

Catalog 2019



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-Buchsiegel 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!



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Labware for general lab applications

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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-Buchsenschlag, 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.



Dreieich-Buchsenschlag, Germany

- 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 competency, motivation and high degree of social competence are the guarantee for our future growth. Our team lives our values every day.



Dreieich-Buchsenschlag, Germany

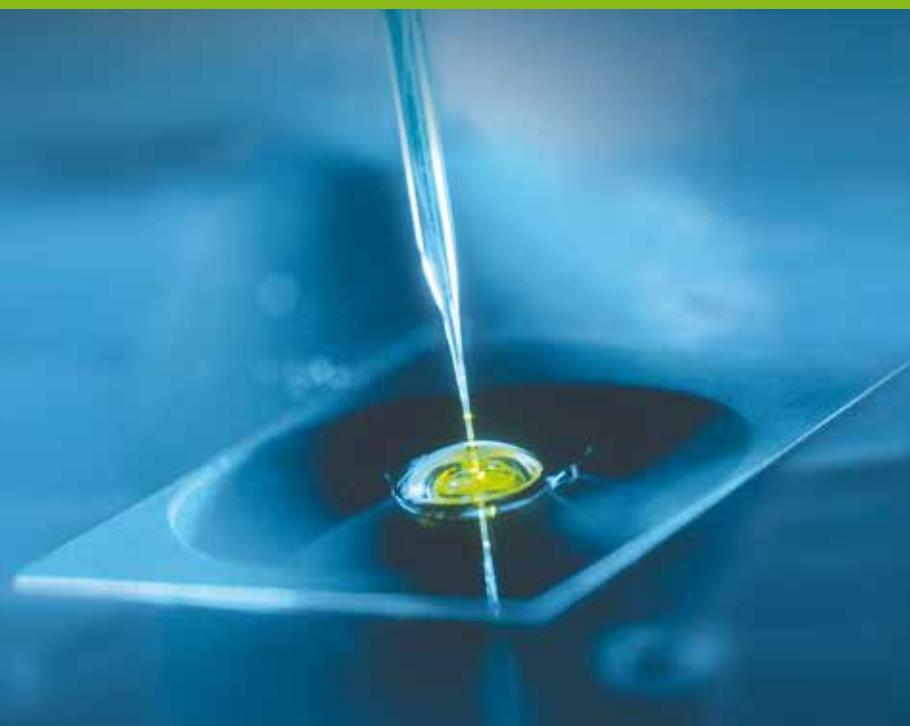


Szada, Hungary



Szada, Hungary

Think!



Think! Development and production
of customized products



Slanted Pipets and
Analysers



Liquid handling
products



Labware for general
lab applications



Life science products for
microbiology and biotechnology



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.

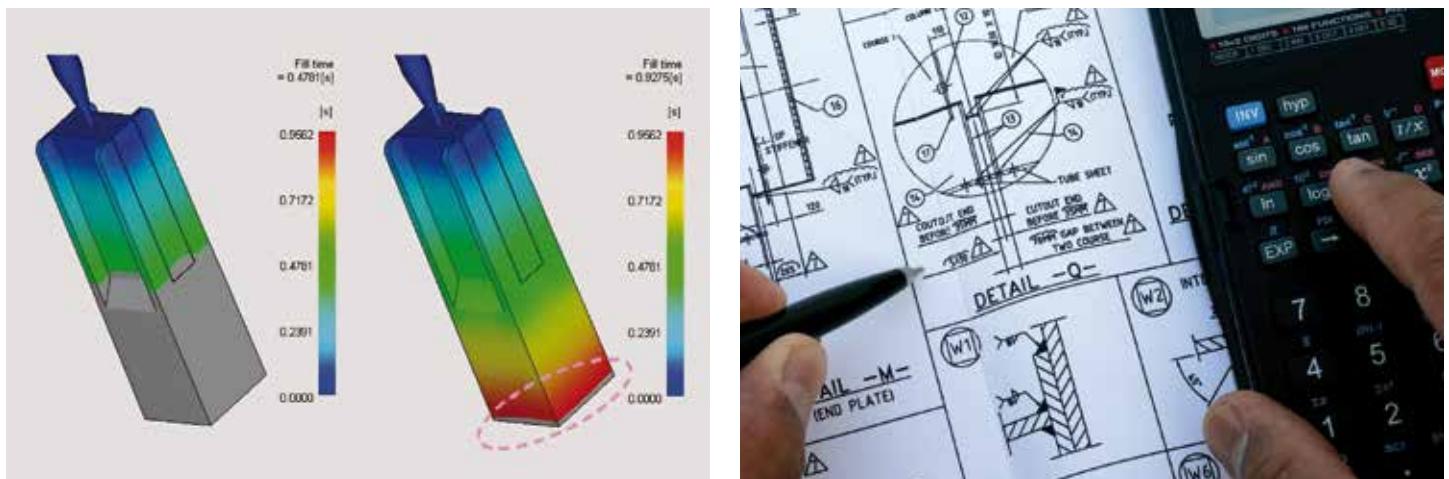
Therefore our entire know-how, years of experience and most modern technique are available to you.
Our service spectrum includes the following sectors:



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 mould 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

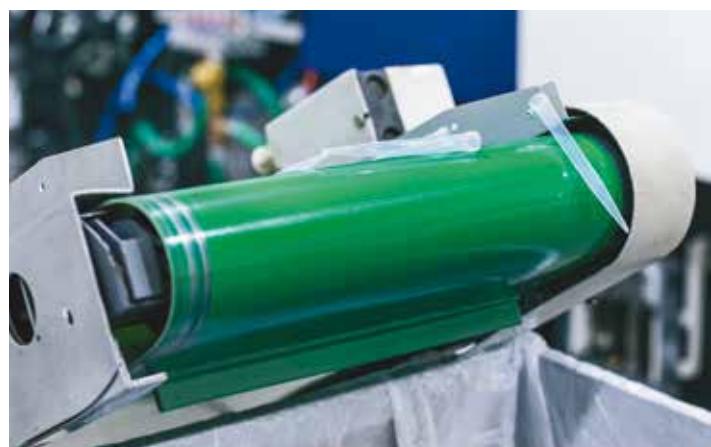


Plastics production

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 moulding 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 an 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



Logistik

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



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Slamed Pipets and
Analysers



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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

CE IVD



Multichannel pipet ME/MT

The fully autoclavable Pipets ME/MT are specially designed for working with gloves under sterile conditions.

The volume range from 1 µl 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	94 20 025
Pipet stand for 4 pipets	[2]	1	94 20 026
Pipet stand for multichannel pipet	[3]	1	94 20 027



ratiopetta®

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

Product properties

- obtainable in volumes from 0.1 µl – 5000 µl
- fullautoclavable, 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.



CE IVD



Single-channel Precision Pipet ratiopetta®

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



8-channel Precision Pipet ratiopetta®

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



12-channel Precision Pipet ratiopetta®

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

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



Pipettor stands ratiopetta®

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

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

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

Micro Centrifuge and Thermocult Incubator



Micro Centrifuge for PCR Strips and Microcentrifuge Tubes

CE

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

CE

Compact incubator for bacteriology. Fixed temperature setting at 35 ± 2 °C, adjustable up to 42°C, with built-in control thermometer. Glass-clear plasticdoor 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

Digital Burette DB and Bottle-top Dispenser



Digital Burette DB

CE

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 hydrofluoric acid or solutions which are aggressive to Platinum-Iridium, 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 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 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 $< \pm %$	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

Convenient and robust instrument for serial dispensing with Dispenser Tips.

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

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

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

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 I
- 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

3-Channel Coagulometer K-3003 Chrom



Coagulometer K-3003 Chrom

CE IVD*

In two channels the changes of the optical density (turbidimetry) are measured chronometrically. If both of these channels are used for a double analysis of the same sample, the results are presented together with the deviation value. The third channel is a colorimeter, used for the measurement of colorimetric tests, which are based on chromogenous substrata.

Thus the K-3003 Chrom fits the demand of all coagulation tests in today's medical laboratories. As the internal memory can accept 55 individual programs, it is possible to use all kinds of test kits available on the market. A cost effective operation is granted by the low consumption of only 50 µl sample and 50-100 µl reagent volumes.

The measuring results with patient number, date and time are printed in 110 mm width by the built-in thermoprinter or can be transmitted via the RS232 data port to a host computer. When the power is disconnected, the internal memory can store up to 15 000 patient results and 60 calibration curves.

- power supply: 220V (+10%-15%)
- 50/60Hz, 100VA
- measuring method optical: turbidimetry+colorimetry
- measuring times: 4 to 300 sec.
- dimension and weight: 45 x 33 x 12 cm, 5 kg
- 2 years warranty

3-Channel Coagulometer K-3003 Chrom suitable for the complete coagulation diagnostic with tests like:

- Prothrombin index PT (Ratio, INR, time)
- Thrombin time TT (Ratio, time)
- Caolin-Kephalin time APTT (Ratio, time)
- Fibrinogen (concentration mg%, g/l)
- Both groups of coagulation factors
- Coagulation inhibitors (ATIII, protein C, protein S, heparin)
- D-Dimers

Product	Quantity per Pack	Order No.
Coagulometer Chrom K-3003	1	90 22 026
Test cuvets	1000	90 22 030

*except 9022030

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

- ($\mu\text{g/l}$)

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 μl 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 cuvets	1000	90 22 030

*except 9022030

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

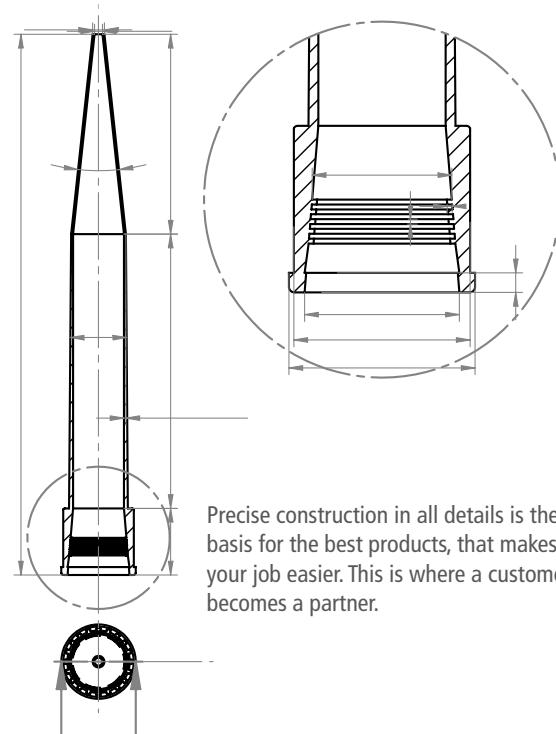
ratiolab® pipet tips are ideal for all commercially available pipets. Their uniform high quality and precision make today's pipets fully effective. Together with specially developed Multirack, Refill System and the ratiolab® Multibox® with the associated pipet tips in Multitray®, they make pipetting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



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

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

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



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

Pipet Tips System and Refill System



Pipet Tips System

Multirack

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

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

Order information on the pages 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 are 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

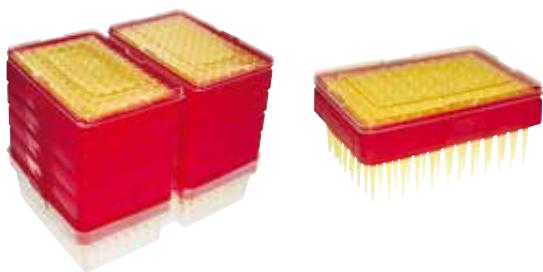


Multibox® plus and -ultra for MultiTray® pipet tips

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



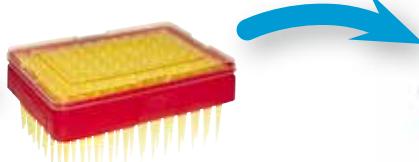
MultiTray® for Multibox®plus and Multibox®ultra

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

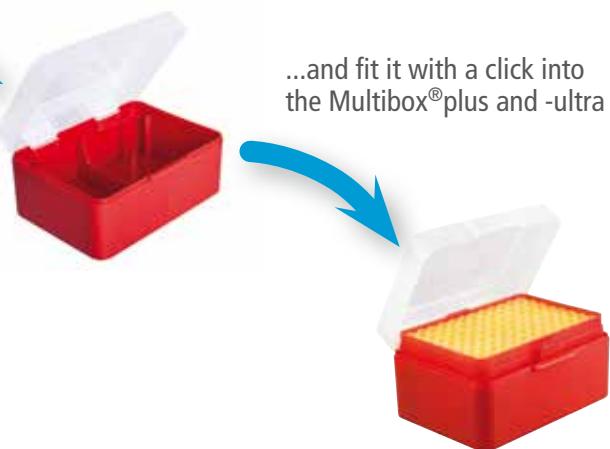
Order information on the pages 34-36.

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

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



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



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 Multiracks 10 x 96 Multiracks, sterilized 10 x 96 MultiTray® 10 x 96	[1] [2] [2] [3]	1000 960 960 960	25 00 170 25 13 172 25 53 172 25 30 172
						
Crystal pipet tip "G", for ratiopetta®, slamed® and all commonly used pipets	0,1-10	38,30	bag 1 x 1000 Multiracks 10 x 96 Multiracks, sterilized 10 x 96 MultiTray® 10 x 96	[1] [2] [2] [3]	1000 960 960 960	25 00 190 25 13 192 25 53 192 25 30 192
						
Crystal pipet tip xl, for ratiopetta®, slamed® and all commonly used pipets	0,1-10	45,50	bag 1 x 1000 Multiracks 10 x 96 Multiracks, sterilized 10 x 96 MultiTray® 10 x 96	[1] [2] [2] [3]	1000 960 960 960	21 00 500 25 13 502 25 53 502 25 30 173
						
Yellow pipet tip "E", for ratiopetta®, slamed® and all commonly used pipets	1-200	49,50	bag 1 x 1000 Multiracks 10 x 96 Multiracks, sterilized 10 x 96 MultiTray® 10 x 96	[1] [2] [2] [3]	1000 960 960 960	21 00 600 21 13 602 21 53 602 21 30 602
						
Colorless pipet tip "E", for ratiopetta®, slamed® and all commonly used pipets	1-200	49,50	bag 1 x 1000 Multiracks 10 x 96 Multiracks, sterilized 10 x 96 MultiTray® 10 x 96	[1] [2] [2] [3]	1000 960 960 960	24 00 600 24 13 602 24 53 602 24 30 602
						
Yellow pipet tip "universal", for ratiopetta®, slamed® and all commonly used pipets	1-250	51,20	bag 1 x 1000 Multiracks 10 x 96 Multiracks, sterilized 10 x 96 MultiTray® 10 x 96	[1] [2] [2] [3]	1000 960 960 960	25 00 160 25 13 162 25 53 162 25 30 162
						
Colorless pipet tip "universal", for ratiopetta®, slamed® and all commonly used pipets	1-250	50,00	bag 1 x 1000 Multiracks 10 x 96 Multiracks, sterilized 10 x 96 MultiTray® 10 x 96	[1] [2] [2] [3]	1000 960 960 960	25 00 163 25 13 163 25 53 163 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 Multiracks 10 x 60 Multiracks, sterilized 10 x 60 MultiTray® 16 x 60	[1] [2] [2] [3]	1000 600 600 960	21 00 610 21 13 612 21 53 612 21 30 612
						
Colorless pipet tip "E", for ratiopetta®, slamed® and all commonly used pipets	100-1200	70,94	bag 1 x 1000 Multiracks 10 x 60 Multiracks, sterilized 10 x 60 MultiTray® 16 x 60	[1] [2] [2] [3]	1000 600 600 960	24 00 610 24 13 612 24 53 612 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 bag 1 x 1000 bag 1 x 3000 bag 1 x 500 rack 1 x 50 rack, sterilized 1 x 50	4 1 1 1 5 5	75 1000 3000 500 50 50	24 00 620 24 00 622 24 00 623 24 00 624 24 10 620 24 53 620
						
Pipet Tip "Makro", for Pipets Eppendorf Research® Plus, Gilson®, Pipetman®, ratiopetta®	1000-5000	119,70	bag 1 x 250 rack 1 x 50 rack, sterilized 1 x 50	1 6 6	250 50 50	24 00 630 24 10 630 24 53 630
						
Pipet Tip "Makro II", for Pipets Socorex Accura®	1000-5000	126,00	bag 1 x 300 rack 1 x 50 rack, sterilized 1 x 50	1 5 5	300 50 50	24 00 650 24 10 650 24 53 650
						
Pipet Tip "Makro III", for Pipets Eppendorf Research® plus,	1000-5000	133,30	bag 1 x 300 rack 1 x 50 rack, sterilized 1 x 50	1 5 5	300 50 50	24 00 653 24 10 653 24 53 653
						
Pipet Tip "Finntip", for Pipets Thermo Scientific®, Socorex Acura®, Gilson®	2000-10000	150,20	bag 1 x 100 rack 1 x 25 rack, sterilized 1 x 25	1 5 5	100 25 25	24 00 640 24 10 640 24 53 640
						
Pipet Tip, for Pipets Brand®, Socorex Acura®, Gilson®	1000-10000	153,60	bag 1 x 100 rack 1 x 25 rack, sterilized 1 x 25	1 5 5	100 25 25	24 00 642 24 10 642 24 53 642
						



aeroject® ultra Pipet Filter Tips

free of DNA, DNase,
pyrogens and ATP

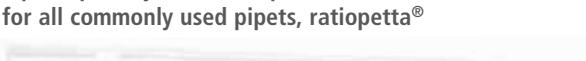


aeroject® ultra filter tips – Pipet Tips with Aerosol Barrier

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 Racks 10 x 96 Racks, sterilized 10 x 96	1000 960 960	New 17 80 013 New 17 80 012 New 17 80 011
ratiolab® premium tips, for all commonly used pipets, ratiopetta®	1-200	53,40	bag 1 x 1000 Racks 10 x 96 Racks, sterilized 10 x 96	1000 960 960	New 17 80 203 New 17 80 202 New 17 80 201
ratiolab® premium tips, for all commonly used pipets, ratiopetta®	100-1.000	83,50	bag 1 x 1000 Racks 6 x 96 Racks, sterilized 6 x 96	1000 576 576	New 17 81 003 New 17 81 002 New 17 81 001
ratiolab® premium tips, for all commonly used pipets, ratiopetta®	100-1.250	98,20	bag 1 x 500 Racks 6 x 96 Racks, sterilized 6 x 96	500 576 576	New 17 81 253 New 17 81 252 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).

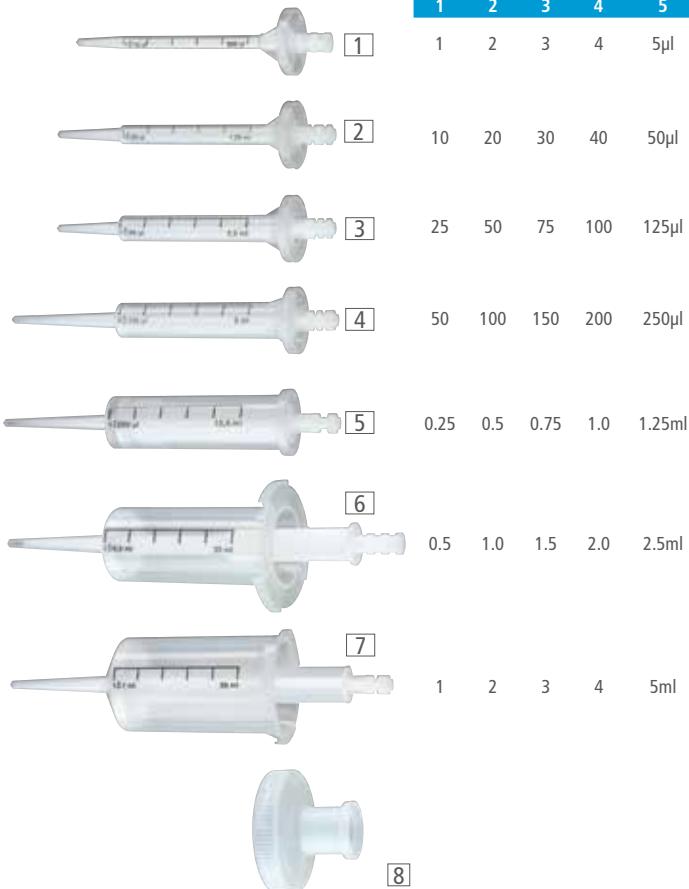
- free of RNase-, DNase-, DNA-, pyrogens
- non-toxic, TSE/BSE free
- permanent black-embossed graduations
- with color-coded ring for convenient identification, standard color code

- 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



Dispenser Tips

CE IVD

For serial pipettings

Dispenser Tips fit onto ratiolab® dispetta and Eppendorf Multipette® 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	New 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	New 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

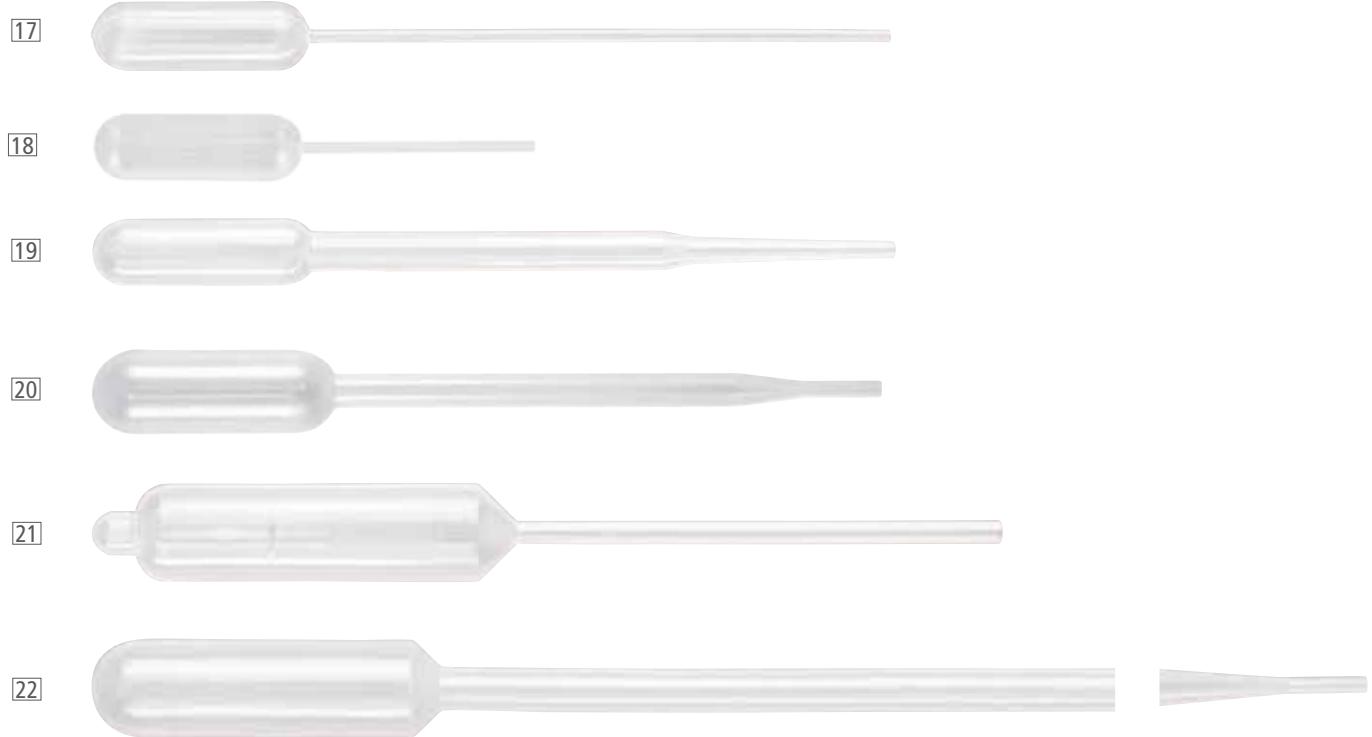
Pasteur-Plast Pipets



Especially for urine analysis

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

Cuvets

Disposable cuvets have long replaced cuvets 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 cuvet – are used for producing ratiolab® Q-VETTES and ratiolab® CUVETTES under controlled room conditions. Thus, in any one injection molding run several cuvets are produced

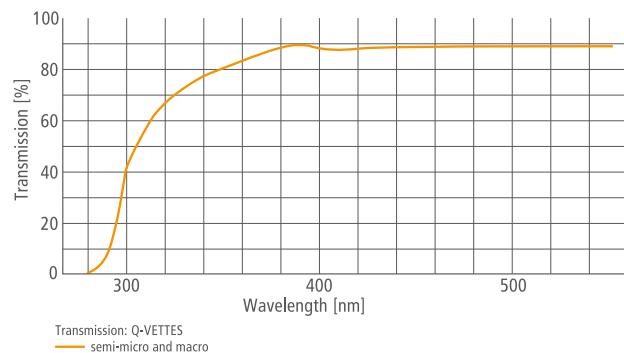
simultaneously. In order to prevent deviations in extinction coefficient values from occurring in any one run due to increased stray light, the cuvets are automatically sorted according to their numbered cavities of origin. Each package shows the corresponding local production number of the cuvets position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



Q-VETTES

The new generation of cuvets with clearly improved photometric properties. The optimized form and the small wall thickness of the cuvets 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 netidentical cuvets 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

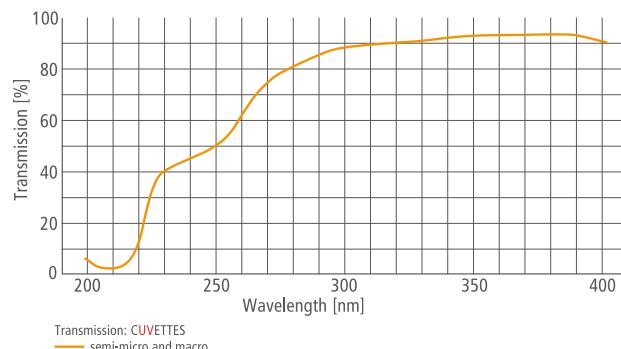


CUVETTES

For photometric measurements even in the UV range 220 nm

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

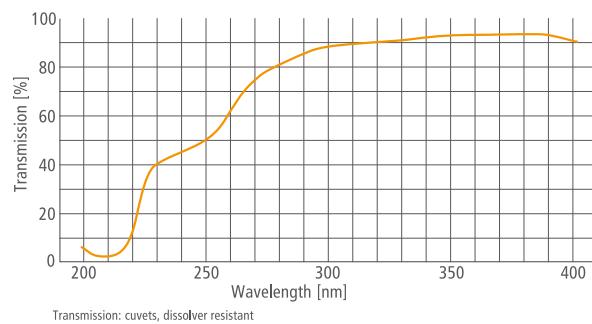
- cuvets of polymethylmethacrylate (PMMA)
- applicable wavelength range 300 to 900 nm
- very low variation of extinction values
- excellent optical transmission range
- path length 10 mm
- outer dimensions 12.5 x 12.5 x 45 mm
- supplied in practical styrofoam racks: 100 netidentical cuvets in a styrofoam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

Product	Material	Volume ml	Packaging	Quantity per Pack	Order No.
ratiolab® semi-micro cuvets	PMMA	1.6	styrofoam racks 10 x 100	1000	28 10 100
ratiolab® macro cuvets	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 netidentical cuvets in a styrofoam box with a resealable cover



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



Stopper for Cuvets

Polypropylene (PP), or polyethylene (PE).

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

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

Multicell Cuvets

Multicell Cuvets of PMMA

CE IVD

Ratiolab 12-cavity multicell cuvets – 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 cuvets	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; Gemsae 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 Gemsae 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

CE IVD*

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

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

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

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

- 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

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



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	56 15 039 New
1,5	2	30000	-	1 x 1000	1000	56 15 008
1,5	2	30000	■	100 x 1	100	56 15 009 New
2,0	3	30000	-	2 x 500	1000	56 15 108
2,0	3	30000	■	100 x 1	100	56 15 109 New
5,0	4	21000	-	1 x 100	100	56 15 158 New
5,0	4	21000	■	50 x 1	50	56 15 159 New

free of DNase/RNase, and pyrogens

CE IVD

Microcentrifuge tubes with screw cap and O-Ring Seal

Polypropylene (PP).

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



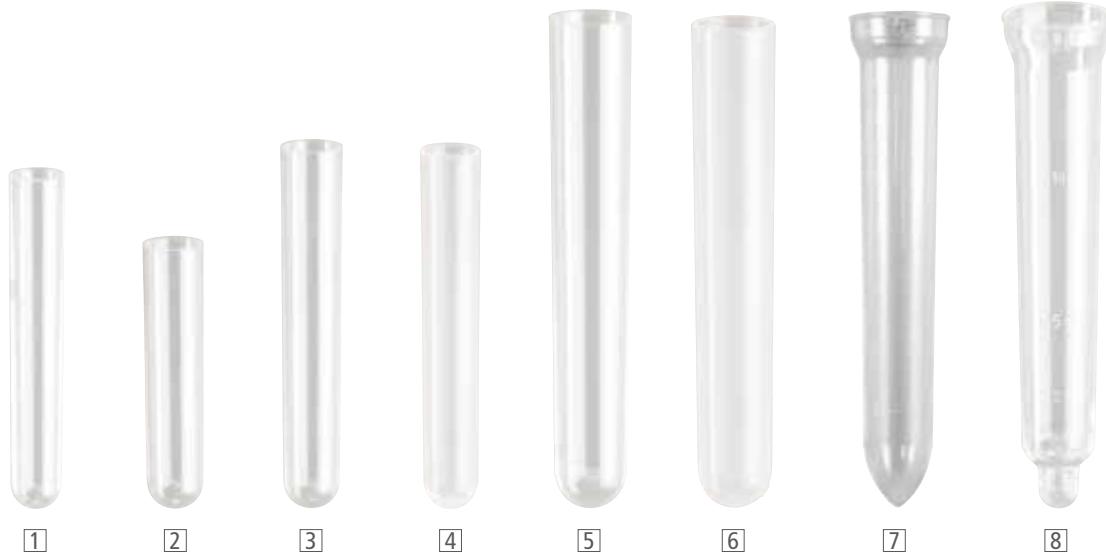
Volume ml	Fig. No.	Bottom	Labeling Area	Sterilized	Packaging	Quantity per Pack	Order No.
0.5	1	self-standing	-	■	2 x 500	1000	56 16 021
0.5	2	conical	-	■	2 x 500	1000	56 16 023
1.5	3	self-standing	■	■	2 x 500	1000	56 16 022
1.5	4	conical	■	■	2 x 500	1000	56 16 027
2.0	5	self-standing	■	■	2 x 500	1000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



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

Stoppers for test tubes, Ø 16 – 17 mm

Polyethylene (PE).

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



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

Multistand Rack, 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 facilities 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	(New) 37 12 201
yellow	15 ml	2 x 10	4	(New) 37 12 202
blue	50 ml	2 x 6	4	(New) 37 12 203
yellow	50 ml	2 x 6	4	(New) 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



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



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 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

CE

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

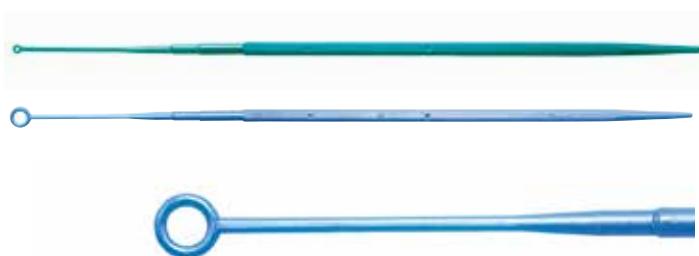
CE IVD

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

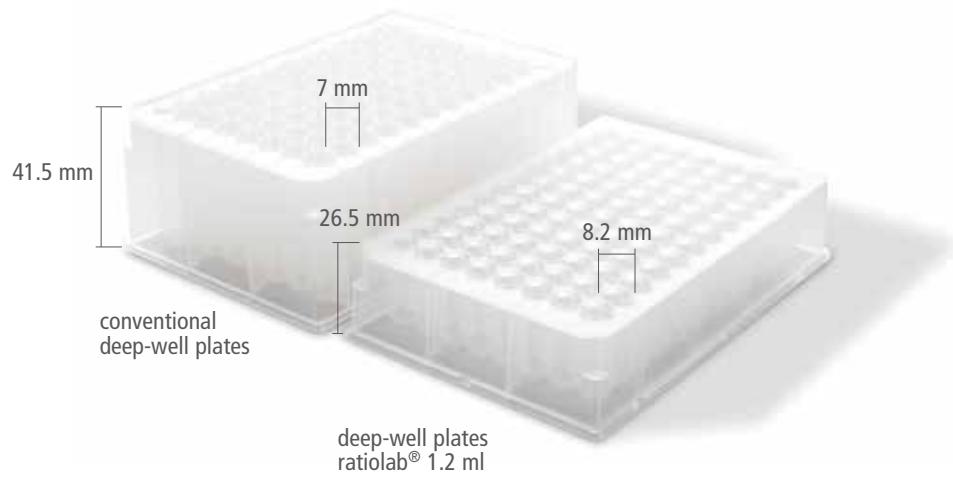
Ø Mould mm	Packaging	Quantity per Pack	Order No.
20	bag 1 x 100	100	60 18 060

Deep-Well-Plates

Low-Profile Deep-Well Plates (96)

These 1.2 ml low-profile deep-well plates are ideal for pharmaceutics, 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.

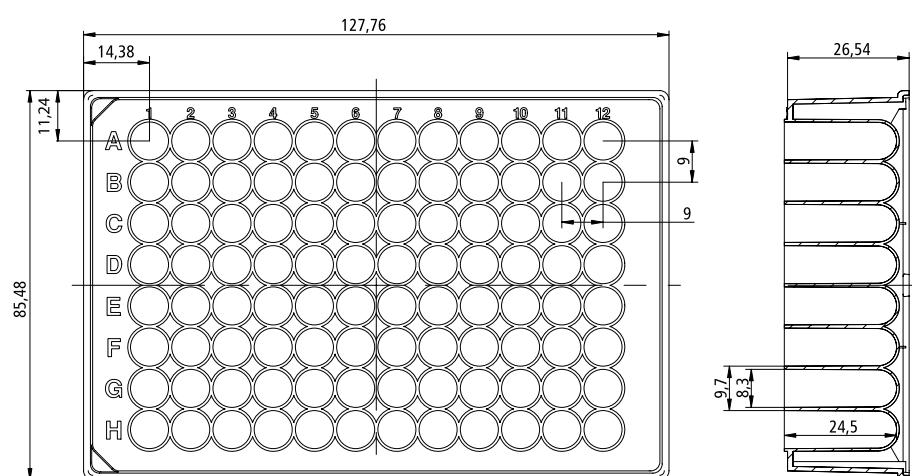
The cavities are some 20 % larger than conventional plates. Thus, when used with robots, they provide additional security. The chimney form of the wells reliably prevents cross-contamination. Their precise, true-to-size form makes them highly suitable for high-throughput screening (HTS).



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



[1]



[3]



[2]



[4]



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

Made of thermo-plastic elastomer (TPE).

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

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

Closures for 96-Well Deep-Well-Plates

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

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

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

Polypropylene 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.

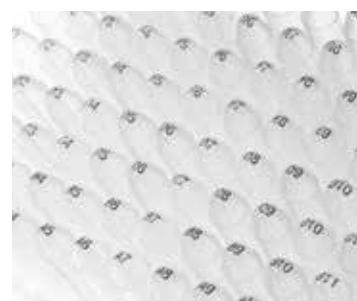
- the Micro-Tubes are autoclavable for 20 min at 121 °C
- temperature-resistant to – 80 °C



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



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



Micro-Tubes 1.2 ml

Micro-Tubes System



Micro-Tubes

Translucent polypropylene (PP) with very low protein binding.

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

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



Micro-Racks, loaded or empty

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

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

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



Micro-Tubes Refill System for Micro-Racks

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

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

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

Further cover films see on page 73.

PCR Tubes



PCR Tubes

Pure polypropylene (PP).

- rapid and homogeneous heat transfer due to consistently ultrathin wall design
- perfect fit, compatible with all major brands of thermocyclers due to precise production
- DNase-, RNase-, 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	[5]	flat	bag 1 x 125	125	86 10 040
8 x 0.2	[6]	domed	bag 1 x 125	125	86 10 039
for separate cap strips					
8 x 0.2	[7]	without	bag 1 x 125	125	86 10 002
cap strips					
8-cap-strips	[8]	flat	bag 1 x 125	125	86 10 015
8-cap-strips	[9]	domed	bag 1 x 125	125	86 10 003



PCR Plates 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

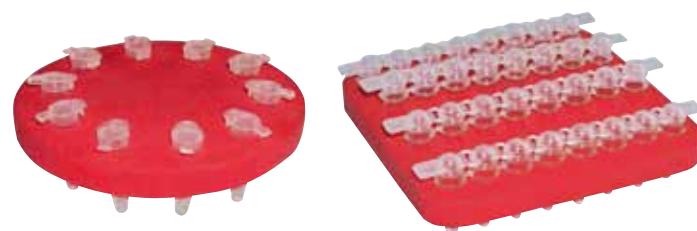
Product	Material	Quantity per Pack	Order No.
PCR-Rack white	PP	10	61 14 100
PCR-Rack yellow	PP	10	61 14 101
PCR-Rack green	PP	10	61 14 103
PCR-Rack red	PP	10	61 14 104
PCR-Rack blue	PP	10	61 14 102
lid for PCR-Racks, 14 mm high	PP	10	61 14 110
lid for PCR-Racks, 28 mm high	SAN*	10	61 14 111

*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



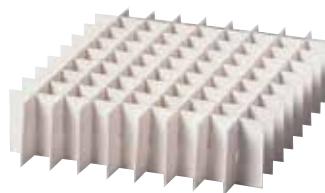
Cryo Boxes, Cardboard, Format 133 x 133 mm

other sizes
available on request

Ultra low temperature-resistant
cardboard.

- 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 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

other sizes
available on request

Ultra low temperature-resistant
cardboard.

- 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



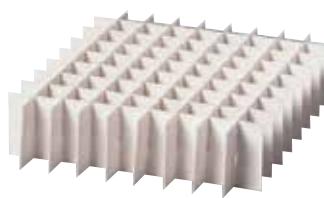
Cryo Boxes, Cardboard, Format 136 x 136 mm

**other sizes
available on request**

Ultra low temperature-resistant cardboard.

- 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 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

**other sizes
available on request**

Ultra low temperature-resistant cardboard.

- 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



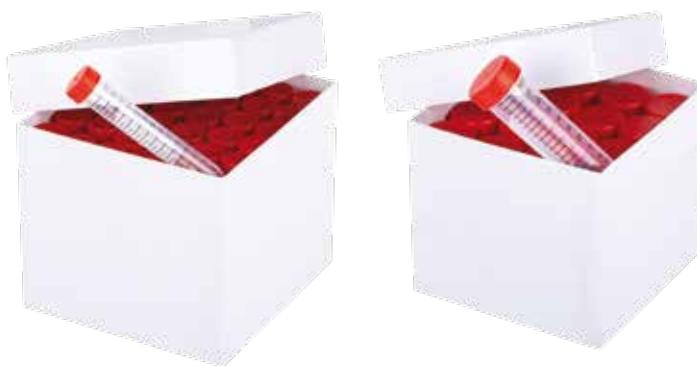
**Cryo Boxes, Cardboard,
Format 136 x 136 x 75 mm**

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 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 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

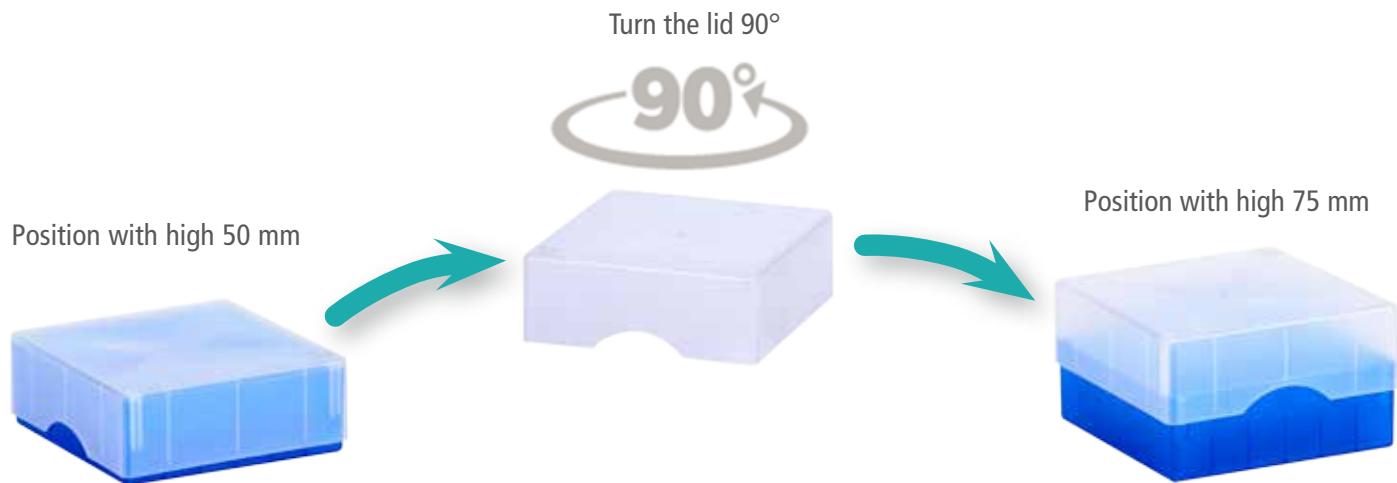
High quality polypropylene (PP). Available in natural and other colors.

The specialty: the boxes are adjustable in height.

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

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

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



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

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

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.

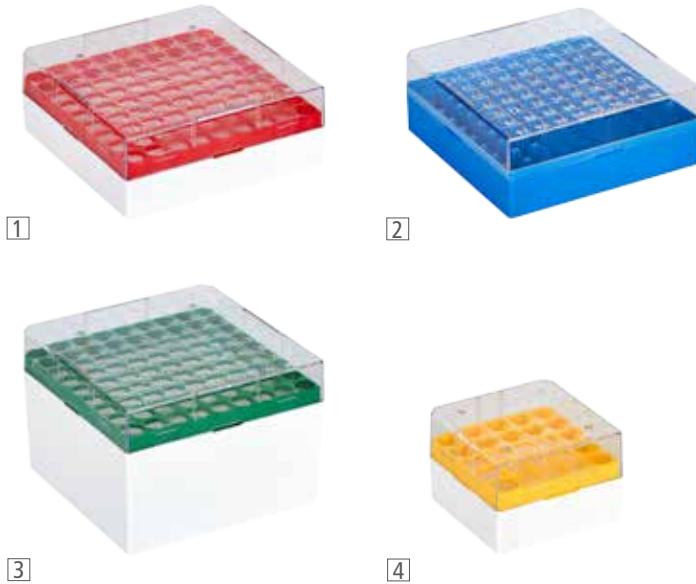
The separate naturally-colored inserts are available in five sizes and can thus be used with sample vessels of differing diameters. The inserts fit all ratiolab® Cryo Boxes. Cleaning of the boxes and the inserts is much simpler than with Cryo Boxes with permanently fitted inserts.

- 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



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

CE IVD

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

CE IVD

Cryo Tubes

Polypropylene with 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 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

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

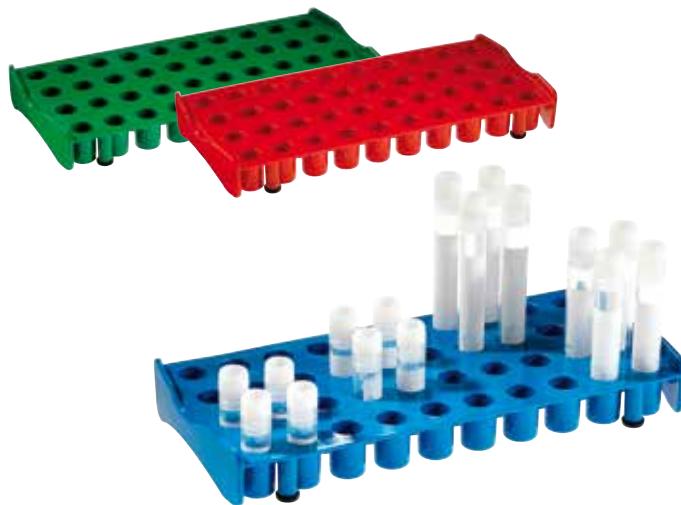


Color Coding Cap Inserts for Cryo Tubes

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.

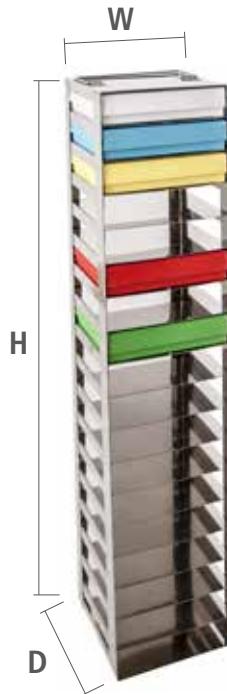
For 40 Cryo Tubes 1.2 to 5 ml with 12.5 mm outer diameter. Cryo Tubes with self standing base are automatically locked in the Work Station and can easily be screwed and unscrewed with one hand.

- 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.

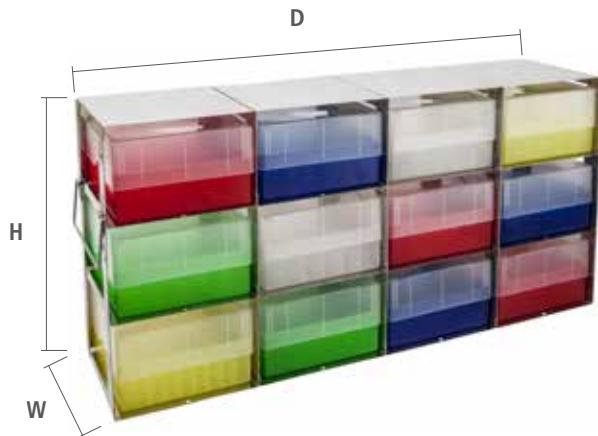
- for all Cryo Boxes format 130 x 130; 133 x 133 and 136 x 136 mm
- surfaces for perfect cleaning
- robust construction
- handles for convenient transport
- rack size includes the holder
- Cryo Racks can be supplied with shelf sizes for any standard Cryo Boxes

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	32 mm	for Cryo Boxes Height 50 mm	75 mm	Quantity per Pack	Order No.
1 x 4	140 x 140 x 222	—	■	—	1	54 00 041
1 x 5	140 x 140 x 277	—	■	—	1	54 00 021 (New)
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	54 00 010
4 x 2	566 x 140 x 275	—	—	—	■	1	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	54 00 008
5 shelves							
5 x 2	705 x 140 x 161	—	■	—	—	1	54 00 016
5 x 2	705 x 140 x 212	—	—	■	—	1	54 00 020
5 x 3	705 x 140 x 240	—	■	—	—	1	54 00 017
5 x 4	705 x 140 x 219	■	—	—	—	1	54 00 013
5 x 4	705 x 140 x 319	—	■	—	—	1	54 00 018
5 x 5	705 x 140 x 274	■	—	—	—	1	54 00 014
5 x 6	705 x 140 x 328	■	—	—	—	1	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	50 mm	for Cryo Boxes Height 75 mm	100 mm	Quantity per Pack	Order No.
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

Racks in special dimensions and design

Beeing 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:



[1]

- 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



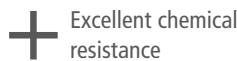
Life science products for
microbiology and biotechnology



Cryo products for
deep-freeze applications

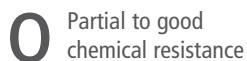
Chemical resistance of plastics

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



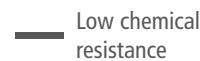
Excellent chemical resistance

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.



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						
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						
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	+	+	+	+
Iooctane			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						
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, nor 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	from	Application temperature (°C) to
ABS	acrylic butadiene styrene copolymer	-40	+85 (+100)
E-CTFE	ethylene chlorotrifluoroethylene	-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.

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2655181	42	3300001	53	4770039	18	5120002	81	5120182	82	5131754	80
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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
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