates, Spot Test Plates



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

Polypropylene (PP) or polystyrene (PS).

- with U-bottom or F-bottom
- SBS standard micro test plate format
- 8 x 12 wells alphanumerically coded
- wells with raised rims for reduced cross-contamination and effective sealing with Ratiolab cover films (see on page 73)
- precise design, perfectly shaped for use with automatic systems
- optimum space for bar code labels on the side walls
- space-saving and stackable
- surface untreated

| Bottom | Material | Color | Packaging | Quantity per Pack | Order No. |
|--------|----------|-------|--------------|-------------------|-----------|
| U | PP | black | bags 10 x 10 | 100 | 60 18 710 |
| U | PS | black | bags 10 x 10 | 100 | 60 18 711 |
| F | PP | black | bags 10 x 10 | 100 | 60 18 717 |
| F | PS | black | bags 10 x 10 | 100 | 60 18 718 |



Lids for Micro Test Plates

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

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



Spot test plates

Polystyrene (PS), white.

- 3 x 4 wells
- L x W x H: 135 x 109 x 10 mm

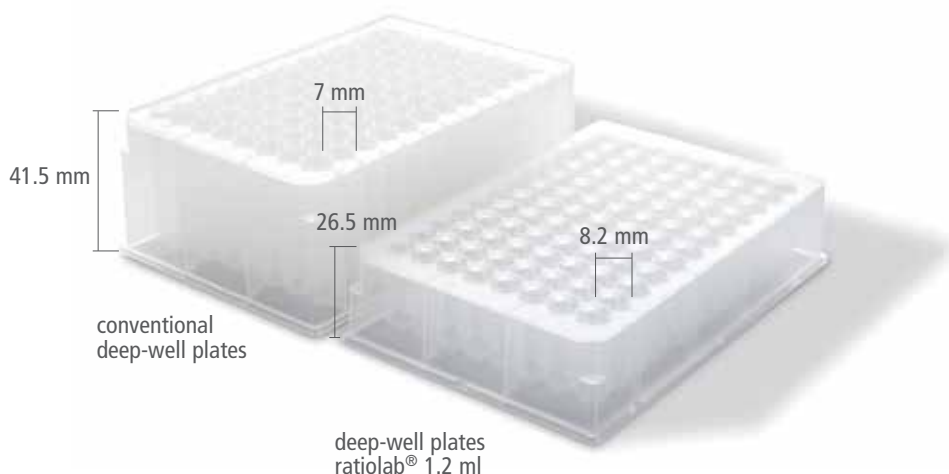
| Ø Mould mm | Packaging | Quantity per Pack | Order No. |
|------------|-------------|-------------------|-----------|
| 20 | bag 1 x 100 | 100 | 60 18 060 |

Deep-Well-Plates

Low-Profile Deep-Well Plates (96)

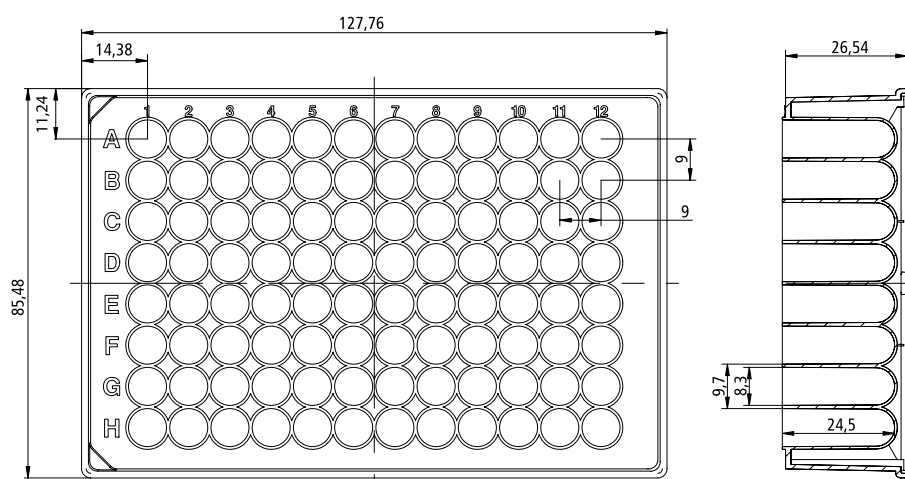
These 1.2 ml low-profile deep-well plates are ideal for pharmaceuticals, biotechnology and diagnostics. Of the same standard dimensions (Society for Biomolecular Sciences – SBS), they are one-third lower than standard deep-well plates (96). They thus require less space! Requiring some 30 % less space,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

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



Clear polypropylene (PP).

- about half as high as conventional deep-well plates at 1.2 ml fill volume
- SBS standard micro test plate format
- well with significantly larger cross section
- wells with raised rims for reduced cross-contamination
- improved visual control due to clear polypropylene
- autoclavable at 121 °C, 20 min
- temperature resistant to – 80 °C
- 8 x 12 wells with alphanumeric code in micro test plate format
- optimally sealing with Ratiolab cover films (see on page 73)
- precise design, for use in automatic pipetting systems for High Throughput Screening (HTS)
- optimum space for bar code labels on the side walls
- space-saving and stackable



Deep-Well-Plates

Deep-Well-Plates

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



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

Closures for Deep-Well-Plates and Reagent Reservoirs



Closures for 96-Well Deep-Well-Plates

Made of thermo-plastic elastomer (TPE).

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

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

Closures for 96-Well Deep-Well-Plates

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

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

| Product | Fig. No. | Material | Packaging | Quantity per Pack | Order No. |
|----------------------------|----------|----------|--------------|-------------------|-----------|
| 1.2 ml 8-well-cover strips | 2 | TPE | bag 1 x 1000 | 1000 | 82 00 008 |
| 1.2 ml 96-well-cover mats | 3 | TPE | bags 10 x 10 | 100 | 82 00 009 |
| 2.2 ml 96-well-cover mats* | 4 | EVA | bags 5 x 20 | 100 | 82 00 010 |

*for 96-square well plates

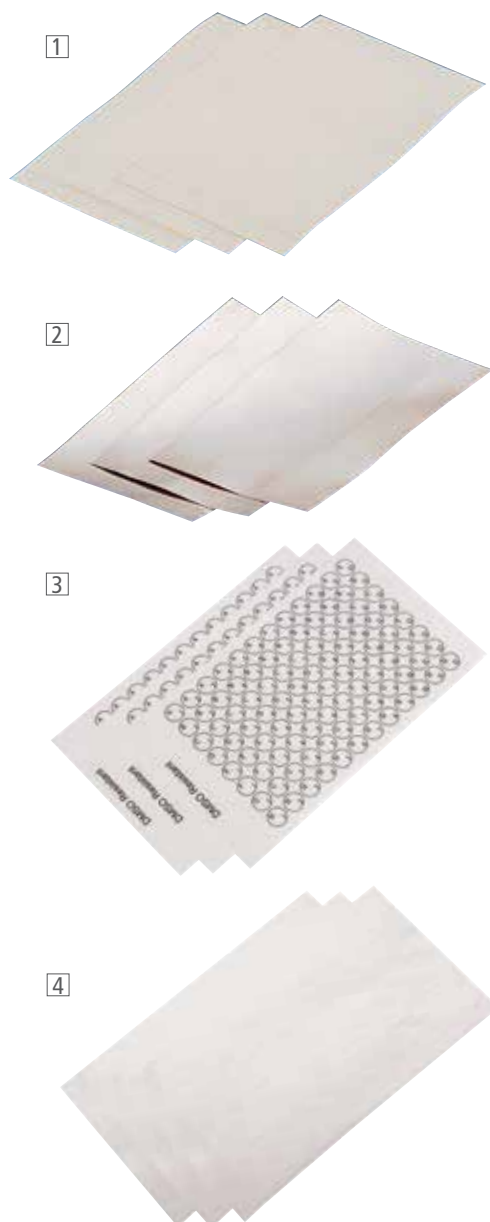
Reagent Reservoirs

Translucent polypropylene (PP).

- for manual and automated liquid handling applications
- compatible with all common pipetting robots and dispensing systems
- autoclavable at 121°C, 20 min only 6025000

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

Cover Films for Micro Test and PCR Plates



Cover Films

For micro test plates, deep-well plates, micro test tubes and PCR plates
Adhesive base must be free of grease, dust, degassing and air-conditioned in order to ensure safe bonding.

- self-adhesive
- for manual operation
- adhesive with high solvent resistance
- all films of SBS standard format

1 Soft-PVC peeling cover film

- low-cost film for polystyrene plates
- can be removed without any residues
- minimum application temperature: + 5 °C
- temperature resistant from – 20 °C to + 70 °C
- ideal for the storage of plates at room temperature

2 Aluminum universal cover film

- can be easily removed
- ideal for piercing
- for all plate types; PS, PP, PC, PE
- temperature resistant from – 80 °C to + 120 °C
- ideal for the storage of plates at room temperature (20 °C-23 °C) and dry room

3 Piercing-foil with cavity circle 96-well

- each cavity is marked by a circle and a numerical printing
- prepierced in each cavity optimizes opening by tip
- self-closing film reduces the risk of cross-contamination
- temperature resistant from – 80 °C to + 30 °C
- DMSO-resistant

4 Gas permeable peeling film

- SBS-Standard
- liquid tight
- high permeability
- temperature resistant from – 5 °C to + 60 °C
- ideal for the storage of plates at room temperature (20 °C-23 °C) and dry room

Polypropylen peeling cover film

- can be removed without any residues and repeatedly used
- for all plate types; PS, PP, PC, PE, DMSO-resistant
- temperature resistant from – 80 °C to + 120 °C
- ideal for the storage of plates at room temperature (20 °C-23 °C) and dry room

Further films on request.

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

PVC = Polyvinyl chloride, AL = Aluminium, PP = Polypropylene

Micro-Tubes System

Micro-Tubes System

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

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

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

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



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

Lid

Plate

with tubes

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



Micro-Rack

Micro-Tubes 1.2 ml

Micro-Tubes System



Micro-Tubes

Translucent polypropylene (PP) with very low protein binding.

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

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



Micro-Racks, loaded or empty

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

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

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



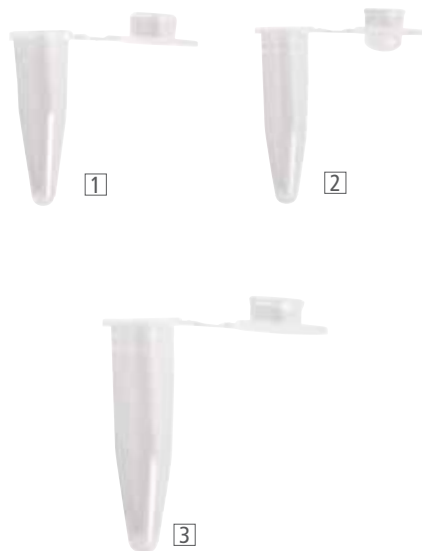
Micro-Tubes Refill System for Micro-Racks

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

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

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

Further cover films see on page 73.



PCR Tubes

Pure polypropylene (PP).

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

PCR Tubes, single

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

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



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 open and close

| Volume ml | Fig. No. | Caps | Packaging | Quantity per Pack | Order No. |
|--------------------------------------|----------|---------|-------------|-------------------|-----------|
| with attached individual caps | | | | | |
| 8 x 0.2 | [4] | flat | bag 1 x 125 | 125 | 86 10 040 |
| 8 x 0.2 | [5] | domed | bag 1 x 125 | 125 | 86 10 039 |
| for separate cap strips | | | | | |
| 8 x 0.2 | [6] | without | bag 1 x 125 | 125 | 86 10 002 |
| cap strips | | | | | |
| 8-cap-strips | [7] | flat | bag 1 x 125 | 125 | 86 10 015 |
| 8-cap-strips | [8] | domed | bag 1 x 125 | 125 | 86 10 003 |



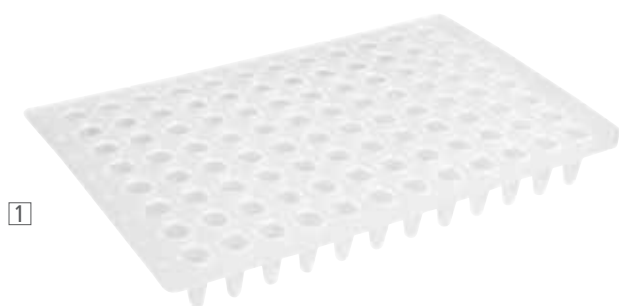
PCR Plates and PCR Racks

96-well PCR Plates

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

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

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



1



2

| 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 | with rim, high form | bags 4 x 25 | 100 | 86 10 011 |

96-Well PCR-Rack

Polypropylene (PP).

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

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



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

*Styrol-Acrylnitril

Floating Cryo Racks

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

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

Cryo



Think! Development and production of customized products



Slamed Pipets and Analysers



Liquid handling products



Labware for general lab applications



Life science products for microbiology and biotechnology



Cryo products for deep-freeze applications

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



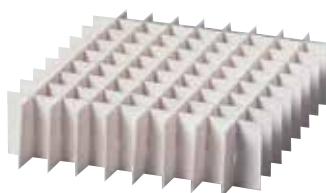
Cryo Boxes, Cardboard, Format 133 x 133 mm

Ultra-low temperature-resistant cardboard.

other sizes available on request

- for sample storage even at very low temperatures
- temperature-resistant down to – 80 °C
- available with a water-repellent standard coating or with a waterproof plastic coating
- highest flexibility: Cryo Boxes can be combined with different grid inserts for tubes from dia. 6 mm to dia. 28 mm
- the Cryo Boxes can be used for larger vessels when the grid is removed
- suitable grid inserts for cryo boxes see under

| 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 |



Grid Inserts for Cryo Boxes, Format 133 x 133 mm

Ultra-low temperature-resistant cardboard.

other sizes available on request

- for sample storage
- 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 |

Cryo Boxes, Cardboard 1/2-Format and Cryo Labels



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

Ultra-low temperature-resistant cardboard, white.

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

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



Rainbow Cryo labels

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

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

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

Cryo Boxes, Cardboard, Format 136 x 136 mm and Grid Inserts



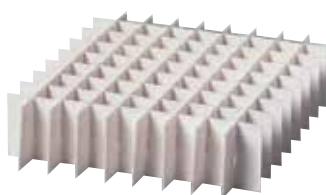
Cryo Boxes, Cardboard, Format 136 x 136 mm

Ultra-low temperature-resistant cardboard.

other sizes available on request

- for sample storage even at ultra-low temperatures
- temperature resistant down to – 80 °C
- available with a water-repellent standard coating or with a waterproof plastic coating
- highest flexibility: Cryo Boxes can be combined with different grid inserts for tubes from dia. 6 mm to dia. 28,5 mm
- the Cryo Boxes can be used for larger vessels when the grid is removed
- suitable grid inserts for cryo boxes see under

| 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 |



Grid Inserts for Cryo Boxes, Format 136 x 136 mm

Ultra-low temperature-resistant cardboard.

other sizes available on request

- for sample storage
- 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 | 28.5 | 51 20 210 | 51 20 211 | 51 20 212 | 51 20 213 |
| 5 x 5 | 10 | 23.5 | 51 20 121 | 51 20 120 | 51 20 122 | 51 20 123 |
| 6 x 6 | 10 | 19.5 | 51 20 131 | 51 20 130 | 51 20 132 | 51 20 133 |
| 7 x 7 | 10 | 16.5 | 51 20 143 | 51 20 140 | 51 20 142 | 51 20 141 |
| 8 x 8 | 10 | 14.5 | 51 20 152 | 51 20 150 | 51 20 151 | 51 20 153 |
| 9 x 9 | 10 | 12.0 | 51 20 163 | 51 20 160 | 51 20 161 | 51 20 162 |
| 10 x 10 | 10 | 11.0 | 51 20 173 | 51 20 170 | 51 20 172 | 51 20 171 |
| 12 x 12 | 10 | 9.0 | 51 20 182 | 51 20 180 | 51 20 181 | 51 20 183 |
| 13 x 13 | 10 | 8.5 | 51 20 190 | 51 20 193 | 51 20 191 | 51 20 192 |
| 14 x 14 | 10 | 7.5 | 51 20 202 | 51 20 203 | 51 20 201 | 51 20 200 |
| 16 x 16 | 10 | 6.5 | 51 20 221 | 51 20 222 | 51 20 223 | 51 20 224 |

Cryo Boxes, Cardboard, 1/2-Format and 1/4-Format

Format 136 x 136 x 75 mm and Format 148 x 148 x 130 mm



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

Ultra-low temperature-resistant cardboard, white.

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

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



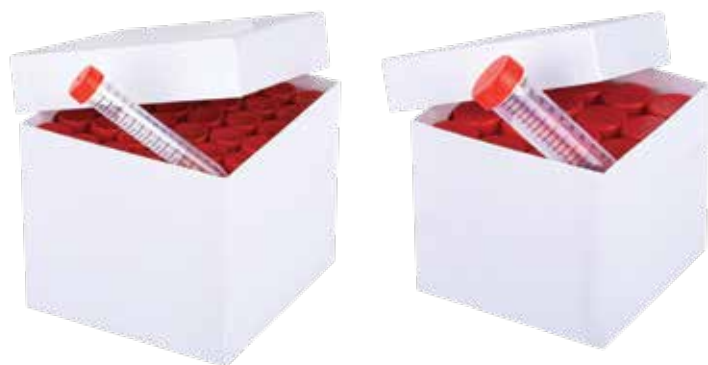
Cryo Boxes, Cardboard, Format 136 x 136 x 75 mm

Ultra-low temperature-resistant cardboard.

suitable for 5 ml microcentrifuge tubes

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

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



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

Ultra-low temperature-resistant cardboard.

suitable for centrifuge tubes

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

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

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



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

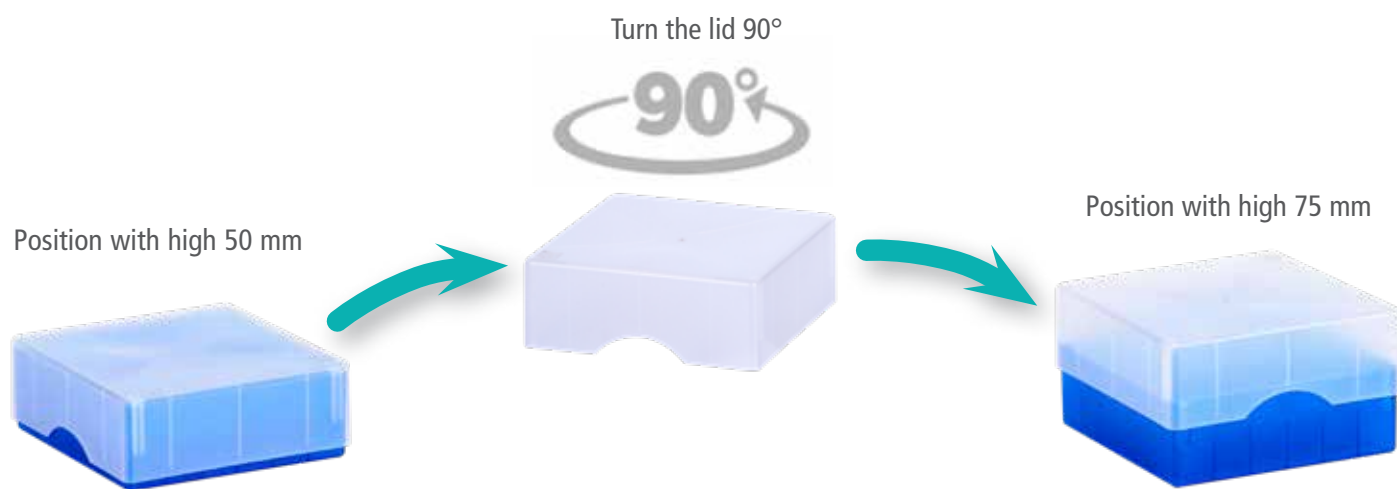
High-quality polypropylene (PP). Available in natural and other colors.

The specialty: the boxes are adjustable in height.

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

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

- autoclavable, temperature-resistant from -90°C to $+121^{\circ}\text{C}$
- grids are available: 6 x 6, 7 x 7, 8 x 8, 9 x 9, 10 x 10
- numerically coded



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

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

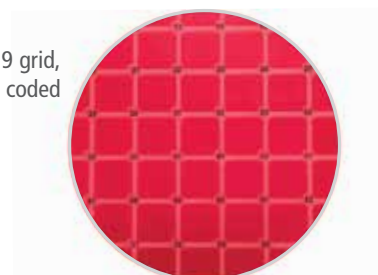


Cryo Boxes with Grids, PP, Format 133 x 133 mm

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

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

9 x 9 grid,
numerically coded



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

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



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

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

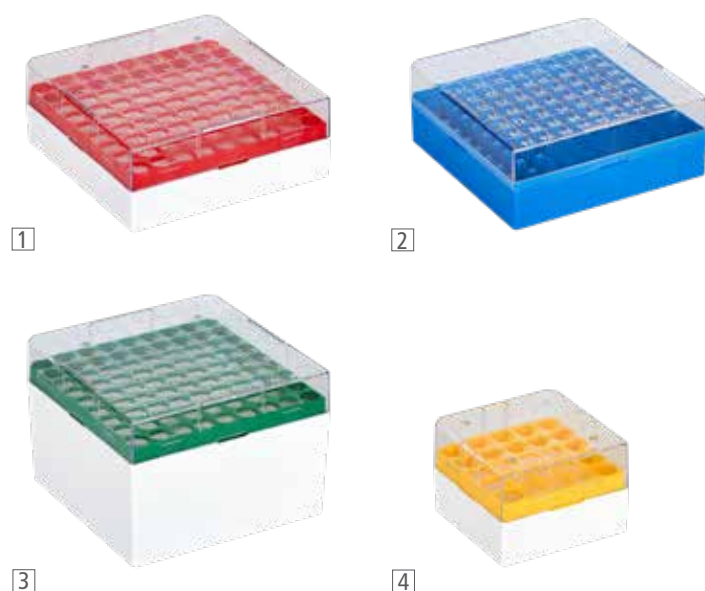
The separate naturally-colored inserts are available in five sizes and can thus be used with sample vessels of differing diameters. The inserts fit all ratiolab® Cryo Boxes. Cleaning of the boxes and the inserts is much simpler than with Cryo Boxes with permanently fitted inserts.

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

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

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

CE IVD



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

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

- autoclavable, temperature-resistant from – 190 °C to + 121 °C
- 81 or 100 places, 9 x 9 resp. 10 x 10 grids
- 1/4-format with 25 places, 5 x 5 grid
- numerically coded
- stackable for safe transport
- drain bores at the bottom for dew liquids
- Cryo Boxes can also be used for larger vials by removing the grid inserts (except figure 2)

| Color | Fig No. | W x D x H mm | For Tube Dia. mm | Grid | Quantity per Pack | Order No. |
|--|---------|-----------------|---------------------|---------|----------------------|--------------|
| for Cryo Tubes 1.2 – 2 ml | | | | | | |
| blue | 1 | 132 x 132 x 52 | 12,3 | 9 x 9 | 5 | 51 50 001 |
| green | 1 | 132 x 132 x 52 | 12,3 | 9 x 9 | 5 | 51 50 002 |
| red | 1 | 132 x 132 x 52 | 12,3 | 9 x 9 | 5 | 51 50 003 |
| yellow | 1 | 132 x 132 x 52 | 12,3 | 9 x 9 | 5 | 51 50 004 |
| for Cryo Tubes 1.2 – 2 ml | | | | | | |
| blue | 2 | 132 x 132 x 52 | 12,3 | 10 x 10 | 5 | 51 50 011 |
| green | 2 | 132 x 132 x 52 | 12,3 | 10 x 10 | 5 | 51 50 012 |
| red | 2 | 132 x 132 x 52 | 12,3 | 10 x 10 | 5 | 51 50 013 |
| yellow | 2 | 132 x 132 x 52 | 12,3 | 10 x 10 | 5 | 51 50 014 |
| white | 2 | 132 x 132 x 52 | 12,3 | 10 x 10 | 5 | 51 50 015 |
| for Cryo Tubes 3 – 5 ml | | | | | | |
| blue | 3 | 132 x 132 x 94 | 12,3 | 9 x 9 | 4 | 51 50 021 |
| green | 3 | 132 x 132 x 94 | 12,3 | 9 x 9 | 4 | 51 50 022 |
| red | 3 | 132 x 132 x 94 | 12,3 | 9 x 9 | 4 | 51 50 023 |
| yellow | 3 | 132 x 132 x 94 | 12,3 | 9 x 9 | 4 | 51 50 024 |
| 1/4-format, for Cryo Tubes 1.2 – 2 ml | | | | | | |
| blue | 4 | 76 x 76 x 52 | 12,3 | 5 x 5 | 8 | 51 50 031 |
| green | 4 | 76 x 76 x 52 | 12,3 | 5 x 5 | 8 | 51 50 032 |
| red | 4 | 76 x 76 x 52 | 12,3 | 5 x 5 | 8 | 51 50 033 |
| yellow | 4 | 76 x 76 x 52 | 12,3 | 5 x 5 | 8 | 51 50 034 |

Cryo Tubes

Cryo Tubes

Polypropylene with the highest translucence. For the storing and conservation of tissue cultures and biological samples e.g. sera, blood and spermata. Suitable for storage from general cold storage refrigeration (+4°C) down to the vapor phase of liquid nitrogen.

Manufactured in clean Room ISO 7 (UNI EN ISO 14644-1). Class 10.000 (US FED STD 209E).

- sterilized by beta-radiation, products meet a minimum Sterility Assurance Level (SAL) of 10^{-6}
- autoclavable at 121°C for 20 Min
- certificate completely free of DNA-, DNase-, Pyrogen-, ATP-, Human DNA, and PCR Inhibitor
- 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
- each tube and package is labeled with an expiry date
- cap: PE and TVP
- 2.0 ml, 4.0 ml and 5.0 ml tubes available also with round bottom
- packaged in PE bags of 50 tubes in boxes
- suitable working stations see on page 89
- suitable cryo-boxes see on page 80-87

CE IVD

free of DNA-, DNase-,
Pyrogen-, ATP-, Human DNA,
and PCR Inhibitor



| Volume ml | Description | Ø x Height mm | Packaging | Quantity per Pack | Order No. |
|--|---------------|---------------|-----------|-------------------|-----------|
| Cryo Tubes with External Thread | | | | | |
| 1,2 | self-standing | 12.3 x 41 | 20 x 50 | 1000 | 51 10 112 |
| 2,0 | round base | 12.3 x 46 | 20 x 50 | 1000 | 51 10 120 |
| 2,0 | self-standing | 12.3 x 47 | 20 x 50 | 1000 | 51 10 122 |
| 3,0 | self-standing | 12.3 x 71 | 20 x 50 | 1000 | 51 10 130 |
| 4,0 | self-standing | 12.3 x 75 | 20 x 50 | 1000 | 51 10 140 |
| 5,0 | self-standing | 12.3 x 90 | 20 x 50 | 1000 | 51 10 150 |
| Cryo Tubes with Internal Thread | | | | | |
| 1,2 | self-standing | 12.3 x 43 | 20 x 50 | 1000 | 51 10 013 |
| 2,0 | round base | 12.3 x 47 | 20 x 50 | 1000 | 51 10 025 |
| 2,0 | self-standing | 12.3 x 48 | 20 x 50 | 1000 | 51 10 024 |
| 4,0 | self-standing | 12.3 x 76 | 20 x 50 | 1000 | 51 10 041 |
| 4,0 | round base | 12.3 x 75 | 20 x 50 | 1000 | 51 10 042 |
| 5,0 | self-standing | 12.3 x 91 | 20 x 50 | 1000 | 51 10 051 |
| 5,0 | round base | 12.3 x 90 | 20 x 50 | 1000 | 51 10 052 |

Cryo Tubes Accessories

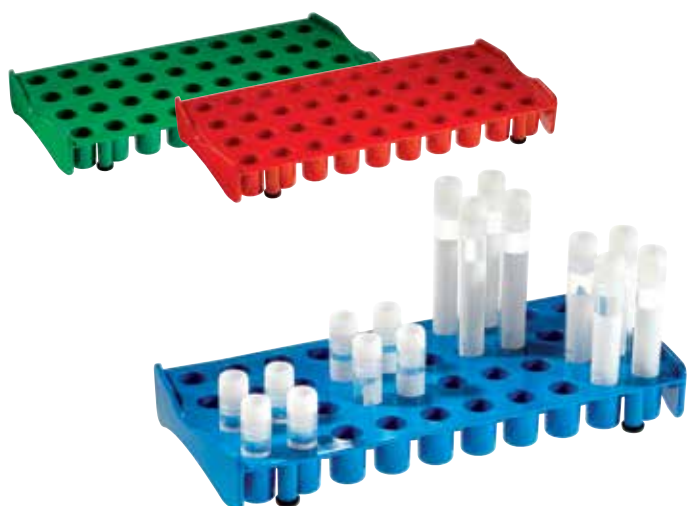


Color Coding Cap Inserts for Cryo Tubes

CE IVD

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

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



Work Stations for 40 Cryo Tubes

CE IVD

High quality polypropylene.

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

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



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

Racks for Freezer Chests



Vertical Racks, stainless steel

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

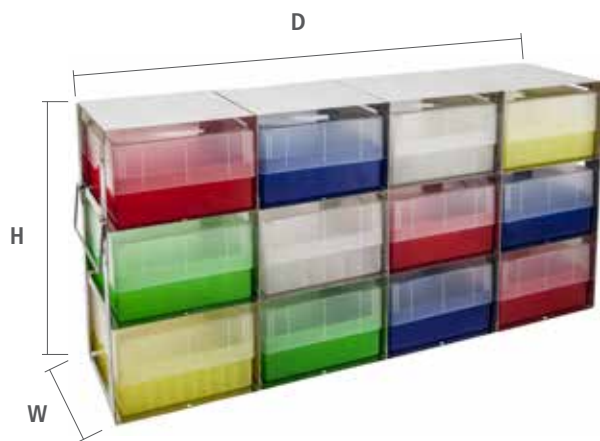
- for all Cryo Boxes format 130 x 130; 133 x 133 and 136 x 136 mm
- surfaces for perfect cleaning
- robust construction
- handles for convenient transport
- rack size includes the holder
- Cryo Racks can be supplied with shelf sizes for any standard Cryo Boxes

Rack standard sizes are listed in the tables below:

other sizes
available on request

| Number of Shelves horizontal x vertical | Rack Size D x W x H mm | for Cryo Boxes Height | | | Quantity per Pack | Order No. |
|--|---------------------------|-----------------------|-------|-------|----------------------|--------------|
| | | 32 mm | 50 mm | 75 mm | | |
| 1 x 4 | 140 x 140 x 222 | — | ■ | — | 1 | 54 00 041 |
| 1 x 5 | 140 x 140 x 277 | — | ■ | — | 1 | 54 00 021 |
| 1 x 6 | 140 x 140 x 482 | — | — | ■ | 1 | 54 00 028 |
| 1 x 7 | 140 x 140 x 385 | — | ■ | — | 1 | 54 00 042 |
| 1 x 7 | 140 x 140 x 561 | — | — | ■ | 1 | 54 00 029 |
| 1 x 8 | 140 x 140 x 441 | — | ■ | — | 1 | 54 00 027 |
| 1 x 8 | 140 x 140 x 641 | — | — | ■ | 1 | 54 00 030 |
| 1 x 9 | 140 x 140 x 495 | — | ■ | — | 1 | 54 00 026 |
| 1 x 9 | 140 x 140 x 720 | — | — | ■ | 1 | 54 00 031 |
| 1 x 10 | 140 x 140 x 550 | — | ■ | — | 1 | 54 00 000 |
| 1 x 11 | 140 x 140 x 406 | ■ | — | — | 1 | 54 00 032 |
| 1 x 11 | 140 x 140 x 604 | — | ■ | — | 1 | 54 00 023 |
| 1 x 12 | 140 x 140 x 443 | ■ | — | — | 1 | 54 00 033 |
| 1 x 12 | 140 x 140 x 659 | — | ■ | — | 1 | 54 00 025 |
| 1 x 13 | 140 x 140 x 479 | ■ | — | — | 1 | 54 00 034 |
| 1 x 13 | 140 x 140 x 713 | — | ■ | — | 1 | 54 00 001 |
| 1 x 14 | 140 x 140 x 516 | ■ | — | — | 1 | 54 00 035 |
| 1 x 15 | 140 x 140 x 552 | ■ | — | — | 1 | 54 00 036 |
| 1 x 16 | 140 x 140 x 589 | ■ | — | — | 1 | 54 00 037 |
| 1 x 17 | 140 x 140 x 625 | ■ | — | — | 1 | 54 00 038 |
| 1 x 18 | 140 x 140 x 662 | ■ | — | — | 1 | 54 00 024 |

Racks for Freezer Cabinets



Horizontal Racks, stainless steel

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

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

Rack standard sizes are listed in the tables below:

other sizes
available on request

| Number of Shelves horizontal x vertical | Rack Size D x W x H mm | for Cryo Boxes Height | | | | Quantity per Pack | Order No. |
|--|---------------------------|-----------------------|-------|--------|--------|----------------------|---------------|
| | | 50 mm | 75 mm | 100 mm | 130 mm | | |
| 3 shelves | | | | | | | |
| 3 x 3 | 424 x 140 x 165 | ■ | — | — | — | 1 | 54 00 007 |
| 3 x 4 | 424 x 140 x 219 | ■ | — | — | — | 1 | 54 00 009 |
| 3 x 5 | 424 x 140 x 274 | ■ | — | — | — | 1 | 54 00 022 |
| 4 shelves | | | | | | | |
| 4 x 2 | 566 x 140 x 164 | — | ■ | — | — | 1 | 54 00 011 |
| 4 x 2 | 566 x 140 x 219 | — | — | ■ | — | 1 | New 54 00 010 |
| 4 x 2 | 566 x 140 x 275 | — | — | — | ■ | 1 | New 54 00 012 |
| 4 x 3 | 566 x 140 x 240 | — | ■ | — | — | 1 | 54 00 006 |
| 4 x 3 | 566 x 140 x 314 | — | — | ■ | — | 1 | 54 00 040 |
| 4 x 4 | 566 x 140 x 219 | ■ | — | — | — | 1 | 54 00 004 |
| 4 x 4 | 566 x 140 x 319 | — | ■ | — | — | 1 | 54 00 005 |
| 4 x 5 | 566 x 140 x 274 | ■ | — | — | — | 1 | 54 00 003 |
| 4 x 6 | 566 x 140 x 328 | ■ | — | — | — | 1 | 54 00 002 |
| 4 x 7 | 566 x 140 x 391 | ■ | — | — | — | 1 | New 54 00 008 |
| 5 shelves | | | | | | | |
| 5 x 2 | 705 x 140 x 161 | — | ■ | — | — | 1 | New 54 00 016 |
| 5 x 2 | 705 x 140 x 212 | — | — | ■ | — | 1 | New 54 00 020 |
| 5 x 3 | 705 x 140 x 240 | — | ■ | — | — | 1 | New 54 00 017 |
| 5 x 4 | 705 x 140 x 219 | ■ | — | — | — | 1 | New 54 00 013 |
| 5 x 4 | 705 x 140 x 319 | — | ■ | — | — | 1 | New 54 00 018 |
| 5 x 5 | 705 x 140 x 274 | ■ | — | — | — | 1 | New 54 00 014 |
| 5 x 6 | 705 x 140 x 328 | ■ | — | — | — | 1 | New 54 00 015 |

Racks for Freezer Cabinets



Drawer Rack, stainless steel

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

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

Rack standard sizes are listed in the tables below:

other sizes
available on request

| Number of Shelves horizontal x vertical | Rack Size D x W x H mm | for Cryo Boxes Height | | | Quantity per Pack | Order No. |
|--|---------------------------|-----------------------|-------|--------|----------------------|---------------|
| | | 50 mm | 75 mm | 100 mm | | |
| 4 shelves | | | | | | |
| 4 x 2 | 570 x 144 x 112 | ■ | — | — | 1 | New 54 00 043 |
| 4 x 3 | 570 x 144 x 168 | ■ | — | — | 1 | New 54 00 044 |
| 4 x 3 | 570 x 144 x 250 | — | ■ | — | 1 | 54 00 019 |
| 4 x 4 | 570 x 144 x 224 | ■ | — | — | 1 | 54 00 046 |
| 4 x 4 | 570 x 144 x 335 | — | ■ | — | 1 | 54 00 066 |
| 4 x 5 | 570 x 144 x 280 | ■ | — | — | 1 | 54 00 045 |
| 4 x 6 | 570 x 144 x 336 | ■ | — | — | 1 | 54 00 047 |
| 4 x 7 | 570 x 144 x 392 | ■ | — | — | 1 | New 54 00 049 |
| 5 shelves | | | | | | |
| 5 x 3 | 709 x 144 x 241 | — | ■ | — | 1 | New 54 00 052 |
| 5 x 4 | 709 x 144 x 224 | ■ | — | — | 1 | New 54 00 050 |
| 5 x 4 | 709 x 144 x 321 | — | ■ | — | 1 | New 54 00 053 |
| 5 x 5 | 709 x 144 x 280 | ■ | — | — | 1 | 54 00 048 |
| 5 x 6 | 709 x 144 x 336 | ■ | — | — | 1 | New 54 00 051 |

Racks in special dimensions and design



1

Racks in special dimensions and design

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

Those products are in example:

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

other sizes
available on request



2

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



3

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

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

Technical information



Think! Development and production
of customized products



Slamed Pipets and
Analysers



Liquid handling
products



Labware for general
lab applications



Life science products for
microbiology and biotechnology



Cryo products for
deep-freeze applications

Chemical resistance of plastics

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

+ Excellent chemical resistance

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

0 Partial to good chemical resistance

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

— Low chemical resistance

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

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

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

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

Chemical resistance of plastics

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

Chemical resistance of plastics

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

Chemical resistance of plastics

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

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

Plastics Technical data and Index

Sterilizing plastic - Autoclaving

Recommended autoclave cycle: 20 minutes at 121 °C, 1 bar

The following plastics can be autoclaved several times: PP and PC

Standard abbreviations for plastics

| DIN-Abbrev. | Description | Application temperature (°C) | |
|-------------|---------------------------------------|------------------------------|-------------|
| | | from | to |
| ABS | acrylic butadiene styrene copolymer | -40 | +85 (+100) |
| E-CTFE | ethylene chlortrifluorethylene | -70 | +150 (+170) |
| ETFE | ethylene tetrafluor ethylene | -100 | +150 (+180) |
| FEP | tetrafluor ethylene perfluorpropylene | -100 | +205 |
| HDPE | polyethylene high density | -50 | +80 (+120) |
| LDPE | polyethylene low density | -50 | +75 (+190) |
| MF | melamine | -60 | +80 (+120) |
| NR | natural rubber | -40 | +80 |
| PA | polyamide (PA6) | -30 | +80 (+140) |
| PBT | polybutylene terephthalate | -50 | +150 |
| PC | polycarbonate | -100 | +135 (+140) |
| PE | polyethylene (see HDPE/LDPE) | -40 | +80 (+90) |
| PES | polyether sulfone | -100 | +150 |
| PETG | polyethylene terephthalate | -40 | +65 |
| PFA | perfluoralkoxy | -200 | +260 |
| PMMA | polymethylmethacrylate | -40 | +85 (+90) |
| PMP (TPX) | polymethylpentene | 0 | +150 (+180) |
| POM | polyoxymethylene | -40 | +110 (+140) |
| PP | polypropylene | -10 | +110 (+140) |
| PS | polystyrene | -20 | +70 (+80) |
| PSU | polysulfone | -100 | +150 |
| PTFE | polytetrafluor ethylene | -200 | +260 |
| PVC | polyvinylchlorid | -20 | +80 |
| PVDF | polyvinylidene flouride | -40 | +105 (+150) |
| SAN | styren acrylonitrile | -20 | +85 (+95) |
| SI | silicone rubber | -50 | +180 (+250) |
| TPE | thermoplastic elastomer | -50 | +121 |

Disclaimer: All information in this table are without guarantee.
Legal claims are excluded here.

| Order No. | Page | Order No. | Page | Order No. | Page | Order No. | Page | Order No. | Page | Order No. | Page |
|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|
| 1020230 | 61 | 1771000 | 37 | 2100555 | 35 | 2410640 | 36 | 2500170 | 34 | 2600131 | 43 |
| 1020231 | 61 | 1771000xl | 37 | 2100600 | 34 | 2410642 | 36 | 2500180 | 36 | 2600135 | 43 |
| 1020240 | 61 | 1780010 | 39 | 2100610 | 35 | 2410650 | 36 | 2500190 | 34 | 2600145 | 42 |
| 1020241 | 61 | 1780011 | 38 | 2113602 | 34 | 2410653 | 36 | 2513162 | 34 | 2600151 | 44 |
| 1020242 | 61 | 1780012 | 38 | 2113612 | 35 | 2413602 | 34 | 2513163 | 34 | 2600155 | 42 |
| 1020243 | 61 | 1780013 | 38 | 2130602 | 34 | 2413612 | 35 | 2513172 | 34 | 2600160 | 43 |
| 1020250 | 61 | 1780020 | 39 | 2130612 | 35 | 2430602 | 34 | 2513192 | 34 | 2600165 | 44 |
| 1020251 | 61 | 1780100 | 39 | 2153602 | 34 | 2430612 | 35 | 2513502 | 34 | 2600171 | 42 |
| 1020260 | 61 | 1780200 | 39 | 2153612 | 35 | 2453602 | 34 | 2530162 | 34 | 2600181 | 42 |
| 1020261 | 61 | 1780201 | 38 | 2400600 | 34 | 2453612 | 35 | 2530163 | 34 | 2600190 | 44 |
| 1020330 | 61 | 1780202 | 38 | 2400610 | 35 | 2453620 | 36 | 2530172 | 34 | 2600195 | 44 |
| 1020331 | 61 | 1780203 | 38 | 2400620 | 36 | 2453630 | 36 | 2530173 | 34 | 2600206 | 44 |
| 1020340 | 61 | 1781000 | 39 | 2400622 | 36 | 2453640 | 36 | 2530192 | 34 | 2600216 | 44 |
| 1020341 | 61 | 1781001 | 38 | 2400623 | 36 | 2453642 | 36 | 2553162 | 34 | 2600220 | 43 |
| 1020350 | 61 | 1781002 | 38 | 2400624 | 36 | 2453650 | 36 | 2553163 | 34 | 2600230 | 42 |
| 1020351 | 61 | 1781003 | 38 | 2400630 | 36 | 2453653 | 36 | 2553172 | 34 | 2600240 | 42 |
| 1020540 | 61 | 1781250 | 39 | 2400640 | 36 | 2500110 | 34 | 2553192 | 34 | 2600250 | 43 |
| 1020541 | 61 | 1781251 | 38 | 2400642 | 36 | 2500130 | 35 | 2553502 | 34 | 2600260 | 42 |
| 1770010 | 37 | 1781252 | 38 | 2400650 | 36 | 2500140 | 35 | 2600111 | 43 | 2655111 | 43 |
| 1770020 | 37 | 1781253 | 38 | 2400653 | 36 | 2500150 | 35 | 2600119 | 42 | 2655120 | 43 |
| 1770100 | 37 | 2100500 | 34 | 2410620 | 36 | 2500160 | 34 | 2600120 | 43 | 2655131 | 43 |
| 1770200 | 37 | 2100553 | 35 | 2410630 | 36 | 2500163 | 34 | 2600125 | 42 | 2655135 | 43 |

Index

| Order No. | Page | Order No. | Page | Order No. | Page | Order No. | Page | Order No. | Page | Order No. | Page |
|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|
| 2655151 | 44 | 3200311 | 27 | 4770037 | 18 | 5110140 | 88 | 5120180 | 82 | 5131752 | 80 |
| 2655171 | 42 | 3200312 | 27 | 4770038 | 18 | 5110150 | 88 | 5120181 | 82 | 5131753 | 80 |
| 2655181 | 42 | 3300001 | 53 | 4770039 | 18 | 5120002 | 81 | 5120182 | 82 | 5131754 | 80 |
| 2655206 | 44 | 3300002 | 53 | 4770040 | 18 | 5120010 | 85 | 5120183 | 82 | 5131755 | 80 |
| 2655230 | 42 | 3300003 | 53 | 4770041 | 18 | 5120011 | 85 | 5120184 | 80 | 5132001 | 80 |
| 2655240 | 42 | 3300004 | 53 | 4770042 | 18 | 5120012 | 85 | 5120185 | 80 | 5132002 | 80 |
| 2656111 | 43 | 3300005 | 53 | 4770043 | 18 | 5120013 | 85 | 5120186 | 80 | 5132003 | 80 |
| 2656135 | 43 | 3300006 | 53 | 4770044 | 18 | 5120014 | 85 | 5120187 | 80 | 5132004 | 80 |
| 2656171 | 42 | 3514030 | 56 | 4770045 | 18 | 5120015 | 85 | 5120190 | 82 | 5132005 | 80 |
| 2711110 | 48 | 3514031 | 56 | 4770046 | 18 | 5120020 | 85 | 5120191 | 82 | 5132131 | 80 |
| 2712120 | 48 | 3514032 | 56 | 4770047 | 18 | 5120021 | 85 | 5120192 | 82 | 5132132 | 80 |
| 2722110 | 49 | 3514033 | 56 | 4770048 | 18 | 5120022 | 85 | 5120193 | 82 | 5132133 | 80 |
| 2722120 | 49 | 3514040 | 56 | 4770049 | 18 | 5120023 | 85 | 5120194 | 80 | 5132134 | 80 |
| 2722130 | 49 | 3514900 | 56 | 4770050 | 18 | 5120024 | 85 | 5120195 | 80 | 5132135 | 80 |
| 2722131 | 49 | 351490B | 56 | 4770051 | 18 | 5120025 | 85 | 5120196 | 80 | 5132321 | 80 |
| 2725110 | 50 | 351490G | 56 | 4770052 | 18 | 5120120 | 82 | 5120197 | 80 | 5132322 | 80 |
| 2725120 | 50 | 351490R | 56 | 4770053 | 18 | 5120121 | 82 | 5120200 | 82 | 5132323 | 80 |
| 2810100 | 50 | 351490Y | 56 | 4770054 | 18 | 5120122 | 82 | 5120201 | 82 | 5132324 | 80 |
| 2811110 | 50 | 3520000 | 56 | 4770055 | 18 | 5120123 | 82 | 5120202 | 82 | 5132325 | 80 |
| 2812010 | 50 | 3622000 | 56 | 4770056 | 18 | 5120124 | 80 | 5120203 | 82 | 5132501 | 80 |
| 2812011 | 50 | 3712005 | 57 | 4770057 | 18 | 5120125 | 80 | 5120204 | 80 | 5132502 | 80 |
| 2812012 | 51 | 3712006 | 57 | 4770058 | 18 | 5120126 | 80 | 5120205 | 80 | 5132503 | 80 |
| 2900101 | 41 | 3712007 | 57 | 4770059 | 18 | 5120127 | 80 | 5120206 | 80 | 5132504 | 80 |
| 2900102 | 41 | 3712008 | 57 | 4770060 | 18 | 5120128 | 81 | 5120207 | 80 | 5132505 | 80 |
| 2900103 | 41 | 3712009 | 57 | 4770061 | 18 | 5120130 | 82 | 5120210 | 82 | 5132751 | 80 |
| 2900104 | 41 | 3712101 | 57 | 4770062 | 18 | 5120131 | 82 | 5120211 | 82 | 5132752 | 80 |
| 2900105 | 41 | 3712201 | 57 | 4770063 | 18 | 5120132 | 82 | 5120212 | 82 | 5132753 | 80 |
| 2900106 | 41 | 3712202 | 57 | 4770064 | 19 | 5120133 | 82 | 5120213 | 82 | 5132754 | 80 |
| 2900107 | 41 | 3712203 | 57 | 4770065 | 19 | 5120134 | 80 | 5120214 | 80 | 5132755 | 80 |
| 2900109 | 41 | 3712204 | 57 | 4770066 | 19 | 5120135 | 80 | 5120215 | 80 | 5141001 | 82 |
| 2910101 | 41 | 3714010 | 56 | 4770067 | 19 | 5120136 | 80 | 5120216 | 80 | 5141002 | 82 |
| 2910102 | 41 | 3814010 | 56 | 4770068 | 19 | 5120137 | 80 | 5120217 | 80 | 5141003 | 82 |
| 2910103 | 41 | 3814020 | 53 | 4770069 | 19 | 5120140 | 82 | 5120218 | 81 | 5141004 | 82 |
| 2910104 | 41 | 3914900 | 56 | 4770070 | 19 | 5120141 | 82 | 5120219 | 83 | 5141005 | 82 |
| 2910105 | 41 | 391490B | 56 | 4770071 | 19 | 5120142 | 82 | 5120221 | 82 | 5141131 | 82 |
| 2910106 | 41 | 391490G | 56 | 4780010 | 21 | 5120143 | 82 | 5120222 | 82 | 5141132 | 82 |
| 2910107 | 41 | 391490R | 56 | 4780012 | 21 | 5120144 | 80 | 5120223 | 82 | 5141133 | 82 |
| 2910109 | 41 | 391490Y | 56 | 4780018 | 21 | 5120145 | 80 | 5120224 | 82 | 5141134 | 82 |
| 2970001 | 25 | 4770001 | 16 | 4780020 | 21 | 5120146 | 80 | 5120225 | 80 | 5141135 | 82 |
| 2970002 | 25 | 4770002 | 16 | 4780025 | 21 | 5120147 | 80 | 5120226 | 80 | 5141321 | 82 |
| 2970003 | 25 | 4770003 | 16 | 4780058 | 21 | 5120150 | 82 | 5120227 | 80 | 5141322 | 82 |
| 2970004 | 25 | 4770004 | 16 | 4780100 | 21 | 5120151 | 82 | 5120228 | 80 | 5141323 | 82 |
| 2970005 | 25 | 4770005 | 16 | 4780200 | 21 | 5120152 | 82 | 5131001 | 80 | 5141324 | 82 |
| 2970006 | 25 | 4770006 | 16 | 4780308 | 21 | 5120153 | 82 | 5131002 | 80 | 5141325 | 82 |
| 2970014 | 24 | 4770007 | 16 | 4781000 | 21 | 5120154 | 80 | 5131003 | 80 | 5141501 | 82 |
| 2980200 | 26 | 4770008 | 16 | 4785000 | 21 | 5120155 | 80 | 5131004 | 80 | 5141502 | 82 |
| 3014030 | 56 | 4770009 | 16 | 4790052 | 21 | 5120156 | 80 | 5131005 | 80 | 5141503 | 82 |
| 3101011 | 40 | 4770010 | 16 | 4790302 | 21 | 5120157 | 80 | 5131131 | 80 | 5141504 | 82 |
| 3102011 | 40 | 4770011 | 17 | 5110001 | 89 | 5120160 | 82 | 5131132 | 80 | 5141505 | 82 |
| 3105011 | 40 | 4770012 | 17 | 5110002 | 89 | 5120161 | 82 | 5131133 | 80 | 5141751 | 82 |
| 3110011 | 40 | 4770013 | 17 | 5110003 | 89 | 5120162 | 82 | 5131134 | 80 | 5141752 | 82 |
| 3125011 | 40 | 4770014 | 17 | 5110004 | 89 | 5120163 | 82 | 5131135 | 80 | 5141753 | 82 |
| 3150011 | 40 | 4770015 | 17 | 5110005 | 89 | 5120165 | 80 | 5131321 | 80 | 5141754 | 82 |
| 3170100 | 45 | 4770016 | 17 | 5110013 | 88 | 5120166 | 80 | 5131322 | 80 | 5141755 | 82 |
| 3170200 | 45 | 4770017 | 17 | 5110024 | 88 | 5120167 | 80 | 5131323 | 80 | 5142001 | 82 |
| 3170305 | 45 | 4770018 | 17 | 5110025 | 88 | 5120168 | 80 | 5131324 | 80 | 5142002 | 82 |
| 3170385 | 45 | 4770019 | 17 | 5110041 | 88 | 5120170 | 82 | 5131325 | 80 | 5142003 | 82 |
| 3170485 | 45 | 4770020 | 17 | 5110042 | 88 | 5120171 | 82 | 5131501 | 80 | 5142004 | 82 |
| 3200300 | 27 | 4770031 | 18 | 5110051 | 88 | 5120172 | 82 | 5131502 | 80 | 5142005 | 82 |
| 3200301 | 27 | 4770032 | 18 | 5110052 | 88 | 5120173 | 82 | 5131503 | 80 | 5142131 | 82 |
| 3200302 | 27 | 4770033 | 18 | 5110112 | 88 | 5120174 | 80 | 5131504 | 80 | 5142132 | 82 |
| 3200303 | 27 | 4770034 | 18 | 5110120 | 88 | 5120175 | 80 | 5131505 | 80 | 5142133 | 82 |
| 3200306 | 27 | 4770035 | 18 | 5110122 | 88 | 5120176 | 80 | 5131506 | 81 | 5142134 | 82 |
| 3200309 | 27 | 4770036 | 18 | 5110130 | 88 | 5120177 | 80 | 5131751 | 80 | 5142135 | 82 |

Index

| Order No. | Page | Order No. | Page | Order No. | Page | Order No. | Page | Order No. | Page | Order No. | Page |
|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|
| 5142321 | 82 | 5320013 | 84 | 5400032 | 90 | 5921171 | 62 | 6025020 | 72 | 8200002 | 75 |
| 5142322 | 82 | 5320014 | 84 | 5400033 | 90 | 5921173 | 62 | 6114100 | 77 | 8200003 | 75 |
| 5142323 | 82 | 5320015 | 84 | 5400034 | 90 | 5921174 | 62 | 6114101 | 77 | 8200004 | 75 |
| 5142324 | 82 | 5320016 | 84 | 5400035 | 90 | 5921175 | 62 | 6114102 | 77 | 8200005 | 75 |
| 5142325 | 82 | 5320110 | 84 | 5400036 | 90 | 5921176 | 62 | 6114103 | 77 | 8200006 | 75 |
| 5142501 | 82 | 5320111 | 84 | 5400037 | 90 | 5921182 | 62 | 6114104 | 77 | 8200007 | 75 |
| 5142502 | 82 | 5320112 | 84 | 5400038 | 90 | 5921183 | 62 | 6114110 | 77 | 8200008 | 72 |
| 5142503 | 82 | 5320113 | 84 | 5400040 | 91 | 5921184 | 62 | 6114111 | 77 | 8200008 | 75 |
| 5142504 | 82 | 5320114 | 84 | 5400041 | 90 | 5921185 | 62 | 6114200 | 77 | 8200009 | 72 |
| 5142505 | 82 | 5320115 | 84 | 5400042 | 90 | 5921188 | 62 | 6114201 | 77 | 8200009 | 75 |
| 5142751 | 82 | 5320116 | 84 | 5400043 | 92 | 5921190 | 62 | 7000250 | 60 | 8200010 | 72 |
| 5142752 | 82 | 5320210 | 84 | 5400044 | 92 | 5921200 | 62 | 7000260 | 60 | 8200021 | 75 |
| 5142753 | 82 | 5320211 | 84 | 5400045 | 92 | 5922204 | 63 | 7000270 | 60 | 8200022 | 75 |
| 5142754 | 82 | 5320212 | 84 | 5400046 | 92 | 5922250 | 63 | 7001000 | 58 | 8200023 | 75 |
| 5142755 | 82 | 5320213 | 84 | 5400047 | 92 | 5922253 | 63 | 7001005 | 58 | 8200024 | 75 |
| 5142756 | 83 | 5320214 | 84 | 5400048 | 92 | 5923050 | 64 | 7001100 | 58 | 8200025 | 75 |
| 5144130 | 83 | 5320215 | 84 | 5400049 | 92 | 5923250 | 64 | 7001105 | 58 | 8200026 | 75 |
| 5144131 | 83 | 5320216 | 84 | 5400050 | 92 | 5923500 | 64 | 7001150 | 58 | 8200027 | 75 |
| 5150001 | 87 | 5320310 | 84 | 5400051 | 92 | 5924050 | 65 | 7001155 | 58 | 8610001 | 76 |
| 5150002 | 87 | 5320311 | 84 | 5400052 | 92 | 5924250 | 65 | 7001200 | 58 | 8610002 | 76 |
| 5150003 | 87 | 5320312 | 84 | 5400053 | 92 | 5924500 | 65 | 7001205 | 58 | 8610003 | 76 |
| 5150004 | 87 | 5320313 | 84 | 5400066 | 92 | 5926035 | 64 | 7001210 | 58 | 8610006 | 76 |
| 5150011 | 87 | 5320314 | 84 | 5515010 | 53 | 5926060 | 64 | 7001212 | 58 | 8610007 | 76 |
| 5150012 | 87 | 5320315 | 84 | 5515040 | 53 | 5926125 | 64 | 7001300 | 58 | 8610011 | 77 |
| 5150013 | 87 | 5320316 | 84 | 5515041 | 53 | 5926375 | 64 | 7001305 | 58 | 8610014 | 77 |
| 5150014 | 87 | 5320410 | 84 | 551504D | 53 | 5926500 | 64 | 7001310 | 58 | 8610015 | 76 |
| 5150015 | 87 | 5320411 | 84 | 5515051 | 53 | 5926998 | 64 | 7001311 | 58 | 8610039 | 76 |
| 5150021 | 87 | 5320412 | 84 | 5515060 | 53 | 5926999 | 64 | 7001400 | 58 | 8610040 | 76 |
| 5150022 | 87 | 5320413 | 84 | 5515061 | 53 | 5927100 | 65 | 7001400 | 60 | 9022000 | 22 |
| 5150023 | 87 | 5320414 | 84 | 551506D | 53 | 5927250 | 65 | 7001401 | 58 | 9022001 | 22 |
| 5150024 | 87 | 5320415 | 84 | 5615000 | 54 | 5927500 | 65 | 7001401 | 60 | 9022026 | 26 |
| 5150031 | 87 | 5320416 | 84 | 5615001 | 54 | 5927999 | 65 | 7001405 | 58 | 9022028 | 23 |
| 5150032 | 87 | 5400000 | 90 | 5615002 | 54 | 6018060 | 69 | 7001405 | 60 | 9022030 | 23 |
| 5150033 | 87 | 5400001 | 90 | 5615003 | 54 | 6018111 | 68 | 7001410 | 58 | 9022030 | 27 |
| 5150034 | 87 | 5400002 | 91 | 5615004 | 54 | 6018113 | 68 | 7001410 | 60 | 9050000 | 63 |
| 5160028 | 83 | 5400003 | 91 | 5615005 | 54 | 6018121 | 68 | 7001415 | 60 | 9050004 | 63 |
| 5160029 | 83 | 5400004 | 91 | 5615008 | 55 | 6018123 | 68 | 7001420 | 60 | 9050005 | 63 |
| 5160035 | 83 | 5400005 | 91 | 5615009 | 55 | 6018211 | 68 | 7001430 | 60 | 9050006 | 63 |
| 5160036 | 83 | 5400006 | 91 | 5615020 | 54 | 6018213 | 68 | 7002100 | 59 | 9050100 | 63 |
| 5162028 | 83 | 5400007 | 91 | 5615030 | 54 | 6018221 | 68 | 7002105 | 59 | 9050104 | 63 |
| 5162751 | 83 | 5400008 | 91 | 5615038 | 55 | 6018223 | 68 | 7002110 | 58 | 9050105 | 63 |
| 5220010 | 86 | 5400009 | 91 | 5615039 | 55 | 6018311 | 68 | 7002150 | 59 | 9050106 | 63 |
| 5220011 | 86 | 5400010 | 91 | 5615101 | 54 | 6018313 | 68 | 7002155 | 59 | 9420016 | 30 |
| 5220012 | 86 | 5400011 | 91 | 5615106 | 54 | 6018321 | 68 | 7002200 | 59 | 9420017 | 30 |
| 5220013 | 86 | 5400012 | 91 | 5615108 | 55 | 6018323 | 68 | 7002205 | 59 | 9420018 | 30 |
| 5220014 | 86 | 5400013 | 91 | 5615109 | 55 | 6018401 | 69 | 7002300 | 59 | 9420019 | 30 |
| 5220015 | 86 | 5400014 | 91 | 5615158 | 55 | 6018402 | 69 | 7002305 | 59 | 9420024 | 21 |
| 5220020 | 86 | 5400015 | 91 | 5615159 | 55 | 6018421 | 69 | 7003100 | 59 | 9420025 | 19 |
| 5220021 | 86 | 5400016 | 91 | 5615400 | 54 | 6018422 | 69 | 7003110 | 59 | 9420026 | 19 |
| 5220022 | 86 | 5400017 | 91 | 5616021 | 55 | 6018610 | 73 | 7003120 | 59 | 9420027 | 19 |
| 5220023 | 86 | 5400018 | 91 | 5616022 | 55 | 6018611 | 73 | 7003130 | 59 | 9425516 | 30 |
| 5220024 | 86 | 5400019 | 92 | 5616023 | 55 | 6018612 | 73 | 7003200 | 59 | 9425517 | 30 |
| 5220025 | 86 | 5400020 | 91 | 5616025 | 55 | 6018618 | 73 | 7003210 | 59 | 9425518 | 30 |
| 5220100 | 86 | 5400021 | 90 | 5616026 | 55 | 6018619 | 73 | 7003220 | 59 | | |
| 5220101 | 86 | 5400022 | 91 | 5616027 | 55 | 6018710 | 69 | 7003230 | 59 | | |
| 5220102 | 86 | 5400023 | 90 | 5700110 | 52 | 6018711 | 69 | 7020100 | 63 | | |
| 5220103 | 86 | 5400024 | 90 | 5700120 | 52 | 6018717 | 69 | 7020200 | 63 | | |
| 5220104 | 86 | 5400025 | 90 | 5700200 | 52 | 6018718 | 69 | 7100007 | 22 | | |
| 5300100 | 89 | 5400026 | 90 | 5700401 | 52 | 6020121 | 71 | 8010161 | 33 | | |
| 5300200 | 89 | 5400027 | 90 | 5810100 | 52 | 6020221 | 71 | 8030160 | 33 | | |
| 5300400 | 89 | 5400028 | 90 | 581010D | 52 | 6020231 | 71 | 8030170 | 33 | | |
| 5320010 | 84 | 5400029 | 90 | 5810110 | 52 | 6020241 | 71 | 8101012 | 71 | | |
| 5320011 | 84 | 5400030 | 90 | 5921160 | 62 | 6025000 | 72 | 8101101 | 72 | | |
| 5320012 | 84 | 5400031 | 90 | 5921170 | 62 | 6025010 | 72 | 8200001 | 75 | | |

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