

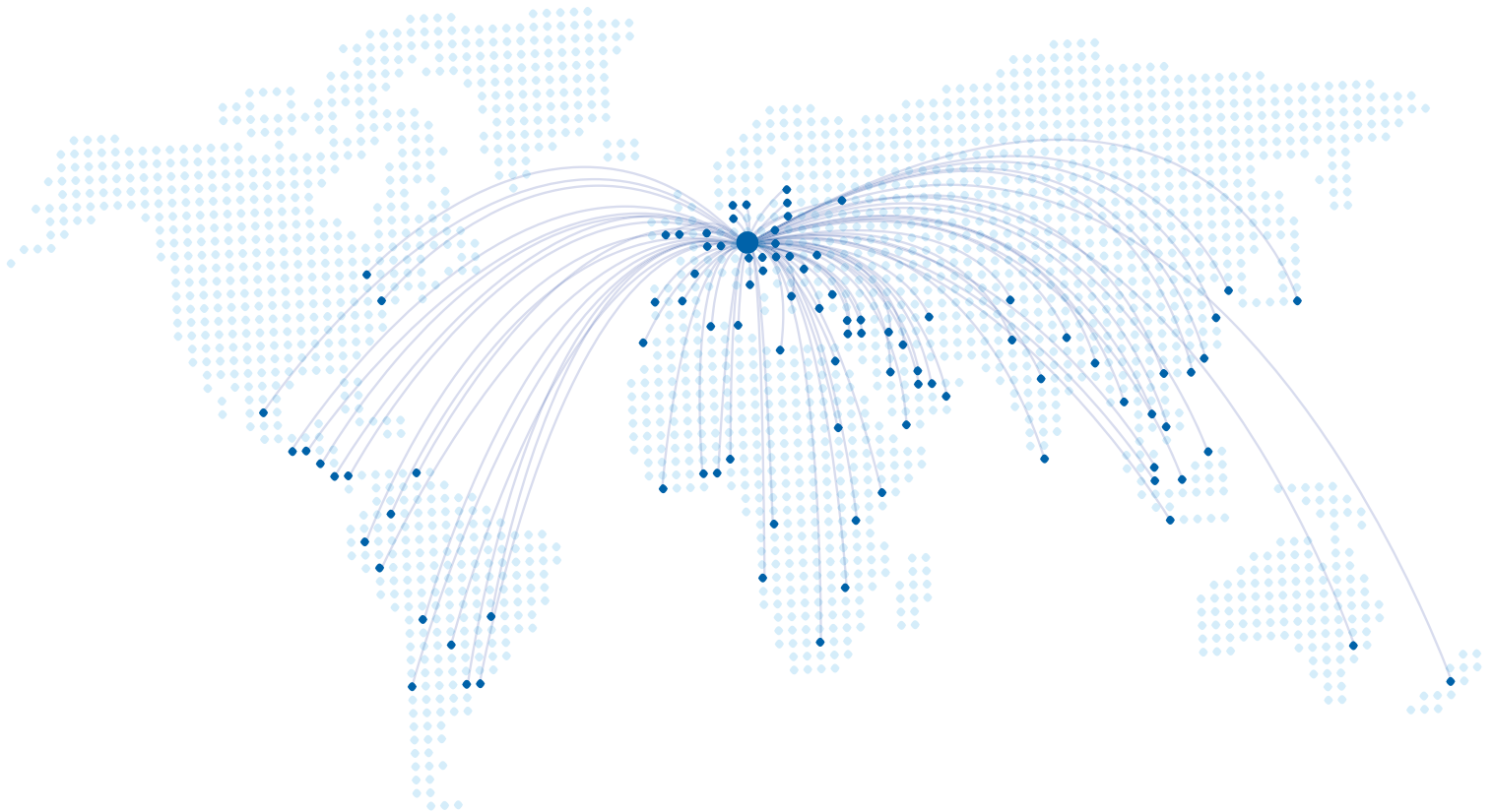


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## Paul Marienfeld GmbH & Co. KG

Our company was founded in 1922 by Paul Marienfeld and since that date the company is owned by the Marienfeld family. Today we supply our products from Germany to more than 100 countries worldwide.



### Since 1922: Our experience is your success

Our comprehensive range of quality laboratory glassware like microscope slides, cover glass, counting chambers, capillary tubes, laboratory containers and volumetric glassware has made our name and our brand renowned internationally. Many products made of plastic and porcelain as well as some small devices for the general laboratory work complete our delivery programme.

The brand Marienfeld Superior is a synonym for quality and reliability.

The needs of our customers are at the center of everything we do – and have done for 100 years. This is a fact we are proud of.





## Your advantages

### Quality

Modern production technologies are combined with the knowledge and expertise of more than 100 years of experience. The results are high quality products.

Our quality management is certified by DEKRA Certification Services acc. to DIN EN ISO 9001:2015. A quality control which accompanies the entire production process and stringent final checks ensure that our customers only receive products of high quality.

### Short delivery times

We stock a large amount of inventory for our customers in our high bay warehouse with over 1500 storing positions and 3000 shelves. In our catalogue arrows indicate products with high availability.

### Security

According to the EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR) the packing of IVD products bears the CE-mark, the production lot number and a recommended best before date for those products with a limited shelf life. This ensures the traceability of our IVD products and serves as comprehensive customer's information, too.

Since 17th October 2011 we are Authorised Economic Operator Type F for customs simplifications and safety.







#### Family business in fourth generation

Since our modest beginnings in Thuringia's Geraberg we have continually grown and developed: Out of a small glass grinding production to an internationally operating company.

After the Second World War, Paul Marienfeld set up the production in Coburg, Bavaria. In the fifties of the last century we moved to Bad Mergentheim in Baden-Wuerttemberg.



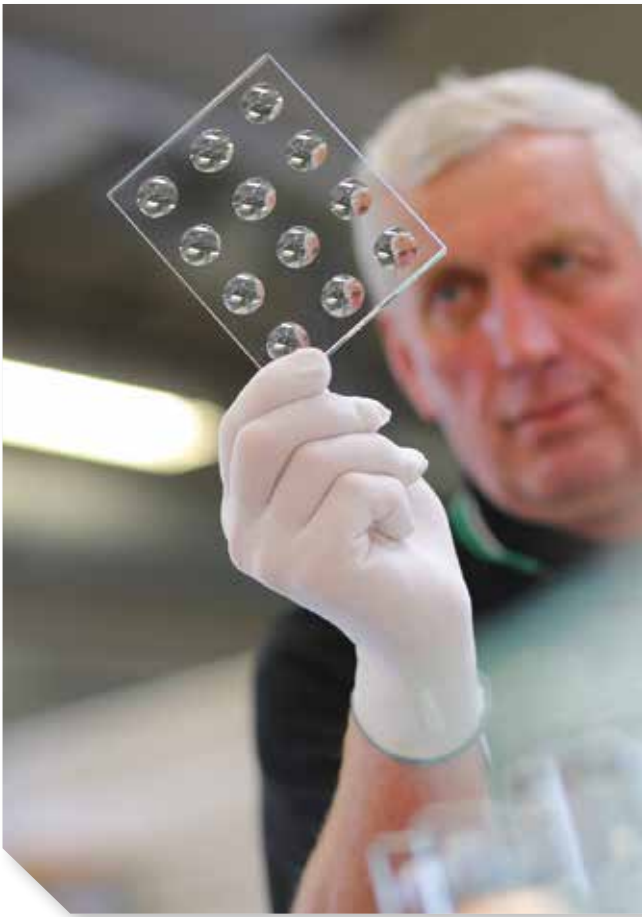
1922

1930

1940

1950

1960



### Progress

After decades of growth the area for our further company's expansion became insufficient. In the year 2000, we built our new factory in Lauda-Koenigshofen which is approx. 40 km south of Wuerzburg. Here we have sufficient space for further growth.

We are well prepared for the challenges and opportunities of the future – the next generation is looking forward to it!



1970

1980

1990

2000

2022



## Interesting facts

### Unit

This represents the packaging unit. Please take this into consideration by ordering complete units or a multiple of these. In general, this "unit" is the minimum order quantity also. Deviations are indicated in the product descriptions and the price list. If "unit" is not indicated the packaging is not specified.

### Minimum quantity

In general, this "unit" is the minimum order quantity. Deviations are indicated in the product descriptions and the price-list.

### Multipack

This additional information indicates the contents of a bigger large-size package. If "multipack" is not indicated this packaging is not specified.



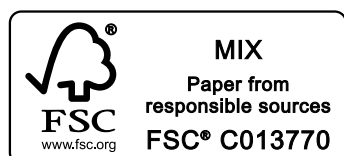
This arrow indicates products that are usually available on short notice.

Cat. No.	Multipack	Unit
▶ 6130603	120 x 12	12

### IVDR

Products that meet the definition of EU Regulation 2017/746 for in vitro diagnostics (IVDR) and are not assigned to general laboratory needs are provided with the CE mark. Among other things, the directive requires us to ensure traceability for IVD products. All our customers who sell CE-marked products within the scope of the IVDR also undertake to ensure traceability back to their customers in accordance with the statutory provisions. This is required for notifying customers in the event of a recall.

For more information please see <https://eur-lex.europa.eu/eli/reg/2017/746>



We assume no responsibility for misprints or errors. Product details, units and design are subject to technical alterations without notice. All measurements without indication of tolerances are approximate. Pictures serve the purpose of visualization and may not correspond exactly to the described product.

Please note that our Conditions of Sale at the end of this catalogue form the basis of all our sales.

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On labels and/or packaging:



manufacturer, company responsible for placing on market



disposable item, for single use only



glass, fragile



to be protected against humidity



product number

GTIN

Global Trade Item Number



batch number



recommended best use before date

ISO

## DIN ISO regulation



subject to  $\mathbb{C}\mathbb{E}$ -prescriptions



subject to IVD-prescriptions



approximately



GS1 Datamatrix code

contains:

GTIN

Date of manufacture or best before date (if any)

batch number

quantity per packing unit

Product details: e. g. size, type, packing

**1000 Pcs./Stck.**  
Smallest sales unit  
Kleinste Verkaufseinheit

[REF] **0111520**

[LOT] **45051 819**

GTIN 04250317300669

2020-12

Microscope Cover Glasses  
Deckgläser  
Laminillas Cubreobjetos  
Marmelles Couvre-Objets  
Vetrini Coprioggetto

**12 mm Ø**

**No. 1 D 263 M**

CE [IVD] ISO 8255

Paul Marienfeld GmbH & Co. KG  
Am Wöllerspflad 4  
97922 Lauda-Königsbach, Germany

(010)4250317300669/(110)2012011(01)45051(02)0000000000000000000000 made in Germany

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
[illegible]

~ 50 pcs./St.

<b>REF</b>	<b>1000412</b>
<b>LOT</b>	<b>12345 017</b>
<b>GTIN</b>	0425031730212


~76x26x1mm


90° ground edges, precleaned  
Kanten 90° geschliffen, vorgereinigt  
bordes esmerilados 90°, limpiados  
bordes rotos 90°, lavados







**ISO 8037/1**


**Microscope slides**  
**Objekträger**  
**Laminas portaobjetos**  
**Lames porte-objets**

 2021-07

 2023-01

plain  
ohne Mattrand  
sin bands mate  
sans bande dépolie



**Paul Marienfeld GmbH & Co. KG**  
Am Wöllersdorf 4  
97922 Lauts-Göhlshöfen, Germany

**MARIENFELD**  
made in Germany

(01)04250317302120(12)503129(10)12345(02)0000000000000000

**250 pcs./Stck.**

REF	<b>3233050</b>
LOT	<b>123456</b>

GTIN 04250317307873

**230 mm**

not sterile  
nicht steril  
no estériles  
pas stériles

without cotton plug  
ohne Wattestopfen  
sin tampón de algodón  
sans tampon

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Am Willerspfad 4  
97922 Lauda-Königsfelden, Germany

  
**MARIENFELD**  
made in Germany

(0104)250317307873(11)01272910(1)23456(02)000000000002030

**10 pcs./Stck.**

REF	<b>5610022</b>
LOT	<b>123456</b>
GTIN	<b>04250317343536</b>

**PP**

black  
schwarz  
negro  
noir

for 100 microslides 76x26 mm  
für 100 Objektträger 76x26 mm  
para 100 portaobjetos 76x26 mm  
pour 100 porte-objets 76x26 mm

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Am Willersplatz 4  
97922 Lauda-Königshofen, Germany

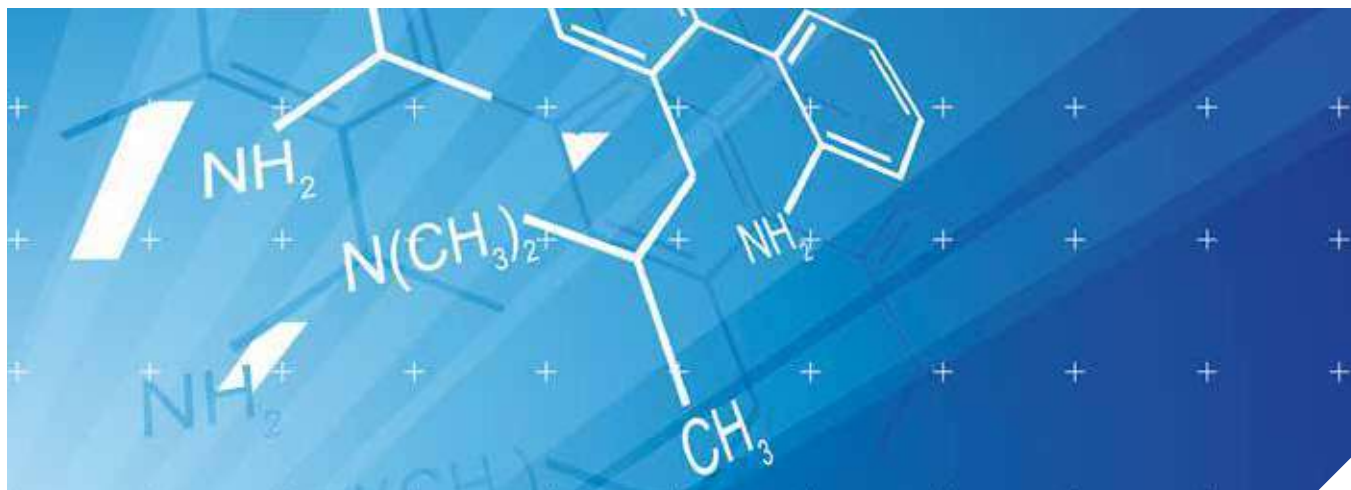
 made in Germany

(01)04250317343536(11)210628(10)123456(02)000000000000010

## Technical information plastics

Abbreviations of the described plastics acc. to DIN 7728

ABS	Acrylonitrile-butadiene-styrene
ETFE	Ethylene-Tetrafluoroethylene copolymer
PBT	Polybutylene terephthalate
PE-HD	Polyethylene high density
PE-LD	Polyethylene low density
PMP	Polymethylpentene
POM	Polyoxymethylene
PP	Polypropylene
PS	Polystyrene
PTFE	Polytetrafluoroethylene
PVC	Polyvinylchloride



Picture spring: fotolia - U. Bakunowich

	Max. operating temperature	Microwave suitability*	Autoclavable** at 121 °C to 20 min per DIN	Hot air sterilization** at 160 °C (dry)
ABS	100 °C	no	no	no
ETFE	150 °C	yes	yes	no
PBT	180 °C	yes	yes	yes
PE-HD	105 °C	yes	no	no
PE-LD	80...90 °C	yes	no	no
PMP	150 °C	yes	yes	no
POM	130 °C	no	yes	no
PP	125 °C	yes	yes	no
PS	70 °C	no	no	no
PTFE	300 °C	yes	yes	yes
PVC	80 °C	no	no	no

\* Please observe chemical and temperature resistance.

\*\* Labware should be carefully cleaned and rinsed with distilled water before sterilization.  
Please always remove covers from containers.



## Technical information glass

This glass is used for microscope slides for its surfaces' properties. Due to his high linear coefficient of expansion it does not withstand thermal shocks.

This glass is highly resistant against acids and alkali and perfectly suitable for microscope cover glasses. Due to his high linear coefficient of expansion it does not withstand thermal shocks.

This glass is more resistant to variations of temperature than soda lime glass and D 263® M.

This glass is perfectly suitable for high quality measuring instruments as it is highly resistant against acids and alkali. Due to its small linear coefficient of expansion it withstands thermal shocks very well.

### Soda lime glass

### Borosilicate glass D 263® M

### Borosilicate glass 5.1

### Borosilicate glass 3.3



	Soda lime glass	Borosilicate glass D 263® M	Borosilicate glass 5.1	Borosilicate glass 3.3
Linear expansion coefficient approx.:	$9 \times 10^{-6} \times K^{-1}$	$7 \times 10^{-6} \times K^{-1}$	$4,9 \times 10^{-6} \times K^{-1}$	$3,3 \times 10^{-6} \times K^{-1}$
Autoclavable:	yes	yes	yes	yes
Hydrolytic resistance (DIN ISO 719):	class 3	class 1	class 1	class 1
Acid resistance (DIN 12 116):	class 3	class 2	class 1	class 1
Alkali resistance (DIN ISO 695):	class 2	class 2	class 2	class 2



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## D 263® M Cover glass for microscopy

D 263® M is a clear borosilicate glass produced by a down-draw method. This permits the production of very thin glass thicknesses between 0.10 and 0.21 mm.

D 263® M is used as a cover glass for microscopic analyses and complies to all requirements of DIN ISO 8255-1. Its low autofluorescence and high chemical resistance are preconditions for reliable research results.

Due to the protective coating and outstanding quality of material it is easily separable and, therefore, well-suited for automated cover slipping equipment.



### Applications

**Light and fluorescence microscopy,  
especially in medical and biological science**

### Features



- high spectral transmission
- refractive index optimized for microscopes
- virtually colourless appearance
- low autofluorescence
- excellent optical and cosmetic quality
- good chemical resistance to environmental conditions facilitates long durability in archiving samples
- low flatness deviations
- complies precisely with the set thickness tolerances
- low alkali content enables cell growth
- good wettability on both glass surfaces
- protective coating facilitates automated separation of individual cover glasses in coverslippers

### Technical data (Source: Schott AG)

Luminous transmittance $\tau_{VD65}$ (d = 0.15 mm)	91.7 %
Coefficient of mean linear thermal expansion $\alpha$ (20 °C; 300 °C) (static measurement)	$7.2 \cdot 10^{-6} \text{ K}^{-1}$
Transformation temperature $T_g$	557 °C
Dielectric constant $\epsilon_r$ at 1 MHz	6.7
Refractive index $n_D$	1.5230
Refractive index $n_e$	1.5255
Abbe value $v_e$	55
Density $\rho$ (annealed at 40 °C/h)	2.51 g/cm <sup>3</sup>



## Cover glasses thickness No. 1

Marienfeld Superior cover glasses feature an excellent flatness and smooth surfaces thanks to the best material. No cover glasses made of soda lime glass match the quality of our borosilicate glass coverslips. Even when archived for years preparations keep their optical quality thanks to our non-corroding glass and the particularly low tolerance of the material thickness. Our precise machining processes make sure that our coverslips have the exact size and their edges are cut with high precision. All of our efficient processes include a stringent, integrated quality control and thus ensure high quality coverslips which do not stick together.

Our coverslips are ready for use and well suited for application in automated coverslippers. All these characteristics result in significant advantages for the user.

- made of chemically resistant borosilicate glass D 263® M of first hydrolytic class
- absolutely colourless, perfectly clear, suitable for fluorescence microscopy
- in compliance with DIN ISO 8255
- thickness No. 1 (0.13 to 0.16 mm)
- in boxes made of plastic, 10 boxes in a carton
- for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE-mark and batch number for comprehensive information and traceability

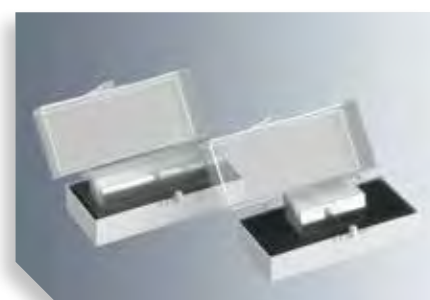


Cat. No.	Size	Multipack	Unit
<b>Two-part boxes containing 100 pieces</b>			
0101000	12 x 12 mm	150 x 1000	1000
0101010	15 x 15 mm	100 x 1000	1000
0101020	16 x 16 mm	100 x 1000	1000
▶ 0101030	18 x 18 mm	100 x 1000	1000
▶ 0101040	20 x 20 mm	100 x 1000	1000
▶ 0101050	22 x 22 mm	75 x 1000	1000
▶ 0101060	24 x 24 mm	75 x 1000	1000
<b>Hinged lid boxes containing 200 or 100 pieces</b>			
▶ 0101052	22 x 22 mm	25 x 2000	2000
0101062	24 x 24 mm	25 x 2000	2000
▶ 0101092	21 x 26 mm	25 x 2000	2000
0101102	22 x 30 mm	25 x 1000	1000
▶ 0101112	22 x 32 mm	25 x 1000	1000
▶ 0101122	22 x 40 mm	25 x 1000	1000
▶ 0101142	22 x 50 mm	25 x 1000	1000
▶ 0101152	22 x 60 mm	25 x 1000	1000
▶ 0101172	24 x 32 mm	25 x 1000	1000
▶ 0101182	24 x 36 mm	25 x 1000	1000
▶ 0101192	24 x 40 mm	25 x 1000	1000
0101202	24 x 46 mm	25 x 1000	1000
0101212	24 x 48 mm	25 x 1000	1000
▶ 0101222	24 x 50 mm	25 x 1000	1000
▶ 0101232	24 x 55 mm	25 x 1000	1000
▶ 0101242	24 x 60 mm	25 x 1000	1000
<b>Cardboard boxes containing 100 pieces</b>			
0101290	50 x 75 mm		1000

▶ This arrow indicates products that are usually available on short notice.

## Cover glasses thickness No. 1.5 / No. 0

- made of chemically resistant borosilicate glass D 263® M of first hydrolytic class
- absolutely colourless, perfectly clear, suitable for fluorescence microscopy
- in compliance with DIN ISO 8255
- in hinged lid plastic boxes containing 200 resp. 100 pieces, 10 boxes in a carton
- for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE-mark and batch number for comprehensive information and traceability



Cat. No.	Size	Multipack	Unit
<b>Thickness No. 1.5 (0.16 – 0.19 mm)</b>			
▶ 0102032	18 x 18 mm	25 x 2000	2000
0102042	20 x 20 mm	25 x 2000	2000
▶ 0102052	22 x 22 mm	25 x 2000	2000
▶ 0102062	24 x 24 mm	25 x 2000	2000
0102112	22 x 32 mm	25 x 1000	1000
0102122	22 x 40 mm	25 x 1000	1000
0102142	22 x 50 mm	25 x 1000	1000
0102152	22 x 60 mm	25 x 1000	1000
0102172	24 x 32 mm	25 x 1000	1000
▶ 0102192	24 x 40 mm	25 x 1000	1000
▶ 0102222	24 x 50 mm	25 x 1000	1000
▶ 0102242	24 x 60 mm	25 x 1000	1000
<b>Thickness No. 0 (0.085 – 0.115 mm)</b>			
0100032	18 x 18 mm	25 x 2000	2000
0100042	20 x 20 mm	25 x 2000	2000
0100052	22 x 22 mm	25 x 2000	2000
0100062	24 x 24 mm	25 x 2000	2000
0100112	22 x 32 mm	25 x 1000	1000
0100122	22 x 40 mm	25 x 1000	1000
0100142	22 x 50 mm	25 x 1000	1000
0100172	24 x 32 mm	25 x 1000	1000
0100192	24 x 40 mm	25 x 1000	1000
0100222	24 x 50 mm	25 x 1000	1000
0100242	24 x 60 mm	25 x 1000	1000

For other sizes and thicknesses, please send us your enquiry.

Also available thicknesses are:

No. 00 (0.06 - 0.08 mm) D 263® M

No. 2 (0.19 - 0.23 mm) D 263® M

No. 3 (0.28 - 0.32 mm) D 263® T eco

No. 4 (0.38 - 0.42 mm) D 263® T eco

No. 5 (0.55 ± 0.05 mm) D 263® T eco

No. 7 (0.70 ± 0.05 mm) D 263® T eco





## Precision cover glasses thickness No. 1.5H (Tol. $\pm 5 \mu\text{m}$ ) for high performance microscopes

Modern high-performance microscope objectives are designed to be used with cover glasses of a thickness of  $170 \mu\text{m}$ . The quality of the cover glass, in particular the compliance with the nominal thickness, has thereby a crucial impact on the imaging quality. Variations of thickness reduce the image contrast and result in image defects, most notably in spherical aberration.

We produce high-precision cover glasses with thickness No. 1.5H featuring an exceptionally accurate thickness of  $170 \mu\text{m} \pm 5 \mu\text{m}$ . This new generation of cover glasses is highly recommended for objectives with high numerical aperture and high resolution, for example:

- dry objectives: N.A. > 0.7
- objectives for water immersion: N.A. > 1.0
- objectives for glycerol immersion: N.A. > 1.2
- objectives for oil immersion: N.A. > 1.3
- made of chemically resistant borosilicate glass D 263<sup>®</sup> M of first hydrolytic class
- absolutely colourless, perfectly clear, suitable for fluorescence microscopy
- in compliance with DIN ISO 8255
- thickness No. 1.5H ( $0.170 \text{ mm} \pm 0.005 \text{ mm}$ )
- for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE-mark and batch number for comprehensive information and traceability



New

Cat. No.	Size	Multipack	Unit
Hinged lid boxes containing 200 or 100 pieces			
▶ 0107032	18 x 18 mm	25 x 2000	2000
▶ 0107052	22 x 22 mm	25 x 2000	2000
▶ 0107172	24 x 32 mm	25 x 1000	1000
▶ 0107222	24 x 50 mm	25 x 1000	1000
0107242	24 x 60 mm	25 x 1000	1000
Two-part boxes containing 100 pieces			
0117500	10 mm Ø	150 x 1000	1000
0117520	12 mm Ø	150 x 1000	1000
0117530	13 mm Ø	150 x 1000	1000
0117550	15 mm Ø	100 x 1000	1000
0117580	18 mm Ø	100 x 1000	1000
0117640	24 mm Ø	75 x 1000	1000
0117650	25 mm Ø	75 x 1000	1000
Cardboard boxes of 100 pieces			
0117700	30 mm Ø		1000

For other sizes, please send us your enquiry.

▶ This arrow indicates products that are usually available on short notice.

## Cover glasses circular, thickness No. 1.0 / No. 1.5

- made of chemically resistant borosilicate glass D 263® M of first hydrolytic class
- absolutely colourless, perfectly clear, suitable for fluorescence microscopy
- in compliance with DIN ISO 8255
- thickness No. 1 (0.13 to 0.16 mm)
- in two-part plastic boxes containing 100 pieces, 10 boxes in a carton
- for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE-mark and batch number for comprehensive information and traceability

Cat. No.	Size	Multipack	Unit
<b>Thickness No. 1 (0.13 – 0.16 mm)</b>			
▶ 0111450	5 mm Ø	150 x 1000	1000
▶ 0111500	10 mm Ø	150 x 1000	1000
▶ 0111520	12 mm Ø	150 x 1000	1000
▶ 0111530	13 mm Ø	150 x 1000	1000
▶ 0111540	14 mm Ø	150 x 1000	1000
▶ 0111550	15 mm Ø	100 x 1000	1000
▶ 0111560	16 mm Ø	100 x 1000	1000
▶ 0111580	18 mm Ø	100 x 1000	1000
▶ 0111600	20 mm Ø	100 x 1000	1000
▶ 0111620	22 mm Ø	75 x 1000	1000
▶ 0111640	24 mm Ø	75 x 1000	1000
▶ 0111650	25 mm Ø	50 x 1000	1000
▶ 0111700	30 mm Ø	in cardboard boxes of 100 pieces	1000
<b>Thickness No. 1.5 (0.16 – 0.19 mm)</b>			
0112450	5 mm Ø	150 x 1000	1000
0112500	10 mm Ø	150 x 1000	1000
0112520	12 mm Ø	150 x 1000	1000
0112530	13 mm Ø	150 x 1000	1000
0112540	14 mm Ø	150 x 1000	1000
0112550	15 mm Ø	100 x 1000	1000
0112560	16 mm Ø	100 x 1000	1000
0112580	18 mm Ø	100 x 1000	1000
0112600	20 mm Ø	100 x 1000	1000
0112620	22 mm Ø	75 x 1000	1000
0112640	24 mm Ø	75 x 1000	1000
0112650	25 mm Ø	50 x 1000	1000
0112700	30 mm Ø	in cardboard boxes of 100 pieces	1000

For other sizes and thicknesses, please send us your enquiry.

Also available thicknesses are:

No. 0 (0.085 - 0.115 mm) D 263® M

No. 2 (0.19 - 0.23 mm) D 263® M

No. 3 (0.28 - 0.32 mm) D 263® T eco



**New**



## Cover glasses thickness No. 1 in ounce packing

- made of chemically resistant borosilicate glass D 263<sup>®</sup> M of first hydrolytic class
- absolutely colourless, perfectly clear, suitable for fluorescence microscopy
- in compliance with DIN ISO 8255
- thickness No. 1 (0.13 to 0.16 mm)
- in hinged lid plastic boxes containing 1 ounce or 2 ounces, 10 boxes in a carton
- for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE-mark and batch number for comprehensive information and traceability

Cat. No.	Size	Multipack	Unit
0101053	22 x 22 mm	25 x 10	10 oz
0101123	22 x 40 mm	25 x 10	10 oz
0101143	22 x 50 mm	25 x 10	10 oz
0101173	24 x 32 mm	25 x 10	10 oz
0101193	24 x 40 mm	25 x 10	10 oz
0101224	24 x 50 mm	25 x 20	20 oz
0101244	24 x 60 mm	25 x 20	20 oz

For other sizes and thicknesses, please send us your enquiry.



## Cover glasses thickness No. 1 hydrophobic

- made of chemically resistant borosilicate glass D 263<sup>®</sup> M of first hydrolytic class
- absolutely transparent, suitable for fluorescence microscopy
- with super hydrophobic surfaces on both sides (e.g. for use in crystallography)
- thickness No. 1 (0.13 to 0.16 mm)
- in two-part plastic boxes containing 100 pieces, 10 boxes in a carton
- for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE-mark and batch number for comprehensive information and traceability

Cat. No.	Size	Multipack	Unit
0895002	12 mm Ø	150 x 1000	1000
0895012	18 mm Ø	100 x 1000	1000
0895022	22 mm Ø	75 x 1000	1000
0895202	12 x 12 mm	150 x 1000	1000
0895222	18 x 18 mm	100 x 1000	1000
0895242	22 x 22 mm	75 x 1000	1000

For other sizes and thicknesses, please send us your enquiry.





## Cover glasses 0.4 mm for counting chambers and haemocytometers

Haemocytometer cover glasses are used to cover specimens in counting chambers. The haemocytometer cover glass is placed on the outer bearings' surfaces and due to their flatness adheres very well. Thus it forms an exact capillary gap and defines the volume of the cell suspension over the counting grid. On our website you will find more detailed information under the keyword counting chambers.

Additional feature: The excellent quality of their edges makes our haemocytometer cover glasses well suitable for blood smears.

- made of special optical glass
- ready for use
- ground and polished edges
- individually packed in poly bags, 10 pieces in a plastic or cardboard box, 10 boxes in a folded box
- for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE-mark and batch number for comprehensive information and traceability

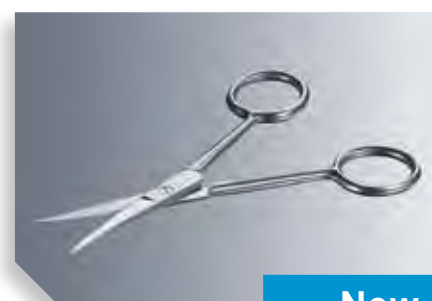
Cat. No.	Size	Multipack	Unit
▶ 0350000	20 x 26 mm	50 x 100	100
▶ 0351000	22 x 22 mm	50 x 100	100
▶ 0352000	24 x 24 mm	50 x 100	100
0357004	30 x 30 mm		100



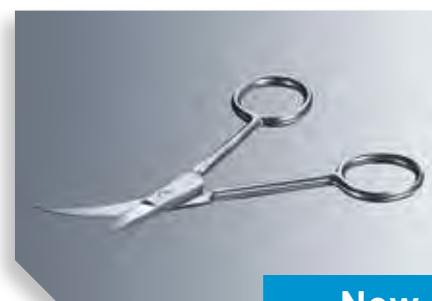
## Microscopy scissors

- made of stainless steel
- length approx. 100 mm
- pointed

Cat. No.	Type	Unit
6627800	straight	5
6627801	bent	5



**New**



**New**



## Histofluid mounting medium

Histofluid is a water-clear adhesive of acrylic resins dissolved in xylene. It hardens fast and due to its optical properties suits perfectly well for embedding microscopic preparations. Shortly after having covered a preparation it can already be examined and filed.

Histofluid may also be used to firmly lock and seal bottle caps.

Further properties:

- long storing or temperature changes do not cause fissures or deformations in Histofluid layers
- does not turn yellowish when being exposed to UV-radiation
- does not fluoresce
- does not form bubbles
- even sensitive colorations are preserved due to its acid number = 0
- refractive index of 1.5 (nD 20 °C)
- water-repellent and dissolves in e.g. xylene, acetone, chloroform, dioxan and toluol
- can be stored in sealed bottles for an unlimited period
- filled into bottles made of sheet metal for hazardous materials and bearing the UN code 1307 XYLENE
- not registered for in vitro diagnostic use within the EU

Cat. No.	Capacity bottle	Unit
▶ 6900002	500 ml	9

Due to its solvent contents Histofluid is inflammable and, therefore, considered as hazardous. So it has to be especially packed and shipped according to the international transport regulations.

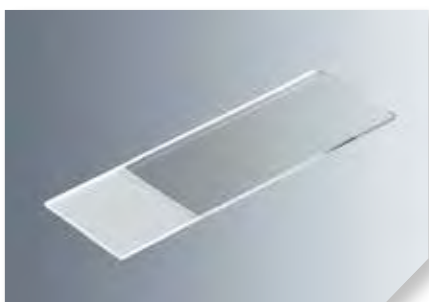
We do not export Histofluid by parcel service or air freight but use ocean freight or transport overland only.

Before ordering please carefully check your country's import regulations and ensure a smooth transport according to the IMO (International Maritime Organization). Any cost that might arise additionally for documents, reloading, returns etc. will be at your expense.

The safety data sheet can be downloaded from our website.







## Information on our microscope slides

Microscope slides for in vitro diagnostic applications (IVD) are manufactured acc. to ISO 8037-1 standard and designed for single use by professionals. The slides are used mainly for microscopic investigation of tissue sections and cells from suspensions, preparation of specimens and their archiving.

Marienfeld Superior microscope slides are well wettable and clean. They are manufactured to exact size and, therefore, well suitable for application in automatic machinery.

### Material:

Our microscope slides are made of soda lime glass of third hydrolytic class with thickness of approx. 1 mm. This glass fulfills all relevant optical requirements for light microscopy. Its composition and physical properties can be downloaded from our website as a technical data sheet.

### Surfaces:

Our slides are cleaned thoroughly by multi-stage processes without using any surfactants. Thus we accomplish ready for use, pre-cleaned, well wettable slides' surfaces. They preserve adhering cells and are well suited for smears of cell suspensions.

### Slides' edges:

All grinding and polishing processes are always carried out water-cooled. The supreme quality of our edges is unmatched.

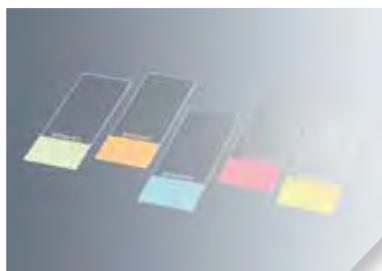
For different applications we offer different types of edges:

- cut edges are suitable for routine applications, when risks of infections do not exist and the economical aspect is of major importance
- finely ground edges with 90° shape. We apply water-cooled grinding processes which results in remarkably smooth and burr-free edges. When handling infectious materials we strongly recommend using this type of slides for increased safety.
- finely ground edges with 90° shape and 4 ground corners chamfered at 45°. These slides additionally reduce the risk of cuts. Some types of automatic machinery and printers require the clipped corners.

### Marking areas:

Our silky frosted marking area is suitable for a fine and contrasty writing with pencil. It has a width of approx. 20 mm by standard - other widths can be produced on request. Our twin-frosted slides (at one end, on both sides) can be used from either side without the necessity of searching the surface that bears the frosted area.

Our printed marking area in white colour or light pastel shades accepts notes printed by most types of printers and written with permanent markers (e.g. laboratory marker Cat. No. 6130603). The thin layer of the marking area prevents slides from sticking together and enables using them on automated systems.



**Quality control:**

All our microscope slides are subject to strict quality controls during the production processes and on the finished product, too.

**Packing:**

Our packing material is made from high quality primary material without recycled paper and without plastic coating. As a result, our boxes are resistant to abrasion and do not affect the quality of the microscope slides. After use, they can be disposed as waste paper.

Our folded boxes have an enlarged finger hole and the lid can be folded to the rear side which facilitates taking individual slides.

We supply microscope slides in small sales units of 2500 pieces (50 boxes of 50 pieces). This carton is reclosable, easy to handle and stack.

Its dimensions are 283 x 146 x 160 mm and the weight is approx. 12 kg.

A pallet can accommodate up to 200'000 slides (80 cartons each 2500 pieces). Its dimensions are 120 x 80 x 93 cm and the gross weight is approx. 1000 kg.

Besides our standard packing we offer the following special packing types:

- plastic boxes of 100 pieces: Our HistoBond® product line is supplied in these boxes with detachable cover. The carton contains 2000 pieces and the weight is approx. 11 kg.
- 50 boxes of 50 pieces are sealed in a watertight aluminium bag. The carton contains 2500 pieces and the weight is approx. 12.5 kg.

**Shelf life:**

Soda lime glass is subject to an aging process which affects the quality of the slides. It is recommended to avoid storing the slides for too long and to use the oldest stocks at first. Your early disposition of slides helps us to optimize our production planning and to supply the slides in time.

Use up the microscope slides until the recommended best before date. Use the oldest stock at first (first in – first out).

**Storage:**

- store microscope slides always in a dry place
- open the carton only when slides reached the room temperature
- make sure that temperature remains constant. When cooling down condensation may occur and penetrate between the slides letting them stick together.
- do not store slides close to solvents as this might turn their surfaces hydrophobic

A detailed instruction manual for slides can be downloaded from our website.



## Microscope slides, thickness approx. 1 mm

- made of soda lime glass of third hydrolytic class
- in compliance with DIN ISO 8037-1
- dimensions: approx. 76 x 26 mm
- thickness: approx. 1 mm (tol.  $\pm 0.05$  mm)
- frosted microscope slides: with a silky frosted marking area of approx. 20 mm on both sides
- pre-cleaned
- ready for use
- autoclavable
- in boxes of 50 pieces
- for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE-mark, recommended best before date and batch number for comprehensive information and traceability

Cat. No.	Type	Unit
<b>With cut edges</b>		
Standard packing: 50 boxes in a carton		
▶ 1000000	plain	2500
▶ 1000200	frosted	2500
Special packing: 50 boxes in a carton boxes are additionally sealed in a watertight aluminium bag		
1005000	plain	2500
1005200	frosted	2500

Cat. No.	Type	Unit
<b>With 90° ground edges</b>		
Standard packing: 50 boxes in a carton		
▶ 1000412	plain	2500
▶ 1000612	frosted	2500
Special packing: 50 boxes in a carton boxes are additionally sealed in a watertight aluminium bag		
1005412	plain	2500
1005612	frosted	2500



## Microscope slides, corners chamfered at 45°

- made of soda lime glass of third hydrolytic class
- in compliance with DIN ISO 8037-1
- dimensions: approx. 76 x 26 mm
- thickness: approx. 1 mm (tol.  $\pm 0.05$  mm)
- chamfered corners reduce the risk of injury
- frosted microscope slides: with a silky frosted marking area of approx. 20 mm on both sides
- especially suitable for application in automatic machinery
- pre-cleaned
- ready for use
- autoclavable
- in boxes of 50 pieces, 50 boxes in a carton
- for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE-mark, recommended best before date and batch number for comprehensive information and traceability

Cat. No.	Type	Unit
<b>With 90° ground edges, 4 ground corners, chamfered at 45° standard packing</b>		
1000812	plain	2500
▶ 1000912	frosted	2500



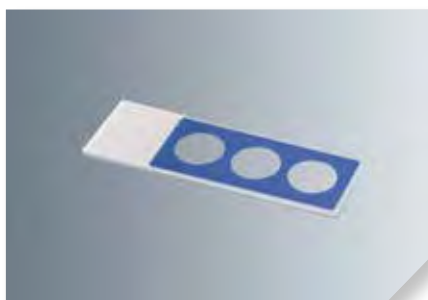
## Microscope slides with cavities

The cavities of our microscope slides are carefully ground and polished. This results in grooveless, immaculate surfaces.

- made of soda lime glass of third hydrolytic class
- with 90° ground edges
- dimensions: approx. 76 x 26 mm
- thickness: approx. 1.35 mm (tol.  $\pm 0.15$  mm)
- cavities with diameter approx. 15 to 18 mm and depth approx. 0.6 to 0.8 mm
- pre-cleaned
- ready for use
- autoclavable
- in boxes of 50 pieces
- for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE-mark, recommended best before date and batch number for comprehensive information and traceability

Cat. No.	Number of cavities	Multipack	Unit
▶ 1320002	1	42 x 50	2 x 50
▶ 1320102	2	42 x 50	2 x 50
▶ 1320202	3	42 x 50	2 x 50
1320000	1	special packing	10 x 10





## Microscope slides with reaction wells

These microscope slides with well wettable reaction wells are used for diagnosis. The epoxy resin colour masks feature remarkably high resistance against solvents and are available in black, blue, green, red and white colour.

- made of soda lime glass of third hydrolytic class
- in compliance with DIN ISO 8037-1
- dimensions: approx. 76 x 26 mm
- thickness: approx. 1 mm (tol.  $\pm 0.05$  mm)
- with 90° ground edges
- with silky frosted marking area of approx. 20 mm on one side
- pre-cleaned
- ready for use
- autoclavable
- in boxes of 50 pieces, 50 boxes in a carton (Multipack)
- for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE-mark, recommended best before date and batch number for comprehensive information and traceability

Cat. No.		Unit
<b>Blue mask</b>		
1216541	1 x 6 mm Ø	4 x 50
1215671	2 x 11 mm Ø	4 x 50
1216491	3 x 14 mm Ø	4 x 50
1216681	3 x 10 mm Ø	4 x 50
1215131	6 x 8 mm Ø	4 x 50
1216751	8 x 6 mm Ø numbered	4 x 50
1216071	8 x 9 mm Ø	4 x 50
1216651	10 x 5 mm Ø	4 x 50
1216691	10 x 6 mm Ø numbered	4 x 50
1216521	10 x 8 mm Ø numbered	4 x 50
1216551	10 x 8 mm Ø	4 x 50
1216821	10 x 7 mm Ø numbered clockwise	4 x 50
1216531	10 x 7 mm Ø	4 x 50
1216331	12 x 5 mm Ø numbered clockwise	4 x 50
For other printing colours please amend Cat. No. accordingly:		
xxxxxx0	black	4 x 50
xxxxxx2	white	4 x 50
xxxxxx3	green	4 x 50
xxxxxx4	red	4 x 50

On request, the slides are also available with adhesive reaction wells.

As a result of the variety of the available masks and due to the limited shelf life, microscope slides with reaction wells are produced upon receipt of your order only. This ensures that you receive slides which come straight from production. The minimum order quantity is 200 pieces. For technical reasons the quantity produced might differ from the quantity originally ordered and we kindly inform you that deliveries of excess and shortage quantities have to be accepted by the client.

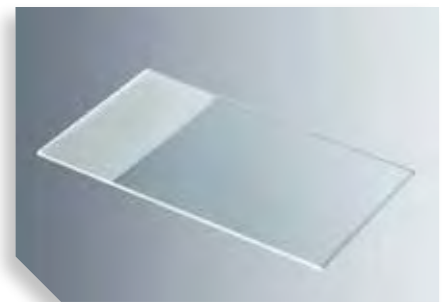
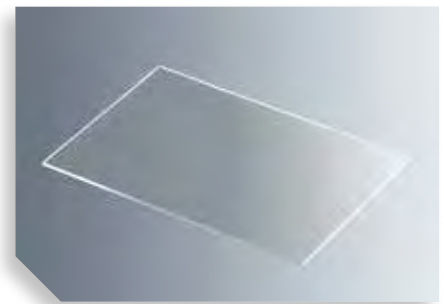
Customized masks according to your individual requirements can be manufactured for a minimum quantity of 200 pieces. One-off costs for creating a special mask will be charged separately.

## Microscope slides special size 76 x 52 mm

- made of soda lime glass of third hydrolytic class
- in compliance with DIN ISO 8037-1
- dimensions: approx. 76 x 52 mm
- thickness: approx. 1 mm (tol.  $\pm 0.05$  mm)
- frosted microscope slides: with a silky frosted marking area of approx. 20 mm on both sides
- pre-cleaned
- ready for use
- autoclavable
- in boxes of 50 pieces, 45 boxes in a carton
- for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE-mark, recommended best before date and batch number for comprehensive information and traceability

Cat. No.	Type	Unit
<b>With cut edges</b>		
▶ 1100020	plain	2250
1100220	frosted	2250
<b>With 90° ground edges</b>		
▶ 1100420	plain	2250
▶ 1100620	frosted	2250

For other sizes and thicknesses please send us your enquiry.



## Microscope slides special size 48 x 28 mm

Microscope slides with the dimensions 48x28 mm are designed for the preparation of geological and technical samples.

The preparation of thin section samples puts high requirements upon the slides. They are produced from low-tension raw material of an adequate thickness to avoid breakage and their edges are ground at 90° to reduce the risk of cuts.

- made of soda lime glass of third hydrolytic class
- dimensions: approx. 48 x 28 mm
- thickness: approx. 1.35 mm (tol.  $\pm 0.15$  mm)
- pre-cleaned
- ready for use
- in boxes of 50 pieces
- minimum order quantity: 1000 pieces

Cat. No.	Type	Multipack
<b>With 90° ground edges</b>		
▶ 1103400	crystal clear, without frosted end	5000
▶ 1123700	one surface completely frosted	5000



**New**



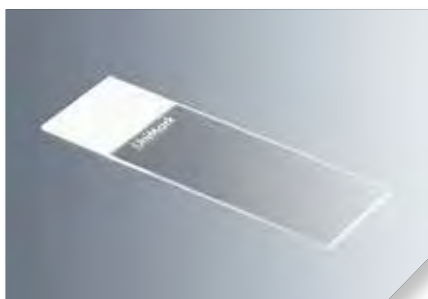


## UniMark® microscope slides

UniMark® slides have a printed area of approx. 20 mm which can take notes printed by most types of printers and can be written with permanent markers (e.g. laboratory marker Cat. No. 6130603). Different colours of the labelling area offer the possibility to distinct the preparations (by users, priorities, etc.).

Dark markings contrast especially well with the bright colours of the labelling areas and thus facilitate the identification of preparations. The thin layer of the marking area prevents the slides from sticking together and enables using them on automated systems.

- made of soda lime glass of third hydrolytic class
- in compliance with DIN ISO 8037-1
- dimensions: approx. 76 x 26 mm
- thickness: approx. 1 mm (tol.  $\pm 0.05$  mm)
- pre-cleaned and ready for use
- autoclavable
- in boxes of 50 pieces, 50 boxes in a carton
- for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE-mark, recommended best before date and batch number for comprehensive information and traceability



Cat. No.	Colour of marking area	Unit
<b>With cut edges, standard packing</b>		
▶ 0703010	white	2500
0703110	yellow	2500
0703210	green	2500
0703310	blue	2500
0703410	pink	2500
0703510	orange	2500
<b>With cut edges, 50 boxes in an aluminium bag</b>		
0703006	white	2500
0703106	yellow	2500
0703206	green	2500
0703306	blue	2500
0703406	pink	2500
0703506	orange	2500
<b>With 90° ground edges, standard packing</b>		
▶ 0704002	white	2500
0704102	yellow	2500
0704202	green	2500
0704302	blue	2500
0704402	pink	2500
0704502	orange	2500
<b>With 90° ground edges, 50 boxes in an aluminium bag</b>		
0704007	white	2500
0704107	yellow	2500
0704207	green	2500
0704307	blue	2500
0704407	pink	2500
0704507	orange	2500

## UniMark® microscope slides

Cat. No.	Colour of marking area	Unit
<b>With 90° ground edges, 4 ground corners chamfered at 45°, standard packing</b>		
0705002	white	2500
0705102	yellow	2500
0705202	green	2500
0705302	blue	2500
0705402	pink	2500
0705502	orange	2500
<b>With 90° ground edges, 4 ground corners chamfered at 45°, 50 boxes in an aluminium bag</b>		
0705007	white	2500
0705107	yellow	2500
0705207	green	2500
0705307	blue	2500
0705407	pink	2500
0705507	orange	2500



## UniMark® microscope slides with circles

For use in cytocentrifuges we offer our UniMark® slides also with white circles. These serve as a microscope help for an easier finding of the centrifuged cells.

These slides have a white printed area of approx. 20 mm which can take notes printed by most types of printers and can be written with permanent markers (e.g. laboratory marker Cat. No. 6130603).

Dark markings contrast especially well with the bright colours of the labelling areas and thus facilitate the identification of preparations.

- made of soda lime glass of third hydrolytic class
- in compliance with DIN ISO 8037-1
- dimensions: approx. 76 x 26 mm
- thickness: approx. 1 mm (tol.  $\pm 0.05$  mm)
- pre-cleaned and ready for use
- autoclavable
- in boxes of 50 pieces, 50 boxes in a carton
- for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE-mark, recommended best before date and batch number for comprehensive information and traceability

Cat. No.	Type	Unit
<b>With 90° ground edges, standard packing</b>		
0704022	with 1 circle of approx. 12 mm Ø int.	2500
0704032	with 2 circles of approx. 12 mm Ø int.	2500







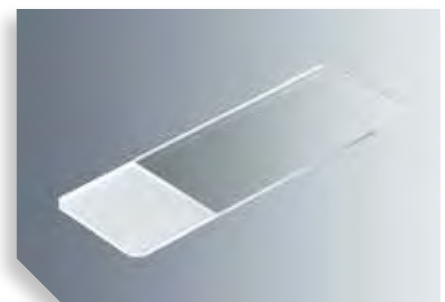
## HistoBond® adhesive microscope slides

HistoBond® microscope slides are suitable for immunohistochemistry and in situ hybridization. Both surfaces of these slides bond tissue sections adhesively with their positive charge. No additional adhesives are required to accomplish this task. The reliable anchoring prevents tissue sections to float during washing and cooking and, thereby, saves time and costs in the laboratory.

HistoBond® slides have a silky frosted marking area of approx. 20 mm on both sides on which notes can be made by pencils or labels.

- made of soda lime glass of third hydrolytic class
- in compliance with DIN ISO 8037-1
- dimensions: approx. 76 x 26 mm
- thickness: approx. 1 mm (tol.  $\pm 0.05$  mm)
- pre-cleaned
- ready for use
- autoclavable
- for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE-mark, recommended best before date and batch number for comprehensive information and traceability

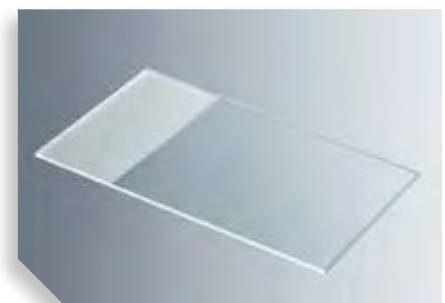
Cat. No.	Type	Unit
<b>With 90° ground edges</b>		
▶ 0810000	50 pieces in a cardboard box	2500
▶ 0810001	100 pieces in a plastic box	2000
<b>With 90° ground edges, 4 ground corners chamfered at 45°</b>		
0830000	50 pieces in a cardboard box	2500
0830001	100 pieces in a plastic box	2000



## HistoBond® SX adhesive microscope slides special size 76 x 51 mm

These slides have all properties of our HistoBond® line with silky frosted marking area of approx. 20 mm on both sides.

Cat. No.	Type	Unit
<b>Soda lime glass of third hydrolytic class</b>		
<b>With 90° ground edges,</b>		
approx. 76 x 51 mm, thickness approx. 1 mm (tol. $\pm 0.05$ mm)		
0810208	50 pieces in two-part box (cardboard)	2250





## HistoBond®+ adhesive microscope slides

HistoBond®+ microscope slides are suitable for immunohistochemistry and in situ hybridization. Both surfaces of these slides bond tissue sections adhesively with their positive charge. No additional adhesives are required. The reliable anchoring prevents tissue sections to float during washing and cooking and, thereby, saves time and costs in the laboratory.

HistoBond®+ slides have a printed area of approx. 20 mm which can take notes printed by most types of printers and can be written with permanent markers (like laboratory marker Cat. No. 6130603). Different colours of the labelling area offer the possibility to distinct the preparations (by users, priorities, etc.).

Dark markings contrast especially well with the bright colours of the labelling areas and thus facilitate the identification of preparations. The thin layer of the marking area prevents the slides from sticking together and enables using them on automated systems.

- made of soda-lime glass of third hydrolytic class
- meet the requirements of DIN ISO 8037-1
- dimensions: approx. 76 x 26 mm
- thickness: approx. 1 mm (tol.  $\pm 0.05$  mm)
- pre-cleaned and ready for use
- autoclavable
- in plastic boxes of 100 pieces, 20 boxes in a carton
- for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE-mark, recommended best before date and batch number for comprehensive information and traceability

Cat. No.	Colour of marking area	Unit
<b>With 90° ground edges</b>		
▶ 0810401	white	2000
0810411	yellow	2000
0810421	green	2000
0810431	blue	2000
0810441	pink	2000
0810451	orange	2000
<b>With 90° ground edges, 4 ground corners chamfered at 45°</b>		
0810701	white	2000
0810711	yellow	2000
0810721	green	2000
0810731	blue	2000
0810741	pink	2000
0810751	orange	2000

## HistoBond®+SX adhesive microscope slides special size 76 x 51 mm

These slides of special size have all properties of our HistoBond® line with printed marking area.

- made of soda lime glass of third hydrolytic class
- dimensions: approx. 76 x 51 mm
- thickness: approx. 1 mm (tol.  $\pm 0.05$  mm)
- with white marking area of approx. 20 mm on one side
- suitable for marking with permanent markers (like laboratory marker Cat. No. 6130603)
- pre-cleaned and ready for use
- autoclavable
- in two-part cardboard boxes of 50 pieces, 45 boxes in a carton
- for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE-mark, recommended best before date and batch number for comprehensive information and traceability



Cat. No.	Colour of marking area	Unit
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### With 90° ground edges

0810608	white	2250
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## HistoBond®+ adhesive slides with circles

For use in cytocentrifuges we offer our adhesive and positively charged HistoBond®+ slides with white rings. These serve as a microscope help to find the centrifuged cells more easily.

- made of soda lime glass of third hydrolytic class
- meet the requirements of DIN ISO 8037-1
- dimensions: approx. 76 x 26 mm
- thickness: approx. 1 mm (tol.  $\pm 0.05$  mm)
- with white marking area of approx. 20 mm on one side
- suitable for marking with various printer systems and can be written with permanent markers (like laboratory marker Cat. No. 6130603)
- pre-cleaned and ready for use
- autoclavable
- in plastic boxes of 100 pieces, 20 boxes in a carton
- for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE-mark, recommended best before date and batch number for comprehensive information and traceability



Cat. No.	Type	Unit
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### With 90° ground edges

0810461	with 1 circle of approx. 12 mm Ø int.	2000
0810471	with 2 circles of approx. 12 mm Ø int.	2000



## HistoBond®+S adhesive microscope slides

HistoBond®+S slides are suitable for immunohistochemistry and in-situ hybridization. They offer a considerably higher positive charge than the regular HistoBond®+ slides. This improves the adhesion of the tissue sections to the glass even under less favorable conditions, e.g. when using alkaline reagents.

HistoBond®+S slides have a printed area of approx. 20 mm which can take notes printed by most types of printers and can be written with permanent markers (e.g. laboratory marker Cat. No. 6130603). Different colours of the labelling area offer the possibility to distinct the preparations (by users, priorities, etc.).

Dark markings contrast especially well with the bright colours of the labelling areas and thus facilitate the identification of preparations. The thin layer of the marking area prevents slides from sticking together and enables using them on automated systems

- made of soda-lime glass of third hydrolytic class
- meet the requirements of DIN ISO 8037-1
- dimensions: approx. 76 x 26 mm
- thickness: approx. 1 mm (tol.  $\pm 0.05$  mm)
- pre-cleaned and ready for use
- autoclavable
- in plastic boxes of 100 pieces, 20 boxes in a carton
- for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE-mark, recommended best before date and batch number for comprehensive information and traceability

Cat. No.	Colour of marking area	Unit
<b>With 90° ground edges</b>		
▶ 0810501	white	2000
0810511	yellow	2000
0810521	green	2000
0810531	blue	2000
0810541	pink	2000
0810551	orange	2000
<b>With 90° ground edges, 4 ground corners chamfered at 45°</b>		
0810801	white	2000
0810811	yellow	2000
0810821	green	2000
0810831	blue	2000
0810841	pink	2000
0810851	orange	2000



## HistoBond®+M adhesive slides

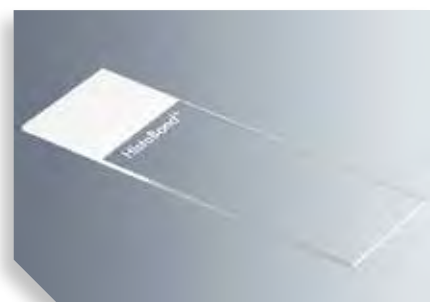
HistoBond®+M slides are suitable for immunohistochemistry and in-situ hybridization. Tissue sections anchor covalently on the glass surface. Even non-polar tissue, e.g. very fatty one that does not cause a charge difference between the adhesive layer and the section, reliably bonds chemically to the glass.

HistoBond®+M slides have an imprinted frosted end of approx. 20 mm, which can be printed with various printer systems and labelled with permanent markers (like laboratory marker Cat. No. 6130603). Dark markings contrast especially well with the bright colours of the labelling areas and thus facilitate the identification of preparations.

The thin layer of the labelling area prevents the slides from sticking together which facilitates the use of these slides on automated machinery.

- made of soda-lime glass of third hydrolytic class
- meet the requirements of DIN ISO 8037-1
- dimensions: approx. 76 x 26 mm
- thickness: approx. 1 mm (tol.  $\pm 0.05$  mm)
- pre-cleaned and ready for use
- autoclavable
- in plastic boxes of 100 pieces, 20 boxes in a carton
- for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE-mark, recommended best before date and batch number for comprehensive information and traceability

Cat. No.	Colour of marking area	Unit
<b>With 90° ground edges</b>		
0811601	white	2000
<b>With 90° ground edges, 4 ground corners chamfered at 45°</b>		
0811701	white	2000



## Laboratory markers

The multi-purpose laboratory marker writes on almost any surfaces of glass, plastics and paper. With this permanent marker you can label, for example, microscope slides, embedding cassettes, Petri dishes and CDs.

- the ultra fine tip and the contrasty black colour allow clearly legible writing
- writes immediately (no priming required)
- water-resistant
- resists most laboratory chemicals
- odourless
- non-toxic
- without solvents, aqueous-based
- does not readily dry out and lasts a long time
- with holding clip to attach it to your pocket or writing board
- 12 pieces in a box

Cat. No.	Multipack	Unit
▶ 6130603	120 x 12	12



### 3D sample holders for light sheet microscopy

The sample holders were developed together with researchers for light sheet microscopy on cleared tissue pieces. They are suitable for use with all common methods, i.e. with aqueous and solvent-based embedding media.

In light sheet microscopy, tissue samples are illuminated through the lateral light entry walls using a thin laser light sheet. The sample is traversed vertically with respect to the light sheet to scan the sample in its entirety. The fluorescence of the individual sample planes is recorded with a camera from above and reconstructed in a 3D display software.

Two types of sample holders are available for tissue samples of different sizes. The holders are made of optically high quality and chemically resistant plastic with a glass-like refractive index of approx. 1.5. Both reservoirs are flared at the top to facilitate filling and to move the marginal menisci outside of the viewing area. The latter enables distortion-free imaging through the liquid surface when using non-immersible dry lenses. The extended rim supports safe handling of the sample containers and offers an area for writing or a sticker for sample identification.

The sample holders are stackable.



Both containers have been confirmed to be chemically resistant to the following organic clearing agents for several days:

- methyl salicylate [oil of wintergreen]
- dibenzyl ether
- 1 part benzyl alcohol:  
2 parts benzyl benzoate  
(= BABB, Murray's clear)
- 4 parts BABB : 1 part diphenyl ether
- ethyl cinnamate
- 2,2'-thiodiethanol [TDE]



Cat. No.	Ext. dimensions approx.	Unit
5241010	55 x 31 x 35 mm	40
Volume		
(filled below the overflow area)	approx. 9 ml	
Height of the overflow space:	approx. 10 mm	
Inclination of the light entry wall:	approx. 1.9° from the vertical to inclined, outwards at the top	

This container offers a usable space for samples up to 40 x 15 x 10 mm. Its shape optimizes the usable area for exposure and image acquisition with large dry lenses while offering low consumption of the refractive index-matching medium. The container is designed for sample sizes that, after clearing, can be completely recorded with one-sided illumination, such as mouse brains or other comparably large tissues. One-sided illumination occurs through the light entrance wall.

Cat. No.	Ext. dimensions approx.	Unit
5241011	55 x 55 x 38 mm	10
Volume		
(filled below the overflow area)	approx. 47 ml	
Height of the overflow space:	approx. 10 mm	
Inclination of the 4 light entry walls:	approx. 1.9° from the vertical to inclined, outwards at the top	

This larger container has a square footprint and sports 4 numbered light entrance walls that enclose a sample space of approx. 40 x 40 x 25 mm. In addition, the larger opening accommodates immersion lenses and can be used with simultaneous dual-sided illumination.

## Adhesion slides

Without losing their antigenicity or ability to function viable cells of suspensions of any body fluid can be anchored to the adhesion slide and investigated for surface antigens, intracellular antigens, cytochemical functions and morphological properties.

The cells adhere so firmly to the slide that they may be washed without coming off. The extremely hydrophobic mask prevents the cells or reagents from spreading into other wells even if the slide is shaken on a Vortex mixer.

Adhesion slide stops losses of cells, saves time and avoids unnecessary steps of centrifugation.

Using a minimum of time and material will result in durable preparations of excellent quality. Up to twelve different tests with different antibodies would be possible on one single slide.

- made of soda lime glass of third hydrolytic class
- in compliance with DIN ISO 8037-1
- dimensions: approx. 76 x 26 mm
- thickness: approx. 1 mm (tol.  $\pm 0.05$  mm)
- with 90° ground edges
- with clipped corners
- with silky frosted marking area of approx. 15 mm on one side
- in storing boxes of 50 or 100 pieces
- not registered for in vitro diagnostic use within the EU

Cat. No.	Type	Unit
0900000	12 x 5 mm Ø	50
0900100	12 x 5 mm Ø	100
0901000	3 x 15 mm Ø	50
0901100	3 x 15 mm Ø	100
0906000	3 square wells 15 x 15 and 4 register marks	50
0906100	3 square wells 15 x 15 and 4 register marks	100

Instructions for PAP and APAAP slide assay can be downloaded from our website.

### Preparations on the adhesion slide

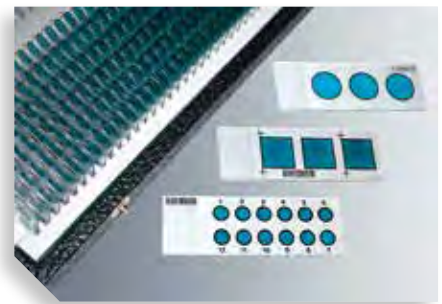
#### (1) Hematoxylin staining

(2) Immunocytologic double staining for CD36 (dark blue ring indicating membrane staining) and Interleukin 8 (brown dots within the cells). Note the hairy appearance of the dendritic cell membrane, which is uniquely preserved after fixation with glutaraldehyde.

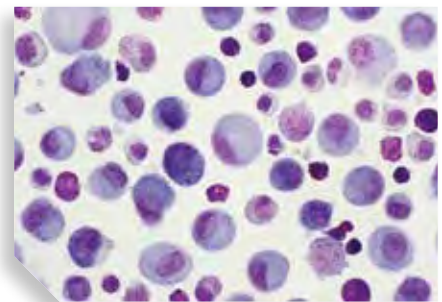
(Immunostaining with sequential ABC technique using 4-CN as substrate for CD36 development and DAB for IL-8; D. Behringer, Zellmarkerlabor, University Hospital of Freiburg)

(3) D20 reactive malignant B-lymphocytes isolated from the cerebrospinal fluid of a patient with B-cell lymphoma thus indicating meningeal spread of the disease. Note the typical hairy appearance of these cells.

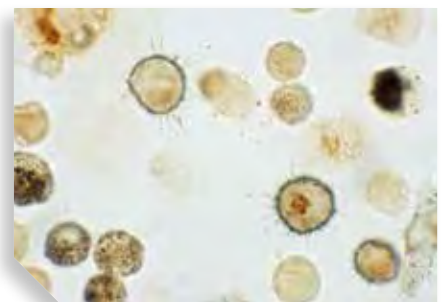
(Immunostaining with immunoperoxidase technique using DAB for CD20 development; fixation: 0.04% glutaraldehyde; D. Behringer, Zellmarkerlabor, University Hospital of Freiburg)



Dendritic cells cultured in vitro and after harvesting attached to Superior slides.



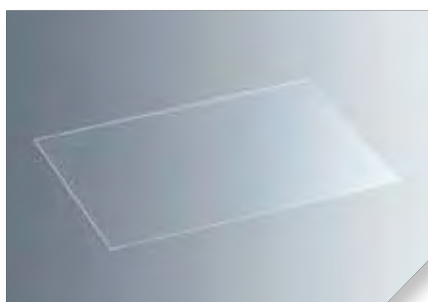
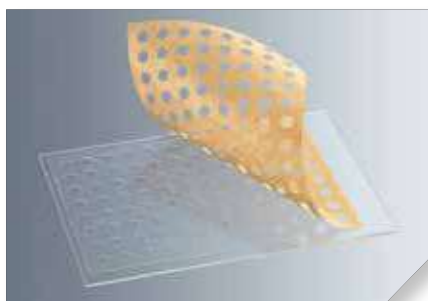
(1)



(2)



(3)



## LCP (Lipidic cubic phase) sandwich sets

The LCP sandwich set consists of a base glass slide and an optimized cover slip. This product has been developed jointly with the renowned Scripps Research Institute in La Jolla, California, USA.

### Application

- optimized for the crystallographic study of membrane proteins. References: V. Cherezov, J. Clogston, M. Z. Papiz, M. Caffrey (2006) Room to Move: Crystallizing Membrane Proteins in Swollen Lipidic Mesophases. *Journal of Molecular Biology* 357, 1605 – 1618
- developed at the NIH Roadmap Center for membrane protein research (<http://jcimpt.scripps.edu>) and routinely used in GPCR structural biology. References: V. Cherezov, D. M. Rosenbaum, M. A. Hanson, S. G. Rasmussen, F. S. Thian, T. S. Kobilka, H. J. Choi, P. Kuhn, W. I. Weis, B. K. Kobilka and R. C. Stevens (2007) High-resolution crystal structure of an engineered human beta2-adrenergic G protein-coupled receptor. *Science* 318: 1258-65
- other applications using LCP membrane protein structure based in drug design

### Bottom slide

- dimensions: approx. 127.8 x 85.5 mm, thickness approx. 1 mm
- with superhydrophobic glass surface
- covered with a 0.2 mm high spacer. This spacer has 96 recesses of 5 mm diameter. They are consistent with the SBS format for robotic handling. The spacer has an adhesive surface to which the hydrophobic coverslip attaches. The crystallization drops are, hence, sealed in these reaction chambers.
- in boxes of 20 pieces

### Cover slip

- dimensions: approx. 112 x 77 mm, thickness No. 1.5 (0.16 to 0.19 mm)
- with superhydrophobic glass surface
- optimized for bright field, UV and fluorescent microscopy
- in boxes of 20 pieces

Cat. No.		Unit
▶ 0890003	LCP sandwich set: Bottom slide and cover slip High spacer approx. 0.2 mm	20



## FRAP (Fluorescent recovery after photobleaching) sandwich sets

The FRAP sandwich set consists of a base glass slide and an optimized cover slip. This product has been developed jointly with the renowned Scripps Research Institute in La Jolla, California, USA.

### Application

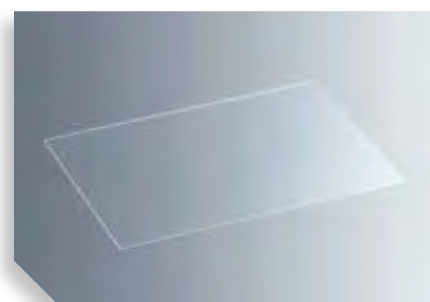
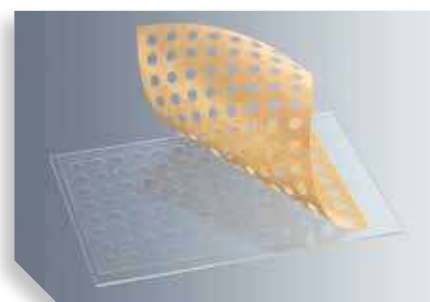
- for development of an automated system of high throughput LCP-FRAP to guide the crystallization of membrane proteins in lipid mesophases. References: F. Xu, W. Liu, M. A. Hanson, R. C. Stevens and V. Cherezov (2011) Development of an automated high throughput LCP-FRAP assay to guide membrane protein crystallization in lipid mesophases *Cryst Growth Des* 11: 1193-1201
- developed at the NIH Roadmap Center for membrane protein research (<http://jcimpt.scripps.edu>) and routinely used in GPCR structural biology. References: V. Cherezov, D. M. Rosenbaum, M. A. Hanson, S. G. Rasmussen, F. S. Thian, T. S. Kobilka, H. J. Choi, P. Kuhn, W. I. Weis, B. K. Kobilka and R. C. Stevens (2007) High-resolution crystal structure of an engineered human beta2-adrenergic G protein-coupled receptor. *Science* 318: 1258-65

### Bottom slide

- dimensions: approx. 127.8 x 85.5 mm, thickness approx. 1 mm
- with superhydrophobic glass surface
- covered with a 0.06 mm high spacer. This spacer has 96 recesses of 7 mm diameter. They are consistent with the SBS format for robotic handling. The spacer has an adhesive surface to which the hydrophobic coverslip attaches. The crystallization drops are, hence, sealed in these reaction chambers.
- in boxes of 20 pieces

### Cover slip

- dimensions: approx. 112 x 77 mm, thickness No. 1.5 (0.16 to 0.19 mm)
- with superhydrophobic glass surface
- optimized for bright field, UV and fluorescent microscopy
- in boxes of 20 pieces



Cat. No.		Unit
0890005	FRAP sandwich set: Bottom slide and cover slip High spacer approx. 0.06 mm	20



## Glass plates acc. to Boerner

- made of pressed glass
- with optically polished, pressed and numbered cavities
- cavities: approx. 14 mm diameter, approx. 2 mm depth

Cat. No.	Cavities	Dimensions	Unit
▶ 1800001	10	107 x 57 x 4 mm	6



## Glass plates

- made of pressed glass
- with bevelled edges
- surface mat
- cavities: approx. 16 mm diameter, approx. 2 mm depth
- 10 pieces in a carton

Cat. No.	Cavities	Dimensions	Unit
▶ 1800003	12	79 x 63 x 4 mm	15



## Microfloculation plates

- made of pressed glass
- with optically polished, pressed and numbered cavities
- cavities: approx. 15 mm diameter, approx. 1.5 mm depth
- with overflow grooves

Cat. No.	Cavities	Dimensions	Unit
▶ 1800002	12	89 x 57 x 4.5 mm	12



## Writing diamonds

- for permanent labelling of microscope slides and other glass products
- engraved information on glass is resistant to humidity, heat, cold and solvents
- indelibly engraved markings comply particularly with the guidelines of GLP (good laboratory practices)
- with wooden handle

Cat. No.	Multipack
▶ 6120300	10

## Glass plates with cavities

- made of float glass
- with bevelled edges
- with clipped corners
- with ground and polished cavities

Cat. No.	Cavities	Dimensions	Unit
<b>Cavities: approx. 20 to 22 mm diameter, approx. 2 mm depth</b>			
1406405	6	130 x 100 x 6 mm	1
1406506	12	130 x 100 x 6 mm	1
1406708	24	130 x 160 x 6 mm	1
<b>Cavities: approx. 24 mm diameter, approx. 3 mm depth</b>			
1406703	24	130 x 200 x 6 mm	1
1406804	30	170 x 200 x 6 mm	1

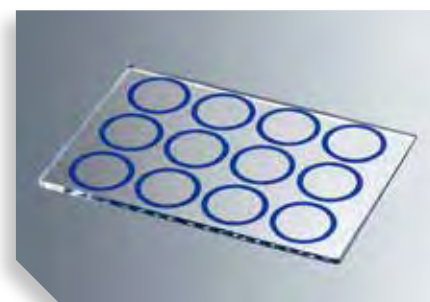
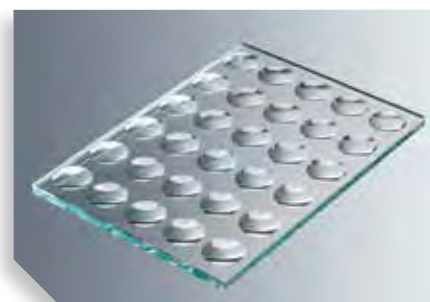
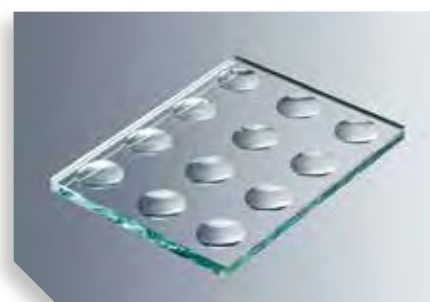
- made of float glass
- with bevelled edges
- with mat surface
- with ground and polished cavities
- cavities: approx. 16 mm diameter, approx. 1.5 mm depth

Cat. No.	Cavities	Dimensions	Unit
1405500	12	76 x 60 x 4 mm	5

## Glass plates with printed rings

- made of soda lime glass of third hydrolytic class
- with 12 blue printed rings with diameter approx. 13 to 14 mm
- with bevelled edges
- with clipped corners
- pre-cleaned
- ready for use
- autoclavable
- in boxes of 10 pieces

Cat. No.	Rings	Dimensions	Unit
1613100	12	76 x 52 x 2 mm	10





## Staining jars

This staining set consists of glass dish, staining tray and wire handle.

- dish, cover and staining tray are made of heavy-walled soda lime glass (pressed glass)
- dimensions glass dish with cover: 105 x 85 x 70 mm
- staining tray offers space for up to 10 microscope slides (approx. 76 x 26 mm)

Cat. No.		Unit
▶ 4200004	glass dish with cover	10
▶ 4200005	staining tray	10
▶ 6611000	wire handle for staining tray	10



## Staining jars

This staining set consists of glass dish and staining tray made of stainless steel.

- dish and cover are made of heavy-walled soda lime glass (pressed glass)
- dimensions glass dish with cover: 105 x 85 x 70 mm
- staining tray offers space for up to 10 microscope slides (approx. 76 x 26 mm to approx. 76 x 52 mm)

Cat. No.		Unit
▶ 4200004	glass dish with cover	10
▶ 6618000	staining tray, made of stainless steel	10

Soda lime glass has got a relatively high coefficient of expansion. Due to their material the glass staining articles must not be exposed to rapid temperature changes. They have to be heated slowly and also cooled down slowly in order to avoid cracks caused by tensions.



## Staining jars Hausser/Gedigk

This staining set consists of glass dish and staining tray made of stainless steel.

- dish is made of heavy-walled soda lime glass (pressed glass)
- cover is made of soda lime glass, with frosted rim of 10 mm width
- staining tray offers space for up to 60 microscope slides (approx. 76 x 26 mm)

Cat. No.		Dimensions	Multipack
▶ 4200012	glass dish	130 x 93 x 121 mm	12
▶ 4200013	cover	130 x 93 x 3 mm	
▶ 6618005	staining tray		



## Staining jars acc. to Schiefferdecker

- made of heavy-walled soda lime glass (pressed glass)
- with cover
- dimensions with cover approx. 91 x 74 x 49 mm
- offers space for up to 20 microscope slides (approx. 76 x 26 mm) (10 pairs of slides placed adjacently back-to-back)
- volume approx. 95 ml

Cat. No.	Unit
▶ 4200002	10



## Staining jars acc. to Hellendahl

- made of heavy-walled soda lime glass (pressed glass)
- with cover
- offers space for up to 8 microscope slides (approx. 76 x 26 mm)

Cat. No.	Type	Unit
▶ 4200000	with enlargement	10
▶ 4200001	without enlargement	10



## Staining jars acc. to Coplin

- made of heavy-walled soda lime glass (pressed glass)
- with cover
- offers space for up to 10 microscope slides (approx. 76 x 26 mm)

Cat. No.	Unit
▶ 4200003	10



## Staining jars acc. to Coplin with screw cap

- made of heavy-walled soda lime glass (pressed glass)
- offers space for up to 10 microscope slides (approx. 76 x 26 mm)
- with screw cap made of black urea resin 131.5 with PE foam insert 1 mm, thread size GPI 48-500 (Cat. No. 5458752)

Cat. No.		Unit
4200030	tall shape	6
4200031	low shape	6





## Slide mailers

Slide mailers are useful for transport, archiving and staining of microscope slides.

- made of polyethylene (PE-HD)
- break-resistant
- oval shape
- thanks to guide rails inside slides can be accommodated and transported without contacting each other
- with secure closure
- offers space for up to 2 microscope slides (approx. 76 x 26 mm)

Cat. No.	Multipack	Unit
▶ 5600065	5 x 100	100



- made of polypropylene
- break-resistant
- cube-shaped
- thanks to guide rails inside the slides can be accommodated and transported without contacting each other
- with secure closure
- offers space for up to 5 microscope slides (approx. 76 x 26 mm)

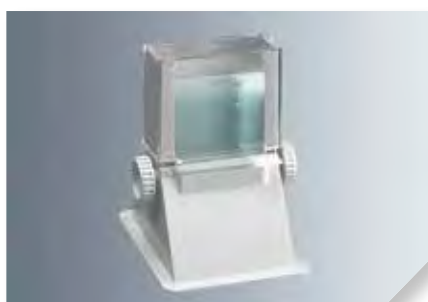
Cat. No.	Unit
▶ 5610067	100



**New**

- made of polypropylene
- with screw cap
- offers space for up to 10 slides (approx. 76 x 26 mm)

Cat. No.	Unit
▶ 5600004	10



## Dispensers for microscope slides

Individual microscope slides are pushed out of the dispenser by turning the knob. The dispenser facilitates easy and convenient taking of slides.

- made of grey ABS
- transparent housing allows the monitoring of the filling level
- offers space for up to 50 microscope slides (approx. 76 x 26 mm)

Cat. N°	Dimensions	Unit
5660040	100 x 120 x 140 mm	1

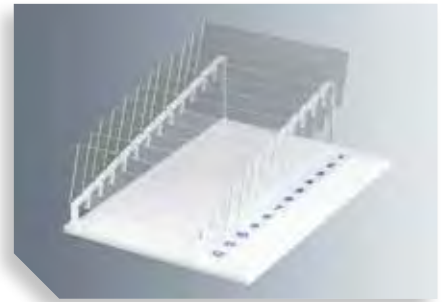
## Racks for microscope slides

This rack is useful for preparation and drying of microscope slides.

- made of plexiglass
- with numbered slots and marking area
- offers space for up to 12 microscope slides (approx. 76 x 26 mm)

Cat. No.

▶ 5680007



## Drying benches for microscope slides

- for up to 48 microscope slides 76 x 26 mm
- temperature adjustable from 30 to 115 °C
- with removable support
- housing made of lacquered aluminium
- slides can be placed both on the bench and the support
- dimensions: 395 x 186 x 105 mm
- with Schuko plug
- with CE-mark

Cat. No.

Electric mains

Unit

7204231

230 V / 50-60 Hz

1



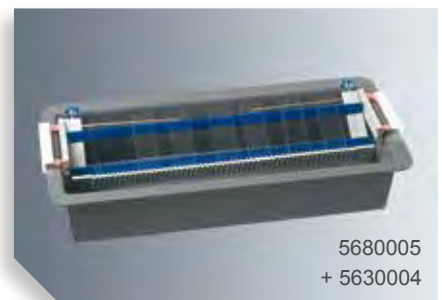
## Staining bridges

- made of PVC
- adjustable to different trays
- with 2 holding clamps
- usable width approx. 360 mm
- both grips can be extended by each 115 mm
- with inclination and horizontal fastening
- when used with our tray Cat. No. 5630004 a safety pin offers secure positioning when the bridge is inclined. Additionally, a second safety pin allows the fastening of the bridge in a horizontal position.

Cat. No.

Unit

▶ 5680005 offers space for up to 13 microscope slides 76 x 26 mm 1



5680005  
+ 5630004

## Staining trays

- for use with staining bridges
- made of dark grey PVC
- inner dimension: 376 x 163 x 72 mm
- outer dimension: 414 x 206 x 75 mm

Cat. No.

Multipack

▶ 5630004

5



## Storage boxes for microscope slides 76 x 26 mm

- made of polypropylene
- stackable
- with 2 securely closing clasps
- with index card enclosed
- with numbered slots. The numbers are still readable even when the box is filled.
- with plastic slots designed for easy taking out of the slides by means of inclination

Cat. No.	For slides	Dimensions	Colour	Unit
▶ 5610022	100	264 x 192 x 36 mm	black	10



- made of polystyrene
- with dust-tight securely snap-on lid
- with index card enclosed
- with numbered slots inside

Cat. No.	For slides	Dimensions	Colour	Unit
5620020	25	97 x 83 x 39 mm	grey	4
▶ 5620023	50	170 x 82 x 30 mm	white	



- made of polystyrene
- standard colour: white
- available also in blue, green, yellow or red colour (minimum order quantity 200 pieces)
- with dust-tight hinged lid
- with plastic closure at front side
- with index card enclosed
- with numbered slots inside
- multipack: 60 pieces in a carton

Cat. No.	For slides	Dimensions	Colour
▶ 5620024	100	210 x 164 x 30 mm	white



- with wooden frame
- cover and base are made of cardboard
- coated with black paper
- with hinges and securely closing clasps made of metal
- with index card in cover
- with numbered slots. The numbers are still readable even when the box is filled.
- with plastic slots designed for easy taking out of the slides by means of inclination

Cat. No.	For slides	Dimensions	Unit
6003005	12	100 x 85 x 35 mm	10
▶ 6003008	25	150 x 100 x 35 mm	10
▶ 6003009	50	270 x 100 x 35 mm	10
▶ 6003010	100	270 x 190 x 35 mm	10

▶ This arrow indicates products that are usually available on short notice.



## Preparation pasteboards "Munich"

- made of cardboard
- base with 3 compartments approx. 78 x 220 mm each for 8 slides (approx. 76 x 26 mm)
- with hinged cover with 3 windows each approx. 56 x 200 mm
- offers space for up to 24 microscope slides (approx. 76 x 26 mm)

Cat. No.	Dimensions	Unit
▶ 6001313	260 x 235 x 8 mm	10



## Preparation pasteboards for microscope slides 76 x 26 mm

- made of cardboard
- with cover
- standard type
- thanks to its recessed grips microscope slides can be easily taken out

Cat. No.	For slides	Dimensions	Unit
▶ 6001000	2	100 x 80 x 6 mm	50



- made of cardboard
- with cover
- with reinforced textile tape in the fold capable to endure numerous openings and closings
- with index card on the outside
- thanks to its recessed grips microscope slides can be easily taken out

Cat. No.	For slides	Dimensions	Unit
6002000	2	100 x 80 x 6 mm	50
6002002	5	185 x 100 x 6 mm	10
6002003	6	210 x 100 x 6 mm	10
▶ 6002004	10	340 x 103 x 6 mm	20
▶ 6002007	20	340 x 205 x 6 mm	10



## Preparation tables for microscope slides 76 x 26 mm

- made of cardboard
- without cover
- thanks to its recessed grips microscope slides can be easily taken out
- with numbering

Cat. No.	For slides	Dimensions	Unit
▶ 6000007	20	340 x 205 x 5 mm	20





## Spatula Drigalski

The spatula Drigalski facilitates uniform distribution and plating of bacteria material on solid nutrient media.

- made of glass
- dimensions: approx. 145 x 50 x 5 mm

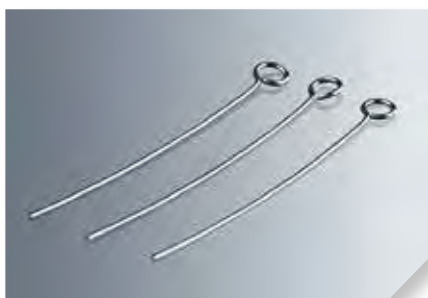
Cat. No.	Multipack	Unit
▶ 1800024	10 x 10	10



## Needle holders acc. to Kolle

- made of nickel-plated brass
- length: approx. 255 mm
- with handle made of plastic

Cat. No.	Multipack	Unit
▶ 6630000	50 x 10	10



## Inoculation loops for needle holders acc. to Kolle

- made of stainless steel wire
- length: approx. 35 mm
- diameter of loop: approx. 5 mm
- diameter of wire: approx. 0.5 mm
- 100 pieces in a poly bag

Cat. No.	Capacity of loop	Unit
6624000	approx. 7 µl	100



## Inoculation loops

For inoculation of nutrient media. Its high flexibility permits gentle streaking without damaging the surface of a nutrient medium.

- made of polystyrene
- with loop at one end and needle at the other end
- gamma sterilized (SAL 10-6)
- for single use
- 20 pieces in a bag, 50 bags in a carton

Cat. No.	Capacity of loop	Colour	Multipack	Unit
5203000	approx. 1 µl	nature	8 x 1000	1000
5203001	approx. 10 µl	blue	8 x 1000	1000

## Petri dishes, glass

- made of soda lime glass of third hydrolytic class
- free of cadmium and lead
- bottom part and cover lid are both very flat. This evenness facilitates the uniform spreading of nutrient media and liquids. Optical distortions are minimized when looking at our Petri dishes' bottoms.
- sterilisable up to 121 °C
- for multiple use



Cat. No.	Ø Cover ext. x height bottom part	Unit
▶ 3400300	60 x 15 mm	144
▶ 3400600	80 x 15 mm	144
▶ 3401000	100 x 15 mm	72
▶ 3401100	100 x 20 mm	72
▶ 3401200	120 x 20 mm	72
▶ 3401300	150 x 25 mm	72
▶ 3401500	180 x 30 mm	10
▶ 3401600	200 x 30 mm	10

## Petri dishes, plastic

- made of polystyrene
- crystal clear material with excellent transparency
- dimensions: approx. 94 x 16 mm
- machine-sterile, manufactured under conditions with low bacterial count
- gamma sterilisable
- heat-resistant up to approx. 80 °C
- for single use
- well stackable and inherently stable
- well suited for the filling by fully or semi-automatic machines
- 20 pieces in a poly bag, 24 bags in a carton



Cat. No.	Type	Unit
▶ 5200700	with vents in the cover	480
▶ 5200701	without vents	480

## Embedding cassettes

In histology, tissue sections are placed in embedding cassettes to be dehydrated and impregnated by Paraffin.

- made of high-quality, technical plastic (POM)
- resistant against the solvents usually used in laboratories
- different colours offer the possibility of colour coding (for example for different users, priorities, etc.)
- with one 45° inclined and 2 vertical marking areas
- the roughness of the marking areas is optimized to allow labelling by different systems: pencil, permanent markers (like Marienfeld Superior laboratory marker Cat. No. 6130603), inkjet or laser printers
- suitable for all common clamps
- ready for use. There is no need to break the lids off the cassettes' bases. Upper and base parts can also be supplied separated on demand if ordered in large quantities. Thus all types are also available for printing on cassette printers.
- the hinge of our cassettes prevents the cassettes from unintended opening – even when they fall down accidentally. Furthermore, our cassettes can be repeatedly opened and securely closed again.
- for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR) with CE-mark and batch number for comprehensive information and traceability
- without lid
- with accurately fitting neeps at the back to fasten standardised stainless steel lids
- entirely perforated bases increase the adhesion of paraffin blocks to the cassettes
- 500 pieces in a bag, 20 bags in a carton
- minimum quantity: 1.000 pieces each type and colour



Cat. No.	Colour	Multipack
<b>Standard</b> perforation: 2.3 mm diameter		
5252500	light blue	10'000
5252501	yellow	10'000
5252502	light green	10'000
5252503	grey	10'000
5252504	white	10'000
5252507	pink	10'000
5252508	beige	10'000
5252509	orange	10'000



## Embedding cassettes

- base and upper parts are connected by a hinge and supplied assembled
- 500 pieces in a box, 12 boxes in a carton
- minimum quantity: 1.000 pieces each type and colour

Cat. No.	Colour	Multipack
<b>Universal</b> perforation: 1 x 5 mm		
5253000	light blue	6000
5253001	yellow	6000
5253002	light green	6000
5253003	grey	6000
5253004	white	6000
5253007	pink	6000
5253008	beige	6000
5253009	orange	6000

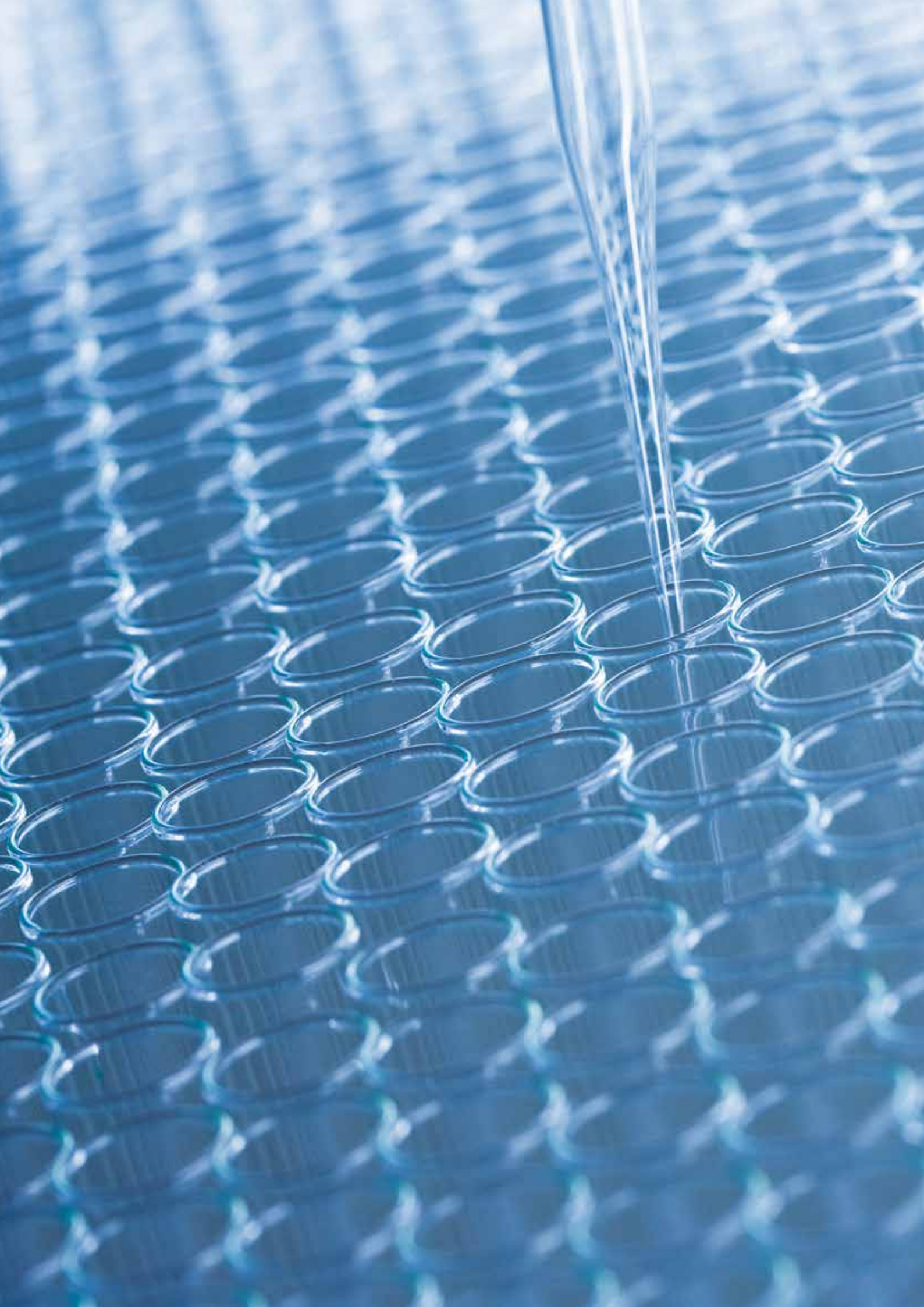


Cat. No.	Colour	Multipack
<b>Biopsy</b> perforation: 1 x 1 mm		
5252600	light blue	6000
5252601	yellow	6000
5252602	light green	6000
5252603	grey	6000
5252604	white	6000
5252607	pink	6000
5252608	beige	6000
5252609	orange	6000



Cat. No.	Colour	Multipack
<b>BioNet</b> perforation: 0.35 x 0.35 mm		
It is not necessary to insert pads, because no tissue sections will be lost. This saves time and money.		
5253100	light blue	6000
5253101	yellow	6000
5253102	light green	6000
5253103	grey	6000
5253104	white	6000
5253107	pink	6000
5253108	beige	6000
5253109	orange	6000







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## Counting grids

The types of counting chambers differ in counting grids and the depths of the chambers. Orthogonal lines form grids which become visible by magnifying them with a microscope.

### Neubauer-improved

The Neubauer-improved counting chamber has become the most popular one.

Its standard depth is 0.1 mm. The grid consists of 3 x 3 large squares with areas of 1 mm<sup>2</sup> each. The large square in the center is subdivided into 5 x 5 group squares with edges of 0.2 mm length each. These group squares are again subdivided into sixteen small squares of an area of each 0.05 mm x 0.05 mm = 0.0025 mm<sup>2</sup>.

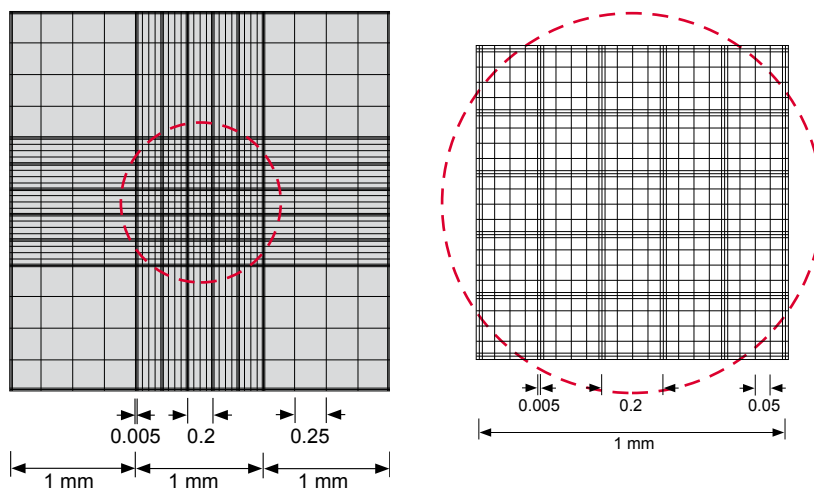
The lines limiting the large squares and the group squares are threefold with the central line as the actual dimension lines. The inner and outer auxiliary lines facilitate counting. They assist determining whether cells near or on the border lines are to be counted as within the area or omitted as outside of the counting area.

As the counting chamber comes with squares of different sizes it can be used for counting different types of cells. E.g. leucocytes are counted in the 4 large squares at the corners of the grid and for counting erythrocytes at least 5 group squares are normally used.

#### Dark line:

The grids of counting chambers with dark lines are engraved into the glass surface of the base of the chamber. When looking through a microscope these lines appear to be dark.

### Neubauer-improved with dark lines

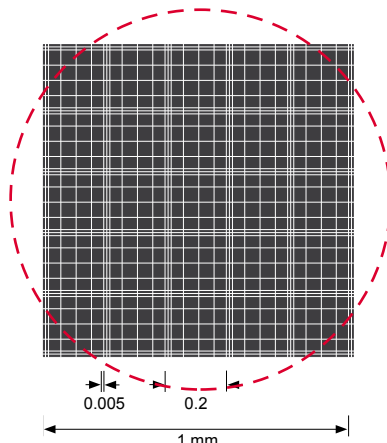
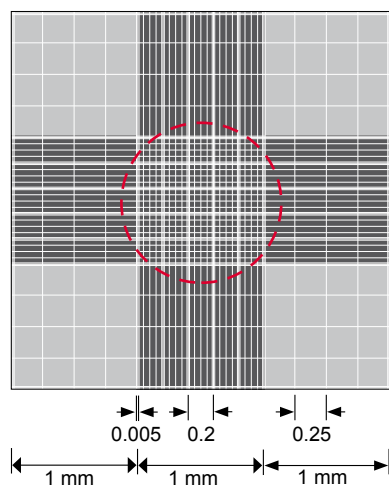


Depth = 0.1 mm

	□	mm x mm / 1 □	mm <sup>2</sup> / 1 □	mm <sup>3</sup> = µl
Total net ruling	1	3 x 3	9	0.9
Large squares per grid	9	1 x 1	1	0.1
Group squares per large square	25	0.2 x 0.2	0.04	0.004
Small squares per group square	16	0.05 x 0.05	0.0025	0.00025



## Neubauer-improved with bright lines

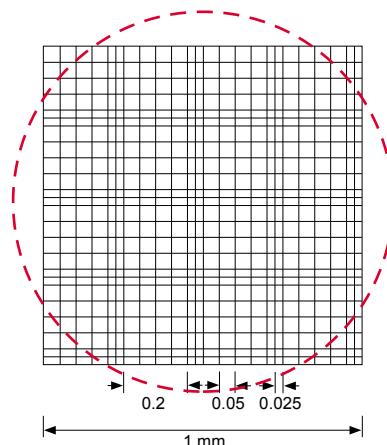
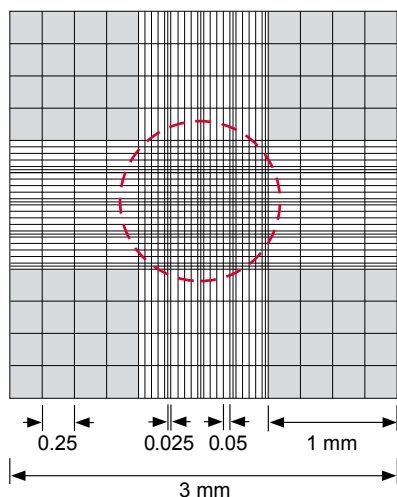
**Bright line:**

The grids of counting chambers with bright lines are engraved into a thin, vapour-deposited metal film. The bright lines contrast well with the darker, metallic background which facilitates the evaluation.

Depth = 0.1 mm

	□	mm x mm / 1 □	mm <sup>2</sup> / 1 □	mm <sup>3</sup> = µl
Total net ruling	1	3 x 3	9	0.9
Large squares per grid	9	1 x 1	1	0.1
Group squares per large square	25	0.2 x 0.2	0.04	0.004
Small squares per group square	16	0.05 x 0.05	0.0025	0.00025

## Neubauer



The depth of the Neubauer chamber is 0.1 mm.

Its net ruling covers 3 mm x 3 mm in total and consists of 9 large squares of 1 mm each side length.

The central large square is subdivided in 4 x 4 group squares of 0.2 x 0.2 mm<sup>2</sup>. Triple lines in a distance of 0.025 mm separate the group squares from each other. Each group square is subdivided in 16 small squares of 0.05 mm side length.

Depth = 0.1 mm

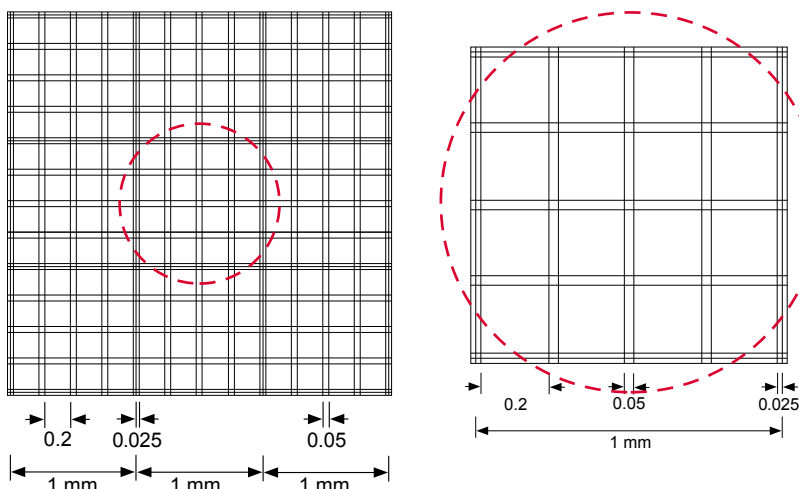
	□	mm x mm / 1 □	mm <sup>2</sup> / 1 □	mm <sup>3</sup> = µl
Total net ruling	1	3 x 3	9	0.9
Large squares per grid	9	1 x 1	1	0.1
Group squares per large square	16	0.2 x 0.2	0.04	0.004
Small squares per group square	16	0.05 x 0.05	0.0025	0.00025

### Buerker

The depth of the Buerker counting chamber is 0.1 mm. Its counting grid covers 9 mm<sup>2</sup> and is subdivided by triple lines into 9 large squares. The distances between the middle lines are 1 mm.

Each of these large squares is subdivided into 16 small squares by double lines with 0.05 mm between them. The inner lines of these small squares form areas of 0.2 x 0.2 mm<sup>2</sup>.

The crossings of the double lines form small squares of 0.05 x 0.05 mm<sup>2</sup>. These squares are suitable for counting thrombocytes and erythrocytes.



Depth = 0.1 mm

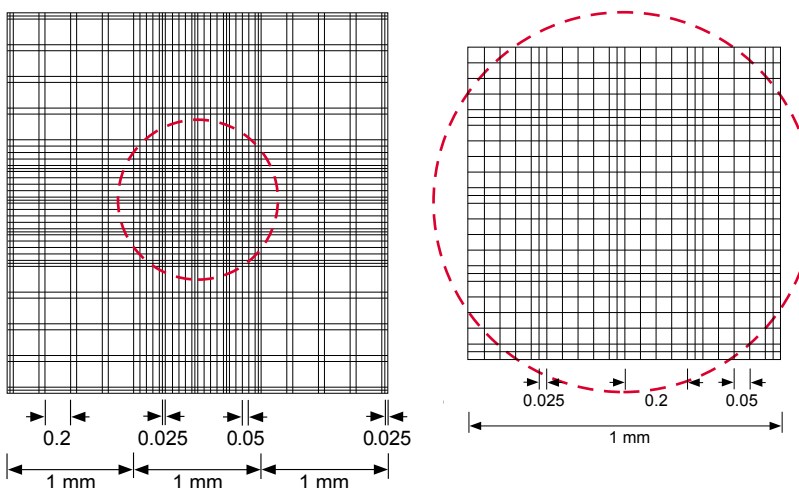
	□	mm x mm / 1 □	mm <sup>2</sup> / 1 □	mm <sup>3</sup> = µl
Total net ruling	1	3 x 3	9	0.9
Large squares per grid	9	1 x 1	1	0.1
Small squares per Large square	16	0.2 x 0.2	0.04	0.004

### Buerker-Tuerk

The depth of the Buerker-Tuerk chamber is 0.1 mm. The counting grid covers 9 mm<sup>2</sup> and is subdivided by triple lines into 9 large squares.

Each of these large squares is subdivided into 16 small squares by double lines with 0.05 mm between them. The inner lines of these small squares form areas of 0.2 x 0.2 mm<sup>2</sup>.

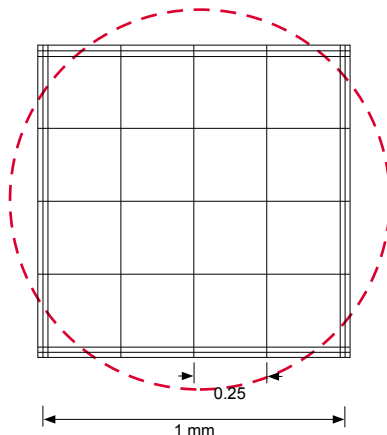
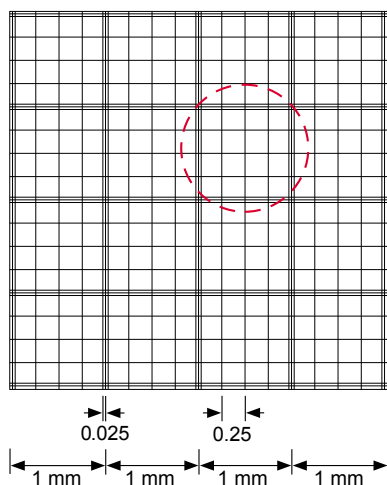
Additionally to the Buerker chamber the 16 small square of the central large square are subdivided again into 16 squares with 0.05 mm length of the edge and an area of 0.0025 mm<sup>2</sup>.



Depth = 0.1 mm

	□	mm x mm / 1 □	mm <sup>2</sup> / 1 □	mm <sup>3</sup> = µl
Total net ruling	1	3 x 3	9	0.9
Large squares per grid	9	1 x 1	1	0.1
Small squares per large square	16	0.2 x 0.2	0.04	0.004
Smallest squares per small square	16	0.05 x 0.05	0.0025	0.00025

## Fuchs-Rosenthal



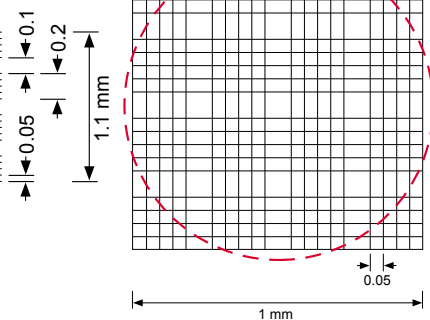
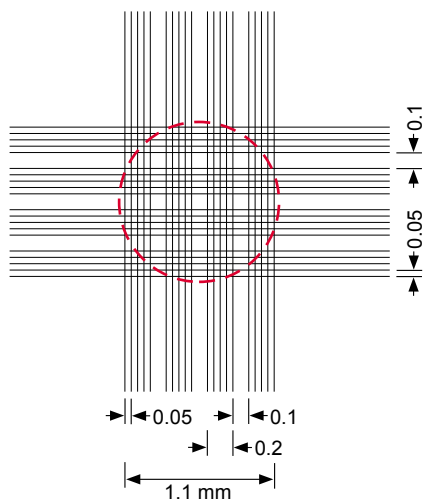
The depth of the Fuchs-Rosenthal counting chamber is 0.2 mm. In total the grid covers 16 mm<sup>2</sup> and contains 16 large squares of 1 mm length of the edge each. These large squares are separated by triple lines with 0.01 mm between each other. The distance between the center lines is 1 mm. All 16 large squares are subdivided into 16 small squares of a side length of 0.25 mm.

Due to the large counting grid and a depth of 0.2 mm the total volume amounts to 3.2 µl. This counting chamber is, therefore, preferably used for counting cell suspensions with relatively few cells, e.g. cerebro-spinal fluid.

Depth = 0.2 mm

	□	mm x mm / 1 □	mm <sup>2</sup> / 1 □	mm <sup>3</sup> = µl
Total net ruling	1	4 x 4	16	3.2
Large squares per grid	16	1 x 1	1	0.2
Small squares per large square	16	0.25 x 0.25	0.0625	0.0125

## Thoma new



The depth of the Thoma new counting chamber is 0.1 mm. The grid covers an area of 1.1 x 1.1 mm<sup>2</sup>. It is subdivided in 16 group squares with a side length of 0.2 mm.

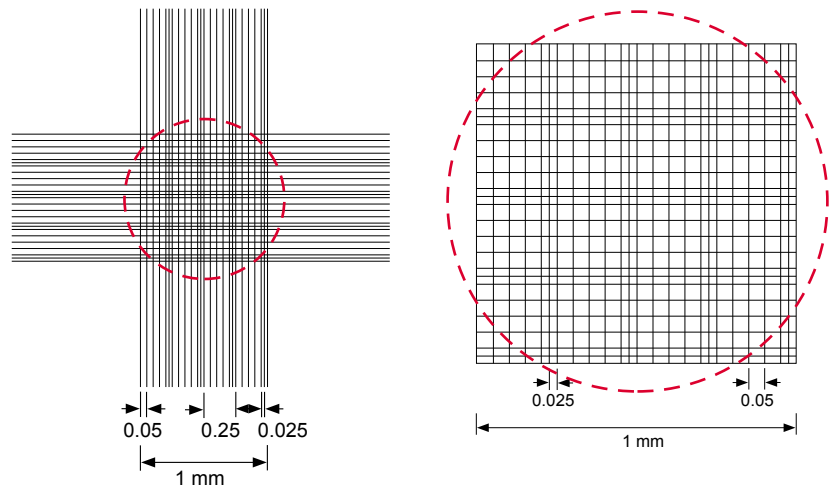
These group squares have a distance of 0.1 mm to the adjacent group squares. They are subdivided into 16 small squares.

### Thoma

The depth of the Thoma counting chamber is 0.1 mm. The grid covers an area of  $1 \times 1 \text{ mm}^2$ .

It is subdivided into group squares with a side length of 0.2 mm (like the Neubauer system).

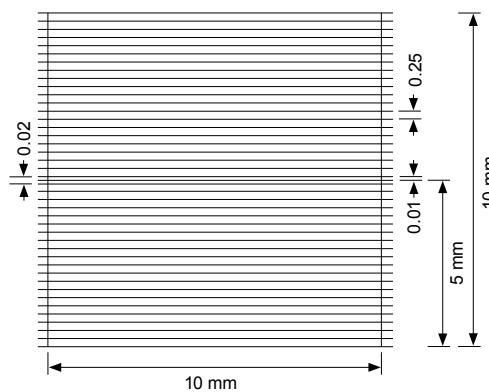
The group squares are subdivided into 16 small squares of an area of  $0.05 \text{ mm} \times 0.05 \text{ mm} = 0.0025 \text{ mm}^2$ .



### Nageotte

The depth of the Nageotte counting chamber is 0.5 mm.

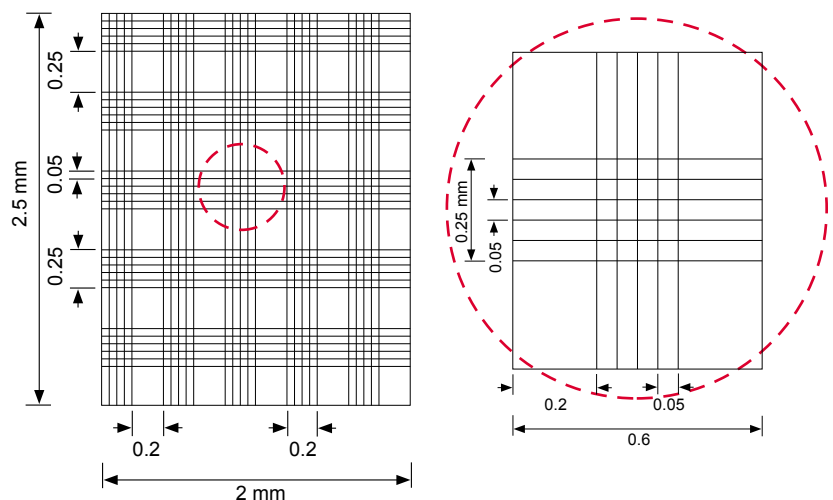
The square area of  $100 \text{ mm}^2$  is divided into 40 rectangles each with an area of  $0.25 \times 10 = 2.5 \text{ mm}^2$ . This counting chamber is mainly used for counting cells in cerebro-spinal fluid or for counting nematodes.



### Malassez

The depth of the Malassez counting chamber is 0.2 mm. The counting grid covers  $2 \times 2.5 \text{ mm}^2$ . The large rectangles have an area of  $0.25 \times 0.20 = 0.05 \text{ mm}^2$ . Each of them is subdivided into 20 small squares with an area of each  $0.05 \text{ mm} \times 0.05 \text{ mm} = 0.0025 \text{ mm}^2$ .

This counting chamber is used for counting cells in liquor (cerebro-spinal fluid) and for counting nematodes for example.









## Counting chambers

Marienfeld Superior counting chambers are precise measuring instruments to determine the number of particles in liquids.

- made of special optical glass
- in compliance with DIN 12847
- individually tested according to the German Calibration Ordinance
- planarity and tolerances are strictly observed
- tolerance of depth of chamber max. 2 %
- our counting chambers for investigations of cell suspensions are equipped with 2 sets of grids. In Vitro diagnostic (IVD) applications generally require duplicate determinations. Double counting grids = double check possibility.
- a cover glass with a thickness of 0.4 mm is placed on top of both external stages of the counting chamber to limit the volume over the counting grids. Thinner cover slips cannot be used as they bend because of the capillary forces.
- with 2 haemocytometer cover glasses 20 x 26 mm which are suitable for most counting chambers.
- counting chambers Fuchs-Rosenthal require cover glasses 24 x 24 mm and counting chambers Nageotte require cover glasses 22 x 30 mm or 30 x 30 mm.  
For spare cover glasses please see page 21.
- individually packed in transparent plastic box, 10 pieces in a carton
- counting grids are structured into two ground and polished surfaces on the central stage (= chamber bottom). This central stage is located between two elevated also ground and polished stages.
- **Dark line:**  
Under the microscope the lines of the counting grid of standard counting chambers appear dark.
- **Bright line:**  
Counting chambers with bright lines have counting grids which are structured into a very thin, transparent metal coating. The bright lines contrast well with the dark metallic background and this facilitates evaluating cell suspensions.

Information on the use of counting chambers can be downloaded from our website.

Detailed description of the counting grids can also be downloaded from our website.

## Counting chambers

Cat. No.	Depth of chamber	Unit
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for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE - mark

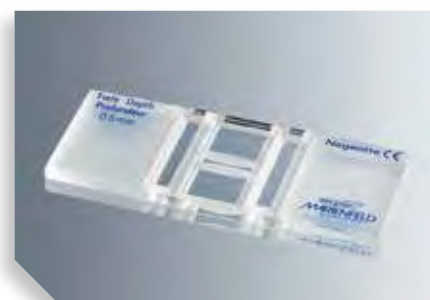
### With dark lines

▶ 0640010	Neubauer-improved	0.1 mm	1
▶ 0640110	Neubauer	0.1 mm	1
▶ 0640210	Bürker	0.1 mm	1
▶ 0640310	Bürker-Türk	0.1 mm	1
▶ 0640410	Fuchs-Rosenthal	0.2 mm	1
▶ 0640510	Nageotte	0.5 mm	1
▶ 0640610	Malassez	0.2 mm	1
▶ 0640710	Thoma	0.1 mm	1
▶ 0640810	Thoma neu	0.1 mm	1

### With bright lines

▶ 0640030	Neubauer-improved	0.1 mm	1
▶ 0640130	Neubauer	0.1 mm	1
▶ 0640230	Bürker	0.1 mm	1
▶ 0640330	Bürker-Türk	0.1 mm	1
▶ 0640430	Fuchs-Rosenthal	0.2 mm	1
▶ 0640530	Nageotte	0.5 mm	1
▶ 0640630	Malassez	0.2 mm	1
▶ 0640730	Thoma	0.1 mm	1
▶ 0640830	Thoma neu	0.1 mm	1

xxxxxx1 For counting chambers with 2 spring clamps please change the Cat. No. accordingly



Cat. No.	Depth of chamber	Unit
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not registered for in vitro diagnostic use within the EU

### With dark lines

▶ 0610010	Neubauer-improved	0.1 mm	1
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### With bright lines

▶ 0610030	Neubauer-improved	0.1 mm	1
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## Counting chambers with special depth

Cat. No.	Special depth (Tol. $\pm 1 \mu\text{m}$ )	Unit
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for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE - mark

### With dark lines

▶ 0642010	Neubauer-improved	0.01 mm	Petroff	1
▶ 0642110	Neubauer-improved	0.02 mm	Petroff	1
0642710	Thoma	0.02 mm	Helber	1

Other types and special depths are available on request (smallest possible depth = 0.01 mm). Minimum order quantity: 10 pieces



## Counting chambers with V-slash

Counting chambers with V-slash at the exterior sides of the chamber bottom offer various advantages:

- the V-slash facilitates the feeding of the capillary gap between chamber bottom and haemocytometer cover glass
- the risk of overflow is reduced



Cat. No.	Depth of chamber	Unit
----------	------------------	------

for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE - mark

### With dark lines

▶ 0650010	Neubauer-improved	0.1 mm	1
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### With bright lines

▶ 0650030	Neubauer-improved	0.1 mm	1
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## Haemocytometers without CE-mark

Complete set in a plastic case consisting of:

- 1 counting chamber with double counting grid
- 2 haemocytometer cover glasses with thickness 0.4 mm
- each 1 blood diluting pipette Thoma red and white
- 2 silicone tubings with approx. 16 cm length
- each 1 plastic mouthpiece red and white

Cat. No.	Depth of chamber	Unit
----------	------------------	------

not registered for in vitro diagnostic use within the EU

### With dark lines

▶ 0630010	Neubauer-improved	0.1 mm	1
-----------	-------------------	--------	---

### With bright lines

▶ 0630030	Neubauer-improved	0.1 mm	1
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For other types please send us your enquiry.

When pipetting, please note the safety regulations. Pipetting by mouth is dangerous. We disclaim any responsibility.

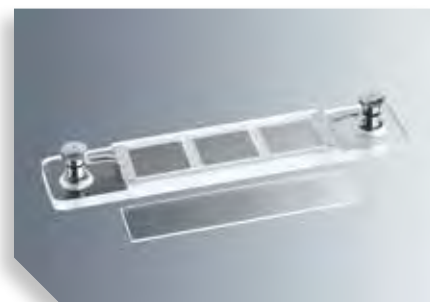
- ▶ This arrow indicates products that are usually available on short notice.



## Counting chambers McMaster with 3 grids

- for counting worm eggs
- suitable for liquid media
- dimensions: approx. 127 x 26 mm
- depth: approx. 1.5 mm
- separate cover glass with 3 counting grids approx. 10 x 10 mm (divided into 10 parts)
- with a pair of clamps to affix the cover glass
- ground edges and rounded corners

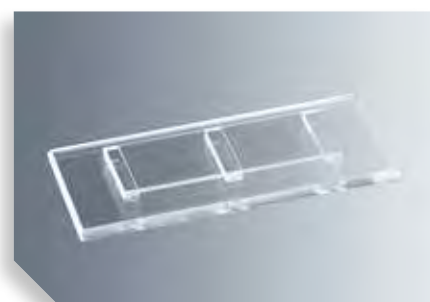
Cat. No.		Unit
0611141	chamber complete	1
0335001	spare cover glass approx. 80 x 18 mm	1



## Counting chambers McMaster with 2 grids

- for counting worm eggs
- suitable for solid media
- dimensions: approx. 75 x 32 mm
- cover glass with 2 counting grids approx. 10 x 10 mm (divided into 10 parts) affixed on 3 supports
- distance between bottom plate and cover glass: approx. 1.5 mm

Cat. No.		Unit
0611240	chamber complete	1



## Cellcounter

The electronic blood counter is designed for counting blood cells, but is also appropriate for counting any other particles.

- TFT colour display 3,5"
- with 5 functional keys, 15 counting keys and 4 different counting programmes. One of these programmes is freely configurable and programmable by the user. This enables the operator to program any kind of counting or analysis by himself.
- tactile and accoustic feedback
- counting steps: 50-1000 in steps of 50
- programmes: LEUKO, MYELO/RBC, RETI, FREE
- storage of the last count by the instrument
- interface: USB Mini
- mains operation: USB power adapter 5 V DC
- battery operation: external USB power bank (not included)
- dimensions: 130x235x35 mm
- supplied with detailed instruction manual
- with CE-mark

Cat. No.	Power adapter	Unit
7170006	5 V DC	1



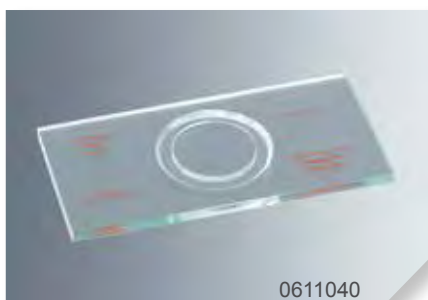
**New**



## Counting chambers Howard with counting lines

- for the investigation of fruit juices
- depth of chamber: 0.1 mm (Tol.  $\pm$  2%)
- line thickness 1.5 - 2  $\mu$ m

Cat. No.		Unit
▶ 0610940	counting chamber without cover glass with 2 counting lines 1402 $\mu$ m apart diameter of ring: approx. 18 mm int. and 22 mm ext.	1
0333001	cover glass approx. 25 x 40 x 0.4 mm, ground edges without mask	1
0334002	cover glass approx. 25 x 40 x 0.4 mm, ground edges with metal mask to facilitate counting with 5 x 5 wells each 1.382 mm diameter	1



## Counting chambers Howard without counting lines

- for the investigation of fruit juices
- depth of chamber: 0.1 mm (Tol.  $\pm$  2%)

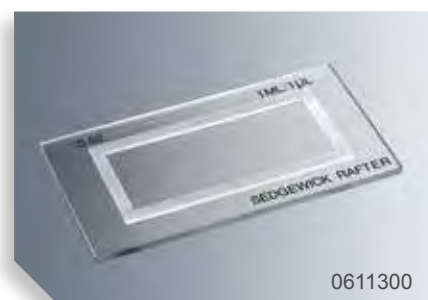
Cat. No.		Unit
0611040	counting chamber without cover glass without counting lines diameter of ring: approx. 20 mm int. and 26 mm ext.	1
0334001	cover glass approx. 33 x 33 x 1 mm, ground edges with blue counting mask approx. 15 x 15 mm with 5 x 5 wells each 1.382 mm diameter	1
0334002	cover glass approx. 25 x 40 x 0.4 mm, ground edges with metal mask to facilitate counting with 5 x 5 wells each 1.382 mm diameter	1

## Counting chambers Sedgewick Rafter

Counting chambers acc. to Sedgewick Rafter are intended for counting of particles and microorganisms in water or other transparent liquids.

- the cell of 50 x 20 x 1 mm (= 1 cm<sup>3</sup>) is ruled in a 1 mm grid subdividing 1 ml in 1000 µl
- supplied with cover glass approx. 60 x 30 x 1 mm

Cat. No.		Unit
▶ 0611300	precision type made of glass with chromium grid for phase contrast use with ground and chamfered edges	1
▶ 0611400	simple type made of plastic	1
▶ 0336000	spare cover glass approx. 60 x 30 x 1 mm	1



0611300



0611400

## Counting chambers Sedgewick Rafter without counting grid

For many applications, particularly for some APHA methods and where larger plankton are being analysed, there is no requirement for a counting grid printed onto the slide. This is where the Sedgewick Rafter counting chamber with the plain glass base is deployed.

This chamber is suitable for either upright or inverted microscopes. It can be used in conjunction with an eyepiece reticle, such as the Whippie micrometer disc.

Cat. No.		Unit
0611500	chamber made of glass without grid, with cover glass	1
0336000	spare cover glass approx. 60 x 30 x 1 mm	1



0611500

New



0336000



## Stands for blood sedimentation pipettes acc. to Westergren

The stands hold the blood sedimentation pipettes upright during examination of blood samples according to Westergren's method.

- made of stainless steel
- clamp is made of 8 x 8 mm anodised aluminium for enhanced protection
- with tilting device for rapid method
- with mixing tubes and rubber stoppers, without pipettes
- not registered for in vitro diagnostic use within the EU

Cat. No.	For	Multipack
3238058	3 tests	10
3238060	6 tests	10
▶ 3238061	10 tests	10



## Blood sedimentation pipettes acc. to Westergren

In case of suspected infectious diseases the erythrocyte sedimentation rate of blood is examined by means of sedimentation pipettes according to Westergren.

- made of AR® clear glass
- length: approx. 300 mm
- with white graduation 0 to 200 subdivided in 1 mm
- not registered for in vitro diagnostic use within the EU

Cat. No.		Multipack	Unit
▶ 3241062	for macro method	55 x 24	24
3242062	for micro method	55 x 24	24



## Haematocrit tubes acc. to Wintrobe

- made of soda lime glass
- with round bottom
- with straight rim
- with double numbered scale in red / white colour
- graduation: 105 mm subdivided in 1 mm
- not registered for in vitro diagnostic use within the EU



Cat. No.	Ø ext.	Ø int.	Multipack	Unit
▶ 3231000	6.5 mm	2.9 mm	120 x 20	20

## Blood diluting pipettes acc. to Thoma

- for white blood corpuscles (leucocytes, proportion of dilution 1 : 10) or for red blood corpuscles (erythrocytes, proportion of dilution 1 : 100)
- in compliance with DIN 12750
- white back
- blue graduation
- tolerance:  $\pm 3\%$
- divided into 10 parts
- individually packed in poly bags, 10 pieces in a box
- not registered for in vitro diagnostic use within the EU



Cat. No.	For	Type	Unit
▶ 3202000	leucocytes	with funnel top	10
▶ 3203000	leucocytes	without funnel top	10
▶ 3205000	erythrocytes	with funnel top	10
▶ 3206000	erythrocytes	without funnel top	10

When pipetting, please note the safety regulations. Pipetting by mouth is dangerous. We disclaim any responsibility.

## Blood diluting pipettes acc. to Malassez-Potain

- for white blood corpuscles (leucocytes, proportion of dilution 1 : 10) or for red blood corpuscles (erythrocytes, proportion of dilution 1 : 100)
- white back
- blue graduation
- individually packed in poly bags, 10 pieces in a box
- not registered for in vitro diagnostic use within the EU



Cat. No.	For	Unit
3208000	leucocytes	10
3209000	erythrocytes	10



When pipetting, please note the safety regulations. Pipetting by mouth is dangerous. We disclaim any responsibility.

## Haemoglobin pipettes acc. to Sahli

Haemoglobin pipettes are used for dosing the blood which is to be examined.

- in compliance with DIN 12689
- capacity: 20 µl
- white back
- blue graduation
- individually packed in poly bags, 25 pieces in a box
- not registered for in vitro diagnostic use within the EU

Cat. No.	Type	Multipack	Unit
▶ 3245035	with funnel top	40 x 25	25
▶ 3246035	without funnel top	40 x 25	25



## Tubings

- made of transparent silicone
- for blood diluting pipettes acc. to Thoma and Malassez-Potain
- for haemoglobin pipettes acc. to Sahli
- 5.5 mm outside diameter
- 3.5 mm inside diameter
- not registered for in vitro diagnostic use within the EU

Cat. No.	Length	Unit
5903000	16 cm	10
5903001	25 cm	10
5903002	40 cm	10



## Adapters

- made of polystyrene
- suitable for our tubings for blood diluting pipettes and haemoglobin pipettes
- not registered for in vitro diagnostic use within the EU

Cat. No.	Colour	Multipack
5833000	white	100
5833001	red	100

## Haemometers acc. to Sahli

Haemometers are used for the determination of blood's content of haemoglobin. The Marienfeld Superior haemometer according to Sahli is supplied as complete set consisting of:

- polystyrene support with 2 coloured rods and opal glass plate
- comparator tube
- haemoglobin pipette 20 µl acc. to Sahli
- silicone tubing of approx. 16 cm length
- white mouthpiece
- dropping pipette with rubber teat
- stirring rod
- acid vial
- cleaning brush
- directions for use
- not registered for in vitro diagnostic use within the EU

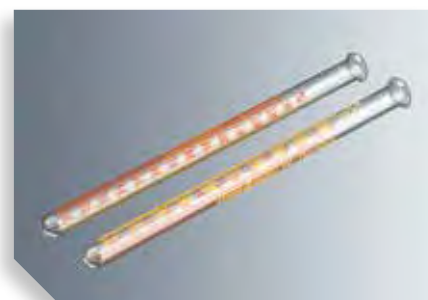


When pipetting, please note the safety regulations. Pipetting by mouth is dangerous. We disclaim any responsibility.

The scales of our comparator tubes are adjusted to our present haemometer's coloured glass rod. The tubes are not to be used for application with haemometers we produced in the past or for those of other manufacturers.

## Comparator tubes

- made of soda lime glass
- with round bottom and beaded rim
- with double coloured scale yellow/red
- not registered for in vitro diagnostic use within the EU



Cat. No.	Multipack	Unit
▶ 3243000	60 x 1	1

## Dropping pipettes

- made of soda lime glass
- with straight tip
- with beaded rim
- without rubber teat
- handy packaging in a carton

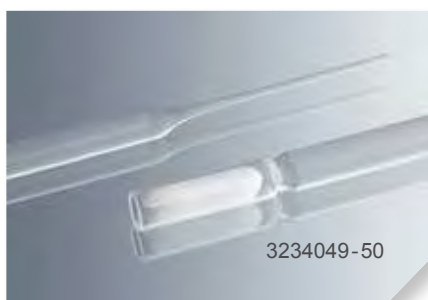


Cat. No.	Length	Diameter	Unit
▶ 4010020	75 mm	6/7 mm	100
▶ 4010070	150 mm	7/8 mm	200

## Rubber teats for dropping pipettes

Cat. No.	Suction volume	Colour	Unit
▶ 5902002	approx. 0.8 ml	red	100





## Pasteur pipettes

- made of soda lime glass
- in compliance with ISO 7712
- with evenly rounded and accurately drawn fine tips
- capacity approx. 2 ml
- with a distinct constriction at the upper end to retain a cotton plug firmly
- for single use
- 250 pieces in a handy dispenser box
- 4 x 250 pieces in a carton

Cat. No.	Length	Ø Tip mm	Unit
<b>Without cotton plug</b>			
▶ 3233049	150 mm	1.3 to 1.4 ext. / 0.8 to 1.0 int.	1000
▶ 3233050	230 mm	1.3 to 1.4 ext. / 0.8 to 1.0 int.	1000
<b>With inserted cotton plug</b>			
3234049	150 mm	1.3 to 1.4 ext. / 0.8 to 1.0 int.	1000
3234050	230 mm	1.3 to 1.4 ext. / 0.8 to 1.0 int.	1000

## Pipetting aids for Pasteur pipettes

- made of natural rubber
- natural colour, transparent
- olive shape
- wall thickness:  $1,6 \pm 0,3$  mm
- suction volume:  $1,8 \pm 0,3$  ml

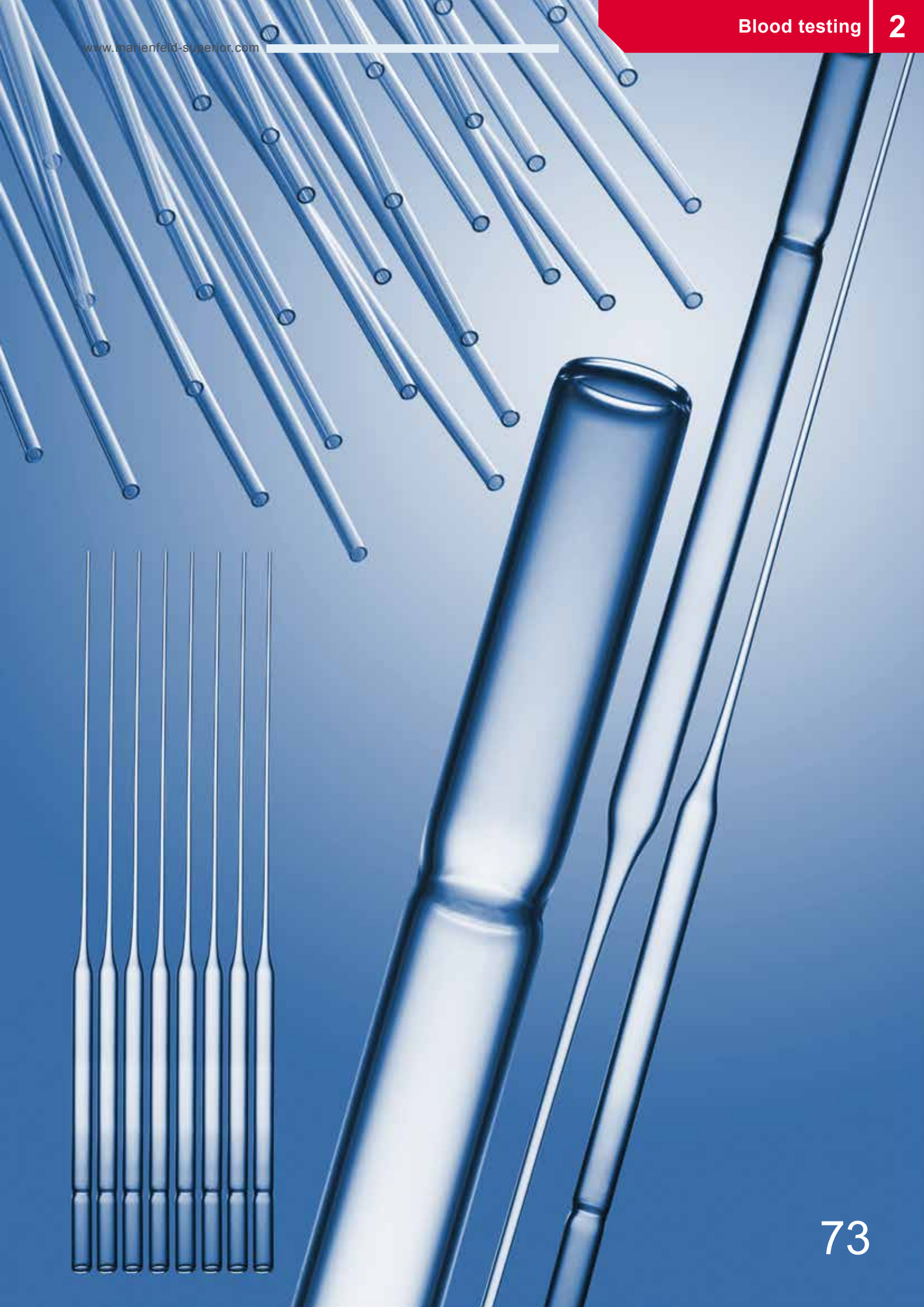
Cat. No.	Length	int. Ø opening	Multipack	Unit
▶ 5902000	$36.4 \pm 1$ mm	$5.8 \pm 0.4$ mm	6000	100

## Transfer pipettes

- made of polyethylene (HD-PE)
- BSE-free
- can be used for food
- soft, elastic bulb
- burr-free orifice for neat, clean and precise dispensing
- length: approx. 150 mm
- non-sterile
- for single use

Cat. No.	Capacity		Multipack	Unit
5210800	micro	not graduated	6 x 500	500
▶ 5210801	1 : 0.25 ml	graduated	6 x 500	500
▶ 5210802	3 : 0.50 ml	graduated	6 x 500	500







## Micro pipettes "end-to-end"

Micro pipettes can dispense more accurately than conventional pipettes. The micro pipettes are used for dispensing very small amounts of liquids.

- made of glass
- in compliance with ISO 7550
- for single use
- length:  $29 \pm 1$  mm
- 100 pieces in a colour coded dispenser vial, 10 vials in a box
- for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE-mark, recommended best before date and batch number for comprehensive information and traceability

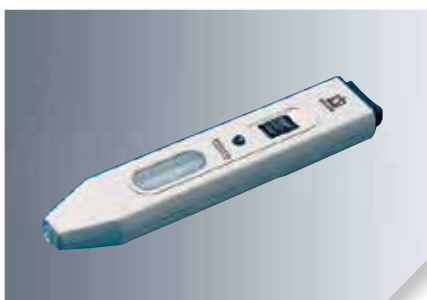
Cat. No.	Capacity	Unit
2910109	10 µl not heparinized	1000
2910110	20 µl not heparinized	1000
▶ 2911109	10 µl Sodium-heparinized (80 iu/ml)	1000
▶ 2911110	20 µl Sodium-heparinized (80 iu/ml)	1000



## Micro pipettes with circular mark

- made of glass
- in compliance with ISO 7550
- for single use
- length: approx. 125 mm
- not heparinized
- as from 5 µl with colour coding according to ISO recommendations
- 250 resp. 125 pieces in a round cardboard box, 4 boxes in a carton
- for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE-mark, recommended best before date and batch number for comprehensive information and traceability

Cat. No.	Circular mark(s) at	Ø ext. n ( $\pm 0,05$ )	Ø int. ( $\pm 0,01$ )	Unit
▶ 2920107	1 + 2 + 3 + 4 + 5 µl	1.15 mm	0.29 mm	1000
▶ 2920109	10 µl	1.25 mm	0.46 mm	1000
▶ 2920110	20 µl	1.60 mm	0.64 mm	1000
▶ 2920115	50 µl	1.50 mm	0.86 mm	1000
▶ 2920116	100 µl	1.70 mm	1.19 mm	1000
2920117	200 µl	2.25 mm	1.68 mm	500



## Micro pipettors



- facilitate the sampling
- very light and conveniently operated
- suitable for micro pipettes with circular mark and other small pipettes up to 1 ml capacity (for example: blood diluting pipettes)
- the integrated ejection device reduces the risk of infection through contaminated pipettes
- autoclavable at 121 °C

Cat. No.	Unit
2960408	1

## Capillary tubes for microhaematocrits

Capillary tubes for microhaematocrits are used for the centrifugation of blood samples. Heparinized capillaries should be used when the samples are not immediately sealed with wax and centrifuged. The heparinized coating delays the clotting of the blood. The heparinization is applied as a thin, homogenous coating on the tube. This enhances the immediate dissolving of the heparin in the blood and prevents agglutination.

- made of high grade quality glass
- in compliance with ISO 12772
- length: approx. 75 mm  $\pm$  0.5 mm
- wall thickness: approx. 0.2  $\pm$  0.025 mm
- the fire polishing at the colour coded end ensures that centrifuges are not damaged
- for single use
- 100 pieces in a dispenser vial, 10 vials in a box
- 64'000 pieces in a carton (multipack)
- for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE-mark, recommended best before date and batch number for comprehensive information and traceability



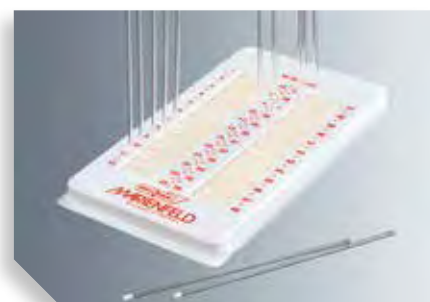
Cat. No.	Ø int.	Ø ext.	Capacity	Unit
<b>Not heparinized</b>				
▶ 2900000	1.1 to 1.2 mm	1.5 to 1.6 mm	75 µl	1000
2900001	0.9 to 1.0 mm	1.3 to 1.4 mm	60 µl	1000
<b>Sodium-heparinized (80 iu/ml)</b>				
▶ 2901000	1.1 to 1.2 mm	1.5 to 1.6 mm	75 µl	1000
2901001	0.9 to 1.0 mm	1.3 to 1.4 mm	60 µl	1000
<b>Sodium-heparinized (240 iu/ml), with ringmark at 60 mm</b>				
2901002	0.5 to 0.6 mm	1.5 to 1.6 mm	18 µl	1000

## Wax plates

Wax plates are used for sealing capillary tubes for microhematorcrits.

- 2 deposit areas on a plastic base
- contain modelling clay and additives of food filler material and natural bees wax. We consciously forego adding any chemicals which could affect the plastic material after some time.
- numbered 1 to 48
- individually packed in poly bags, 6 pieces in a box

Cat. No.	Multipack	Unit
▶ 2960409	100 x 6	6





## Blood gas capillary tubes

Blood gas capillary tubes are capillaries for the analysis of blood gas, in particular of oxygen and carbon dioxide.

- made of heavy-walled glass, with fire polished ends
- sodium-heparinized (80 iu/ml)
- tolerance length:  $\pm 1$  mm
- tolerance diameter:  $\pm 0.05$  mm
- for single use
- 250 pieces in a round cardboard box, 4 boxes in a carton
- for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE-mark, recommended best before date and batch number for comprehensive information and traceability

Cat. No.	Length	Ø ext.	Capacity min.	Hep. iu/ml	Unit
2951300	75 mm	2.3 mm	130.0 µl	80	1000
2951301	100 mm	2.3 mm	175.0 µl	80	1000
2951302	125 mm	2.3 mm	220.0 µl	80	1000
2951303*	75 mm	1.75 mm	82.5 µl	240	1000
2951305	125 mm	1.75 mm	137.5 µl	80	1000

\* Minimum quantity per order: 10'000 pieces



## Stirrers for blood gas capillary tubes

For mixing the sample in the capillary tube.

- made of spring steel
- length: approx.  $9 \pm 1$  mm
- 250 pieces in a dispenser vial, 10 vials in a box
- for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE-mark, recommended best before date and batch number for comprehensive information and traceability

Cat. No.	For Ø tubes	Diameter	Unit
2960412	1.75 mm	0.6 mm	2500
2960413	2.3 mm	1.0 mm	2500



## Closure caps for blood gas capillary tubes

- made of white rubber
- for applications according to EU regulation 2017/746 on in vitro diagnostic medical devices (IVDR), with CE-mark, recommended best before date and batch number for comprehensive information and traceability

Cat. No.	For Ø tubes	Unit
2960414	1.75 mm	2 x 500
2960415	2.3 mm	2 x 500



## Capillary tubes for the determination of melting point

These capillary tubes can be used for storage of small amounts of liquids or for the determination of melting point.

- made of glass
- with rectangular cut edges
- for single use
- tolerance length:  $\pm 1$  mm
- tolerance diameter:  $\pm 0.05$  mm
- 100 resp. 50 pieces (Cat. No. 29 402 02) in a dispenser vial
- 10 vials in a box



For Melting point meters (MPM) please see page 162.

Cat. No.	Length	Ø ext.	Ø int.	Unit
<b>Both ends open</b>				
2930201	70 mm	1.20 mm	0.90 mm	1000
▶ 2930203	80 mm	0.60 mm	0.42 mm	1000
▶ 2930204	80 mm	0.80 mm	0.56 mm	1000
▶ 2930205	80 mm	1.00 mm	0.80 mm	1000
▶ 2930207	80 mm	1.50 mm	1.20 mm	1000
▶ 2930208	100 mm	1.00 mm	0.80 mm	1000
2930210	100 mm	1.55 mm	1.15 mm	1000
<b>One end closed</b>				
2940202	75 mm	2.00 mm	1.50 mm	500
2940205	80 mm	1.00 mm	0.80 mm	1000
▶ 2940206	80 mm	1.30 mm	1.00 mm	1000
▶ 2940211	80 mm	1.40 mm	1.00 mm	1000
▶ 2940207	80 mm	1.50 mm	1.20 mm	1000
▶ 2940208	100 mm	1.00 mm	0.80 mm	1000
▶ 2940209	100 mm	1.20 mm	0.90 mm	1000
▶ 2940210	100 mm	1.55 mm	1.15 mm	1000





## Test tubes with round bottom, ungraduated

Cat. No.	Length x Ø ext.	Wall thickness	Capacity	Unit
<b>Soda lime glass, with straight rim</b>				
▶ 3700318	75 x 10 mm	0.6 mm	4 ml	1000
▶ 3700323	75 x 12 mm	0.6 mm	6 ml	1000
▶ 3700334	100 x 12 mm	0.6 mm	9 ml	1000
▶ 3700544	100 x 16 mm	0.8 mm	14 ml	1240
▶ 3700552	130 x 16 mm	0.8 mm	20 ml	100
▶ 3700562	150 x 16 mm	0.8 mm	23 ml	100
▶ 3700579	160 x 16 mm	0.8 mm	25 ml	100
3700784	180 x 18 mm	1.0 mm	35 ml	100
3700896	200 x 25 mm	1.2 mm	75 ml	126
<b>Soda lime glass, with beaded rim</b>				
3702323	75 x 12 mm	0.6 mm	6 ml	100
3702334	100 x 12 mm	0.6 mm	9 ml	1000
3702352	130 x 16 mm	0.8 mm	20 ml	1000
3702379	160 x 16 mm	0.6 mm	25 ml	1000
3702784	180 x 18 mm	0.8 mm	35 ml	100
<b>Borosilicate glass 5.1, with straight rim</b> relatively inured to rapid temperature changes and local heating				
▶ 3710323	75 x 12 mm	0.6 mm	6 ml	1000
▶ 3710337	100 x 13 mm	0.6 mm	10 ml	1000
▶ 3710544	100 x 16 mm	0.7 mm	14 ml	1000
▶ 3710562	150 x 16 mm	0.7 mm	23 ml	1000
3710775	150 x 25 mm	1.0 mm	55 ml	100



## Test tubes Durham

Durham tubes are mainly used in microbiology to detect gas produced by micro organisms. These special tubes are placed upside down in bigger test tubes.

- wall thickness 0.7 mm
- with straight rim
- with round bottom
- ungraduated

Cat. No.	Length x Ø ext.	Material	Capacity	Unit
▶ 3700401	25 x 7 mm	borosilicate glass Fiolax	0.5 ml	10 x 100
▶ 3700400	35 x 6 mm	soda lime glass	0.5 ml	250
▶ 3700406	50 x 6 mm	soda lime glass	0.75 ml	350



All dimensions and capacities of the test tubes are approximate.



## Test tubes with screw caps (culture tubes)

Test tubes with screw caps are suitable for transporting and growing of cultures.

- made of borosilicate glass 5.1
- very good chemical resistance
- minimal thermal expansion
- with round bottom
- high resistance to thermal shocks
- with white marking area
- with screw thread and black screw cap including Butyl/PTFE sealing insert (loosely attached)
- sterilisable up to 110 °C
- wall thickness: approx. 1.0 to 1.1 mm
- ungraduated

Cat. No.	Length x Ø ext.	Thread	Capacity	Unit
▶ 3737737	100 x 13 mm	13-415	8 ml	100
▶ 3737852	125 x 16 mm	15-415	16 ml	100
▶ 3737862	150 x 16 mm	15-415	20 ml	100



## Test tube caps Labocap

These caps for test tubes are used in microbiological, biotechnological and bacteriological laboratories. They are mainly used for protection against contamination and guarantee the required sterilizable, but not hermetic seal. The built-in springs made of chromium steel make the caps cling firmly on the tubes and ensure the required airflow.

- made of high grade aluminium
- with coloured anodized coating
- washable with neutral cleansing material (max. 140 °C)
- sterilizable
- reusable
- stainless
- heat-resistant
- without handle

Cat. No.	For tubes Ø	Colour	Unit
▶ 6602005	12/13 mm	silver	100
▶ 6602008	15/16 mm	silver	100
▶ 6602011	17/18 mm	silver	100
6602105	12/13 mm	blue	100
6602108	15/16 mm	blue	100
6602111	17/18 mm	blue	100
6602205	12/13 mm	red	100
6602208	15/16 mm	red	100
6602211	17/18 mm	red	100

These caps are also available in green, yellow, violet and black. Minimum quantity is 400 pieces per type and order. Please send us your enquiry.

## Test and centrifuge tubes

- made of high quality polystyrene
- high optical transparency
- optimal visibility of content
- perfect rotation
- suitable for centrifugation up to 2000 x g
- suitable for temperature range from - 10 °C to + 60 °C
- for single use
- with round bottom
- straight rim
- ungraduated
- 1000 pieces in a poly bag



All dimensions and capacities of the test tubes are approximate.

Cat. No.	Length x Ø ext.	Capacity	Unit
▶ 5200102	75 x 12 mm	5 ml	4000
5200104	100 x 16 mm	12 ml	2000

## Centrifuge tubes for determination of solubility acc. to ADPI

- made of borosilicate glass 3.3
- conical type
- blue graduated up to 20 ml, with mark at 50 ml
- 10 pieces in a carton



Cat. No.	Length x Ø	Division	Tol.	Unit
Straight rim				
3939521	195 x 24 mm	0-1 ml : 0.1 ml	± 0.1 ml	10
		1-2 ml : 0.2 ml	± 0.2 ml	
		2-10ml : 0.5 ml	± 0.5 ml	
		10-20 ml : 1 ml	± 1 ml	
		mark at 50 ml	± 1 ml	
With beaded rim				
3949501	100 x 34 mm	0-1 ml : 0.1 ml	± 0.2 ml	10
		1-2 ml : 0.2 ml	± 0.2 ml	
		2-10ml : 0.5 ml	± 0.5 ml	
		10-20 ml : 1 ml	± 1 ml	
		mark at 50 ml	± 1 ml	
3949511	135 x 30 mm	0-1 ml : 0.1 ml	± 0.1 ml	10
		1-2 ml : 0.2 ml	± 0.2 ml	
		2-10ml : 0.5 ml	± 0.5 ml	
		10-20 ml : 1 ml	± 1 ml	
		mark at 50 ml	± 1 ml	





## Centrifuge tubes

- made of soda lime glass
- long conical type
- dimensions: approx. 112/113 x 16/17 mm
- capacity: approx. 15 ml
- 100 pieces in a box

Cat. No.		Unit
<b>With beaded rim</b>		
▶ 3910002	ungraduated	100
3910012	white graduated 1 to 10 : 0.1 ml, with mark at 15 ml	100
▶ 3910022	white graduated 1 to 15 : 0.1 ml	100
<b>Straight rim</b>		
3900002	ungraduated	100
3900022	white graduated 1 to 15 : 0.1 ml	100

## Centrifuge tubes heavy walled

- made of borosilicate glass 3.3
- straight rim
- ungraduated

Cat. No.	Length x Ø	Capacity	Wall (± 0.2)	Unit
<b>Short conical, angle 30°</b>				
3906001	98 x 16/17 mm	10 ml	1.2 mm	100
<b>With round bottom</b>				
3933011	100 x 16 mm	12 ml	1.2 mm	100
3933081	115 x 40 mm	80 ml	3.2 mm	10

## Flat bottom tubes

- made of soda lime glass
- with straight rim
- ungraduated

Cat. No.	Height x Ø ext.	Wall thickness	Unit
3806001	35 x 12 mm	0.8 - 1.0 mm	144
3806153	62 x 24 mm	1.0 mm	160

## Stands for test tubes

- made of white polypropylene
- break-resistant
- suitable for water baths
- autoclavable
- stackable
- demountable and hence space-savings storable
- dimensions: approx. 246 x 104 x 64 mm



Cat. No.	Positions	For tubes Ø	Multipack
▶ 5610120	90	13 mm	50
▶ 5610123	60	16 mm	50
▶ 5610126	40	20 mm	50

- made of unlacquered wood
- low shape
- with 2 levels
- offers space for 12 tubes with diameter up to 18 mm



Cat. No.	Dimensions
6560090	without draining rods 200 x 110 x 65 mm

## Test tube holders

- made of wood
- with galvanized wire spring

Cat. No.		Multipack	Unit
▶ 6569000	for tubes up to 20 mm Ø	24 x 12	12
▶ 6569010	for tubes up to 40 mm Ø	1 x 300	12



## Test tube brushes

- bristles with tufted end made of wool
- galvanised wire handle with loop to hang up

Cat. No.	Total length	Head: Length x Ø	Unit
▶ 6228006	280 mm	70 x 15 mm	10
▶ 6228009	280 mm	80 x 25 mm	10







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Do not mouth pipette! For recommended pipetting aids please see page 89.

## Volumetric pipettes, glass

Volumetric pipettes are used to dose liquids. Only one circular mark showing the defined volume is printed on volumetric pipettes. They are calibrated "Ex" (to deliver): The imprinted volume refers to the delivered amount of liquid.

- **Class AS**

„A“ stands for highest accuracy, „S“ for fast delivery (waiting time reduced to 5 seconds). The tolerances of class AS are half of the tolerances of class B according to DIN ISO standards.

- **Class AS conformity certified**

Conformity means compliance with the German Calibration Regulations (DIN 12 600) and the relevant standards. By imprinting the conformity symbol DE-M we confirm that the measuring device complies with these conditions. A batch certificate of conformity is supplied together with every box. On request individual certificates of conformity are available.

- **Graduation:** The amber stain graduation penetrates into the glass surface and is more resistant than a blue fused-on enamel graduation.

- made of soda lime glass
- acc. to DIN EN ISO 648 (except 3 ml, 4 ml and 15 ml)
- especially formed tips and ends, bevelled and fire-polished
- calibrated tips provide short and practice-oriented waiting time
- with colour coding for easy identification
- with indication of tolerance
- with 1 circular mark

Cat. No.	Capacity	Tolerance	Unit
<b>Class AS</b>			
2002000	0.5 ml straight form	± 0.005 ml	50
▶ 2002010	1 ml straight form	± 0.008 ml	50
▶ 2002020	2 ml	± 0.010 ml	40
2002030	3 ml	± 0.010 ml	50
2002040	4 ml	± 0.015 ml	30
▶ 2002050	5 ml	± 0.015 ml	30
▶ 2002060	10 ml	± 0.020 ml	10
2002070	15 ml	± 0.030 ml	25
▶ 2002080	20 ml	± 0.030 ml	25
▶ 2002090	25 ml	± 0.030 ml	20
▶ 2002100	50 ml	± 0.050 ml	10
2002110	100 ml	± 0.080 ml	6
<b>Class AS, conformity certified DE-M, with batch certificate</b>			
▶ 2003010	1 ml straight form	± 0.008 ml	50
▶ 2003020	2 ml	± 0.010 ml	40
2003030	3 ml	± 0.010 ml	50
2003040	4 ml	± 0.015 ml	30
▶ 2003050	5 ml	± 0.015 ml	30
▶ 2003060	10 ml	± 0.020 ml	10
2003070	15 ml	± 0.030 ml	25
▶ 2003080	20 ml	± 0.030 ml	25
▶ 2003090	25 ml	± 0.030 ml	20
▶ 2003100	50 ml	± 0.050 ml	10
2003110	100 ml	± 0.080 ml	6

▶ This arrow indicates products that are usually available on short notice.

## Graduated pipettes, glass

Pipettes with a scale are used to dispense liquids. They are calibrated „Ex“ (to deliver): The imprinted volume refers to the delivered amount of liquid.

- **Class AS**

„A“ stands for highest accuracy, „S“ for fast delivery (waiting time reduced to 5 seconds). The tolerances of class AS are half of the tolerances of class B according to DIN ISO standards.

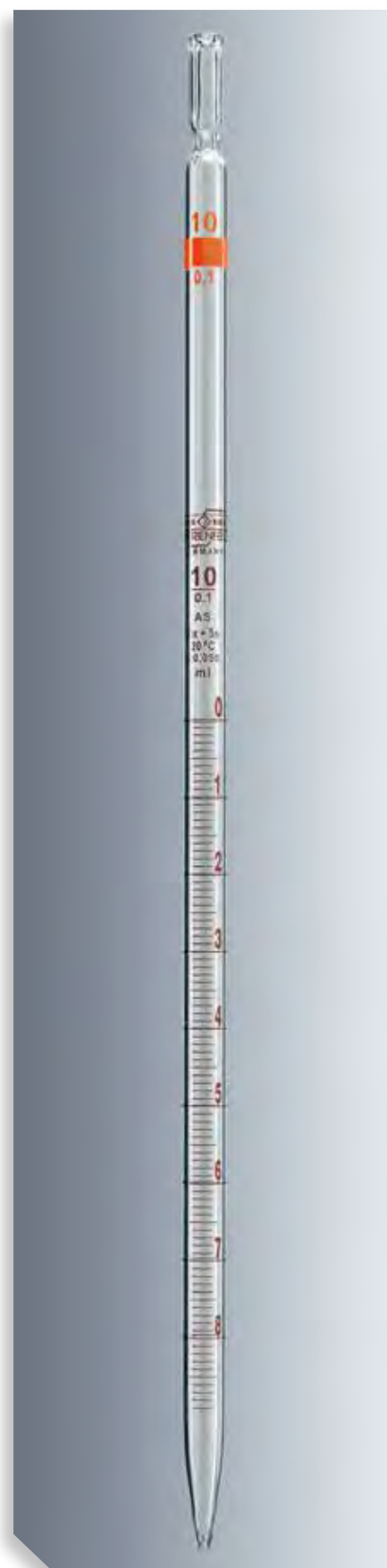
- **Class AS conformity certified**

Conformity means compliance with the German Calibration Regulations and the relevant standards. By imprinting the conformity symbol DE-M we confirm that the measuring device complies with these conditions. A batch certificate of conformity is supplied in every packing unit. On request, individual certificates of conformity are available.

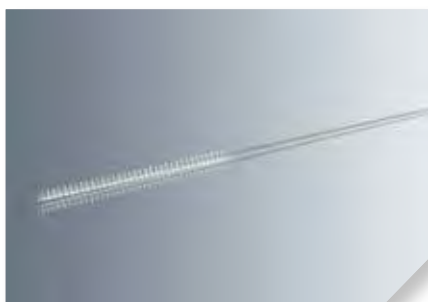
- **Graduation:** The amber stain graduation penetrates into the glass surface and is more resistant than a blue fused-on enamel graduation.

- made of soda lime glass
- acc. to DIN EN ISO 835 (except capacity 0.1 ml)
- low risk of breakage
- especially formed tips and ends, bevelled and fire-polished
- calibrated tips provide short and practice-oriented waiting time
- with colour coding for easy identification
- with indication of tolerance
- as from 5 ml capacity with constricted upper end to retain cotton plug. A cotton plug prevents an overflow of the pipette. But it can also extend the waiting time and thereby influence the accuracy of the measuring.
- circular graduation at main points, well legible numbers and graduations
- for complete delivery, zero at top

Cat. No.	Capacity	Tolerance	Multipack	Unit
<b>Class AS</b>				
1902000	0.1 : 0.001 ml	± 0.006 ml	39 x 24	24
1902010	0.2 : 0.001 ml	± 0.006 ml	39 x 24	24
1902030	0.5 : 0.01 ml	± 0.006 ml	39 x 24	24
▶ 1902040	1 : 0.01 ml	± 0.007 ml	39 x 24	24
▶ 1902070	2 : 0.02 ml	± 0.010 ml	39 x 24	24
▶ 1902080	2 : 0.1 ml	± 0.010 ml	39 x 24	24
▶ 1902100	5 : 0.1 ml	± 0.030 ml	55 x 12	12
▶ 1902110	10 : 0.1 ml	± 0.050 ml	55 x 12	12
▶ 1902120	20 : 0.1 ml	± 0.10 ml	10 x 12	12
▶ 1902130	25 : 0.1 ml	± 0.10 ml	10 x 10	10
1902140	50 : 0.2 ml	± 0.20 ml	10 x 5	5
<b>Class AS, conformity certified DE-M, with batch certificate</b>				
▶ 1903040	1 : 0.01 ml	± 0.007 ml	39 x 24	24
▶ 1903070	2 : 0.02 ml	± 0.010 ml	39 x 24	24
▶ 1903100	5 : 0.1 ml	± 0.030 ml	55 x 12	12
▶ 1903110	10 : 0.1 ml	± 0.050 ml	55 x 12	12
1903120	20 : 0.1 ml	± 0.10 ml	10 x 12	12
1903130	25 : 0.1 ml	± 0.10 ml	10 x 10	10



Do not mouth pipette! For recommended pipetting aids please see page 89.



## Brushes for pipettes

- nylon bristles on zinc-coated wire
- with loop to hang up

Cat. No.	Total length	Head: length x Ø	Unit
6205024	500 mm	100 x 5 mm	10

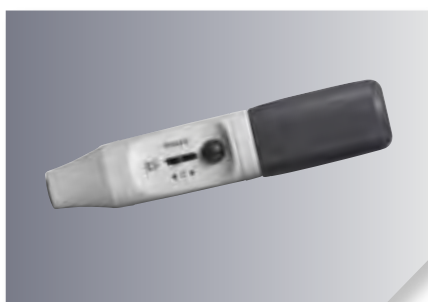


## Pipette racks



- made of polypropylene
- rotary rack with solid base for safe standing
- rotary base unit protects the pipettes' tips
- 94 openings with different diameters for graduated pipettes and volumetric pipettes of all sizes
- supplied flat-packed, assembly instruction included

Cat. No.	Diameter	Height	Unit
5610100	230 mm	470 mm	2



## Pipette controller macro

The optimized design, the practical arrangement of functions and the low weight (125 g only) offer reliable operation during serial pipetting tasks. The unique valve system allows an easy compression of the suction bellow. The spring loaded lever enables an even more sensitive filling and delivery of liquids.

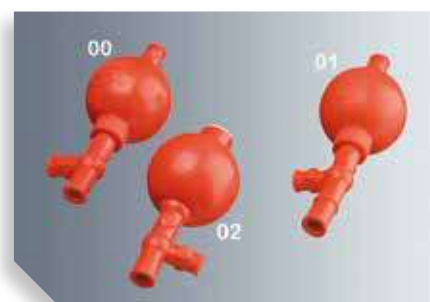
- suitable for graduated and volumetric pipettes from 0.1 to 200 ml capacity
- the conical silicone adapter offers a secure fit for different diameters
- the meniscus is easily adjustable
- fully autoclavable at 121 °C acc. to DIN EN 285
- a hydrophobic membrane filter protects the system from liquid penetration
- delivery with 1 spare filter 3 µm

Cat. No.	Colour	Unit
5827500	grey	1

## Safety pipette fillers

- for graduated and volumetric pipettes
- made of red rubber (natural caoutchouc)
- control of the functions by squeezing the appropriate valves between thumb and forefinger
- individually packed in foil with short instruction for use
- 100 pieces in a carton (multipack)

Cat. No.			Unit
▶ 5900000	Standard	for pipettes up to 20 ml capacity and 5 to 8 mm Ø, with 3 valves	1
▶ 5900001	Universal	for pipettes up to 100 ml capacity and 5 to 9 mm Ø, with 3 valves	1
5900002	Flip™	for pipettes up to 100 ml capacity and 5 to 8 mm Ø, with 2 valves, with detachable automatic valve for easy inside cleaning	1



## Rubber bulbs

- for graduated and volumetric pipettes
- made of grey rubber (natural caoutchouc)

Cat. No.	Capacity	Unit
5900003	1 ml	10
▶ 5900004	2 ml	10
5900005	5 ml	10
5900006	10 ml	10
5900007	15 ml	10



## Pipetting aids

- for graduated and volumetric pipettes
- made of plastic
- with hand wheel and drain valve lever (0.2 ml without drain valve lever). By turning the hand wheel the issue quantity is easy to dose.
- suitable for one-handed operation
- different colours for easy identification of the maximum volume
- autoclavable at 121 °C, 15 psi for 15 - 20 minutes

Cat. No.	Capacity	Colour	Multipack	Unit
5841000	0.2 ml	yellow	10	1
▶ 5841001	2 ml	blue	50	1
▶ 5841002	10 ml	green	50	1
▶ 5841003	25 ml	red	25	1





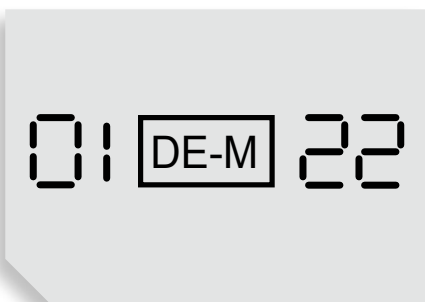


## Graduated cylinders, plastic



- made of transparent polypropylene
- class B in compliance with DIN 12 681 / ISO 6706
- break-resistant
- calibrated "In" (to contain)
- with ring-moulded graduation overprinted in blue and ring mark at the main points
- tall form
- with spout and hexagonal base
- autoclavable at 121 °C
- maximum operating temperature: 125 °C

Cat. No.	Capacity	Ø	Height	Unit
5500104	10 : 0.2 ml	16 mm	140 mm	12
5500105	25 : 0.5 ml	21 mm	169 mm	12
5500106	50 : 1 ml	28 mm	199 mm	12
5500107	100 : 1 ml	34 mm	260 mm	12
5500109	250 : 2 ml	47 mm	315 mm	6
5500111	500 : 5 ml	61 mm	350 mm	6
5500113	1000 : 10 ml	76 mm	415 mm	6
5500114	2000 : 20 ml	97 mm	482 mm	3



## Graduated cylinders, glass

### Classification:

- **Class B** (shortline graduation)
- **Class A** (circular graduation at main points)  
The tolerances are half of the tolerances of class B according to DIN ISO standards.
- **Class A conformity certified** (circular graduation at main points):  
Conformity means compliance with the German Calibration Regulations and the relevant standards. By imprinting the conformity symbol "DE-M" we confirm that the measuring device complies with these conditions.  
A batch certificate of conformity is supplied together with every packing unit.  
On request, individual certificates of conformity are available.

### Graduation:

- the blue graduation is fused on the glass and resistant against most acid and alkaline solutions
- the amber stain graduation penetrates into the glass surface and is, therefore, more resistant than the blue, fused-on enamel graduation

## Graduated cylinders, glass

- made of borosilicate glass 3.3
- in compliance with DIN EN ISO 4788
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- autoclavable
- calibrated "In" (to contain)
- well legible numbers and graduations
- with spout
- with hexagonal base

Cat. No.	Capacity	Tolerance	Height	Unit
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### Tall form, class B amber stain graduation

▶ 2103000	5 : 0.1 ml	± 0.10 ml	115 mm	10
▶ 2103030	10 : 0.2 ml	± 0.20 ml	140 mm	10
▶ 2103040	25 : 0.5 ml	± 0.50 ml	170 mm	10
▶ 2103060	50 : 1 ml	± 1.0 ml	200 mm	10
▶ 2103080	100 : 1 ml	± 1.0 ml	260 mm	10
▶ 2103110	250 : 2 ml	± 2.0 ml	335 mm	10
▶ 2103140	500 : 5 ml	± 5.0 ml	390 mm	10
▶ 2103160	1000 : 10 ml	± 10.0 ml	470 mm	10
▶ 2103180	2000 : 20 ml	± 20.0 ml	570 mm	10



Cat. No.	Capacity	Tolerance	Height	Unit
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### Tall form, class A blue graduation

▶ 2106021	10 : 0.2 ml	± 0.10 ml	140 mm	10
▶ 2106041	25 : 0.5 ml	± 0.25 ml	170 mm	10
▶ 2106061	50 : 1 ml	± 0.50 ml	200 mm	10
▶ 2106081	100 : 1 ml	± 0.50 ml	260 mm	10
▶ 2106111	250 : 2 ml	± 1.0 ml	335 mm	10
▶ 2106141	500 : 5 ml	± 2.5 ml	390 mm	10
▶ 2106161	1000 : 10 ml	± 5.0 ml	470 mm	10
▶ 2106181	2000 : 20 ml	± 10.0 ml	570 mm	10

### Tall form, class A, conformity certified DE-M, with batch certificate blue graduation

▶ 2106022	10 : 0.2 ml	± 0.10 ml	140 mm	10
▶ 2106042	25 : 0.5 ml	± 0.25 ml	170 mm	10
▶ 2106062	50 : 1 ml	± 0.50 ml	200 mm	10
▶ 2106082	100 : 1 ml	± 0.50 ml	260 mm	10
▶ 2106112	250 : 2 ml	± 1.0 ml	335 mm	10
▶ 2106142	500 : 5 ml	± 2.5 ml	390 mm	10
▶ 2106162	1000 : 10 ml	± 5.0 ml	470 mm	10
▶ 2106182	2000 : 20 ml	± 10.0 ml	570 mm	10





## Graduated cylinders with plastic base

- made of soda lime glass
- in compliance with DIN EN ISO 4788
- calibrated "In" (to contain)
- autoclavable (without plastic base)
- well legible numbers and graduations
- with spout
- with hexagonal base made of white plastic (PE)

Cat. No.	Capacity	Tolerance	Unit
<b>Tall form, class B</b> amber stain graduation			
2180030	10 : 0.2 ml	± 0.20 ml	10
2180040	25 : 0.5 ml	± 0.50 ml	10
▶ 2180060	50 : 1 ml	± 1.0 ml	10
▶ 2180080	100 : 1 ml	± 1.0 ml	10
2180110	250 : 2 ml	± 2.0 ml	10
2180140	500 : 5 ml	± 5.0 ml	10
2180160	1000 : 10 ml	± 10.0 ml	10



## Protective collars for graduated cylinders

- made of polyethylene (PE)
- different colours for each capacity of cylinder
- minimum order quantity: 10 pieces each
- multipack: 100 pieces in a poly bag

Cat. No.	For graduated cylinders	Colour
5815100	10 ml	blue
5815101	25 ml	green
5815102	50 ml	red
5815103	100 ml	orange
5815104	250 ml	yellow
5815105	500 ml	light blue
5815106	1000 ml	violet



## Brushes for cylinders

- bristles with tufted end made of wool
- galvanised wire handle with loop to hang up

Cat. No.	Total length	Head: length x Ø	Unit
6205026	520 mm	100 x 20 mm	10
6205027	520 mm	100 x 40 mm	10
6205028	520 mm	100 x 60 mm	10

## Mixing cylinders

Mixing cylinders with stoppers are useful when liquids have to be shaken or to impede evaporation of liquids.

- made of borosilicate glass 3.3
- in compliance with DIN EN ISO 4788
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- autoclavable
- calibrated "In" (to contain)
- well legible numbers and graduations
- with hexagonal base
- with standard ground joint and poly stopper (PE)

Cat. No.	Capacity	Tolerance	Ground joint	Unit
<b>Tall form, class B</b> blue graduation (shortline)				
2226010	10 : 0.2 ml	± 0.20 ml	NS 10/19	10
2226020	25 : 0.5 ml	± 0.50 ml	NS 14/23	10
2226030	50 : 1 ml	± 1.0 ml	NS 19/26	10
2226040	100 : 1 ml	± 1.0 ml	NS 24/29	10
2226050	250 : 2 ml	± 2.0 ml	NS 29/32	10
2226060	500 : 5 ml	± 5.0 ml	NS 34/35	10
2226070	1000 : 10 ml	± 10.0 ml	NS 45/40	10



## Nessler cylinders

Nessler cylinders are used for comparison of colour and turbidity between solutions.

- made of soda lime glass
- calibrated "In" (to contain)
- with white circular mark
- with spout
- minimum order quantity: 10 pieces each type

Cat. No.	Mark at	Height (Tol. ± 2 mm)	Ø ext./ Ø int. (Tol. ± 1 mm)
<b>Low form</b>			
▶ 2800011	50 ml	175 mm	26 mm / 23 mm
▶ 2800012	100 ml	200 mm	32 mm / 29 mm
<b>Tall form</b>			
2800014	50 ml	265 mm	22 mm / 19 mm
2800015	100 ml	320 mm	26 mm / 23 mm





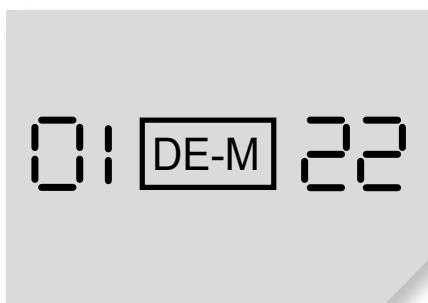


## Volumetric flasks with ground joint, clear glass

- made of borosilicate glass 3.3 (amber glass: dyed brown)
- in compliance with DIN EN ISO 1042
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- autoclavable
- calibrated "In" (to contain)
- with 1 circular mark
- printed with fused-on enamel colour resistant against most acid and alkaline solutions
- supplied with NS poly stopper

Cat. No.	Capacity	Ground joint	Tolerance	Unit
<b>Class A</b> blue graduation				
▶ 2332161	5 ml	NS 7/16	± 0.025 ml	10
▶ 2332171	5 ml	NS 10/19	± 0.040 ml	10
2332181	10 ml	NS 7/16	± 0.025 ml	10
▶ 2332191	10 ml	NS 10/19	± 0.040 ml	10
▶ 2332201	20 ml	NS 10/19	± 0.040 ml	10
▶ 2332211	25 ml	NS 10/19	± 0.040 ml	10
▶ 2332221	50 ml	NS 12/21	± 0.060 ml	10
2332231	50 ml	NS 14/23	± 0.100 ml	10
▶ 2332241	100 ml	NS 12/21	± 0.100 ml	10
2332251	100 ml	NS 14/23	± 0.100 ml	10
▶ 2332261	200 ml	NS 14/23	± 0.150 ml	10
▶ 2332271	250 ml	NS 14/23	± 0.150 ml	10
▶ 2332281	500 ml	NS 19/26	± 0.250 ml	10
▶ 2332291	1000 ml	NS 24/29	± 0.400 ml	10
▶ 2332301	2000 ml	NS 29/32	± 0.600 ml	5
2332311	5000 ml	NS 34/35	± 1.200 ml	1
<b>Class A</b> conformity certified DE-M, with batch certificate blue graduation				
2332162	5 ml	NS 7/16	± 0.025 ml	10
2332182	10 ml	NS 7/16	± 0.025 ml	10
2332202	20 ml	NS 10/19	± 0.040 ml	10
2332212	25 ml	NS 10/19	± 0.040 ml	10
▶ 2332222	50 ml	NS 12/21	± 0.060 ml	10
▶ 2332242	100 ml	NS 12/21	± 0.100 ml	10
2332262	200 ml	NS 14/23	± 0.150 ml	10
2332272	250 ml	NS 14/23	± 0.150 ml	10
2332282	500 ml	NS 19/26	± 0.250 ml	10
2332292	1000 ml	NS 24/29	± 0.400 ml	10
2332302	2000 ml	NS 29/32	± 0.600 ml	5
2332312	5000 ml	NS 34/35	± 1.200 ml	1

Conformity means compliance with the German Calibration Regulations and the relevant standards. By imprinting the conformity symbol DE-M we confirm that the measuring device complies with these conditions.



## Volumetric flasks with ground joint, amber glass

Cat. No.	Capacity	Ground joint	Tolerance	Unit
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### Class A white graduation

2333161	5 ml	NS 7/16	± 0.025 ml	10
2333171	5 ml	NS 10/19	± 0.040 ml	10
2333181	10 ml	NS 7/16	± 0.025 ml	10
2333191	10 ml	NS 10/19	± 0.040 ml	10
2333201	20 ml	NS 10/19	± 0.040 ml	10
2333211	25 ml	NS 10/19	± 0.040 ml	10
2333221	50 ml	NS 12/21	± 0.060 ml	10
2333231	50 ml	NS 14/23	± 0.100 ml	10
2333241	100 ml	NS 12/21	± 0.100 ml	10
2333251	100 ml	NS 14/23	± 0.100 ml	10
2333261	200 ml	NS 14/23	± 0.150 ml	10
2333271	250 ml	NS 14/23	± 0.150 ml	10
2333281	500 ml	NS 19/26	± 0.250 ml	10
2333291	1000 ml	NS 24/29	± 0.400 ml	10
2333301	2000 ml	NS 29/32	± 0.600 ml	5
2333311	5000 ml	NS 34/35	± 1.200 ml	1

### Class A, conformity certified DE-M, with batch certificate white graduation

2333162	5 ml	NS 7/16	± 0.025 ml	10
2333182	10 ml	NS 7/16	± 0.025 ml	10
2333202	20 ml	NS 10/19	± 0.040 ml	10
2333212	25 ml	NS 10/19	± 0.040 ml	10
2333222	50 ml	NS 12/21	± 0.060 ml	10
2333242	100 ml	NS 12/21	± 0.100 ml	10
2333262	200 ml	NS 14/23	± 0.150 ml	10
2333272	250 ml	NS 14/23	± 0.150 ml	10
2333282	500 ml	NS 19/26	± 0.250 ml	10
2333292	1000 ml	NS 24/29	± 0.400 ml	10
2333302	2000 ml	NS 29/32	± 0.600 ml	5
2333312	5000 ml	NS 34/35	± 1.200 ml	1

### Cleaning instructions for volumetric glassware

These laboratory devices with graduations and imprints can be cleaned manually or by machine. When cleaning please make sure that the rinse bath temperature does not exceed 70 °C in use with alkaline detergents. In addition, the retention period should be reduced to a minimum. Alkaline media in conjunction with temperatures above 50 °C and longer retention periods may cause volume changes due to glass removal and can destroy the imprints.

Our recommendation for cleaning is water above 90 °C without chemical additives (hot water cleaning). Please avoid rapid temperature changes when using measuring instruments made of soda lime glass.



Conformity means compliance with the German Calibration Regulations and the relevant standards. By imprinting the conformity symbol DE-M we confirm that the measuring device complies with these conditions.

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## Standard ground joint stoppers

- made of borosilicate glass 3.3
- very good chemical resistance
- with standard ground joint in compliance with DIN 12 252
- hollow
- with hexagonal grip
- with closed tip

Cat. No.	Ground joint	Unit
4820000	NS 7/16	10
4820001	NS 10/19	10
4820002	NS 12/21	10
4820003	NS 14/23	10
4820004	NS 19/26	10
4820005	NS 24/29	10
4820006	NS 29/32	10
4821000	NS 7/16	100
4821001	NS 10/19	100
4821002	NS 12/21	100
4821003	NS 14/23	100
4821004	NS 19/26	100
4821005	NS 24/29	100
4821006	NS 29/32	100

- made of polyethylene (PE-HD)
- with octagonal grip for easy opening and closing
- with red insert
- minimum order quantity: 10 pieces per size



Cat. No.	Ground joint
5402128	NS 7/16
5402129	NS 10/19
5402130	NS 12/21
5402131	NS 14/23
5402132	NS 19/26
5402133	NS 24/29
5402134	NS 29/32
5402135	NS 34/35

## Volumetric flasks, plastic



- made of transparent polypropylene
- tolerances correspond to class B acc. to DIN EN ISO 1042
- calibrated "In" (to contain)
- with circular mark individually calibrated
- with screw cap made of polypropylene
- autoclavable at 121 °C
- maximum operating temperature: 125 °C

Cat. No.	Capacity	Height	Thread	Unit
5500604	10 ml	100 mm	GL 18	2
5500605	25 ml	115 mm	GL 18	2
5500606	50 ml	150 mm	GL 18	2
5500607	100 ml	180 mm	GL 18	2
5500609	250 ml	235 mm	GL 25	2
5500611	500 ml	270 mm	GL 25	2
5500613	1000 ml	310 mm	GL 32	1



## Volumetric flasks for sugar analysis

- made of borosilicate glass 3.3 (clear glass)
- for analysis of sugar juices
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- class A
- blue graduation
- with 2 circular marks
- with beaded rim

Cat. No.	With 2 marks at	Tolerance	Unit
2322121	50 + 55 ml	± 0.06 ml	10
2322131	100 + 110 ml	± 0.10 ml	10
2322141	200 + 220 ml	± 0.15 ml	10



## Volumetric flasks acc. to Kohlrausch

- made of borosilicate glass 3.3 (clear glass)
- for sugar analysis
- wide mouth for easy introduction of solid materials
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- class A
- blue graduation
- with 1 circular mark

Cat. No.	Capacity	Tolerance	Unit
2342051	100 ml	± 0.10 ml	10
2342061	200 ml	± 0.15 ml	10







## Burettes acc. to Mohr

Burettes are calibrated volumetric instruments with graduations and ground-in stopcocks. They are used in laboratories for quantitative measurements of smaller liquid volumes in titration.

Burettes are calibrated "Ex" (to deliver): The imprinted volume corresponds to the delivered quantity of liquid.

### Classification:

- **Class AS** (fast delivery). "A" stands for highest accuracy, "S" for fast delivery. The tolerances of class AS are half of the tolerances of class B according to DIN ISO standards.
- **Class AS conformity certified** (fast delivery): Conformity means compliance with the German Calibration Regulations and the relevant standards. By imprinting the conformity symbol "DE-M" we confirm that the measuring device complies with these conditions. A batch certificate of conformity is supplied together with every packing unit. On request, individual certificates of conformity are available.
- made of borosilicate glass 3.3
- in compliance with DIN EN ISO 385
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- circular graduation at main points
- well legible numbers and graduations
- total length approx. 760 +/- 20 mm
- 2 pieces in a sturdy carton

Cat. No.	Capacity	Tolerance	Unit
<b>Class AS, with NS glass plug, clear glass blue graduation</b>			
2422001	10 : 0.02 ml	± 0.02 ml	2
▶ 2422011	25 : 0.05 ml	± 0.03 ml	2
▶ 2422031	50 : 0.1 ml	± 0.05 ml	2
2422041	100 : 0.2 ml	± 0.10 ml	2
<b>Class AS. with NS glass plug, with Schellbach stripe blue graduation</b>			
2423001	10 : 0.02 ml	± 0.02 ml	2
2423011	25 : 0.05 ml	± 0.03 ml	2
2423031	50 : 0.1 ml	± 0.05 ml	2
2423041	100 : 0.2 ml	± 0.10 ml	2

## Burettes acc. to Mohr

- made of borosilicate glass 3.3 (amber glass: dyed brown)
- in compliance with DIN EN ISO 385
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- circular graduation at main points
- well legible numbers and graduations
- total length approx. 760 +/- 20 mm
- 2 pieces in a sturdy carton

Cat. No.	Capacity	Tolerance	Unit
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### Class AS, with NS PTFE plug, clear glass blue graduation

2422101	10 : 0.02 ml	± 0.02 ml	2
2422111	25 : 0.05 ml	± 0.03 ml	2
2422131	50 : 0.1 ml	± 0.05 ml	2
2422141	100 : 0.2 ml	± 0.10 ml	2

### Class AS, with NS PTFE plug, with Schellbach stripe blue graduation

2423101	10 : 0.02 ml	± 0.02 ml	2
2423111	25 : 0.05 ml	± 0.03 ml	2
2423131	50 : 0.1 ml	± 0.05 ml	2
2423141	100 : 0.2 ml	± 0.10 ml	2

### Class AS, with NS glass plug, clear glass made of KPG precision tubing, calibrated at 5 points conformity certified DE-M, with batch certificate, blue graduation

2432001	10 : 0.02 ml	± 0.02 ml	2
2432011	25 : 0.05 ml	± 0.03 ml	2
2432031	50 : 0.1 ml	± 0.05 ml	2
2432041	100 : 0.2 ml	± 0.10 ml	2



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Cat. No.	Capacity	Tolerance	Unit
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### Class AS, with NS glass plug, amber glass white graduation

2426002	10 : 0.02 ml	± 0.02 ml	2
2426012	25 : 0.05 ml	± 0.03 ml	2
2426032	50 : 0.1 ml	± 0.05 ml	2
2426042	100 : 0.2 ml	± 0.10 ml	2

### Class AS with NS PTFE plug, amber glass white graduation

2426102	10 : 0.02 ml	± 0.02 ml	2
2426112	25 : 0.05 ml	± 0.03 ml	2
2426132	50 : 0.1 ml	± 0.05 ml	2
2426142	100 : 0.2 ml	± 0.10 ml	2





## Automatic burettes acc. to Pellet

Burettes are calibrated volumetric instruments with graduations and ground-in stopcocks. They are used in laboratories for quantitative measurements of smaller liquid volumes in titration.

Burettes are calibrated "Ex" (to deliver): The imprinted volume corresponds to the delivered quantity of liquid.

The Schellbach stripe facilitates reading precisely the meniscus of a liquid.

### Classification:

- **Class AS** (fast delivery). "A" stands for highest accuracy, "S" for fast delivery. The tolerances of class AS are half of the tolerances of class B according to DIN ISO standards.

- made of borosilicate glass 3.3
- in compliance with DIN EN ISO 385
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- with automatic zero adjustment
- without intermediate stopcock
- circular graduation at main points
- well legible numbers and graduations
- 2 pieces in a sturdy carton
- bottles and rubber bellows can be ordered separately

Cat. No.	Capacity	Tolerance	Unit
<b>With NS glass plug in delivery stopcock</b>			
<b>Class AS, clear class, blue graduation</b>			
2522001	10 : 0.02 ml	± 0.02 ml	2
2522011	25 : 0.05 ml	± 0.03 ml	2
2522031	50 : 0.1 ml	± 0.05 ml	2
<b>With NS glass plug in delivery stopcock</b>			
<b>Class AS, with Schellbach stripe, blue graduation</b>			
2523001	10 : 0.02 ml	± 0.02 ml	2
2523011	25 : 0.05 ml	± 0.03 ml	2
2523031	50 : 0.1 ml	± 0.05 ml	2
<b>With NS PTFE plug in delivery stopcock</b>			
<b>Class AS, clear glass, blue graduation</b>			
2522101	10 : 0.02 ml	± 0.02 ml	2
2522111	25 : 0.05 ml	± 0.03 ml	2
2522131	50 : 0.1 ml	± 0.05 ml	2
<b>With NS PTFE plug in delivery stopcock</b>			
<b>Class AS, with Schellbach stripe, blue graduation</b>			
2523101	10 : 0.02 ml	± 0.02 ml	2
2523111	25 : 0.05 ml	± 0.03 ml	2
2523131	50 : 0.1 ml	± 0.05 ml	2

Pellet burettes made of amber glass are available on request.

## Rubber bellows for burettes

- made of red PVC
- single, with valve and tubing

Cat. No.	Capacity	Multipack
▶ 5901000	approx. 65 ml	50

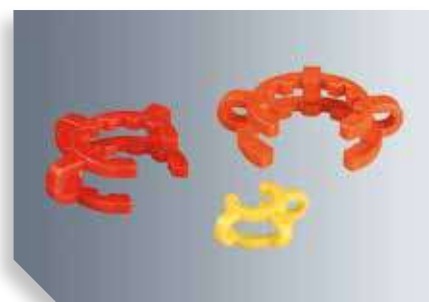


## Clamps for standard ground joints

Clamps for standard ground joints are used to securely link the socket and the cone. In addition to their excellent resilience our clamps also offer stability.

- made of plastic (POM)
- very good chemical resistance
- maximum operating temperature: 150 °C
- different colours for rapid identification of respective ground joint sizes

Cat. No.	For	Colour	Unit
5836500	NS 10/19	green	10
▶ 5836502	NS 14/23	yellow	10
▶ 5836503	NS 19/26	blue	10
▶ 5836504	NS 24/29	green	10
▶ 5836505	NS 29/32	red	10
5836506	NS 34/35	orange	10
5836507	NS 45/40	amber	10



## Reservoir bottles for burettes

- made of soda lime glass
- with ground joint NS 29/32, without stopper

Cat. No.	Capacity		Multipack	Unit
3619009	2000 ml	clear glass	3 x 2	2
3619109	2000 ml	amber glass	3 x 2	2







## Microburettes acc. to Bang

- made of borosilicate glass 3.3
- in compliance with DIN EN ISO 385
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- class AS (fast delivery, circular graduation at main points)
- calibrated "Ex" (to deliver)
- with blue graduation and Schellbach stripe at the back of the instrument. This white stripe facilitates reading precisely the meniscus of a liquid.
- 4 pieces in a sturdy carton

Cat. No.	Capacity	Tolerance	Unit
<b>Straight stopcock, with NS glass plug in delivery stopcock and in stopcock of filling tube</b>			
2630001	1 : 0.01 ml	± 0.010 ml	4
2630101	2 : 0.01 ml	± 0.010 ml	4
2630201	5 : 0.01 ml	± 0.010 ml	4
2630501	10 : 0.02 ml	± 0.020 ml	4
<b>Straight stopcock, with NS PTFE plug in delivery stopcock and in stopcock of filling tube</b>			
2630011	1 : 0.01 ml	± 0.010 ml	4
2630111	2 : 0.01 ml	± 0.010 ml	4
2630211	5 : 0.01 ml	± 0.010 ml	4
2630511	10 : 0.02 ml	± 0.020 ml	4
<b>Lateral fine regulation stopcock with PTFE screw valve and stopcock of filling tube with PTFE plug</b>			
2640021	1 : 0.01 ml	± 0.010 ml	4
2640121	2 : 0.01 ml	± 0.010 ml	4
2640221	5 : 0.01 ml	± 0.010 ml	4
2640521	10 : 0.02 ml	± 0.020 ml	4

## Bases for microburettes acc. to Bang

- for steady hold of microburettes with lateral stopcock
- made of metal and wood

Cat. No.	Unit
6622000	2

## Automatic burettes acc. to Dr. Schilling

- burette made of borosilicate glass
- with automatic zero adjustment
- class B
- the Schellbach stripe at the back of the clear glass burette facilitates reading precisely the meniscus of a liquid
- calibrated "Ex" (to deliver)
- with high grade pinchcock
- complete with plastic bottle and stable plastic base (red)
- top of burette is provided with an overflow tube
- bottle and burette are firmly fixed by the fitting
- suitable for left- and right-handers
- 2 pieces in a sturdy carton

Cat. No.	Capacity burette	Capacity bottle	Fitting	Unit
<b>Clear glass, with Schellbach stripe</b> blue graduation, with white bottle				
2600400	5 : 0.05 ml	500 ml	blue	2
▶ 2600600	10 : 0.05 ml	500 ml	blue	2
▶ 2600800	25 : 0.1 ml	1000 ml	red	2
▶ 2601000	50 : 0.1 ml	1000 ml	red	2
<b>Amber glass</b> white graduation, with amber bottle				
2600403	5 : 0.05 ml	500 ml	blue	2
2600603	10 : 0.05 ml	500 ml	blue	2
2600803	25 : 0.1 ml	1000 ml	red	2
2601003	50 : 0.1 ml	1000 ml	red	2



## Burettes acc. to Daffert

- made of borosilicate glass 3.3
- in compliance with DIN EN ISO 385
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- with automatic zero adjustment
- calibrated "Ex" (to deliver)
- class AS (fast delivery, circular graduation at main points)
- with blue graduation and Schellbach stripe at the back of the instrument. This stripe facilitates reading precisely the meniscus of a liquid.
- double oblique bore stopcock with ground joint PTFE plug for convenient change between filling and titrating
- 4 pieces in a sturdy carton

Cat. No.	Capacity	Tolerance	Unit
2650841	25 : 0.1 ml	± 0.05 ml	4
2651041	50 : 0.1 ml	± 0.10 ml	4





New

## Bottle-top burette Titrette®

for quick and reliable titration with highest precision and with no power hookup needed, observing the following physical limits:

- +15 °C to +40 °C (59 °F to 104 °F) of instrument and reagent
- vapor pressure up to 500 mbar
- viscosity up to 500 mm<sup>2</sup>/s
- altitude: maximum 3000 m above sea level
- relative humidity: 20 % to 90 %
- within the error limits of class A
- digital display
- Easy Handling (no switching between „fill“ and „titrate“)
- simple maintenance (cleaning and part replacement right in the lab)
- optionally available with PC interface
- four additional electronic functions:
  - adjustment with Easy Calibration
  - calibration schedule
  - save power with Auto-Power-Off
  - changing decimal place settings
- with bottle thread GL 45
- dismountable
- titrating tube horizontally and vertically adjustable for flexible positioning
- DE-M marking
- items supplied:
  - bottle-top burette Titrette®
  - telescoping filling tube 170-330 mm
  - recirculation tube
  - 2 batteries (AAA/UM4/LR03)
  - 3 polypropylene bottle adapters (GL 45/32, GL 45/S 40, GL 32/NS 29/32)
  - 2 coloured light shield inspection windows
  - operation manual
  - performance certificate

Cat. No.	Volume	Resolution	Unit
5334021	10 ml	0.001 ml	1
5334023	25 ml	0.001 ml, above 20 ml titration volume 0.01 ml	1
5334024	50 ml	0.002 ml, above 20 ml titration volume 0.01 ml	1

BRAND®, Titrette®, as well as the BRAND figurative mark are registered trademarks of BRAND GMBH+CO KG, Germany.



## Bottle-top burette Titrette®

### Error limits

Volume	Partial volume	A* ≤ ± %	μl	CV* ≤ %	μl
10 ml	10 ml	0.10	10	0.05	5
	5 ml	0.20	10	0.10	5
	1 ml	1.00	10	0.50	5
25 ml	25 ml	0.07	18	0.025	6
	12.5 ml	0.14	18	0.05	6
	2.5 ml	0.70	18	0.25	6
50 ml	50 ml	0.06	30	0.02	10
	25 ml	0.12	30	0.04	10
	5 ml	0.06	30	0.20	10

\*A = accuracy

\*CV = coefficient of variation

Error limits related to the nominal capacity (= maximum volume) indicated on the instrument, obtained when instrument and distilled water are equilibrated at ambient temperature (20 °C/68 °F) and with smooth operation.

The instrument can be used for the following titration media (maximum concentration 1 mol/l):

Titration media		
Acetic acid	Iron (II) sulfate solution	Silver nitrate solution*
Alcoholic potassium hydroxide solution	Nitric acid	Sodium arsenite solution
Ammonium iron (II) sulfate solution	Oxalic acid solution	Sodium carbonate solution
Ammonium thiocyanate solution	Perchloric acid	Sodium chloride solution
Barium chloride solution	Perchloric acid in glacial acetic acid	Sodium hydroxide solution
Bromide bromate solution	Potassium bromate solution	Sodium nitrite solution
Cerium (IV) sulfate solution	Potassium bromide bromate solution	Sodium thiosulfate solution
EDTA solution	Potassium dichromate solution	Sulfuric acid
Hydrochloric acid	Potassium hydroxide solution	Tetra-n-butylammonium hydroxide solution
Hydrochloric acid in acetone	Potassium iodate solution	Triethanolamine in acetone*
Iodide iodate solution*	Potassium permanganate solution*	Zinc sulfate solution
Iodine solution*	Potassium thiocyanate solution	

\*use light shield inspection window

When the instrument is properly handled, dispensed liquid will only come into contact with the following chemically resistant materials: borosilicate glass, Al<sub>2</sub>O<sub>3</sub>, ETFE, PFA, FEP, PTFE, platinum-iridium, PP (screw cap)



## Brushes for burettes

- bristles with protection cap
- galvanised wire handle with loop to hang up

Cat. No.	Total length	Head: Length x Ø	Unit
6210029	100 cm	150 x 30 mm	10



## Universal clamps

- made of powder-coated zinc die-casting
- with cork-lined jaws
- diameter of rod 10 mm
- span width 0 to 80 mm

Cat. No.	Unit
6648004	5



## Clamps for burettes

- nickel-plated zinc die-casting
- clamps and jaw dies are plastic coated
- span width: 0 to 40 mm

Cat. No.	
▶ 6610001	for 1 burette
▶ 6610003	for 2 burettes



## Stands for burettes

- to be assembled by a base plate and a rod
- non-slipping stand due to its rubber feet

Cat. No.		Length x width
▶ 6647402	Plate made of powder-coated steel	210 x 130 mm

Cat. No.		Length x Ø
▶ 6647601	Rod, zinc-coated, with thread M 10	750 x 12 mm



## Specific gravity bottles acc. to Gay-Lussac

The specific gravity bottle is a measuring device to determine the density of liquids.

- made of borosilicate glass 3.3
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- pear-shaped
- with ground-in glass stopper
- the calibrated versions show the actual capacity  $\pm 0.001$  ml.  
The exact capacity is durably engraved into the glass.

Cat. No.	Capacity	Unit
<b>Not calibrated</b>		
2702000	5 ml	2
2703000	10 ml	2
2704000	25 ml	2
2705000	50 ml	2
2706000	100 ml	2
<b>Calibrated at 20 °C ("In")</b>		
2710000	1 ml	2
2711000	2 ml	2
2712000	5 ml	2
▶ 2713000	10 ml	2
▶ 2714000	25 ml	2
▶ 2715000	50 ml	2
2716000	100 ml	2



## Specific gravity bottles with ground joint thermometer NS 10/19

- made of borosilicate glass 3.3
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- lateral capillary tube with glass cap on ground joint
- measuring range of thermometer: 10 to 35 °C
- thermometer with blue filling
- calibrated at 20 °C ("In") showing the actual capacity  $\pm 0.001$  ml.  
The exact capacity is durably engraved into the glass.

Cat. No.	Capacity	Unit
2722000	5 ml	2
2723000	10 ml	DIN 12 809 2
2724000	25 ml	DIN 12 809 2
2725000	50 ml	DIN 12 809 2
2726000	100 ml	2





### Gas washing bottles acc. to Drechsel

- the set is to be combined by the gas washing bottle and the required head with standard ground joint NS 29/32
- components can be ordered separately

Cat. No.		Unit
<b>Bottle only, NS 29/32</b> borosilicate glass 3.3		
4800200	100 ml	1
4800201	250 ml	1
4800202	500 ml	1
<b>Head only, NS 29/32</b> borosilicate glass Duran®		
4820303	without sintered disc	1
4820503	with sintered disc of porosity 1	1



### Oxygen bottles acc. to Winkler

For the determination of oxygen dissolved in water

- made of clear glass
- with ground-in stopper
- with frosted marking area
- exact volume is engraved on the flask
- tolerance:  $\pm 0.1$  ml
- stopper and bottle show identical number and cannot be exchanged

Cat. No.	Capacity	Unit
3618016	100 to 150 ml	10
3618017	250 to 300 ml	10

## Sedimentation cones

Sedimentation cones according to Imhoff are used for determination of sedimentable particles in water.

- made of borosilicate glass 3.3
- in compliance with DIN 12 672
- white graduation

Cat. No.		Unit
<b>With stopcock</b>		
2800001	graduated 0 to 100 ml, with mark at 1000 ml	2
2800003	graduated 0 to 1000 ml	2
<b>Without stopcock</b>		
2800000	graduated 0 to 100 ml, with mark at 1000 ml	2
2800002	graduated 0 to 1000 ml	2



## Drying racks for laboratory containers



- made of polystyrene
- stable type
- with 72 interchangeable hanging hooks approx. 100 x 15 mm
- suitable for graduated cylinders up to 250 ml or beakers up to 1000 ml
- with draining groove and runoff support
- accessories for wall mounting are supplied with the rack

Cat. No.	Dimensions	Unit
5610300	450 x 630 mm	1



## Water jet filter pumps



For various use such as acceleration of filtering processes (vacuum filtration) and extracting liquids and vapors.

- made of polypropylene. Other media-touching parts are made of FKM and PTFE.
- good chemical resistance
- maximum operating temperature: 80 °C
- with non-return valve
- water jet pump includes: sleeve nut R3/4", reducing adapter R1/2"
- and tubing connector (hose nozzle) of 10-12 mm outer diameter
- suction line connection: detachable hose nozzle of 6-9 mm outer diameter, with screw cap GL 14
- water consumption approx. 220 litres/h at 3.5 bar (absolute pressure)
- suction capacity 450 l/h ( $\pm 50$  l/h) air against atmospheric pressure at a supply pressure of 3.5 bar and a water temperature of 12 °C.
- ultimate pressure at 12 °C (water temperature): < 16 mbar
- water supply pressure to attain the ultimate pressure: 3 - 6 bar (absolute)

Cat. No.	Unit
5877000	1







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Beakers are no measuring instruments. Their scales are only approximate.

## Beakers, glass

- made of borosilicate glass 3.3
- in compliance with DIN 12331, ISO 3819
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- with spout
- white graduation

Cat. No.	Capacity	Diameter	Height	Unit
<b>Low form (Griffin type)</b>				
▶ 4110000	5 ml	22 mm	30 mm	10
▶ 4110001	10 ml	26 mm	35 mm	10
▶ 4110002	25 ml	34 mm	50 mm	10
▶ 4110003	50 ml	42 mm	60 mm	10
▶ 4110004	100 ml	50 mm	70 mm	10
▶ 4110005	150 ml	60 mm	80 mm	10
▶ 4110007	250 ml	70 mm	95 mm	10
▶ 4110009	400 ml	80 mm	110 mm	10
▶ 4110011	600 ml	90 mm	125 mm	10
▶ 4110012	800 ml	100 mm	135 mm	10
▶ 4110013	1000 ml	105 mm	145 mm	10
▶ 4110014	2000 ml	130 mm	185 mm	4
▶ 4110015	3000 ml	150 mm	210 mm	4
▶ 4110017	5000 ml	170 mm	270 mm	2
<b>Tall form</b>				
▶ 4110102	25 ml	30 mm	55 mm	10
▶ 4110103	50 ml	38 mm	70 mm	10
▶ 4110104	100 ml	48 mm	80 mm	10
▶ 4110105	150 ml	54 mm	95 mm	10
▶ 4110107	250 ml	60 mm	120 mm	10
▶ 4110109	400 ml	70 mm	130 mm	10
▶ 4110111	600 ml	80 mm	150 mm	10
▶ 4110112	800 ml	90 mm	175 mm	10
▶ 4110113	1000 ml	95 mm	180 mm	10
▶ 4110114	2000 ml	120 mm	240 mm	6
▶ 4110115	3000 ml	135 mm	280 mm	6



## Beaker tongs

- made of stainless steel
- vinyl coated
- minimum order quantity: 10 pieces

Cat. No.	Total length	Holding capacity
6606001	260 mm	40 to 100 mm

## Beakers, plastic

- made of transparent polypropylene
- in compliance with DIN 7056
- break-resistant
- low form (Griffin type)
- with spout and burr free rim
- blue graduation
- autoclavable at 121 °C
- maximum operating temperature: 125 °C
- suitable for food



Beakers are no measuring instruments. Their scales are only approximate.

Cat. No.	Capacity	Division	Diameter	Height	Unit
▶ 5501705	25 ml	1 ml	34 mm	49 mm	10
▶ 5501706	50 ml	5 ml	43 mm	60 mm	10
▶ 5501707	100 ml	5 ml	51 mm	72 mm	10
▶ 5501708	150 ml	5 ml	58 mm	82 mm	10
▶ 5501709	250 ml	5 ml	70 mm	95 mm	10
▶ 5501710	400 ml	10 ml	80 mm	110 mm	10
▶ 5501712	600 ml	25 ml	93 mm	125 mm	10
▶ 5501713	1000 ml	50 ml	108 mm	148 mm	10
▶ 5501714	2000 ml	100 ml	140 mm	188 mm	10

## Measuring jugs, plastic

- made of transparent polypropylene
- break-resistant
- with handle
- with spout
- with moulded blue graduation
- autoclavable at 121 °C
- maximum operating temperature: 125 °C



Beakers are no measuring instruments. Their scales are only approximate.

Cat. No.	Capacity	Division	Diameter	Height	Unit
5501106	50 ml	2 ml	40 mm	70 mm	24
5501107	100 ml	2 ml	50 mm	80 mm	24
▶ 5501109	250 ml	5 ml	70 mm	120 mm	12
▶ 5501111	500 ml	10 ml	91 mm	133 mm	12
▶ 5501113	1000 ml	20 ml	116 mm	182 mm	6
▶ 5501114	2000 ml	50 ml	150 mm	215 mm	6
5501115	3000 ml	50 ml	170 mm	242 mm	6
5501116	5000 ml	100 ml	210 mm	270 mm	6

## Beaker brushes

- with bristles and nylon on galvanised wire
- with wooden handle

Cat. No.	Total length	Head: Length x Ø	Unit
6243001	430 mm	140 x 60 to 85 mm	10



▶ This arrow indicates products that are usually available on short notice.



Erlenmeyer flasks are no measuring instruments. Their scales are only approximate.

## Erlenmeyer flasks, glass

- made of borosilicate glass 3.3
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- with beaded rim
- white graduation

Cat. No.	Capacity	Ø Bottom x Ø Neck	Height	Unit
<b>Narrow neck DIN ISO 1773</b>				
4110202	25 ml	42 x 22 mm	75 mm	10
▶ 4110203	50 ml	51 x 22 mm	90 mm	10
▶ 4110204	100 ml	64 x 22 mm	105 mm	10
4110206	200 ml	79 x 34 mm	135 mm	10
▶ 4110207	250 ml	85 x 34 mm	145 mm	10
▶ 4110208	300 ml	87 x 34 mm	160 mm	10
▶ 4110210	500 ml	105 x 34 mm	180 mm	10
▶ 4110213	1000 ml	131 x 42 mm	220 mm	10
▶ 4110214	2000 ml	166 x 50 mm	280 mm	6
4110215	3000 ml	187 x 50 mm	310 mm	6
4110217	5000 ml	220 x 50 mm	365 mm	2
<b>Wide neck DIN 12385</b>				
4110302	25 ml	42 x 32 mm	70 mm	10
4110303	50 ml	51 x 34 mm	85 mm	10
▶ 4110304	100 ml	64 x 34 mm	110 mm	10
4110306	200 ml	79 x 50 mm	131 mm	10
▶ 4110307	250 ml	85 x 50 mm	140 mm	10
4110308	300 ml	87 x 50 mm	156 mm	10
▶ 4110310	500 ml	105 x 50 mm	175 mm	10
4110313	1000 ml	131 x 50 mm	220 mm	10
4110314	2000 ml	153 x 72 mm	280 mm	6



Erlenmeyer flasks are no measuring instruments. Their scales are only approximate.

## Erlenmeyer flasks with screw cap



- made of borosilicate glass 3.3 Simax
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- with DIN thread
- with screw cap made of blue polypropylene ( $T_{\max.}$  140 °C)
- white graduation

Cat. No.	Capacity	Division	Thread	Height with cap	Unit
4121804	100 ml	25 ml	GL 25	107 mm	10
4121807	250 ml	50 ml	GL 32	150 mm	10
4121810	500 ml	50 ml	GL 32	187 mm	10
4121813	1000 ml	100 ml	GL 32	225 mm	10

▶ This arrow indicates products that are usually available on short notice.

## Erlenmeyer flasks with standard ground joint

- made of borosilicate glass 3.3
- in compliance with DIN 12387
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- white graduation
- stoppers are not included. Please order them separately.

Cat. No.	Capacity	Ground joint	Unit
4310302	25 ml	NS 14/23	10
4310403	50 ml	NS 19/26	10
4310504	100 ml	NS 24/29	10
4310604	100 ml	NS 29/32	10
4310507	250 ml	NS 24/29	10
4310607	250 ml	NS 29/32	10
4310610	500 ml	NS 29/32	10
4310613	1000 ml	NS 29/32	10



Erlenmeyer flasks are no measuring instruments. Their scales are only approximate.

## Standard ground joint stoppers

- made of borosilicate glass 3.3
- with standard ground joint in compliance with DIN 12252
- very good chemical resistance
- hollow
- with hexagonal grip
- with closed tip

Cat. No.	Ground joint	Unit
4820003	NS 14/23	10
4820004	NS 19/26	10
4820005	NS 24/29	10
4820006	NS 29/32	10



## Erlenmeyer flasks, plastic

- made of transparent polypropylene
- break-resistant
- with screw cap
- blue graduation
- autoclavable at 121 °C
- maximum operating temperature: 125 °C

Cat. No.	Capacity	Thread	VE
5811400	75 ml	GL 45	6
5811401	125 ml	GL 45	6
5811402	250 ml	GL 45	6
5811403	500 ml	GL 45	6
5811404	1000 ml	GL 45	4



Erlenmeyer flasks are no measuring instruments. Their scales are only approximate.



## Flasks with beaded rim

- made of borosilicate glass 3.3
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks

Cat. No	Capacity	Unit
<b>Round bottom, narrow neck</b>		
4110403	50 ml	10
4110404	100 ml	10
4110407	250 ml	10
4110410	500 ml	10
4110413	1000 ml	10
4110414	2000 ml	6
<b>Flat bottom, narrow neck</b>		
4110603	50 ml	10
4110604	100 ml	10
4110607	250 ml	10
4110610	500 ml	10
4110613	1000 ml	10
4110614	2000 ml	6



## Lead rings for weighing down

These rings are used for weighing down containers and prevent flasks from floating or tilting over in water baths (by putting the ring around the flasks' necks).

- made of lead
- with strong PVC coating. The coating protects the surfaces of flasks and workplaces.
- very good chemical and thermal resistance
- non-ageing material
- open C-shape. Suitable for containers with side connections.
- individually packed

Cat. No.	Diameter int.	Weight	Unit
6607100	50 mm	660 g	1
6607101	70 mm	930 g	1
6607102	100 mm	1190 g	1



## Flask tongs

- made of stainless steel
- vinyl coated
- minimum order quantity: 10 pieces

Cat. No.	Total length	Holding capacity
6626002	300 mm	45 to 70 mm



## Flasks with standard ground joint

- made of borosilicate glass 3.3
- in compliance with DIN EN ISO 4797
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- short neck

Cat. No.	Capacity	NS-Socket	Ø Flask mm	Height mm	Unit
<b>Round bottom flasks</b>					
4311503	50 ml	24/29	55 ± 1.8	100 ± 6	10
4311603	50 ml	29/32	55 ± 1.8	100 ± 6	10
4311504	100 ml	24/29	65 ± 2.0	110 ± 6	10
4311604	100 ml	29/32	65 ± 2.0	110 ± 6	10
4311507	250 ml	24/29	85 ± 2.6	130 ± 6	10
4311607	250 ml	29/32	85 ± 2.6	130 ± 6	10
4311610	500 ml	29/32	100 ± 3.0	165 ± 6	10
4311613	1000 ml	29/32	120 ± 3.5	190 ± 6	10
<b>Flat bottom flasks</b>					
4312503	50 ml	24/29	55 ± 1.8	90 ± 6	10
4312603	50 ml	29/32	55 ± 1.8	90 ± 6	10
4312504	100 ml	24/29	65 ± 2.0	105 ± 6	10
4312604	100 ml	29/32	65 ± 2.0	105 ± 6	10
4312507	250 ml	24/29	85 ± 2.6	125 ± 6	10
4312607	250 ml	29/32	85 ± 2.6	125 ± 6	10
4312610	500 ml	29/32	100 ± 3.0	160 ± 6	10
4312513	1000 ml	24/29	120 ± 3.5	185 ± 6	10
4312613	1000 ml	29/32	120 ± 3.5	185 ± 6	10

## Brushes for flasks

- with tilting head
- with wooden handle
- natural bristle stamped into wooden head
- suitable for flasks with ground joint NS 29/32 or minimum inside neck diameter of 45 mm

Cat. No.	Total length	Bristle: Length x dia.	Unit
6204430	400 mm	42 x 20 mm	10





### Condensers acc. to Liebig

- made of borosilicate glass Duran®
- in compliance with DIN 12576 (NS 24/29 in supplement to DIN)
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- with 2 standard ground joints
- water connection: glass hose nozzle

Cat. No.	Jacket length	Cone	Socket	Ø Hose	Unit
4710708	250 mm	NS 24/29	NS 24/29	11 mm	5
4710709	250 mm	NS 29/32	NS 29/32	11 mm	5



### Condensers acc. to Allihn

- made of borosilicate glass Duran®
- in compliance with DIN 12581 (NS 24/29 in supplement to DIN)
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- with 2 standard ground joints
- with 5 bulbs (for length 250 mm)
- water connection: glass hose nozzle

Cat. No.	Jacket length	Cone	Socket	Ø Hose	Unit
4710808	250 mm	NS 24/29	NS 24/29	11 mm	5
4710809	250 mm	NS 29/32	NS 29/32	11 mm	5



### Condensers acc. to Dimroth

- made of borosilicate glass Duran®
- in compliance with DIN 12591 (NS 24/29 in supplement to DIN)
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- with 2 standard ground joints
- water connection: glass hose nozzle

Cat. No.	Jacket length	Cone	Socket	Ø Hose	Unit
4711008	250 mm	NS 24/29	NS 24/29	11 mm	5
4711009	250 mm	NS 29/32	NS 29/32	11 mm	5

## Separatory funnels acc. to Squibb

- made of borosilicate glass 3.3
- in compliance with DIN ISO 4800
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- with poly stopper standard ground joint NS 29/32 (100 ml: NS 19/26)

Cat. No.	Capacity	Stopcock: Ground joint	Bore	Unit
<b>Stopcock with NS PTFE plug, ungraduated</b>				
4411140	100 ml	NS 14.5	2.5 mm	2
4411240	250 ml	NS 14.5	2.5 mm	2
4411340	500 ml	NS 18.8	4.0 mm	1
4411440	1000 ml	NS 18.8	4.0 mm	1
4411540	2000 ml	NS 18.8	4.0 mm	1
<b>Stopcock with NS PTFE plug, with blue graduation</b>				
4411150	100 ml	NS 14.5	2.5 mm	2
4411250	250 ml	NS 14.5	2.5 mm	2
4411350	500 ml	NS 18.8	4.0 mm	1
4411450	1000 ml	NS 18.8	4.0 mm	1
4411550	2000 ml	NS 18.8	4.0 mm	1



## Separatory funnels with conical shape

- made of borosilicate glass 3.3 Duran®
- in compliance with DIN ISO 4800
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- with poly stopper standard ground joint NS 29/32 (100 ml: NS 19/26)

Cat. No.	Capacity	Stopcock: Ground joint	Bore	Unit
<b>Stopcock with NS PTFE plug, ungraduated</b>				
4400140	100 ml	NS 14.5	2.5 mm	2
4400240	250 ml	NS 14.5	2.5 mm	2
4400340	500 ml	NS 18.8	4.0 mm	1
4400440	1000 ml	NS 18.8	4.0 mm	1
4400540	2000 ml	NS 18.8	4.0 mm	1
<b>Stopcock with NS PTFE plug, with blue graduation</b>				
4400150	100 ml	NS 14.5	2.5 mm	2
4400250	250 ml	NS 14.5	2.5 mm	2
4400350	500 ml	NS 18.8	4.0 mm	1
4400450	1000 ml	NS 18.8	4.0 mm	1
4400550	2000 ml	NS 18.8	4.0 mm	1





## Funnels

- made of borosilicate glass 3.3
- in compliance with DIN 12445
- with plain surfaces
- angle: 60°
- with short and angled-ground stem (length of stem  $\approx$  diameter of funnel)

Cat. No.	Diameter	Stem Ø ext. ( $\pm$ 0.2 mm)	Unit
3501030	30 mm	6	10
3501035	35 mm	6	10
▶ 3501040	40 mm	6	10
▶ 3501045	45 mm	6	10
▶ 3501050	50 mm	7	10
▶ 3501055	55 mm	8	10
▶ 3501060	60 mm	8	10
▶ 3501070	70 mm	8	10
▶ 3501080	80 mm	9	10
▶ 3501100	100 mm	10	10
3501125	125 mm	16	10
▶ 3501150	150 mm	16	10
3501200	200 mm	24	6
3501250	250 mm	30	2

## Bunsen funnels

- made of borosilicate glass 3.3
- in compliance with DIN 12446
- with plain surfaces
- length of stem: approx. 150 mm

Cat. No.	Diameter	Stem Ø ext. ( $\pm$ 0.2 mm)	Unit
3511045	45 mm	6	10
3511055	55 mm	8	10
3511070	70 mm	8	10
3511080	80 mm	9	10
3511100	100 mm	10	10

## Funnels, plastic

- made of polypropylene
- with plain surfaces and short stem



Cat. No.	Diameter	Unit
5868002	40 mm	24
5868003	50 mm	24
5868004	75 mm	12
5868005	100 mm	12
5868006	120 mm	12
5868007	150 mm	12

## Ointment jars

- made of amber glass of third hydrolytic class
- with screw thread
- autoclavable
- screw caps are not included. Please order them separately.

Cat. No.	Capacity	Thread	unit
3668131	60 ml	51/R3	72
3668141	108 ml	58/R3	49



## Screw caps for ointment jars

Cat. No.	For capacity	Thread
5454924	60 ml Polypropylene black, with ALKOzell insert 2 mm	DIN 50
5458752	108 ml Urea resin 131.5 black, with PE-foam insert 1 mm	GPI 58-400



## Square laboratory bottles GL80

- made of borosilicate glass 3.3 Simax
- in compliance with ISO 4796
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- autoclavable 121 °C
- sterilizable (steam 134 °C)
- not suitable for working under pressure or vacuum
- with retrace code for traceability
- white graduation
- with DIN thread GL 80
- complete with pouring ring and screw cap made of blue polypropylene (T<sub>max.</sub> 140 °C)



Cat. No.	Capacity	Dimension mm	Unit
<b>Clear glass</b>			
3667507	500 ml	94 x 94 x 139	10
3667508	1000 ml	105 x 105 x 185	10
3667509	2000 ml	115 x 115 x 258	10
3667512	5000 ml	160 x 160 x 357	6
<b>With amber colour coating</b>			
3667607	500 ml	94 x 94 x 139	10
3667608	1000 ml	105 x 105 x 185	10
3667609	2000 ml	115 x 115 x 258	10
3667612	5000 ml	160 x 160 x 357	6







## Laboratory bottles

- made of borosilicate glass 3.3 Simax
- in compliance with ISO 4796
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- autoclavable at 121 °C
- sterilizable (steam 134°C)
- not suitable for working under pressure or vacuum
- with retrace code for traceability
- white graduation
- with DIN thread GL 45 (50 ml: GL 32)
- complete with pouring ring and screw cap made of blue polypropylene ( $T_{max.}$  140 °C)

Cat. No.	Capacity	Ø mm	Height mm	Multipack	Unit
<b>Clear glass</b>					
3607504	50 ml	45	90		10
▶ 3607505	100 ml	56	100	2340	10
▶ 3607506	250 ml	70	138	1400	10
▶ 3607507	500 ml	86	176	720	10
▶ 3607508	1000 ml	101	225	490	10
▶ 3607509	2000 ml	136	260	240	10
3607512	5000 ml	186	330	96	6
3607513	10000 ml	234	410	42	1
3607515	20000 ml	299	505		1
<b>With amber colour coating</b>					
3607604	50 ml	45	90		10
3607605	100 ml	56	100	2340	10
3607606	250 ml	70	138	1400	10
3607607	500 ml	86	176	720	10
3607608	1000 ml	101	225	490	10
3607609	2000 ml	136	260	240	10
3607612	5000 ml	186	330	96	6
3607613	10000 ml	234	410	42	1
3607615	20000 ml	299	505		1

## Spare parts for laboratory bottles

Cat. No.	Unit
<b>Thread GL 45</b>	
▶ 5444122	Pouring ring made of blue polypropylene ( $T_{max.}$ 140 °C) 10
▶ 5444722	Screw cap made of blue polypropylene ( $T_{max.}$ 140 °C) 10
▶ 5440122	Pouring ring made of red PBT ( $T_{max.}$ 180 °C) 10
▶ 5440822	Screw cap made of red PBT ( $T_{max.}$ 180 °C) with PTFE-coated silicone sealing insert 10
<b>Thread GL 32 (50 ml)</b>	
▶ 5444120	Pouring ring made of blue polypropylene ( $T_{max.}$ 140 °C) 10
▶ 5444720	Screw cap made of blue polypropylene ( $T_{max.}$ 140 °C) 10
▶ 5440120	Pouring ring made of red PBT ( $T_{max.}$ 180 °C) 10
▶ 5440820	Screw cap made of red PBT ( $T_{max.}$ 180 °C) with PTFE-coated silicone sealing insert 10

- ▶ This arrow indicates products that are usually available on short notice.

## Safety laboratory bottles



These bottles have the same characteristics as the laboratory bottles. In addition, they have a plastic coating to protect the contents of the bottle in the event of a breakage. The coating provides protection against shocks, shatter and anti-slip. The safe laboratory bottles are ideal for transportation and storage of hazardous media or valuable samples.

- transmission / UV-protection: up to approx. 380 nm wavelength
- temperature durability PU: -30 °C to + 135 °C
- short-term temperature resistance: up to 190 °C
- suitable for use in a microwave
- suitable for freezing (down to -30 °C)
- autoclavable at 121 °C (steam sterilisation)

Cat. No.	Capacity	Ø mm	Height mm	Multipack	Unit
<b>Clear glass, plastic coated</b>					
3607705	100 ml	56	100	2340	10
3607706	250 ml	70	138	1400	10
3607707	500 ml	86	176	720	10
3607708	1000 ml	101	225	490	10
3607709	2000 ml	136	260	240	10
3607712	5000 ml	186	330	96	6
3607713	10000 ml	234	410	42	1
3607715	20000 ml	299	505		1
<b>With amber colour coating, plastic coated</b>					
3607805	100 ml	56	100	2340	10
3607806	250 ml	70	138	1400	10
3607807	500 ml	86	176	720	10
3607808	1000 ml	101	225	490	10
3607809	2000 ml	136	260	240	10
3607812	5000 ml	186	330	96	6
3607813	10000 ml	234	410	42	1
3607815	20000 ml	299	505		1



## Filtering flasks



For filtration with reduced pressure these special flasks serve as collecting vessel for the filtrate.

- made of borosilicate glass 3.3 Simax
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- autoclavable
- Erlenmeyer shape
- with loosely attached plastic hose nozzle

Cat. No.	Capacity	Unit
3623505	100 ml	10
3623506	250 ml	10
3623507	500 ml	8
3623508	1000 ml	8
3623509	2000 ml	6





## Thread bottles, round shoulder

- made of glass of third hydrolytic class
- autoclavable
- screw caps are not included. Please order them separately.

Cat. No.	Capacity	Thread	Unit
<b>Clear glass, narrow neck</b>			
▶ 3655003	30 ml	GL 18	143
▶ 3655005	100 ml	GL 22	72
▶ 3655006	250 ml	GL 22	42
▶ 3655007	500 ml	GL 25	35
▶ 3655008	1000 ml	GL 28	20
<b>Clear glass, wide neck</b>			
▶ 3656003	30 ml	GL 32	126
▶ 3656004	50 ml	GL 32	85
▶ 3656005	100 ml	GL 40	63
▶ 3656006	250 ml	GL 55	48
▶ 3656007	500 ml	GL 55	20
▶ 3656008	1000 ml	GL 68	18
<b>Amber glass, narrow neck</b>			
▶ 3655105	100 ml	GL 22	56
▶ 3655106	250 ml	GL 22	42
▶ 3655107	500 ml	GL 25	35
▶ 3655108	1000 ml	GL 28	20
<b>Amber glass, wide neck</b>			
▶ 3656103	30 ml	GL 32	126
▶ 3656104	50 ml	GL 32	85
▶ 3656105	100 ml	GL 40	56
▶ 3656106	250 ml	GL 55	48
▶ 3656107	500 ml	GL 55	20
▶ 3656108	1000 ml	GL 68	12

## Screw caps DIN for thread bottles

- made of black plastic, with PE-LD seal
- minimum order quantity: 10 pieces per size

Cat. No.	Thread
▶ 5457417	GL 18
▶ 5457442	GL 22
▶ 5457418	GL 25
▶ 5457419	GL 28
▶ 5457420	GL 32
▶ 5457421	GL 40
▶ 5457443	GL 55
▶ 5457444	GL 68

## Spray bottles

To be assembled by DIN-thread bottle and bent delivery tube.

- break resistant bottle made of transparent polyethylene (PE-LD)
- minimum order quantity: 10 pieces per size

Cat. No.	Capacity	Thread	Ø	Height	Ø Neck int.
<b>Thread bottle, narrow neck</b>					
▶ 5401307	250 ml	GL 25	60 mm	138 mm	18 mm
▶ 5401308	500 ml	GL 25	75 mm	169 mm	18 mm
▶ 5401309	1000 ml	GL 28	95 mm	212 mm	21 mm
5401310	2000 ml	GL 28	120 mm	260 mm	21 mm
<b>Spray head with adjustable nozzle and suction tube</b>					
5408918		GL 25 suitable for bottles 250 ml and 500 ml			
5408919		GL 28 suitable for bottles 1000 ml and 2000 ml			



## Washing bottles

To be assembled by DIN-thread bottle and bent delivery tube.

- made of transparent polyethylene (PE-LD)
- material considered harmless, suitable for food contact, break-resistant
- minimum order quantity: 10 pieces per size
- Multipack: 100 pieces (2000 ml: 10 pieces)

Cat. No.	Capacity	Thread	Ø	Height	Ø Neck int.
<b>Thread bottle, narrow neck</b>					
▶ 5401306	100 ml	GL 18	45 mm	102 mm	13 mm
▶ 5401307	250 ml	GL 25	60 mm	138 mm	18 mm
▶ 5401308	500 ml	GL 25	75 mm	169 mm	18 mm
▶ 5401309	1000 ml	GL 28	95 mm	212 mm	21 mm
5401310	2000 ml	GL 28	120 mm	260 mm	21 mm
<b>Screw cap with bent delivery tube</b>					
▶ 5402306		GL 18 suitable for bottles 100 ml			
▶ 5402308		GL 25 suitable for bottles 250 ml and 500 ml			
▶ 5402309		GL 28 suitable for bottles 1000 ml and 2000 ml			



## Washing bottles with hazard symbol

Complete set consisting of DIN-thread bottle and bent delivery tube.

- made of polyethylene (PE-LD)
- material considered harmless, suitable for food contact, break-resistant
- yellow coloured bottle with coloured imprint and hazard symbol

Cat. No.	Capacity	Imprint	Unit
5402546	500 ml	Distilled water	10
5402547	500 ml	Acetone	10
5402565	1000 ml	Distilled water	10
5402566	1000 ml	Acetone	10





New

## Thread bottles, plastic

Multi-purpose bottles for a wide range of applications like storage, packaging, sampling and transport.

- made of transparent polyethylene (PE-LD)
- material considered harmless, suitable for food contact
- break-resistant
- with DIN thread
- minimum order quantity: 10 pieces per size
- screw caps are not included. Please order them separately.

Cat. No.	Capacity	Thread	Ø	Height	Ø Neck int.
<b>Narrow neck</b>					
5401301	10 ml	GL 14	26 mm	45,5 mm	9 mm
5401304	30 ml	GL 14	35 mm	66 mm	9 mm
5401305	50 ml	GL 18	40 mm	84 mm	13 mm
▶ 5401306	100 ml	GL 18	45 mm	102 mm	13 mm
▶ 5401307	250 ml	GL 25	60 mm	138 mm	18 mm
▶ 5401308	500 ml	GL 25	75 mm	169 mm	18 mm
▶ 5401309	1000 ml	GL 28	95 mm	212 mm	21 mm
5401310	2000 ml	GL 28	120 mm	260 mm	21 mm
<b>Wide neck</b>					
5403305	50 ml	GL 32	40 mm	77 mm	24 mm
5403306	100 ml	GL 32	48 mm	92 mm	32 mm
5403307	250 ml	GL 40	64 mm	123 mm	31 mm
5403308	500 ml	GL 50	75 mm	153 mm	38,5 mm
5403309	1000 ml	GL 65	94 mm	202 mm	50 mm
5403310	2000 ml	GL 65	120 mm	243 mm	50 mm

## VITgrip™ Laboratory bottles



Leak-proof bottles with optimum grip and excellent pouring properties.

- made of break resistant polypropylene
- excellent chemical resistance against most acids, alkalis and alcohols
- suitable for food
- with thread GL 45 and tamper-evident screw caps made of polypropylene
- double-sided embossed scale (tol.  $\pm 5\%$ )

Cat. No.	Capacity	Unit	
5419006	125 ml	6	
5419007	250 ml	6	
5419008	500 ml	6	
5419009	1000 ml	6	
5419010	2000 ml	1	
5419122	Spare closures GL 45 made of red polypropylene		6

▶ This arrow indicates products that are usually available on short notice.



## Screw caps for thread bottles

- made of transparent polyethylene (PE-LD)
- material considered harmless, suitable for food contact
- minimum order quantity: 10 pieces per size

Cat. No.	DIN Thread	Multipack
▶ 5402216	GL 14	100
▶ 5402217	GL 18	100
▶ 5402218	GL 25	100
▶ 5402219	GL 28	100
▶ 5402220	GL 32	100
▶ 5402221	GL 40	100
▶ 5402224	GL 50	100
▶ 5402227	GL 65	100
<b>Screw caps with dropping tip</b>		
▶ 5402816	GL 14	100
▶ 5402817	GL 18	100
▶ 5402818	GL 25	100



## Nalgene thread bottles, plastic

These bottles are leak proof and dispose about a very good chemical resistance to the most acids, bases and alcohols. Before autoclaving them please remove the closure and put it on the top of the container.

- made of polypropylene
- with wide neck polypropylene screw cap
- autoclavable

Cat. No.	Capacity	Nalgene Ref. No.	Unit
5468604	30 ml	2105-0001	72
5468605	60 ml	2105-0002	72
5468606	125 ml	2105-0004	72
5468607	250 ml	2105-0008	72
5468608	500 ml	2105-0016	48
5468609	1000 ml	2105-0032	24



## Square bottles, plastic

- made of transparent polyethylene (PE-LD)
- material considered harmless, suitable for food contact
- break-resistant
- with DIN thread, wide neck
- Multipack: 100 pcs per size (1500 ml: 10 pcs)
- screw caps are not included. Please order them separately.

Cat. No.	Capacity	Thread	Length x Width	Height	Ø Neck int.
5408806	100 ml	GL 32	46 x 46 mm	78 mm	24,0 mm
5408807	250 ml	GL 50	80 x 80 mm	83 mm	38,5 mm
5408808	500 ml	GL 65	90 x 90 mm	120 mm	50,0 mm
5408809	1000 ml	GL 65	90 x 90 mm	168 mm	50,0 mm
5408853	1500 ml	GL 65	98 x 98 mm	212 mm	50,0 mm





## Dropping bottles (Thread bottles)

- made of amber glass of third hydrolytic class
- with DIN thread GL 18
- serve for multiple applications thanks to many different screw caps
- nominal capacity is indicated up to the shoulder of the bottles

Cat. No.	Capacity	Height	Diameter	Multipack	Unit
<b>Bottle without cap</b>					
3665130	5 ml	53.2 mm	22.5 mm	170 x 186	186
▶ 3665127	10 ml	63.7 mm	24.2 mm	170 x 160	160
3665138	15 ml	64.2 mm	27.8 mm	108 x 195	195
3665132	20 ml	71.5 mm	28.6 mm	72 x 195	195
3665102	25 ml	78.2 mm	30.0 mm	72 x 168	168
▶ 3665103	30 ml	79.3 mm	32.6 mm	90 x 98	98
▶ 3665104	50 ml	92.0 mm	37.7 mm	60 x 105	105
3665105	100 ml	111.0 mm	46.7 mm	48 x 68	68

## Screw caps DIN GL 18 for thread bottles

### Screw caps made of white polypropylene

- with white rubber teat and dropping pipette
- with bent, spherical tip
- Minimum order quantity: 100 pieces per size

Cat. No.	Length dropping pipette	For bottle	Multipack
5459901	60 mm	10 ml	3000
5459902	70 mm	20 ml	2500
5459903	78 mm	30 ml	2500
5459904	90 mm	50 ml	2500
5459905	105 mm	100 ml	2000



### Screw caps, urea resin 131.5, with PE-LD sealing insert

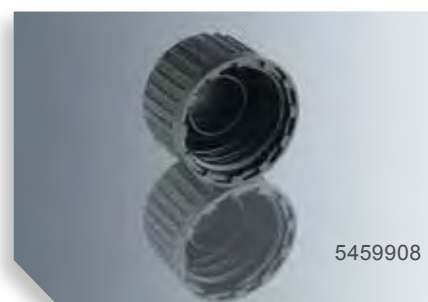
Cat. No.	Colour	Multipack
▶ 5457417	black	1500
5459907	white	1500



## Screw caps DIN GL 18 for thread bottles

### Screw caps PE-HD, barrel gasket

Cat. No.	Colour	Multipack
5459908	black	2250
5459909	white	2250



### Tamper-evident screw caps

Cat. No.	Colour and type	Multipack
5459912	black, made of PE-HD, with dropper insert made of PE-LD of natural colour	5000



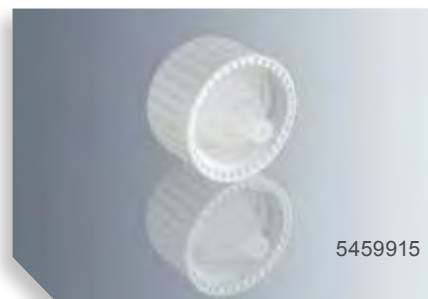
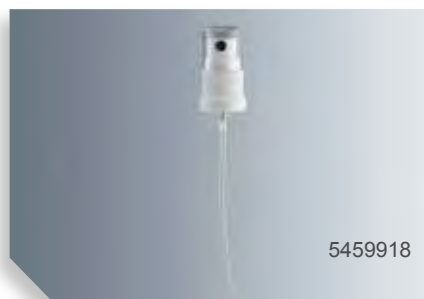
### Screw caps

Cat. No.	Colour and type	Multipack
5459914	white, made of PE-HD, with dropper insert UNI 1-04 made of white PE-LD	1875
5459915	white, made of PE-HD, with dropper insert UNI 2-02 made of PE-LD of natural colour	1875

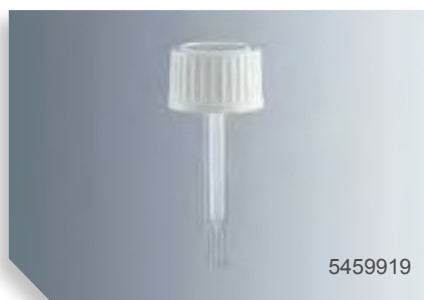
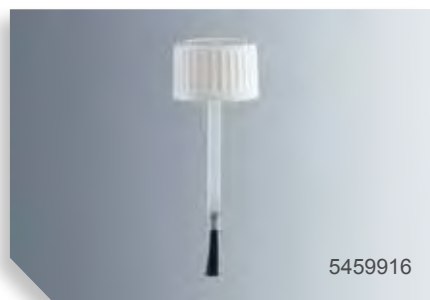


### Available on demand:

- Screw caps with child-proof lock
- Atomizers



- Screw caps with paint-brush
- Screw caps with spatula





## Dropping bottles with pipette

- made of clear glass or amber glass
- conical shoulder
- with clear glass pipette, rubber teat and standard ground joint polypropylene stopper

Cat. No.	Capacity	Unit
<b>Clear glass</b>		
▶ 3611004	50 ml	10
▶ 3611005	100 ml	6
3611006	250 ml	10
<b>Amber glass</b>		
▶ 3611104	50 ml	10
▶ 3611105	100 ml	6
3611106	250 ml	10



## Dropping bottles with head stopper

- made of clear glass or amber glass
- round shoulder
- with flat head stopper made of glass

Cat. No.	Capacity	Unit
<b>Clear glass</b>		
3610004	50 ml	10
3610005	100 ml	10
<b>Amber glass</b>		
3610104	50 ml	10
3610105	100 ml	10



## Storage bottles



- made of polyethylene
- narrow neck
- with screw cap and carrying bail
- with exchangeable tap with 3/4" pipe fitting. The tap is designed for smooth operation and reduces dripping.
- maximum operating temperature: 80 to 90 °C

Cat. No.	Capacity	Height bottle	Ø Bottle	Ø Neck int.
5411912	5 l	335 mm	165 mm	45 mm
5411913	10 l	415 mm	210 mm	55 mm
5411914	25 l	525 mm	280 mm	55 mm
5411915	50 l	605 mm	365 mm	55 mm

## Bottles with round shoulder

- made of clear glass or amber glass
- with standard ground joint
- with standard ground joint stopper made of glass

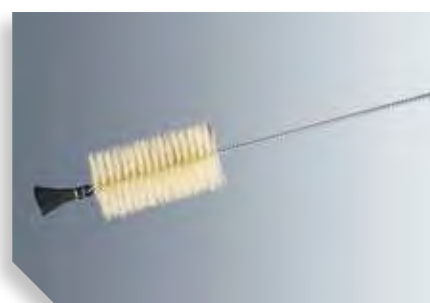
Cat. No.	Capacity		Unit
<b>Narrow neck, clear glass</b>			
3652004	50 ml	NS 14/15	10
3652005	100 ml	NS 14/23	10
3652006	250 ml	NS 19/26	10
3652007	500 ml	NS 24/29	10
3652008	1000 ml	NS 29/32	10
3652009	2000 ml	NS 29/32	6
<b>Narrow neck, amber glass</b>			
3652104	50 ml	NS 14/15	10
3652105	100 ml	NS 14/23	10
3652106	250 ml	NS 19/26	10
3652107	500 ml	NS 24/29	10
3652108	1000 ml	NS 29/32	10
3652109	2000 ml	NS 29/32	6
<b>Wide neck, clear glass</b>			
3653004	50 ml	NS 24/20	10
3653005	100 ml	NS 29/22	10
3653006	250 ml	NS 34/24	10
3653007	500 ml	NS 45/27	10
3653008	1000 ml	NS 60/31	10
3653009	2000 ml	NS 60/31	6
<b>Wide neck, amber glass</b>			
3653104	50 ml	NS 24/20	10
3653105	100 ml	NS 29/22	10
3653106	250 ml	NS 34/24	10
3653107	500 ml	NS 45/27	10
3653108	1000 ml	NS 60/31	10
3653109	2000 ml	NS 60/31	6



## Bottle brushes

- natural bristle on galvanised wire
- with 40 mm long front bristles for improved cleaning of the flask's bottom
- wire handle with loop to hang up

Cat. No.	Total length	Head: length x Ø	Unit
▶ 6243015	420 mm	100 x 55 mm	10







## Reagent bottles

- made of clear glass or amber glass
- narrow neck
- with standard ground joint
- with standard ground joint glass stopper

Cat. No.	Capacity	Ground joint	Unit
<b>Clear glass</b>			
3602004	50 ml	NS 14/15	10
3602005	100 ml	NS 14/23	10
3602006	250 ml	NS 19/26	10
3602007	500 ml	NS 24/29	10
3602008	1000 ml	NS 29/32	10
3602009	2000 ml	NS 29/32	6
<b>Amber glass</b>			
3602104	50 ml	NS 14/15	10
3602105	100 ml	NS 14/23	10
3602106	250 ml	NS 19/26	10
3602107	500 ml	NS 24/29	10
3602108	1000 ml	NS 29/32	10
3602109	2000 ml	NS 29/32	6



## Reagent bottles, plastic

- made of transparent polypropylene
- autoclavable at 121 °C
- with DIN thread and screw cap



Cat. No.	Capacity	Thread	Height x Ø	Unit
<b>Narrow neck</b>				
5415606	100 ml	GL 18	100 x 52 mm	20
5415607	250 ml	GL 25	132 x 70 mm	20
5415608	500 ml	GL 25	165 x 87 mm	10
5415609	1000 ml	GL 32	202 x 108 mm	10
5415610	2000 ml	GL 32	245 x 131 mm	6
<b>Wide neck</b>				
5416006	100 ml	GL 32	96 x 55 mm	20
5416007	250 ml	GL 45	132 x 73 mm	20
5416008	500 ml	GL 45	172 x 87 mm	10
5416009	1000 ml	GL 63	204 x 108 mm	10
5416010	2000 ml	GL 63	243 x 131 mm	6



## Desiccators

Desiccators are suitable for drying and dehydration processes. If supplied with stopcock or valve, they are also suitable for storage under vacuum.

- made of borosilicate glass 3.3 Simax
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- autoclavable
- with ground flat flange
- discs are not included. Please order them separately
- spare parts are available on request



Cat. No.	Nominal diameter	Unit
----------	------------------	------

### With plastic knob in interchangeable lid

4201401	100 mm	1
4201403	150 mm	1
▶ 4201405	200 mm	1
▶ 4201406	250 mm	1
▶ 4201407	300 mm	1

### With plastic knob and stopcock in interchangeable lid

4201601	100 mm	1
4201603	150 mm	1
▶ 4201605	200 mm	1
▶ 4201606	250 mm	1
▶ 4201607	300 mm	1

### With glass knob in interchangeable lid, DIN 12491, ISO 13130

4204201	100 mm	1
4204203	150 mm	1
4204205	200 mm	1
4204206	250 mm	1
4204207	300 mm	1

### With NS 24/29 and valve in interchangeable lid, DIN 12491, ISO 13130

4204301	100 mm	1
4204303	150 mm	1
4204305	200 mm	1
4204306	250 mm	1
4204307	300 mm	1

## Discs for desiccators

- made of porcelain
- in compliance with DIN 12911
- with several vent perforations and one central hole

Cat. No.	Ø	for desiccator nominal Ø	Unit
----------	---	--------------------------	------

6833001	90 mm	100 mm	1
6833004	140 mm	150 mm	1
6833007	189 mm	200 mm	1
6833010	241 mm	250 mm	1
6833013	290 mm	300 mm	1





## Aspirator bottles

Aspirator bottles are used to sediment solid or suspended particles in liquid materials. The liquid is filled into the container. After some time, the heavier solid particles deposit at the bottom of the aspirator bottle and the stopcock is opened to release the liquid into a collection flask.

- made of borosilicate glass 3.3 Simax
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- autoclavable
- with standard ground joint stopper made of glass
- with standard ground joint stopcock at bottom

Cat. No.	Capacity	Glass stopper	Stopcock	Unit
3616509	2000 ml	NS 29/32	NS 19/26	3
3616512	5000 ml	NS 45/40	NS 24/29	3
3616513	10000 ml	NS 50/42	NS 29/32	1



## Aquarium jars

- made of soda lime glass of third hydrolytic class
- with ground rim
- with thick walls

Cat. No.	Length x Width x Height	Unit
4204107	100 x 100 x 100 mm	1
4204174	150 x 100 x 100 mm	1
4204119	150 x 100 x 150 mm	1
4204108	200 x 100 x 100 mm	1
4204136	200 x 150 x 200 mm	1
4204145	250 x 180 x 220 mm	1
4204126	300 x 160 x 160 mm	1
4204146	300 x 220 x 240 mm	1
4204155	360 x 230 x 260 mm	1



## Dressing jars

- made of soda lime glass
- with loosely overlapping glass cover with knob
- with base

Cat. No.	Height	Diameter	Unit
4205101	100 mm	100 mm	6
4205102	120 mm	120 mm	4
4205103	150 mm	150 mm	4
4205106	200 mm	200 mm	2

## Crystallizing dishes

- made of borosilicate glass 3.3
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- cylindrical shape, with flat bottom

Cat. No.	Ø Ext.	Height	Capacity	Unit
<b>Without spout, with fused rim, DIN 12337</b>				
4210400	40 mm	25 mm	15 ml	10
4210403	50 mm	30 mm	20 ml	10
4210405	60 mm	35 mm	40 ml	10
4210407	70 mm	40 mm	50 ml	10
4210408	80 mm	45 mm	90 ml	10
4210409	95 mm	55 mm	200 ml	10
4210410	115 mm	65 mm	380 ml	10
4210411	140 mm	75 mm	650 ml	10
4210413	190 mm	90 mm	1600 ml	4
4210414	230 mm	100 mm	2700 ml	4
<b>With spout, with fused rim, DIN 12338</b>				
4210500	40 mm	25 mm	15 ml	10
4210503	50 mm	30 mm	20 ml	10
4210505	60 mm	35 mm	40 ml	10
4210507	70 mm	40 mm	50 ml	10
4210508	80 mm	45 mm	90 ml	10
4210509	95 mm	55 mm	200 ml	10
4210510	115 mm	65 mm	380 ml	10
4210511	140 mm	75 mm	650 ml	10
4210513	190 mm	90 mm	1600 ml	4
4210514	230 mm	100 mm	2700 ml	4



## Evaporating dishes

- made of borosilicate glass 3.3
- in compliance with DIN 12336
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- hemispherical shape, with flat bottom
- with spout, with fused rim

Cat. No.	Ø Ext.	Height	Capacity	Unit
4210301	40 mm	18 mm	10 ml	10
4210302	50 mm	25 mm	15 ml	10
4210304	60 mm	30 mm	45 ml	10
4210306	70 mm	35 mm	60 ml	10
4210308	80 mm	45 mm	90 ml	10
4210309	95 mm	55 mm	170 ml	10
4210310	115 mm	65 mm	320 ml	10
4210312	140 mm	80 mm	600 ml	10
4210314	190 mm	100 mm	1500 ml	4





## Information on porcelain

The laboratory porcelain has a low thermal expansion coefficient and therefore a high resistance against thermal shocks. Because of its high mechanical solidity it is resistant against most kind of chemical influences.

Max. operating temperature:	glazed 1100 °C unglazed 1350 °C
Acid resistance::	99.99 %
Alkali resistance::	99.96 %
Water absorption::	0 %
Specific gravity:	2.3 to 2.5 g/cm <sup>3</sup>

The characteristics of laboratory porcelain as well as the measurements of the products are according to all current standards and meet the latest recommendations of ISO.

All indications of diameter, height and capacity of our porcelain products are approximate and may vary.



## Evaporating dishes

- made of porcelain
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- maximum operating temperature: 1100 °C
- glazed inside
- with spout



Cat. No.	Diameter	Height	Capacity	Unit
<b>Flat bottom</b>				
6830401	54 mm	22 mm	22 ml	5
6830403	70 mm	30 mm	62 ml	5
6830408	86 mm	33 mm	93 ml	5
6830413	98 mm	40 mm	154 ml	5
6830416	112 mm	50 mm	265 ml	5
6830420	126 mm	53 mm	330 ml	5
6830426	151 mm	63 mm	620 ml	5
6830432	195 mm	74 mm	1200 ml	1
6830433	254 mm	105 mm	3000 ml	1
<b>Round bottom</b>				
6830610	50 mm	20 mm	20 ml	5
6830615	63 mm	25 mm	30 ml	5
6830620	80 mm	32 mm	60 ml	5
6830612	81 mm	38 mm	107 ml	5
6830616	94 mm	42 mm	140 ml	5
6830614	100 mm	40 mm	150 ml	5
6830604	112 mm	47 mm	232 ml	5
6830621	132 mm	55 mm	300 ml	5
6830617	160 mm	64 mm	580 ml	5
6830618	200 mm	80 mm	1000 ml	1
6830622	320 mm	140 mm	6000 ml	1



## Crucibles

- made of porcelain
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- maximum operating temperature: 1100 °C
- glazed



Cat. No.	Diameter	Height	Capacity	Unit
<b>Low form</b>				
6837002	30 mm	19 mm	5 ml	5
6837005	35 mm	22 mm	10 ml	5
6837007	40 mm	25 mm	17 ml	5
6837009	45 mm	28 mm	21 ml	5
6837012	50 mm	32 mm	34 ml	5
6837015	60 mm	38 mm	62 ml	5
6837018	70 mm	44 mm	91 ml	5
<b>Medium tall form</b>				
6837105	35 mm	28 mm	12 ml	5
6837108	40 mm	32 mm	20 ml	5
6837112	45 mm	36 mm	30 ml	5
6837115	50 mm	40 mm	45 ml	5
6837119	60 mm	48 mm	80 ml	5
6837123	70 mm	56 mm	120 ml	5
<b>Tall form</b>				
6837207	30 mm	38 mm	15 ml	5
6837210	35 mm	44 mm	26 ml	5
6837212	40 mm	50 mm	35 ml	5
6837216	45 mm	56 mm	50 ml	5
6837217	50 mm	62 mm	72 ml	5
6837222	60 mm	75 mm	130 ml	5

## Lids for crucibles

- made of porcelain
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- maximum operating temperature: 1100 °C
- glazed



Cat. No.	Ø Lid	For Ø crucible	Unit
6838030	34 mm	30 mm	5
6838035	39 mm	35 mm	5
6838040	44 mm	40 mm	5
6838045	49 mm	45 mm	5
6838050	54 mm	50 mm	5
6838060	64 mm	60 mm	5
6838070	74 mm	70 mm	5



## Funnels acc. to Buechner

- made of porcelain
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks

Cat. No.	Ø Filter	Ø Holes	Total height	Unit
6831539	45 mm	1.0 mm	67 mm	1
6831540	55 mm	1.0 mm	94 mm	1
6831541	70 mm	1.0 mm	99 mm	1
6831542	90 mm	1.5 mm	111 mm	1
6831543	110 mm	1.5 mm	132 mm	1
6831544	125 mm	2.0 mm	137 mm	1
6831545	150 mm	2.0 mm	155 mm	1
6831546	185 mm	2.0 mm	191 mm	1



## Annealing dishes

- made of porcelain, glazed
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- maximum operating temperature: 1100 °C
- low form with spout

Cat. No.	Diameter	Height	Capacity	Unit
6830503	60 mm	14 mm	20 ml	5
6830510	80 mm	20 mm	55 ml	5
6830515	100 mm	25 mm	110 ml	5
6830519	130 mm	30 mm	250 ml	5



## Combustion boats

- made of porcelain, unglazed
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- maximum operating temperature: 1300 °C
- with loop

Cat. No.	Length x Width x Height	Unit
6836801	90 x 14 x 8 mm	50



## Crucible tongs

- made of stainless steel, corrosion-resistant
- double bent
- minimum order quantity: 10 pieces each type

Cat. No.	Total length
6650601	200 mm
6650605	400 mm

## Mortars, porcelain

- made of porcelain
- very good chemical resistance
- minimal thermal expansion
- glazed outside, rough inside
- with spout
- pestles are not included. Please order them separately.

Cat. No.	Ø inside	Height inside	Capacity	Unit
6835105	56 mm	36 mm	30 ml	2
6835107	63 mm	41 mm	70 ml	2
6835109	76 mm	45 mm	75 ml	2
6835112	83 mm	50 mm	110 ml	2
6835113	90 mm	56 mm	160 ml	1
6835116	105 mm	64 mm	220 ml	1
6835118	125 mm	71 mm	400 ml	1
6835121	139 mm	82 mm	500 ml	1
6835123	150 mm	90 mm	650 ml	1
6835126	180 mm	104 mm	1000 ml	1



## Pestles

- made of porcelain
- very good chemical resistance
- with rough surface at head

Cat. No.	Diameter	Length	For mortars with Ø	Unit
6836001	24 mm	115 mm	56 + 63 + 76 mm	2
6836003	30 mm	135 mm	83 + 90 mm	2
6836006	36 mm	150 mm	105 + 125 mm	2
6836009	42 mm	175 mm	139 mm	1
6836014	55 mm	210 mm	150 mm	1
6836019	74 mm	250 mm	180 mm	1



## Mortars, glass

- made of borosilicate glass 3.3
- rough inside
- with spout
- complete with pestle

Cat. No.	Diameter	Height	Capacity	Unit
4201201	80 mm	60 mm	80 ml	1
4201202	100 mm	75 mm	170 ml	1
4201203	120 mm	90 mm	300 ml	1
4201204	150 mm	110 mm	600 ml	1





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New

## Powder spatula

- made of stainless steel

Cat. No.	Length	Width of blade	Unit
6645828	150 mm	9 mm	10
6645854	185 mm	9 mm	10

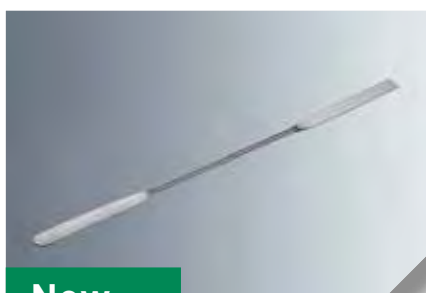


New

## Double blade spatula

- made of stainless steel
- flexible

Cat. No.	Length	Width of blade	Unit
6643828	150 mm	9 mm	10
6643866	210 mm	11 mm	10



New

## Micro double blade spatula

- made of stainless steel
- flexible

Cat. No.	Length	Width of blade	Unit
6645824	150 mm	3 mm	10
6645853	185 mm	6 mm	10

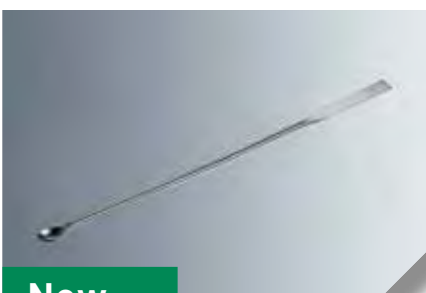


New

## Spatula with spoon

- made of stainless steel
- rigid

Cat. No.	Length	Width of spoon	Unit
6644496	210 mm	29 mm	10



New

## Micro spatula with spoon

- made of stainless steel
- rigid

Cat. No.	Length	Width of spoon	Width of blade	Unit
6644426	150 mm	5 mm	5 mm	10

## Triangles

- made of galvanized steel wire
- with clay tubes

Cat. No.	Length of clay tubes	Unit
6614001	50 mm	5
6614002	60 mm	5
6614004	80 mm	5

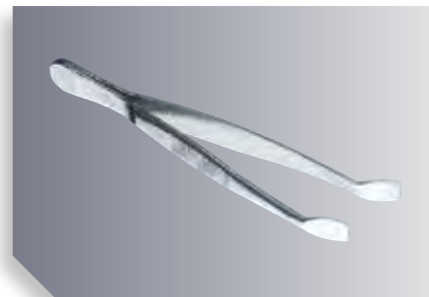


**New**

## Forceps acc. to Kuehne

- made of nickel-plated steel
- flat ends

Cat. No.	Length	Shape	Unit
▶ 6633002	105 mm	bent	10



## Forceps

- made of stainless steel
- pointed

Cat. No.	Length	Shape	Unit
6631403	115 mm	straight	10
6631405	145 mm	straight	10
6632002	105 mm	bent	10
6632005	145 mm	bent	10



**New**



**New**



## Filter papers

Suitable for quantitative analysis.

- made of pure cellulose with an alpha cellulose content of almost 100 %
- extremely low ash content (approx. 0.007 %)
- wet-strength
- acid-washed

Cat. No.	Diameter	Grade	Unit
6759115	125 mm	388 ● Black spot	100
6759116	150 mm	388 ● Black spot	100
6759215	125 mm	389 ○ White spot	100
6759216	150 mm	389 ○ White spot	100
6759315	125 mm	391 ● Blue spot	100
6759316	150 mm	391 ● Blue spot	100

	388 ● Black spot	389 ○ White spot	391 ● Blue spot
Applications	for coarse and voluminous precipitates such as iron-, aluminium- and chromium hydroxide, Si-determination in steel and pig iron analysis	coarser precipitates such as lead-, iron- and silver sulphide, alkali carbonates, food stuff and soil analysis	fine-grained precipitates such as barium sulphate, metastannic acid, cuprous oxide
Filtration properties	fast filtering wide pores soft, loose structure coarse crystalline	medium fast filtering medium pores medium tight medium crystalline	very slow filtering fine pores very tight very fine crystalline
Filtration velocity	10 s/10 ml	20 s/10 ml	180 s/10 ml
Filtration time (Herzberg)	70 s/100 ml 850 ml/min	150 s/100 ml 375 ml/min	2500 s/100 ml 25 ml/min
Basis weight	84 g/m <sup>2</sup>	84 g/m <sup>2</sup>	84 g/m <sup>2</sup>
Typical pore size (Retention range/ recommended guide)	12 to 15 µm	8 to 12 µm	2 to 3 µm

## Filter papers

Suitable for ordinary qualitative-technical filtration purposes.

- made of very pure cellulose with a high alpha cellulose content
- low ash content (average content is approx. 0.1 %)
- wet-strength



Cat. No.	Diameter	Grade	Unit
----------	----------	-------	------

### Circular filters

6758809	70 mm	3 hw	100
6758812	90 mm	3 hw	100
6758814	110 mm	3 hw	100
6758815	125 mm	3 hw	100
6758816	150 mm	3 hw	100
6758909	70 mm	6	100
6758912	90 mm	6	100
6758914	110 mm	6	100
6758915	125 mm	6	100
6758916	150 mm	6	100

6759609	70 mm	292	100
6759612	90 mm	292	100
6759614	110 mm	292	100
6759615	125 mm	292	100
6759616	150 mm	292	100

### Folded filters

6716603	125 mm	3 hw	100
6716604	150 mm	3 hw	100
6716605	185 mm	3 hw	100
6716607	240 mm	3 hw	100
6716609	320 mm	3 hw	100

6716703	125 mm	6	100
6716704	150 mm	6	100
6716705	185 mm	6	100
6716707	240 mm	6	100
6716709	320 mm	6	100

6717003	125 mm	292	100
6717004	150 mm	292	100
6717005	185 mm	292	100
6717007	240 mm	292	100
6717009	320 mm	292	100

grade	3 hw	6	292
Similar to Whatman	student grade	114	1
Surface	plain	plain	plain
Filtration properties	medium crystalline	medium crystalline	medium tight
Filtration velocity	20 s/10 ml	15 s/10 ml	50 s/10 ml
Filtration time (Herzberg)	140 s/100 ml 430 ml/min.	70 s/100 ml 850 ml/min.	500 s/100 ml 120 ml/min.
Basis weight	65 g/m <sup>2</sup>	80 g/m <sup>2</sup>	87 g/m <sup>2</sup>
Typical pore size	8 - 12 µm	10 - 13 µm	5 - 8 µm



## Surface protection paper Labsorb

- special paper coated with polyethylene
- ultra-absorbent carrier material
- toxic, infectious, aggressive and radioactive substances are quickly soaked up into the carrier material
- prevents contamination of the surface underneath
- suitable for clinical laboratories as contamination can be prevented by treatment with disinfectants
- ideal for laying out chemical cupboards, trays etc.
- soft character of material reduces the risk of glass breakage

Cat. No.	Grade	Basis weight	Thickness	Sheet	Unit
6723002	601/PE	140 g/m <sup>2</sup>	0.22 mm	480 x 600 mm	50



**New**

## Lens cleaning tissue papers

The thin, soft paper made of 100 % Manila fibres is used for cleaning optical glasses, bulbs and as protection paper for metallographic grinding. This non-linting paper has a particularly high cleaning capacity.

- 500 sheets per pack

Cat. No.	Grade	Dimensions	Unit
6745105	2113	100x150 mm	500



## pH-Indicator strips

- non bleeding
- 100 stripes in a plastic box

Cat. No.	pH range	pH scale
6740501	pH 0-14 (Universal)	0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 - 11 - 12 - 13 - 14
6740502	pH 5.0 – 10.0	5.0 - 5.5 - 6.0 - 6.5 - 7.0 - 7.5 - 8.0 - 8.5 - 9.0 - 9.5 - 10.0
6740503	pH 6.5 – 10.0	6.5 - 6.8 - 7.1 - 7.4 - 7.7 - 7.9 - 8.1 - 8.3 - 8.5 - 8.7 - 9.0 - 9.5 - 10.0



## Parafilm® M Sealing film

No matter whether you wish to seal beakers, Erlenmeyer flasks, weighing bottles or graduated cylinders, the highly elastic and stretchable Parafilm® M laboratory film fits the opening of any vessel. It saves specimens from contamination or evaporating. Furthermore, it prevents fallen over flasks from spilling. Parafilm® M stretches up to 200 % of its original size and clings even around irregular shapes and surfaces.



If Parafilm® M comes into contact with foods, the relevant regulations are to be observed. Parafilm® M complies with the provisions of the US FDA Food and Drug Administration when used below 55 °C and observance of GMP (Good Manufacturing Practice).

Cat. No.	Length	Width	Packaging	Unit
▶ 7403810	38 m	10 cm	Dispenser	12
▶ 7407505	75 m	5 cm	Dispenser	24
▶ 7407510	75 m	10 cm	Dispenser	12

Physical properties:		Chemical resistance:	
Toxicity:	not toxic	Parafilm® M is resistant up to 48 hours against many polar substances, e. g. saline solutions, inorganic acids and alkaline solutions. After that period embrittlement may occur.	
Melting point:	60 °C		
Flash point:	301 °C		
Temperature range (continuous use):	- 45 °C to + 50 °C		
Stretchability:	200 %	Effects of 48 hours of exposure at 23 °C	
Elongation at tear:	300 %		
Gas permeability in 24 hours at 23 °C with 50 % relative humidity:		<b>Acids:</b>	* Brown discoloration
Oxygen O <sub>2</sub> :	≤ 350 cm <sup>3</sup> /m <sup>2</sup>	Hydrochloric acid 36.5 %	resistant
Nitrogen N <sub>2</sub> :	≤ 105 cm <sup>3</sup> /m <sup>2</sup>	Sulphuric acid 98 %	resistant
Carbon Dioxide CO <sub>2</sub> :	≤ 1100 cm <sup>3</sup> /m <sup>2</sup>	Nitric acid 95 %	resistant*
		<b>Alkaline solutions:</b>	
		Sodium hydroxide 22 %	resistant
		Ammonia 28 %	resistant
Water vapour permeability in 24 hours at 37 °C and 90 % relative humidity:	0.8 g/m <sup>2</sup>	<b>Saline solutions:</b>	
		Sodium chloride 20 %	resistant
		Potassium permanganate 5 %	resistant*
		Iodine solution 0.1 ml/l	resistant*
<b>Storage:</b>		<b>Organic solvents:</b>	
Parafilm® M can be stored for at least 3 years at a temperature between 7 °C and 32 °C and relative humidity of 50 %.		Methanol	resistant
		Ethanol	resistant
		Isopropanol	resistant
		Diethylether	not resistant
		Chloroform	not resistant
		Carbon tetrachloride	not resistant
		Benzene	not resistant
		Toluene	not resistant

## Dispensers for Parafilm® M

For dust-free storing and convenient cutting of sealing film Parafilm® M.

- made of transparent acrylic
- with hinged lid
- with holding device for taking one roll Parafilm® M of 10 cm width or two rolls of each 5 cm width
- efficient cutting wheel is supported by a firm knife guide



Cat. No.	Dimensions	Unit
▶ 5838900	120 x 160 x 170 mm	1



## Stirring rods

- made of borosilicate glass 3.3 Simax
- both ends fused

	Cat. No.	Length	Diameter	Multipack	Unit
▶	4902000	150 mm	6 mm	500	10
▶	4902001	200 mm	6 mm	500	10
▶	4902002	250 mm	7 mm	300	10
▶	4902003	250 mm	8 mm	200	10
▶	4902004	300 mm	8 mm	300	10



## Alcoholometers

The areometer or alcoholometer is a measuring device for the determination of density or specific gravity of liquids.

- according to Gay-Lussac
- without thermometer
- minimum order quantity: 10 pieces

	Cat. No.	Range	Total length
▶	3104465	0 to 100: 1 %-vol	300 mm



## Spirit lamps

- made of soda lime glass
- capacity: approx. 100 ml
- without tubulature
- complete with ground-on cap, cotton wick and socket

	Cat. No.	Unit
▶	4200901	complete 10
	4271201	spare wick 10

## Watch glasses

Watch glasses can be used to cover beakers, Erlenmeyer flasks and others. In addition, they can be used as weighing dishes.

- made of soda lime glass of 3. hydrolytic class
- free of cadmium and lead
- fire-polished edges



Cat. No.	Diameter	Multipack	Unit
1704010	40 mm	300	10
1705010	50 mm	300	10
1706010	60 mm	300	10
▶ 1707010	70 mm	300	10
▶ 1708010	80 mm	300	10
▶ 1709010	90 mm	300	10
▶ 1710010	100 mm	300	10
1712010	120 mm	300	10
1712510	125 mm	300	10
1715010	150 mm	300	10
1720010	200 mm	100	10
1725010	250 mm	100	5

## Glass beads

Glass beads are used for mixing or milling. The smaller the beads and the higher their quantity the more intense is the mixing or milling.

- made of soda lime glass
- solid
- specific gravity: 2,5 kg/dm<sup>3</sup>
- in poly bags of 500 g or 1 kg each



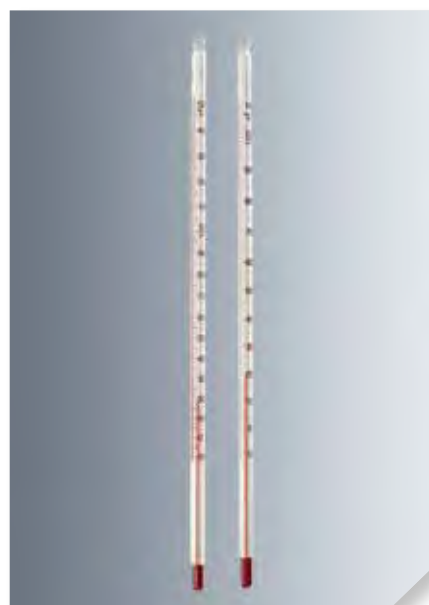
Cat. No.	Diameter	Multipack	Unit
▶ 4901001	1 mm	10 kg	1 kg
▶ 4901002	2 mm	10 kg	0.5 kg
▶ 4901003	3 mm	10 kg	0.5 kg
▶ 4901004	4 mm	10 kg	0.5 kg
▶ 4901005	5 mm	10 kg	0.5 kg
▶ 4901006	6 mm	10 kg	0.5 kg
4901007	7 mm	10 kg	0.5 kg
4901008	8 mm	10 kg	0.5 kg
4901010	10 mm	10 kg	0.5 kg



## Chemical thermometers, enclosed scale

- with circular or prismatic capillary
- with red filling (alcohol)
- scale printed in black colour
- division: 1 °C
- calibrated for total immersion
- diameter approx. 7 to 8 mm
- with loop at top
- individually packed in plastic sleeves

Cat. No.	Range	Length
3003017	- 10 + 100 °C	260 mm
3003018	- 10 + 150 °C	260 mm
3003019	- 10 + 200 °C	300 mm
3003020	- 10 + 250 °C	300 mm



## Chemical thermometers, solid stem

- capillary with white back
- with red filling (alcohol)
- with dark amber stain graduation
- division: 1 °C
- calibrated for total immersion
- diameter approx. 6 to 7 mm
- with loop at top
- individually packed in plastic sleeves
- minimum order quantity: 10 pieces each type

Cat. No.	Range	Length
3011014	- 10 + 110 °C	240 mm
3011018	- 10 + 150 °C	240 mm



## Maxima-Minima thermometers

The Maxima-Minima thermometer allows you to detect fluctuations of temperature and to read them subsequently.

- plastic case and porch in ivory colour
- dimensions: approx. 230 x 60 mm
- division: 1 °C
- with pushbutton for resetting
- with hook for hanging
- minimum order quantity: 10 pieces

Cat. No.	Range (Tol. ± 1)	Filling
3005025	- 38 to + 50 °C	red filling (alcoholic)

## Universal timers

- electronic timer
- offers 3 different functions:
  - count-down from 1 second to 24 hours
  - count-up from 1 second to 24 hours
  - clock with 24-hours display
- with digital display
- with alarm signal
- with magnet to attach the timer to metal surfaces
- with holding clip and stand
- dimensions: approx. 68 x 53 x 20 mm
- with battery



Cat. No.	Display range	Multipack	Unit
▶ 6350060	23 hours, 59 minutes and 59 seconds	50 x 1	1

## Digi-Timers

- electronic interval timer
- with 4-digits display for minutes and seconds
- with count-down from 0 to 99:59 minutes
- with alarm signal when reaching "0"
- with magnet to attach the timer to metal surfaces
- with battery (button cell SR 44 1.5 V)



Cat. No.	Display range	Multipack	Unit
▶ 6340050	99 minutes and 59 seconds	50 x 1	1

## Interval timers

- mechanical interval timer
- with count-down
- with alarm signal when reaching "0"
- with white plastic casing
- for lying, standing or hanging



Cat. No.	Display range	Multipack	Unit
▶ 6311000	0 to 60 minutes	100 x 1	1
▶ 6371010	0 to 120 minutes	50 x 1	1





## Hand tally counters

- with zero setting by knurled turning knob at the right
- with holding ring
- 4-digits display up to 9999

Cat. No.		Unit
7100000	with plastic housing	1
7100001	with metal housing	1



## Stopwatches addition type AMIGO *hanhart* 1882

- mechanical timer
- with interruption and flyback functions
- display range: 30 min, 1/5 sec
- mechanical winding up of the shock-protected lever movement is at back
- pinlever 1 jewel
- with black plastic housing approx. 55 mm diameter
- with lanyard

Cat. No.	Unit
6390100	1



## Stopwatches STRATOS 2 *hanhart* 1882

- electronic timer
- with 2 buttons for following functions:
  - start/stop/reset
  - addition/split/dual measuring
- with 7-digits LCD display (heights of numbers: approx. 6.5 mm)
- display range: 9 hours, 59 minutes and 59.99 seconds, 1/100 sec
- with black plastic housing approx. 66 x 70 x 21 mm
- with lanyard
- with battery (button cell SR 54)

Cat. No.	Unit
6390110	1

## Table timers PRISMA 400

**hanhart**  
1882

- interval-up-down timer for various applications in laboratories
- offers 4 different functions:
  - start/stop/reset
  - addition
  - flyback count-down
  - count-down
- with double row LCD display:
  - upper row: 3 digits, lower row: 5 digits
  - double row function window with 6 positions, height of digits approx. 22/8 mm
- display range can be selected as:
  - 999 min, 99/100 min
  - 9 h, 59 min, 59 sec, 1/10 sec
- with adjustable alarm signal
- can be used at temperatures from - 10 to + 55 °C
- with sturdy, white plastic housing
- dimensions: approx. 175 x 130 x 40 / 95 mm
- with battery: Mignon (AA) R 6



Cat. No.

Unit

6390120

1

## Table stopwatches Mesotron

**hanhart**  
1882

- quartz controlled stopwatch with analog display
- easy to read, with noctilucent hands
- ergonomic design featuring high stability
- start, stop and reset by means of 2 buttons
- can be used at temperatures from - 10 to + 55 °C
- with sturdy, white plastic housing
- display range:
  - 0-60 seconds and
  - 0-100 minutes
- diameter of dial: 110 mm
- dimensions: approx. 175 x 130 x 40 / 95 mm
- with battery: 1.5 V Mignon (AA)



Cat. No.

Unit

6390130

1

## Laboratory timers LABOR 3

**hanhart**  
1882

- electronic timer featuring two modes
  - timer mode with 3 timers
  - clock mode showing time, alarm and date
- timer mode allows count down and count up
- display range of timers: 99 hours, 59 minutes, 59 seconds
- clock offering American and European display format
- with LCD display
- with alarm signal
- with magnet to attach the timer to metal surfaces
- with holding clip and stand
- dimensions: approx. 83 x 70 x 22 mm
- with battery (button cell SR 44 1.5 V)



**New**

Cat. No.

Unit

6390140

1



## Weighing bottles

- made of borosilicate glass 3.3
- in compliance with DIN 12 605
- very good chemical resistance
- minimal thermal expansion
- high resistance to thermal shocks
- with interchangeable cover with standard ground joint
- with frosted marking area

Cat. No.	Height	Ø	Capacity	Unit
<b>Low form</b>				
4500000	30 mm	35 mm	15 ml	10
4500010	30 mm	50 mm	30 ml	10
4500020	30 mm	80 mm	80 ml	10
<b>Tall form</b>				
4501030	40 mm	25 mm	10 ml	10
4501040	50 mm	30 mm	20 ml	10
4501050	70 mm	35 mm	45 ml	10
4501070	80 mm	40 mm	70 ml	10



## Aluminium pans

Aluminium pans can be used for moisture analysis in infra-red dryer or as laboratory or weighing dishes.

The extraordinarily flat bottom of these pans ensures good standing on the worktop and keeps the samples securely in place.

- made of aluminium
- manufactured free of grease or oil

Cat. No.	Ø	Height of rim	Vol. approx.	Multipack	Unit
▶ 6604900	100,0 mm	7 mm	58 ml	6x80	80
6604901	94,5 mm	8 mm/compatible with Kern	60 ml	6x80	80
6604902	100,5 mm	7 mm/compatible with Mettler/Ohaus	50 ml	6x80	80



## Measuring scoops



These measuring scoops can be used for determination of granular materials and as weighing scoops.

- made of white polypropylene
- with imprint of capacity
- closed tip minimizes risk of losing media

Cat. No.	Capacity	Length	Unit
5831005	100 ml	200 mm	12
5831006	250 ml	260 mm	6
5831007	500 ml	315 mm	6
5831008	1000 ml	385 mm	6

## Burners for propane and natural gas

- made of non-corrosive material
- with nickel-plated air regulation
- with needle valve for selection of gas type
- gas pressure range
  - Natural gas 18 to 25 mbar
  - Propane gas 47.5 to 57.5 mbar (use pressure regulator)

Cat. No.	Type of gas	Consumption max.	Height mm	Tube Ø mm	Head Ø mm	Temp.	Unit
<b>Acc. to Bunsen</b>							
▶ 6609007	natural gas	95 l/h	160	13	17	1250 °C	1
	Propane gas	33 l/h	160	13	17	1245 °C	
<b>Acc. to Teclu</b>							
▶ 6609008	natural gas	124 l/h	165	14	17	1300 °C	1
	Propane gas	43 l/h	165	14	17	1270 °C	



## Tripods

- made of zinc-plated steel
- steady and non-slipping stand due to its rubber-coated feet

Cat. No.	Height	Diameter inside
▶ 6615201	180 mm	100 mm
▶ 6615203	210 mm	120 mm





## Magnetic stirring bars

- with magnetic centre and PTFE-coating
- very good chemical resistance
- cylindrical shape
- with smooth surfaces
- magnetic stirring bars with pivot rings find automatically the best turning position

Cat. No.	Length x Ø	Unit
<b>Without pivot ring</b>		
▶ 5700001	7 x 2 mm	10
▶ 5700002	8 x 3 mm	10
▶ 5700004	10 x 3 mm	10
▶ 5700006	10 x 6 mm	10
▶ 5700010	12 x 4,5 mm	10
▶ 5700020	15 x 6 mm	10
▶ 5700027	20 x 6 mm	10
▶ 5700032	25 x 6 mm	10
▶ 5700040	30 x 6 mm	10
▶ 5700047	35 x 6 mm	10
▶ 5700055	40 x 8 mm	10
▶ 5700061	45 x 8 mm	10
▶ 5700065	50 x 8 mm	10
▶ 5700074	60 x 9 mm	10
▶ 5700081	70 x 9 mm	10
▶ 5700085	80 x 10 mm	10
<b>With pivot ring</b>		
▶ 5700427	20 x 6 mm	10
▶ 5700432	25 x 6 mm	10
▶ 5700440	30 x 6 mm	10
▶ 5700447	35 x 6 mm	10
5700455	40 x 8 mm	10
▶ 5700465	50 x 8 mm	10
5700481	70 x 9 mm	10

## Magnetic stirring bar retrievers

- with magnetic centre and PTFE-coating
- very good chemical resistance
- length: approx. 350 mm
- with smooth surface

Cat. No.
▶ 5700097

▶ This arrow identifies products which are usually available within short time.



## Magnetic stirrers with hotplate

- with 4-digits LED display
- speed infinitely adjustable from 60 to 1600 r.p.m.
- with indication of set temperature, nominal temperature and safety temperature
- with switch-off timer (1 to 999 min.)
- upper part of case and top plate made of stainless steel, lower part of case acid-proof lacquered sheet steel
- direct control of the liquid's temperature is possible by attachable Pt100-probe (probe is not included but available separately)
- with Schuko plug
- with CE-mark

### Model M 21

- with hotplate made of stainless steel
- dimensions of hotplate: approx. 135 mm Ø
- temperature range of hotplate: 40 °C to 350 °C
- heating power: 500 W
- dimensions: approx. 210 x 145 x 110 mm

Cat. No.	Electric mains	Unit
7204124	230 V / 50 to 60 cps	1

The instruction manual can be downloaded from our website.



### Model M 23

- with hotplate made of Ceran®
- dimensions of hotplate: approx. 135 x 135 mm
- temperature range of hotplate: 40 °C to 500 °C
- heating power: 600 W
- dimensions: approx. 210 x 145 x 110 mm

Cat. No.	Electric mains	Unit
7204125	230 V / 50 to 60 cps	1

The instruction manual can be downloaded from our website.



## Accessories

Cat. No.		Unit
7205220	Pt100-probe for above magnetic stirrers	1
7205221	Rod, stainless steel, 350 x 8 mm Ø, M6	1
7205222	Cross clamp, stainless steel, 30 x 15 mm Ø, M6-M17,5	1
7205223	Probe clamp 0 to 20 mm, shaft 115 x 8 mm Ø	1



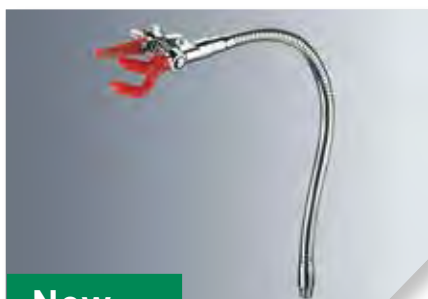
New

## Labjacks

The carrier plate of this labjack acc. to DIN 12897 has a bore of 10 mm diameter to hold flexible clamps with a M10 thread.

- plate made of stainless steel
- shear stable type
- carrier plate with bore of 10 mm Ø to hold the flexible clamps  
Cat. No. 6621000 and 6621001 (please order them separately)
- with rubber feet
- height adjustable from 60 to 255 mm
- dynamic load: 7 kg (max. operating load to lift from each position)
- static load: 30 kg (max. load permitted)

Cat. No.	Dimensions carrier plate	Unit
6627102	130 x 160 mm	1

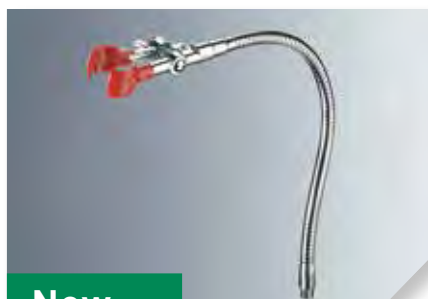


New

## Flexible clamps for the labjacks

- with M10 nut
- plastic coated jaws
- length 300 mm

Cat. No.	Model	Span width	Unit
6621000	three-prong clamp	0 to 40 mm	1
6621001	clamp with round jaws	12 to 25 mm	1



New

## Laboratory stirrers R18

Suitable for stirring media with medium viscosity, even in case of temporary fluctuations in viscosity. Small dimensions, great performance range.

- speed infinitely adjustable from 110 to 2000 r.p.m.
- with opto-electronic feed-back speed control
- can be mounted on any stand by means of a bosshead
- stirring elements, stands and bossheads: Please order them separately
- with Schuko plug
- with CE-mark

### Technical specifications:

- torque: 18 Ncm
- stirring capacity: 50 litres
- with hollow shaft for stirring paddles with a diameter of 6, 8 and 10 mm
- length of hollow shaft: 55 mm
- power output: 85 Watt
- power input: 120 Watt
- dimensions: approx. 65 x 108 x 100 mm (L x W x H)
- weight: 2.1 kg

Cat. No.	Electric mains	Unit
7204220	230 V / 50 to 60 cps	1

The instruction manual can be downloaded from our website.



## Laboratory stirrers R50

Suitable for reproducible stirring of media of medium viscosity, even in case of fluctuations in viscosity.

- speed infinitely adjustable from 50 to 1600 r.p.m.
- with opto-electronic feed-back speed control
- with its slim shape the instrument is excellently suitable for parallel experiments
- can be mounted on any stand by means of a bosshead
- stirring elements, stands and bossheads: Please order them separately
- with Schuko plug
- with CE-mark

### Technical specifications:

- torque: 50 Ncm
- stirring capacity: 100 litres
- with hollow shaft for stirring paddles with a diameter of 6, 8 and 10 mm
- length of hollow shaft: 55 mm
- power output: 85 Watt
- power input: 120 Watt
- dimensions: approx. 65 x 108 x 100 mm (L x W x H)
- weight: 2.1 kg

Cat. No.	Electric mains	Unit
7204219	230 V / 50 to 60 cps	1

The instruction manual can be downloaded from our website.





## Laboratory stirrers R100 C

Suitable for reproducible stirring of media of medium to high viscosity.

- digital display
- display of the set and the real speed
- user programmable limits for speed and torque
- with timer function (1 minute to 99 days, resolution: 1 minute)
- overheat control
- with RS232 interface for up to 255 instruments (daisy chaining)
- with Schuko plug
- with CE-mark
- stirrers, stands and clamps: Please order them separately

### Technical specifications:

- speed: 40 to 2000 r.p.m.
- torque: 150 Ncm
- stirring capacity: 200 litres
- with hollow shaft for 1 to 10.5 mm diameter paddles
- power output: 220 Watt
- power input: 300 Watt
- dimensions: approx. 78 x 200 x 230 mm (L x W x H)
- weight: 4.7 kg

Cat. No.	Electric mains	Unit
7204230	230 V / 50 to 60 cps	1

The instruction manual can be downloaded from our website.



## Stands U-shape for laboratory stirrers R100 C

- made of acid-proof painted steel
- dimensions feet: approx. 692 x 371 mm (L x W)
- dimensions rod: approx. 27 mm Ø, approx. 100 mm length
- weight: 7.5 kg

Cat. No.	Unit
7205225	1



## Special clamps for laboratory stirrers R100 C

- Made of aluminium (ALMg4,5Mn)

Cat. No.	Unit
7205226	1

## Blade stirrers

- made of stainless steel
- suitable for laboratory stirrers

Cat. No.	For stirrers	Stirring rod: Length x Ø	Paddle: Width Height		Unit
6641301	R14	175 x 4 mm	38 mm	13 mm	1
6641302	R18 R50 R100 C	350 x 8 mm	90 mm	15 mm	1



## Propeller stirrers

- made of stainless steel
- suitable for laboratory stirrers
- 3-bladed

Cat. No.	For stirrers	Stirring rod: Length x Ø	Paddle: Width Height		Unit
6641303	R18 R50 R100 C	400 x 8 mm	70 mm	12 mm	1



## Bossheads

Bossheads are designed to fasten the overhead laboratory stirrers to the stand.

- made of powder-coated zinc die-casting
- screws made of nickel-plated steel
- suitable for rods up to 16 mm diameter

Cat. No.	Unit
6628000	1



## Stands for stirrers

- to be assembled by a base plate and a rod with thread M10
- non-slipping stand due to its rubber-coated feet

Cat. No.	Length x width
▶ 6647402	Plate made of powder-coated steel 210 x 130 mm

Cat. No.	Length x Ø
▶ 6647601	Rod, zinc-coated, with thread M 10 750 x 12 mm







## Melting point meters MPM

For the determination of the melting point of pulverized substances in glass capillary tubes for identification of the substance.

### Principle:

After setting the start temperature (approx. 3 °C less than the expected melting point) the capillary is to be inserted and observed while the instrument is heating up with a heating rate of 1 °C per minute. Report printing is produced by MPM-software supplied for both models.

### Model MPM-H3

for visual measuring method by observing the specimen in the capillary through a magnifying glass. After reaching the melting point temperature is shown on the digital display.

### Model MPM-HV3

for optional measurements visual (as model MPM-H3) or fully automatic with graphic presentation of the substance's change during the measuring process.

- tracing the report to the device is guaranteed by indicating the device's version with serial number on the report
- supervision of the calibration due date by indication on the record
- matching of the examined substance and the verifying person by mandatory fields in the software
- antiglare lighting of the substance during visual measuring
- digital temperature control
- foil keyboard for easy cleaning
- short manual (German/English) on the instrument
- base is adjustable in height
- with CE-mark
- for use with capillary tubes one-end closed (Marienfeld Cat. No. 2940211) of 80 mm length, 1.4 mm outside and 1.0 mm inside diameter
- supplied with :
  - Schuko-plug
  - covering hood
  - USB cable
  - software
  - instruction manual
  - 100 capillary tubes

### Technical data:

- electric mains: 88-264 V, AC 0,8 A
- heating: 12 V, DC 25 VA
- heating rate after starting the measurement:
  - 35 °C to 100 °C approx. 2 minutes
  - 35 °C to 300 °C approx. 7 minutes
- cooling-down from 100 °C to 35 °C approx. 3 minutes  
from 300 °C to 35 °C approx. 9 minutes
- safety class IP 20
- measuring range: up to 360 °C
- accuracy:  $\pm 0.4$  °C
- reproducibility:  $\pm 0.3$  °C
- magnifying glass: 20 dioptries / threefold
- dimensions: display approx. 85 x 55 mm (width x height)  
housing: approx. 320 x 260 x 65 mm (width x height x depth)
- weight: device: approx. 4 kg; base approx. 2.8 kg

Cat. No.	Model	Unit
7232233	Modell MPM-H3 for visual determination (max. 3 capillaries)	1
7232234	Modell MPM-HV3 for visual and fully automatic determination (max. 1 capillary)	1

The instruction manual can be downloaded from our website.

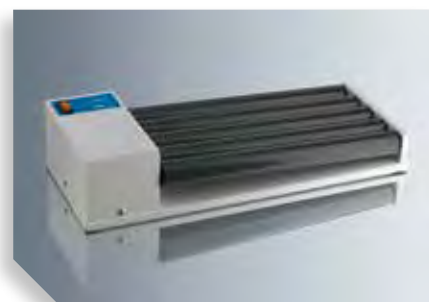
## Swivel roller mixers RM5F

Allows the thorough mixing of samples and cell suspensions by wobbling and rolling motions.

- with constant speed of 40 r.p.m.
- with wobbling and rolling motions
- with 5 rollers made of PVC, each with a length of 334 mm
- diameter of rollers 32 mm
- dimensions: approx. 480 x 180 x 113 mm
- with EURO-plug
- with CE-mark

Cat. No.	Electric mains	Unit
7202038	24 V DC	1

The instruction manual can be downloaded from our website.



## Swivel roller mixers Swap-system

The synchronized rotating PVC rollers provide a uniform and gently swaying mixing of test tubes and can be removed for using vessels with larger diameters. By loosening the milled screw, the side plate will open and allows to remote the rollers tool-free.

- speed infinitely adjustable from 10 to 70 r.p.m.
- power 15 Watt
- length of rollers 330 mm
- diameter of rollers 32 mm
- distance from roller to roller 36 mm
- max. load 5.0 kg
- power supply with connectors for EU, US, UK and AU included
- with CE-mark

Cat. No.	Model	Number of rollers	Dimensions	Electric mains	Unit
7204028	RM 5	5	480 x 180 x 113 mm	24 V DC	1
7202037	RM 10	10	480 x 360 x 113 mm	24 V DC	1

The instruction manual can be downloaded from our website.



## Distilling apparatus for water

- for mono-distillation of tap water
- heating coil made of stainless steel
- glass part made of borosilicate glass 3.3
- distillate: 3.5 l/h
- distillate temperature: 60 °C
- with Schuko-plug
- with CE-mark

Cat. No.	Electric mains	Unit
7224003	230 V / 50 - 60 Hz	1

The instruction manual can be downloaded from our website.



**New**

Transferpette® S-8

20 - 200 µl

Adjust



Disassemble



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Recommended application range for the bottle-top-dispensers VITLAB® simplex<sup>2</sup>

Reagent	Reagent	Reagent	Reagent
Acetaldehyde	Butyl methyl ether	Ethyl methyl ketone	Phenol
Acetic acid, ≤ 96 %	Calcium carbonate	Formaldehyde, ≤ 40 %	Phenylethanol
Acetone	Calcium chloride	Formamide	Phenylhydrazine
Acetonitrile	Calcium hydroxide	Formic acid	Phosphoric acid, ≤ 85 %
Acetylacetone	Calcium hypochlorite	Glycol (Ethylene glycol)	Phosphoric acid, 85% + Sulfuric acid 98%, 1:1
Acrylonitrile	Chloroacetaldehyde, ≤ 45 %	Glycolic acid, 50%	Piperidine
Acrylic acid	Chloroacetone	Glycerol	Potassium chloride
Adipic acid	Chlorobenzene	Heating oil (Diesel oil)	Potassium dichromate
Allyl alcohol	Chlorbutane	Hexane	Potassium hydroxide
Aluminium chloride	Chloroacetic acid	Hexanoic acid	Potassium permanganate
Amino acids	Chloro naphthalene	Hexanol	Propanol
Ammonium chloride	Chromic acid, ≤ 50 %	Hydrochloric acid, ≤ 37 %**	Propionic acid
Ammonium fluoride	Chromosulfuric acid	Hydroiodic acid, ≤ 57 %**	Propylene glycol (Propanediol)
Ammonium hydroxide, ≤ 20 %	Copper sulfate	Iodine-Potassium iodide solution	Propylene oxide
Ammonium sulfate	Cresol	Isoamyl alcohol	Pyridine
n-Amyl acetate	Cumene (Isopropyl benzene)	Isobutanol	Pyruvic acid
Amyl alcohol (Pentanol)	Cyclohexanone	Isopropanol (2-Propanol)	Salicyl acid
Amyl chloride (Chloropentane)	Decane	Isopropyl ether	Salicylaldehyde
Aniline	1-Decanol	Lactic acid	Sodium acetate
Barium chloride	Dibenzylether	Magnesium chloride	Sodium chloride
Benzaldehyde	Dichlorobenzene	Mercuric chloride	Sodium dichromate
Benzine (Gasoline)	Dichloroethane	Methanol	Sodium fluoride
Benzene	Dichloromethane	Methoxybenzene	Sodium hypochlorite
Benzyl chloride	Diethanolamine	Methyl benzoate	Sodium hydroxide, ≤ 30 %
Benzyl alcohol	Diethylamine	Methyl butyl ether	Sulfuric acid, ≤ 98 %
Biuret reagent	1,2 Diethylbenzene	Methyl formate	Silver acetate
Benzyl amine	Diethylene glycol	Methyl propyl ketone	Silver nitrate
Benzyl chloride	Diethyl ether	Mineral oil (Engine oil)	Turpentine
Boric acid, ≤ 10 %	Dimethylaniline	Monochloroacetic acid, ≤ 50 %	Tetramethylammonium hydroxide
Bromobenzene	Dimethylformamide (DMF)	Nitric acid, ≤ 60 %*/**	Toluene
Bromonaphthalene	Dimethyl sulfoxide (DMSO)	Nitrobenzene	Tartaric acid
Butanediol	1,4 Dioxane	Octane	Urea
1-Butanol	Diphenyl ether	Oleic acid	Xylene
Butyric acid	Ethanol	Oxalic acid	Zinc chloride, ≤ 10 %
n-Butyl acetate	Ethanolamine	Perchloric acid	Zinc sulfate, ≤ 10 %
Butyl amine	Ethyl acetate	Petroleum	

\*use ETFE/PTFE bottle adapter, \*\*use drying adapter



## Dispenser bottles

- made of amber glass
- with ISO thread fitting bottle top-dispensers VITLAB® simplex<sup>2</sup>
- the plastic coating made of polyethylene increases the resistance against breakage and minimizes the risk of splintering
- with dust protection cap, without pouring ring

Cat. No.	Capacity	Form	Thread	Multipack
<b>Uncoated</b>				
3620606	250 ml	square	GL 32	24
3620607	500 ml	square	GL 32	20
3620608	1000 ml	square	GL 45	24
3620610	2500 ml	round	GL 45	11
<b>Plastic coated (T<sub>max.</sub> 60 °C)</b>				
3620706	250 ml	square	GL 32	
3620707	500 ml	square	GL 32	
3620708	1000 ml	square	GL 45	
3620710	2500 ml	round	GL 45	



## Bottle-top dispensers VITLAB® simplex<sup>2</sup>

Used for dispensing fluids considering the following physical limits:

- temperature from 15 to 40 °C for apparatus and liquids
- density up to 2.2 g/cm<sup>3</sup>
- vapour pressure up to 600 mbar
- viscosity up to 500 mm<sup>2</sup>/s
- high-quality materials (PTFE, PFA, FEP, borosilicate glass, platinum-iridium) ensure high chemical resistance against most acids, solvents and bases
- quick, easy and precise volume adjustment
- a positive displacement plunger with a PFA seal minimizes the crystallization of liquids and thus the clogging of the plunger
- variable volume
- scale easily readable
- no drops after tube has been capped
- completely autoclavable at 121 °C (2 bar, T<sub>max.</sub> 20 min)
- DE-M marked
- simple-to-use calibration function to meet the requirements of testing-apparatus monitoring
- individual serial number on each dispenser
- detailed instruction manual and quality certificate attached
- equipped with GL 45 thread by standard
- with unscrewable ejector valve
- supplied with 3 resp. 5 thread adapters\* made of PP, intake tube and mounting tool



Cat. No.	Volume	Graduation	A** ≤ ± %	A** ≤ ± µl	CV** ≤ %	CV** ≤ µl	Unit
5330001	0.2 - 2.0 ml	0.05 ml	0.5	10	0.1	2	1
5330004	0.5 - 5.0 ml	0.10 ml	0.5	25	0.1	5	1
5330005	1.0 - 10.0 ml	0.20 ml	0.5	50	0.1	10	1
5330006	2.5 - 25.0 ml	0.50 ml	0.5	125	0.1	25	1
5330008	5.0 - 50.0 ml	1.00 ml	0.5	250	0.1	50	1
5330009	10.0 - 100.0 ml	1.00 ml	0.5	500	0.1	100	1

\* Nominal capacity 1 to 10 ml:  
with adapters GL 25, GL 28, GL 32, GL 38, S 40 and telescope filling tube of 125 to 240 mm length

\* Nominal capacity 25 to 100 ml:  
with adapters GL 32, GL 38, S 40 and telescope filling tube of 170-330 mm length

\*\* Accuracy (A) and coefficient of variation (CV) acc. to DIN EN ISO 8655-5



## Micro pipettes Transferpette® S single-channel

The air-displacement pipettes Transferpette® S are the perfect choice for simple and efficient pipetting in demanding applications. They cover a wide volume range from 0.1 µl to 10 ml. Pipettes with small nominal volumes provide high precision for small-volume applications such as those found in molecular biology, e.g. for pipetting enzymes. Large nominal volumes are used for water and environmental analysis, for example, where durability is critical.

- variable type
- ergonomic design for all hands – right, left, big or small
- short stroke and low operating forces
- universal tip cone
- completely autoclavable at 121 °C
- comfortable one-hand operation: volume setting, pipetting, ejecting the tip
- colour code on volume adjustment wheel, shaft and volume-change protection
- Easy Calibration technology: adjustment without tools
- slim shaft for sampling from narrow vessels
- operating temperature from +15 °C to +40 °C
- vapor pressure up to 500 mbar
- viscosity up to 260 mPa s
- high chemical resistance due to carefully selected plastics as well as corrosion-resistant pistons and ejectors
- UV resistance
- DE-M marked
- delivery with performance certificate, shelf/rack mount and silicone grease

Cat. No.	Volume range µl	Division µl	A* ≤ ± %	A* ≤ ± µl	CV* ≤ %	CV* ≤ µl	Unit
5114754	0.1-1	0.001	2	0.02	1.2	0.012	1
5114755	0.1-2.5	0.002	1.4	0.035	0.7	0.018	1
5114726	0.5-10	0.01	1	0.1	0.5	0.05	1
5114727	2-20	0.02	0.8	0.16	0.4	0.08	1
5114728	5-50	0.05	0.8	0.4	0.3	0.15	1
5114730	10-100	0.1	0.6	0.6	0.2	0.2	1
5114745	20-200	0.2	0.6	1.2	0.2	0.4	1
5114735	100-1000	1	0.6	6	0.2	2	1
5114746	500-5000	5	0.6	30	0.2	10	1
5114748	1000-10000	10	0.6	60	0.2	20	1

A = Accuracy, CV = Coefficient of variation

\*Calibrated to deliver „Ex“. Error limits according to the nominal capacity (= max. volume) indicated on the instrument, obtained with instrument and distilled water at equilibrium with ambient temperature at 20 °C and with steady operation.



## Bench-top racks for Transferpette® S single-channel and S-8/-12 multi-channel



Cat. No.	For	Unit
5121203	6 pipettes	1

BRAND®, Transferpette®, as well as the BRAND figurative mark are registered trademarks or trademarks of BRAND GMBH + CO KG, Germany.



## Micro pipettes Transferpette® S -8/-12 multi-channel

Work in microplates and PCR plates is efficient with the multi-channel models of the Transferpette® S. These 8- und 12-channel pipettes cover the volume range from 0.5 µl bis 300 µl. They provide all the advantages of the single-channel models plus additional features that make work and maintenance easier.

- variable type
- ergonomic design for all hands – right, left, big or small
- short stroke and low operating forces
- universal tip cone
- completely autoclavable at 121° C
- comfortable one-hand operation: volume setting. pipetting. ejecting the tip
- colour code on volume adjustment wheel, shaft and volume-change protection
- adjustment without tools - Easy Calibration technology
- pipetting unit can be rotated 360° for individualized comfort
- easy insertion and ejection of tips due to O-rings
- slim shaft for sampling from narrow vessels
- operating temperature from +15 °C to +40 °C
- vapor pressure up to 500 mbar
- viscosity up to 260 mPa s
- high chemical resistance due to carefully selected plastics as well as corrosion- resistant pistons and ejectors
- UV resistance
- DE-M marked
- delivery with performance certificate, 1 shelf/rack mount, 1 reagent reservoir, 1 installation tool, silicone grease and 1 set of sealing rings made of silicone/FKM



Cat. No.	Volume range µl	Division µl	A* ≤ ± %	CV* ≤ %	Unit
<b>Transferpette® S-8</b>					
5114826	0.5 - 10	0.01	1.6	1.0	1
5114828	5 - 50	0.05	0.8	0.4	1
5114830	10 - 100	0.1	0.8	0.3	1
5114845	20 - 200	0.2	0.8	0.3	1
5114849	30 - 300	0.5	0.6	0.3	1
<b>Transferpette® S-12</b>					
5114926	0.5 - 10	0.01	1.6	1.0	1
5114928	5 - 50	0.05	0.8	0.4	1
5114930	10 - 100	0.1	0.8	0.3	1
5114945	20 - 200	0.2	0.8	0.3	1
5114949	30 - 300	0.5	0.6	0.3	1

A = Accuracy, CV = Coefficient of variation

\* Calibrated to deliver (TD, Ex). Error limits according to the nominal capacity (= max. volume) indicated on the instrument, obtained with instrument and distilled water at equilibrium with ambient temperature at 20 °C, and with steady operation.

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## PLT unit (Pipette Leak Testing unit) for air displacement pipettes



The PLT unit finds smallest leaks within seconds. Daily checks with this leak tester can provide a safeguard during the periods between calibrations. Even smallest leaks are detected and the process reliability for the pipettes is thus significantly improved.

- test limit values for all commercially available single- and multichannel pipettes in the volume range 1 µl to 10 ml are pre-programmed
- test with and without tips to assist in leak source diagnosis
- test results in seconds
- items supplied:
  - one adapter each for testing single-channel (4-channel optional) air-displacement pipettes with tip (mounted) and without tip
  - 2 plugs (for instrument validation)
  - 3 replacement PE filters for the pipette adapters
  - 1 universal AC adapter
  - quality certificate and instruction manual

Cat. No.	Unit
5114300	PLT unit 1



## Repetitive pipettes HandyStep® S



The HandyStep® S repetitive pipette combines the application advantages of the positive displacement principle with easy operation, robust design and an attractive price-to-performance ratio.

Thanks to the positive displacement principle, the HandyStep® S is often the easy solution for liquids that are difficult to pipette. This includes highly viscous or wetting media, high density media, foaming media such as detergents or highly volatile liquids.

Its balanced weight distribution and the practical ergonomic positioning of operating elements makes work more efficient, even when pipetting long series. The ergonomic finger rest relieves strain on the hand, the positioning of the dispensing lever is easy on the thumb, and the stroke can be set with one hand, even while wearing gloves. Tips can be ejected with the press of a button, without having to touch the tips, making tip ejection contamination-free.

The HandyStep® S repetitive pipette works with the original BRAND PD-Tips //. Tips from many other manufacturers can also be used, providing maximum flexibility. The simple, robust design and purely mechanical, battery-free operation make the HandyStep® S a reliable lab partner.

- volume range from 2 µl to 5 ml adjustable to 59 volumes and up to 49 dispensing steps
- easy tip mounting - PD-Tip // is now simply inserted from below
- double-sided volume table on the back side for quick adjustments
- ergonomic eject button
- DE-M marked
- items supplied: performance certificate, instruction manual, shelf/rack mount, 3 PD-Tips //: 0,1 ml, 1 ml and 10 ml

Cat. No.	Unit
5114200	1

BRAND®, HandyStep®, as well as the BRAND figurative mark are registered trademarks of BRAND GMBH+CO KG, Germany.

## Manual repetitive Pipette HandyStep® S

### Volume table with PD-Tips // from BRAND®

Depending on the PD-Tip and set number of strokes used up to 59 different sub-volumes arise with many different dosing steps.

Setting	Tip size ml										Steps
	0,1	0,5	1	1,25	2,5	5	10	12,5	25	50	
1	2	10	20	25	50	100	200	250	500	1000	49
1,5	3	15	30	37,5	75	150	300	375	750	1500	32
2	4	20	40	50	100	200	400	500	1000	2000	24
2,5	5	25	50	62,5	125	250	500	625	1250	2500	19
3	6	30	60	75	150	300	600	750	1500	3000	15
3,5	7	35	70	87,5	175	350	700	875	1750	3500	13
4	8	40	80	100	200	400	800	1000	2000	4000	11
4,5	9	45	90	112,5	225	450	900	1125	2250	4500	10
5	10	50	100	125	250	500	1000	1250	2500	5000	9
Volume µl											

### Accuracy table with PD-Tips // from BRAND®

PD-Tip //	Volume range	Accuracy $\leq \pm$ %			Coefficient of variation $\leq$ %		
		Stroke setting = % of nominal volume 1 = 2%    3 = 6%    5 = 10%			Stroke setting $\hat{=}$ % of nominal volume 1 $\hat{=}$ 2%    3 $\hat{=}$ 6%    5 $\hat{=}$ 10%		
0.1 ml	2 - 10 µl	4.0	2.4	1.6	6.0	3.0	2.0
0.5 ml	10 - 50 µl	2.5	1.5	1.0	2.5	1.5	1.0
1.0 ml	20 - 100 µl	2.5	1.5	1.0	2.0	1.2	0.8
1.25 ml	25 - 125 µl	2.5	1.4	0.9	2.0	1.1	0.7
2.5 ml	50 - 250 µl	1.8	1.1	0.7	1.5	0.9	0.6
5.0 ml	100 - 500 µl	1.8	1.1	0.7	1.5	0.9	0.7
10 ml	200 - 1000 µl	1.8	1.1	0.7	2.0	1.2	0.8
12.5 ml	250 - 1250 µl	1.8	1.1	0.8	3.2	2.0	1.4
25 ml	500 - 2500 µl	1.5	0.9	0.6	3.0	1.5	1.0
50 ml	1000 - 5000 µl	1.5	0.8	0.5	5.0	1.8	1.2

Distilled water was used as the test liquid.

The nominal volume is the maximum volume printed on the PD-Tip.

The tolerances specified in ISO 8655 are not exceeded.

BRAND®, HandyStep®, as well as the BRAND figurative mark are registered trademarks of BRAND GMBH+CO KG, Germany.





## Repetitive pipettes HandyStep® touch / HandyStep® touch S

The next generation repetitive pipette with intuitive menu navigation and integrated help function by touchscreen operation.

Repetitive pipettes are the first choice when it comes to efficient dispensing of long series. Positive displacement pipettes are often the right solution for pipetting viscous media. The new stepper HandyStep® touch from BRAND combines both features.

With the touchscreen display, you conveniently swipe back and forth between functions and always have an overview of the essential information on your work steps. Operation is easy, even with protective gloves on. And speaking of easy, the days of manually changing tips are over. On the HandyStep® touch, lightly tapping on the Eject icon on the display is enough to eject the tip.

The HandyStep® touch repetitive pipette automatically recognizes the volume of the new BRAND PD-Tips //. This saves time and reduces the risk of error. Tips from many other manufacturers can also be used, providing maximum flexibility.

Charging is easy and efficient: simply place the HandyStep® touch in the inductive charging stand and the battery automatically starts charging.

- touchscreen operation with intuitive menu navigation in English, German, Spanish, French and Chinese
- compatible with tips from many other manufacturers: for example, Encode™ tips, Repet-Tips®, Combitips®, Combitips® plus, Combitips® advanced (the above-mentioned brands are property of their respective owners)
- automatic tip ejection
- variable volume adjustment from 1.0 µl to 50 ml
- easy to clean thanks to smooth surface without grooves and edges
- inductively rechargeable
- DE-M marked, with performance certificate
- items supplied:  
operating manual, short instruction, Li-Ion battery, shelf/rack mount and universal AC adapter,  
one each PD-Tip // size 0.5 ml, 1.25 ml, 2.5 ml, 5 ml and 12.5 ml.

Cat. No.	Type	Unit
<b>HandyStep® touch</b>		
5114500	with the features multi-dispensing, auto-dispensing and pipetting	1
<b>HandyStep® touch S</b>		
5114600	with the additional features sequential dispensing, multi-aspiration and titration	1

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## Repetitive pipettes

### HandyStep® touch / HandyStep® touch S

#### Accuracy table with PD-Tips // from BRAND®

PD-Tips //	Volume range	Subdivision	Nominal volume				Nominal volume			
			Accuracy* ≤ ± %				Coefficient de variation* ≤ %			
			100%	50%	10%	1%	100%	50%	10%	1%
0.1 ml	1 µl - 100 µl	0.1 µl	1.0	1.0	1.6	8.0	0.5	1.0	2.0	12
0.5 ml	5 µl - 500 µl	0.1 µl	0.9	0.9	1.0	5.0	0.3	0.6	1.0	5.0
1.0 ml	10 µl - 1000 µl	1 µl	0.6	0.9	1.0	5.0	0.2	0.5	0.8	4.0
1.25 ml	12.5 µl - 1250 µl	0.5 µl	0.6	0.6	0.9	5.0	0.15	0.5	0.7	4.0
2.5 ml	25 µl - 2500 µl	1 µl	0.5	0.6	0.7	3.5	0.15	0.3	0.6	3.0
5.0 ml	50 µl - 5000 µl	1 µl	0.5	0.5	0.7	3.5	0.15	0.4	0.7	3.0
10 ml	100 µl - 10 ml	10 µl	0.4	0.5	0.7	3.5	0.15	0.5	0.8	4.0
12.5 ml	125 µl - 12.5 ml	5 µl	0.5	0.5	0.8	3.5	0.15	0.6	1.4	6.5
25 ml	250 µl - 25 ml	10 µl	0.5	0.5	0.6	3.0	0.15	0.3	1.0	6.0
50 ml	500 µl - 50 ml	10 µl	0.5	0.5	0.5	3.0	0.15	0.4	1.2	9.0

Distilled water was used as the test liquid.

The nominal volume ist the maximum volume printed on the PD-Tip.

The tolerances specified in ISO 8655 are not exceeded.

## Stands for

### HandyStep® touch / HandyStep® touch S

Cat. No.		Unit
5114501	Charging stand with inductive charging function, with blue LED status indicator at the base, without universal adapter	1
5114502	Support stand	1





## PD-Tips from BRAND® Precision Dispenser Tips //

The PD-Tips // dispenser tips for efficient, step-by-step dispensing enhance the proven features of the classic BRAND PD-Tips. Thanks to patented size coding, HandyStep® touch and HandyStep® electronic from BRAND automatically detect the tip volume. The tips are also compatible with all other instruments of the HandyStep® family and with repetitive pipettes from other manufacturers.

The positive displacement principle enables precision work, even with viscous media or media with high vapor pressure. With tightly sealed pistons, the PD-Tips // effectively protect the stepper from aerosols. This prevents contamination and ensures long service life of the instrument.

PD-Tips // can be used with different repetitive pipets

- Compatible with automatic size detection:  
HandyStep® touch, HandyStep® electronic, Gilson Repetman®, Rainin AutoRep™ E
- Compatible without automatic size detection:  
HandyStep®, HandyStep® S, Rainin AutoRep™ M und S, Eppendorf® Multipette® 4780 und EDOS® 5221  
(the above-mentioned brands are property of their respective owners)
- manufactured from high-quality raw materials  
(cylinder: PP / Piston: PE-HD, 0.1 ml: LCP)
- not autoclavable. (adapters can be autoclaved at 121° C.)
- comply with the requirements of ISO 8655
- with batch certificate



Cat. No.	nominal volume	Unit
<b>Not sterile, cleanroom quality, bulk packing, type coded</b>		
5107723	0.10 ml	100
5107706	0.50 ml	100
5107721	1.0 ml	100
5107708	1.25 ml	100
5107712	2.50 ml	100
5107713	5.0 ml	100
5107719	10.0 ml	100
5107714	12.5 ml	100
5107715	25 ml incl. adapter	50
5107716	50 ml incl. adapter	25
5107730	Set with each 20 PD-Tips // 0.5 · 1.0 · 1.25 · 2.5 · 5 · 10 · 12.5 ml	1
<b>Sterile, BIO-CERT® quality, individually packed, free of DNA, RNase, endotoxines and ATP</b>		
5108223	0.10 ml	100
5108206	0.50 ml	100
5108221	1.0 ml	100
5108208	1.25 ml	100
5108212	2.5 ml	100
5108213	5.0 ml	100
5108219	10.0 ml	100
5108214	12.5 ml	100
5108215	25 ml	50
5108216	50 ml	25

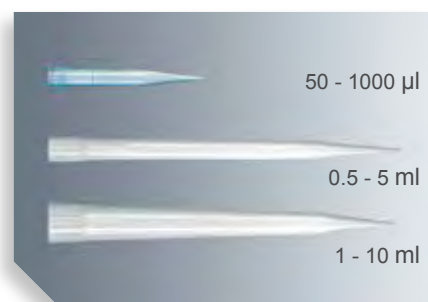
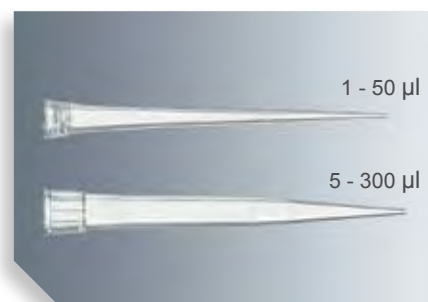
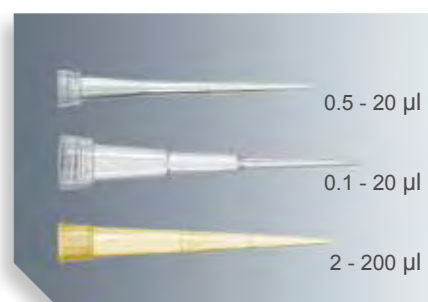
For accuracy table please see Handy Step® S/touch/touch S.



## Pipette tips from BRAND®

- produced under supervised state-of-the-art cleanroom conditions
- raw materials are free from the additives DiHEMDA und oleamide
- no parting agents or demolding aids are used
- for single use, none sterile
- autoclavable at 121 °C (2 bar), acc. to DIN EN 285
- up to 1000 µl the tips are tested for BRAND® and most of the pipette types of Gilson®, Thermo Fischer Scientific Finnpiquette®, Eppendorf® and BIOHIT®/sartorius.
- The 5 ml tip is exclusively tested for BRAND® and Thermo Fisher Scientific Finnpiquette®. The 10 ml tip tested for BRAND® and Eppendorf®.
- automatically shrink-wrapped in reclosable bags (with batch number)
- bags are packed in cardboard boxes

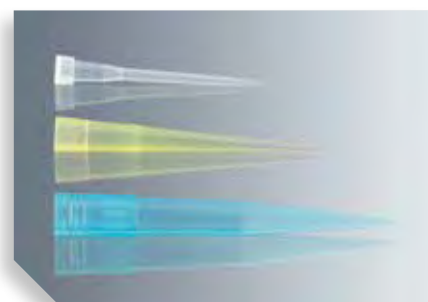
Cat. No.	Volume range	Colour of tip	Length of tip	Unit
5220027	0.1 - 20 µl	nature nano-cap™	37 mm	2 x 1000
5220038	0.1 - 20 µl	nature nano-cap™	37 mm	10 x 1000
5220039	0.5 - 20 µl	nature	46 mm	2 x 1000
5220014	0.5 - 20 µl	nature	46 mm	10 x 1000
5220037	1 - 50 µl	nature	50 mm	2 x 1000
5220040	2 - 200 µl	yellow	50 mm	1 x 1000
5220012	2 - 200 µl	yellow	50 mm	10 x 1000
5220022	5 - 300 µl	nature	53 mm	1 x 1000
5220041	50 - 1000 µl	blue	70 mm	2 x 500
5220013	50 - 1000 µl	blue	70 mm	10 x 500
5220026	0.5 - 5 ml	nature	160 mm	1 x 200
5220028	1 - 10 ml	nature	156.5 mm	2 x 100



## Pipette tips

- made of selected and hydrophobic polypropylene, conform to the EC chemicals regulation REACH
- universal fit for use on various single and multiple channel pipettes of leading manufacturers such as Eppendorf®, BRAND®, Gilson®, Socorex®, Labsystems®, Finn®, BioHit®
- for single use
- non-sterile
- autoclavable at 121 °C (2 bar)
- with precise opening of the tip
- accurate fitting due to long soft cone
- with modified shape of rim and oval recessed grips
- high accuracy and reproducibility
- easy ejection
- 1000 pieces in a poly bag

Cat. No.	Volume range	Colour of tip	Unit
5220009	0.1 - 20 µl	crystal	10 x 1000
5220000	2 - 200 µl	yellow	25 x 1000
5220001	50 - 1000 µl	blue	10 x 1000





## Pipette tips from BRAND® palletized in a TipBox

### Description of the TipBox:

- stackable
- autoclavable at 121 °C (2 bar), acc. to DIN EN 285
- dual function: hinged and push-on lid. Simply rotate 180° to change closure method
- opening and closing with one hand: The clamping mechanism holds the tip-tray securely in the box
- with transparent window for a better all-round visual inspection
- no deflection during tip loading: Tip-tray is fabricated from especially rigid PP
- coloured tip-trays with side panel labeling: The contents of the box are always clearly visible
- the batch number printed on the pipette ensures traceability
- the rimless tip-tray border enables problem-free loading of individual tips with multichannel pipettes
- low box optimized for tips up to 300 µl, tall box up to 1000 µl volume

### Content of the TipBox: 96 palletized tips from BRAND®

- produced under supervised state-of-the-art cleanroom conditions
- raw materials are free from the additives DiHEMA and oleamide
- all palletized tips up to 1000 µl are free from DNA (>40 fg), RNase (>8,6 fg), ATP (<1 fg) and endotoxines (>1 pg)
- no parting agents or demolding aids are used
- up to 1000 µl the tips are tested for BRAND® and most of the pipette types of Gilson®, Thermo Fischer Scientific Finnpipe®tette®, Eppendorf® and BIOHIT®/sartorius
- BIO-CERT® quality

Cat. No.	Volume range	Colour of tip	Colour of tray	Unit
5220127	0.1 - 20 µl	nature nano-cap™	grey	5 x 96
5220114	0.5 - 20 µl	nature	grey	5 x 96
5220137	1 - 50 µl	nature	grey	5 x 96
5220112	2 - 200 µl	nature	yellow	5 x 96
5220122	5 - 300 µl	nature	green	5 x 96
5220113	50 - 1000 µl	nature	blue	5 x 96



## Pipette tips from BRAND® palletized in a TipRack



Environmentally friendly refill unit for the TipBox: Compared to the filled TipBoxes, the amount of waste with the refill units is reduced by over 20%.

- all tip-trays are printed on one side with information on the contents
- BIO-CERT® quality
- sterile according to ISO 11137 and AAMI guide-lines, a SAL of 10<sup>-6</sup> is obtained
- autoclavable at 121 °C (2 bar), acc. to DIN EN 285
- rack contains 96 palletized tips, 10 TipRacks in a carton

Cat. No.	Volume range	Colour of tip	Colour of tray	Unit
5220227	0.1 - 20 µl	nature nano-cap™	grey	10 x 96
5220214	0.5 - 20 µl	nature	grey	10 x 96
5220237	1 - 50 µl	nature	grey	10 x 96
5220212	2 - 200 µl	nature	yellow	10 x 96
5220222	5 - 300 µl	nature	green	10 x 96
5220213	50 - 1000 µl	nature	blue	10 x 96



## Micro titer plates 96-Well

- made of selected, high quality polystyrene
- high optical transparency
- for single use
- machine-sterile, manufactured under conditions with low bacterial count
- suitable for all current standard equipment (e.g. reading and washing devices)
- safe stacking, no danger of slipping
- appropriate gripping surfaces at the side
- frosted surface of the plates prevents errors from extraneous light
- alpha-numerical well identification for easy sample location
- space for identification marking on the side surface
- covers are provided with condensation rings to avoid loss of medium and uneven evaporation
- orientation corners of the covers reduce the risk of cross-contamination
- covers to be ordered separately
- packed in polybags of 5 pieces, in a carton of 100 pieces

### Different well-types for different applications:

#### U-Well

- no edges, easy and clean pipetting
- for +/- evaluations
- especially suitable for agglutination tests

#### V-Well

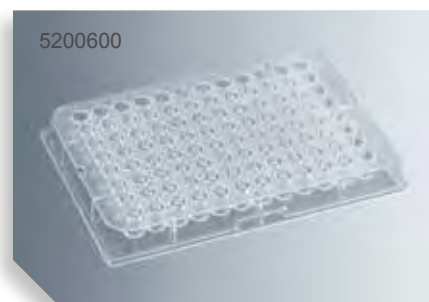
- for easy release of the "last drop" from the pipette
- for +/- evaluations
- suitable for storage of samples

#### F-Well

- for precise optical measurements
- for microscopic applications (Bottom Reading)
- embossment at the bases prevent a scuffing of the optical surface
- extended surface for cell-growth

Cat. No.	Type	Well volume max.	Unit
5200600	96 U-Well	345 µl	100
5200601	96 V-Well	335 µl	100
5200602	96 F-Well	405 µl	100
5200603	Cover		100

5200600



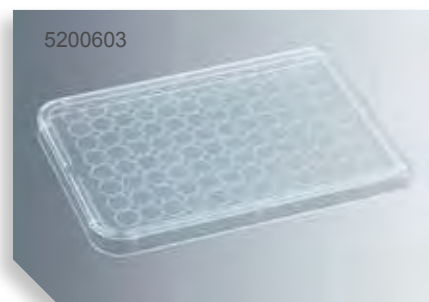
5200601



5200602



5200603





## Reaction vessels

- made of polypropylene
- good resistance against temperature and chemicals
- with graduation
- with space for markings
- with attached lid for perfect closure
- lid's membrane can be effortlessly penetrated
- with round vessel's bottom for optimized formation of pellets
- autoclavable
- gamma sterilizable
- for single use
- 1000 pieces in a poly bag

Cat. No.	Capacity	Colour	Multipack	Unit
5220501	1.5 ml	nature	8000	1000



## Reaction vessels SafeFit

- made of selected clear polypropylene
- content optimal visible
- High Speed Protected: highest stability for highest centrifugal safety
- special mechanism of closure: preventing unwanted popping up
- reliable and safe closure: suitable for applications under thermal stress
- precise sealing for low evaporation rate
- lid's membrane can be effortlessly penetrated
- with round vessel's bottom for optimized formation of pellets
- good resistance against temperature and chemicals
- with graduation
- with space for markings
- autoclavable
- gamma sterilizable
- for single use
- 1000 pieces in a poly bag

Cat. No.	Capacity	Colour	Multipack	Unit
5220511	1.5 ml	nature	8000	1000



## Stands for reaction vessels

- made of plastic (ABS)
- offers space for up to 20 reaction vessels 1.5 ml

Cat. No.	Multipack
5660251	60



3D, Sample holders	38	Capillary tubes, melting point determination	77	Erlenmeyer flasks, various	114-115
Adapters for blood diluting pipettes	70	Capillary tubes, microhaematocrits	75	ESR tubes Westergren	68
Addition, stopwatches	152	Caps, for laboratory bottles	122	Evaporating dishes, glass	135
Adhesion slides	39	Caps, for test tubes, Labocap	80	Evaporating dishes, porcelain	136
Adhesive slides HistoBond®	33-37	Cassettes, embedding	52-53	Filter funnels	120
ADPI, centrifuge tubes	81	Cellcounters, blood picture counter	65	Filter papers, various	144-145
Alcoholometers, Gay-Lussac	148	Centrifuge tubes	81-82	Filtering flasks	123
Allihn, condensers	118	Chemical thermometers	150	Flasks, beaded rim	116
Aluminium pans	154	Clamps, flexible for labjacks	158	Flasks, brushes	117
Annealing dishes, porcelain	138	Clamps, for burettes	106	Flasks, Erlenmeyer	114-115
Aquarium jars	134	Clamps, for standard ground joints	101	Flasks, for sugar analysis, Kohlrausch	97
Aspirator bottles, glass	134	Clamps, universal	106	Flasks, laboratory, ISO	122
Automatic burettes, Dr. Schilling	103	Closure caps for blood gas tubes	76	Flasks, standard ground joint	117
Bang, microburettes	102	Collars, plastic, for cylinders	92	Flasks, tongs	116
Bases for microburettes Bang	102	Combustion boats, porcelain	138	Flasks, volumetric	94-97
Beads, glass	149	Comparator tubes	71	Flat bottom tubes	78
Beakers, brushes	113	Condensers, various	118	Forceps for cover glasses	143
Beakers, glass, polypropylene	112-113	Coplin, staining jars	45	FRAP Sandwich sets	41
Beakers, tongs	112	Counters, hand tally	152	Fuchs-Rosenthal, counting chambers	63
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Blood diluting pipettes	69	Cover glasses, for counting chambers		Glass beads	149
Blood gas capillary tubes	76	and haematocytometers	21	Glass markers, laboratory, permanent	36
Blood picture counter Cellcounter	65	Cover glasses, for Howard chambers	66	Glass writing diamond	42
Blood sedimentation pipettes, Westergren	68	Cover glasses, for McMaster chambers	65	Graduated cylinders, glass & plastic	90-92
Blood sedimentation stands, Westergren	68	Cover glasses, for Sedgewick Rafter	67	Graduated pipettes, glass	87
Boats, combustion, porcelain	138	Cover glasses, forceps	143	Griffin type beakers	113
Boerner, staining plates	42	Cover glasses, hydrophobic	20	Ground joint stoppers	96, 115
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Bottles, aspirator, glass	134	Cover glasses, No. 1	16	Haematocytometers	64
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Bottles, dropping	128, 130	Cover glasses, No. 1.5H	18	Haemoglobin pipettes, Sahli	70
Bottles, filtering, glass	123	Cover glasses, thickness 0.4 mm	21	Haemometers, Sahli	71
Bottles, for dispensers	166	Crucibles & lids, porcelain	137	Hand tally counters	152
Bottles, gas washing, Drechsel	108	Crucible tongs, stainless steel	138	HandyStep® touch, touch S	172
Bottles, laboratory (ISO)	122-123	Crystallizing dishes, glass	135	HandyStep® S	170-171
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Bottles, reagent	132	Cylinders, mixing	93	Hellendahl, staining jars	45
Bottles, reservoir, for burettes Pellet	101	Cylinders, Nessler	93	HistoBond®, slides, various	33-37
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Bottles, specific gravity	107	Density bottles	107	Holders, for test tubes	83
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Bottle-top burettes Titrette	104	Dishes, aluminium	154	Information, porcelain	136
Bottletop-dispensers	167	Dishes, annealing, porcelain	138	Inoculation loops, various	50
Boxes, storing, for slides	48	Dishes, crystallizing, glass	135	Interval timers	151
Bridges, staining, plexiglass	47	Dishes, evaporating, glass	135	ISO bottles, glass	122
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Brushes for burettes	106	Dispenser Tips, precision	174	Jars, ointment	121
Brushes for cylinders	92	Dispensers, bottle-top & flasks	166-167	Jars, staining, various	45
Brushes for pipettes	88	Dispensers, for Parafilm® M	147	Jugs, measuring	113
Brushes for test tubes	83	Dispensers, for slides	46	Kohlrausch, volumetric flasks	97
Buechner funnels, porcelain	138	Distilling apparatus	163	Kolle, needle holders	50
Bunsen burners	155	Drechsel, gas washing bottles	108	Kuehne, forceps	143
Bunsen funnels, glass	120	Dressing jars	134	Labjacks and flexible clamps	158
Burettes, Bang	102	Drigalski, spatula	50	Labocap, test tube caps	80
Burettes, clamps and stands	106	Dropping bottles, glass	128, 130	Laboratory bottles, ISO	122
Burettes, Daffert	103	Dropping bottles, polyethylene	126-127	Laboratory bottles, VITgrip™	126
Burettes, Dr. Schilling	103	Dropping pipettes	71	Laboratory markers	37
Burettes, Mohr	98-99	Drying bench for microscope slides	47	Laboratory stirrers, R18, R50, R100 C	159-160
Burettes, Pellet	100	Drying racks, polystyrene	109	Laboratory timers	153
Burettes, reservoirs	101	Durham tubes	79	Labsorb, surface protection papers	146
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Burners, all gas type	155	Embedding medium Histofluid	22	Lead rings, for weighing down	116
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Loops, inoculation, various	50	Pipettes, brushes	88	Stands, for reaction vessels	178
Macro pipetting aids	88	Pipettes, dropping	71	Stands, for test tubes	83
Magnetic stirrers, with hotplate	157	Pipettes, graduated	87	Stands, Westergren	68
Magnetic stirring bars & retrievers	156	Pipettes, micro-, with ring mark	74	Stirrer blades, for overhead stirrers	161
Mallorys, for slides	46	Pipettes, Pasteur	72	Stirrers, for blood gas capillary tubes	76
Malassez, counting chambers	63	Pipettes, racks	88	Stirrers, overhead, R18, R50, R100 C	159-160
Malassez-Potain, blood diluting pipettes	69	Pipettes, transfer, polyethylene	72	Stirring bars, magnetic	156
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Microscope slides, dispensers	46	Racks, for reaction vessels	178	Test tubes, racks	83
Microscope slides, drying bench	47	Racks, for test tubes	83	Test tubes, stands	83
Microscope slides, HistoBond®	33	Reaction vessels & stands	178	Test tubes, with screw cap	80
Microscope slides, HistoBond®+, +SX	34-35	Reagent bottles	132	Thermometers, chemical	150
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Microscope slides, HistoBond®+S	36	Reservoir bottles for burettes Pellet	101	Thoma, Thoma new, counting chambers	63
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Microscope slides, preparation boards	49	Rings, lead, for weighing down	116	Thread bottles, glass, polyethylene	124, 126
Microscope slides, racks	47	Rods, stirring, glass	148	Timers, various	153
Microscope slides, special size	29	Rubber bellows/bulbs for Pellet burettes	101	Tips, pipette, various	175-176
Microscope slides, standard	26	Rubber bulbs for pipettes	89	Titration apparatus, Pellet	100
Microscope slides, storing boxes	48	Rubber teats for dropping pipettes	71	Titrette, bottle-top burettes	104
Microscope slides, UniMark®	30-31	Rubber teats for Pasteur pipettes	72	Tongs, for beakers	112
Microscope slides, with cavities	27	Rubber tubings for blood diluting pipettes	70	Tongs, for crucibles	138
Microscope slides, with printed rings	43	Safety laboratory bottles	123	Tongs, for flasks	116
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# General terms and conditions

## 1. General, colliding conditions, collateral agreements in writing

- 1.1 These Conditions of Sale are applicable to all our deliveries of goods or services.
- 1.2 In case of discrepancy between the English text and the German text the latter shall prevail.
- 1.3 We repudiate other conditions of the buyer without explicit objection.
- 1.4 All other agreements differing from these conditions become valid only after they were confirmed in writing.
- 1.5 For delivery within 5 working days or order values up to 500 €, we reserve the right to ship and invoice immediately without separate order confirmation.

## 2. Place of performance, court of jurisdiction, governing law chosen

- 2.1 Place of performance for deliveries and payments is our plant in Lauda-Königshofen.
- 2.2 Court of jurisdiction for all litigations is Tauberbischofsheim. However, we also reserve the right to take legal proceedings against the buyer at his place of domicile.
- 2.3 The formation, interpretation and operation of this contract will be subject to German Law, exclusive of the United Nations International Law of the 11th of April 1980 about contracts for international sale of goods.

## 3. Offers

- 3.1 Our offers are without engagement.
- 3.2 We reserve the right to make technical alterations to the offered products.

## 4. Risk, Conditions of delivery

- 4.1 After the goods have left our company the risk of damage passes on to the buyer. In case the goods are to be collected by the buyer at our premises the risks pass on to the buyer after we advised the buyer that the goods are ready for collection.
- 4.2 Deliveries will be effected ex factory. Freight, packing and insurance will be borne by the buyer unless we agreed differently in writing.
- 4.3 Partial deliveries are permissible if they are not expressly forbidden.

## 5. Deliveries of excess and shortage quantities

- 5.1 Deliveries of excess and shortage quantities of 15% (for special production 25%) of the ordered quantity are permissible and have to be accepted by the buyer. The buyer has to pay for the actually delivered quantity.

## 6. Taking back packing material

- 6.1 We take back returned packing material in accordance with the effective rules.
- 6.2 The buyer bears all cost for returning and disposal of packing material.

## 7. Non-acceptance

- 7.1 If the buyer fails to accept the delivery or collect of the goods within 3 days of notice in writing that the goods are ready for delivery the buyer shall be liable for all storage cost and other charges. We are entitled without prejudice to our other rights to resell or otherwise dispose of the goods.
- 7.2 We are entitled to claim damages of at least 25% of the value of the invoice unless we prove a higher damage.

## 8. Orders on call

- 8.1 The buyer has to call off and accept deliveries in approximately equal quantities the latest within 6 months after the date of order confirmation unless otherwise agreed in writing.

## 9. Delivery dates

- 9.1 Delivery times quoted are approximate only and begin after all technical details are cleared and agreed payments are received on our account.

9.2 We have met the date of delivery as soon as the goods have left our premises or the buyer has been notified that goods are ready for dispatch.

9.3 Operating troubles and incidents of force majeure prolong our delivery time accordingly or discharge us from our engagement in case they prevent us from executing an order.

9.4 Our default in delivery shall not exist unless the Customer has provided us with a warning and an indicated reasonable additional period of time has lapsed.

9.5 We assume the liability for damages caused by default only in case of our purpose or gross negligence. Any liability is limited to the net value of the goods.

## 10. Custom-made products

- 10.1 Custom-made products which are produced according to the buyer's instructions, drawings or samples which were approved by the buyer cannot be returned to us. All products packed in boxes with non-standard printing or with other than our logo are considered to be custom-made products.
- 10.2 The buyer shall accept surplus or shortage quantities of 25% of the ordered quantity. The buyer has to pay for the actually delivered quantity.

## 11. Tools

- 11.1 Tools, moulds or other equipment remains our property even if the buyer has paid for their cost wholly or in part.

## 12. Copyright protection

- 12.1 The buyer shall be liable that products manufactured according to its instructions do not infringe any protective rights of any third party.
- 12.2 All damages caused by infringements shall be born by the buyer.

## 13. Minimum order value and minimum quantities

- 13.1 The minimum order value is 200.- Euro.
- 13.2 Delivery is generally made in packing units according to the valid price-list. Normally, this unit is the minimum order quantity also.
- 13.3 We invoice the prices valid on the date of dispatch.

## 14. Terms of payment

- 14.1 Our invoices are due in Euro and without any deduction or charges at our account on the date specified in the invoice. Decisive is the date on which the payments are received on our account.

## 15. Default of payment

- 15.1 If the buyer fails to make any payment on due date, then all his outstanding debits become due immediately and we are entitled to cancel the contract or suspend any further deliveries to the buyer. That applies also for the buyer's checks or drafts which cannot be cashed or in case of the buyer's insolvency.
- 15.2 We have the right to charge the buyer interest on the amount unpaid. Interest will be charged at a rate of 5% per annum above the respective reference interest rate of the European Central Bank. We reserve the right to demand compensation of further cost caused by the buyer in connection with the contract.

## 16. Return of goods

- 16.1 If we agree to the return of faultless goods the buyer has to pay a handling charge of 15% of the value of the goods (minimum 10 €) as compensation for the handling of the returned goods.

## 17. Price changes

- 17.1 We reserve the right to adjust our prices in case of unforeseen increases in cost caused by increased cost of material, energy or duties.

## 18. Reservation of proprietary rights

18.1 (Reservation of proprietary rights) The delivered products shall remain our property and title shall be withheld until all products have been fully and unconditionally paid for.

18.2 (Prolonged reservation) The buyer may neither consume products delivered conditionally nor combine them with other items to which third parties have rights. The buyer may process or resell the products in the normal course of business only if claims arising from the resale have not been assigned, pledged, attached or otherwise encumbered or are liable to be offset against counterclaims. The buyer shall assign to us in advance, any accounts receivable arising from the sale of products delivered conditionally and of newly constituted products to the amount of the invoice for the products delivered conditionally.

18.3 The buyer may have the accounts receivable for products delivered conditionally or under joint ownership as per clauses 18.1 and 18.2 sold or factored only if the Factor is aware of the advance assignment of claims to us and if the Factor transfers payments received directly to us. Pledges or transferances of products or claims assigned to us or to which we retain the title are not allowed. The buyer is required to immediately inform us of any access, confiscation or any other disposition of a third party with regard to products delivered.

18.4 We shall be entitled, at any time after a default of payment has been made by the buyer on any payment by the due date, to require the buyer by written notice to place at our disposal any goods to which title has been reserved by us under these conditions any to pay over to us any proceeds of sale in respect of goods which have been sold by the agent for us. Any action so taken by us shall not prejudice our rights either with respect to the goods concerned or any other goods or with respect to our action for the price.

18.5 In the case of sales in countries where the right of ownership does not have the same effect as in German law, the goods remain property until all contractual obligations of the sale have been fulfilled, and all payments have been made.

18.6 If the right of ownership does not have the same effect as in German law but the reservation of other rights over the goods is permissible, then we have the authority to exercise these rights. The buyer must be prepared to co-operate with any measures we take for the protection of our right of ownership, or the equivalent right to the goods.

## 19. Warranty

19.1 The entire liability of the seller under or in connection with the contract shall not exceed the price of the goods or services.

19.2 The buyer's right to warranty for consumables presupposes that the goods have been used, stored and transported duly. In case the buyer does not comply with these duties about handling the goods any warranty expires.

19.3 The warranty for consumables ends on the sell-by date given or the latest 12 months after the date of the invoice.

19.4 Any claim has to be made in writing detailing exactly the claimed fault.

19.5 No warranty is given that the goods are suitable for any particular or special purpose or for use in connection with any equipment unless expressly confirmed by us in writing.

Lauda-Koenigshofen, Germany  
January 2022



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- We are located in the south of Germany and in the middle of Europe.

