# Assistent-Precision Assistent





### **LEGAL NOTICE**



#### Glaswarenfabrik Karl Hecht GmbH & Co KG

Stettener Straße 22 - 24 97647 Sondheim v. d. Rhön Germany

Phone: +49 (0) 9779 808-0 Telefax: +49 (0) 9779 808-88 Mail: info@hecht-assistent.de

#### Karl Hecht "Assistent" GmbH

Rank 5 8595 Altnau TG Switzerland

Phone: +41 (0) 71 69522-22 Telefax: +41 (0) 71 69522-27 Mail: info@khecht.ch

#### Hecht Assistent

Z.I 5 91430 IGNY / Paris France

Phone: +33 (0) 1 693536-50 Telefax: +33 (0) 1 601907-15 Mail: o.bosi@assistent.eu

#### Karl Hecht Ges.mbH

Fischerweg 1 6122 Fritzens / Tirol Austria

Phone: +43 (0) 5224 52646-50 Telefax: +43 (0) 5224 57679 Mail: office@hecht-assistent.at

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### LIST OF CONTENTS





## PRECISION-GLASS INSTRUMENTS AND DEVICES FOR DOCTOR AND LABORATORY

Glaswarenfabrik Karl Hecht	4
Quality management	5
Plastics resistance charts	7
Technical information	9
Blood test and urinalysis	- 11
Microscopy and staining	51
Liquid handling	80
Volumetric instruments and accessories	96
Laboratory equipment	144
Thermometers	260
Hydrometers	272
Hospital equipment	280
Index	304

### **GLASWARENFABRIK KARL HECHT**





#### Company

For more than 90 years the **Glaswarenfabrik Karl Hecht** produces high-quality precision devices and glass instruments for physician and laboratory. We supply the specialised trade under the well-known trade mark Assistent® through numerous domestic and abroad representatives. Many of them are exclusive distribution partners. Our comprehensive standard programme, e. g. volumetric measuring instruments made of glass and plastics or different liquid handling products, is completed by an extensive range of consumables, disposable articles and electric devices. Due to our long-time experience and our trained and motivated staff's professional competence we are the ideal contact if individual solutions are in demand.

On request we are also producing custom-made products even in small quantities. Since 1995 the quality management system of the Glaswarenfabrik Karl Hecht is certified by TÜV Hessen according to DIN EN ISO 9001. The "Assistent" products are distributed worldwide through the specialist trade (laboratory specialist trade, medical technical specialist trade). Our employees and representatives visit and advise the business partners in Germany, Switzerland, France, Austria and Scandinavia. Thanks to fully developed logistics a fast and reliable delivery is guaranteed. In Germany the supply partly takes place with own vehicles.

#### History

The enterprise was founded in April 1919 in Unterweißbach-Sitzendorf, Thuringia, by Mr. Karl Hecht and is engaged in the production and distribution of high-quality precision devices and glass instruments for physician and laboratory. In 1945 the relocation with a new start in Sondheim/Rhön took place due to the political situation. The branch with production and warehouse in Bernhausen near Stuttgart was founded in the year 1948. The foundation of an own sales office with warehouse in Kreuzlingen, Switzerland in 1962, (move to larger premises in Altnau in 1971),

an own sales office with warehouse in Igny (near Paris), France in 1967 and eventually in 1972 the foundation of an own sales office with warehouse in Fritzens, Austria, took place in order to be more present in Europe.In 1982 the branch in Bernhausen was abandoned due to better infrastructure. Sondheim/Rhön became head office and only production plant. In 2008 the warehouse in France has been closed, but the sales office for French customers remains. Currently about 85 employees work here under the guidance of Mr. Karl-Heinz Hecht and Mr. Thomas Diepholtz.

### QUALITY MANAGEMENT



#### Quality management system

In 1995 our quality management system was initially certified. Currently our company is certified according to **DIN EN ISO 9001:2008**.

We strive to constantly improve our processes. The upcoming recertification will take place according to the coming DIN EN ISO 9001:2015.

#### Authorised economic operator (AEO)

We are authorised economic operator. Therefore we can export our goods in a simplified customs procedure.

#### Volumetric instruments

cover a wide section of the "Assistent" range. Please refer in particular to the article group "volumetric instruments".

Following information may be useful:

The "ASSISTENT-PERMANENT" graduation is subject to regular quality controls i.e. checking of colour-fastness, accuracy etc.

**Blue, white and red graduations** are fused onto the glass surface and are fired-in. Therefore they are acid-resistant and alkali-proof.

**Amber graduation** is fused into the glass surface and thereby provides absolute durability.

The most modern calibrating equipment has steadily improved the **accuracy** of the volumetric instruments.

Following types are available:

#### Standard type

1.5 times of the tolerance of class A/class AS for the total capacity (therefore more accurate than class B)

#### Conformity certified type

#### Regulation until 31 December 2014:

The mark **HE** (on the instrument) confirms that the device is in accordance with the German Calibration Directive valid until 31.12.2014.

#### Regulation as of 1 January 2015:

By the mark **DE-M** (followed by the two last digits of the year in which the mark has been affixed)

we confirm that the volumetric instruments are in accordance with the valid German Ordinance of Measurement and Verification.

#### CE type

These products meet the requirements of the EU directive.

#### **GENERAL INFORMATION**

#### Calibration to contain: marked "IN"

The quantity of liquid contained serves as measuring basis for calibration. We recommend rinsing capillary pipettes "calibrated to tip".

#### Calibration to deliver: marked "EX"

The quantity of liquid delivered serves as measuring basis for calibration.

Don't blow out residual liquid (except "blowout pipettes" which are marked as such).

### Partial delivery (calibrated between zero at top and lowest mark, not to tip)

The above is applicable as well. Adjust meniscus to lowest mark (e.g. enzyme test pipettes, burettes, volumetric pipettes with 2 marks).

### General information for using measuring pipettes and volumetric pipettes and burettes:

Fill burettes 5 mm, measuring and volumetric pipettes 10 mm above the desired mark.

After discharging the liquid to the mark, remove remaining drop from the tip by sliding it off.

Hold pipette in upright position and put tip against inner wall of vessel.

Cut off flow of liquid at approx. 10 mm (pipettes) or 5 mm (burettes) above mark of the desired capacity and let balance discharge on completion of waiting time (as stated in the product description or on the instrument).

The **surface hardened tips** of the pipettes and burettes are calibrated to achieve volumetric accuracy. They must not be damaged.

Measuring pipettes of 5 ml to 25 ml are with constriction in upper part (for cotton plug).

## Assistent

### **QUALITY MANAGEMENT**

#### Repairs

Repairs will be carried out if the defective device is cleaned, sterilised and decontaminated and in case the repair is economic. We reserve the right to ask for a letter of non-objection (certificate of decontamination).

#### Ordinance of Measurement and Verification

The new German Ordinance of Measurement and Verification - valid from 1 January 2015 - requires certification of conformity by the manufacturer for volumetric instruments used for medical, pharmaceutical and commercial measurements (e.g. manufacture and testing of drugs).

The regulatory compliance is certified by the marking DE-M. The conformity guarantees the compliance of the instrument with the German Ordinance of Measurement and Verification and the valid standards.

For details of the procedure please refer to the German Ordinance of Measurement and Verification.

The user is responsible for the application and keeping available of conformity certified instruments.

The certificate of conformity is valid indefinitely unless otherwise specified by the manufacturer.

Conformity certified instruments which have been manufactured before 1 January 2015 can continue to be used.

The conformity of volumetric instruments is certified by "Assistent" directly on the instrument; in case of disposable micropipettes on the inner packing.

For some liquid handling instruments in the directions for use accompanying the instrument.

#### Medical products law

The medical products law regulates the putting into circulation of products falling under the directive 93/42/EEC and 98/79/EC. The products have to bear the CE mark and may be distributed within the EU with CE mark only.

The manufacturer of the products is responsible for correctly putting into circulation. The manufacturer has to be indicated on the product itself or on the packaging.

We emphasise that the medical products law stipulates the setting up of a system which enables to trace back the origin of the medical products and also to report possible incidents in connection with these products.

### PLASTICS RESISTANCE CHARTS



		Heat resistance in °C (continuous)	Sterilisation
EPDM	Ethylene propylene diene M-class rubber	-45 up to +150	A, C, D
ETFE	Ethylene-tetrafluoroethylene copolymer	-100 up to +150	A, C, D
FEP	Fluorinated ethylene propylene	-200 up to +205	A, C, D
MF	Melamine-formaldehyde resin	-35 up to +80	A, C, D
NR	Natural rubber	-40 up to +60	C, D
PBT	Polybutylene terephthalate	-45 up to +180	
PC	Polycarbonate	-135 up to +135	A, B, C, D
PE	Polyethylene	LDPE -50 up to +80 HDPE -100 up to +90	B, C, D B, C, D
PMMA	Polymethyl methacrylate	-40 up to +85	B, C
POM	Polyoxymethylene	-40 up to +110	A, B (limited), C, D
PP	Polypropylene	-10 up to +120	A, B (limited), C, D
PS	Polystyrene	-10 up to +70	B, C
PTFE	Polytetrafluoroethylene	-200 up to +260	A, C, D
PVC	Polyvinylchloride	-20 up to +70	C, D
SAN	Styrene acrylonitrile	-20 up to +85	C, D
UF	Urea-formaldehyde resin	0 up to +80	B, C, D

- A Autoclavable at +121 °C
- **B** β/γ rays 25 kGy
- **C** Chemical (formalin, ethanol)
- **D** Gas (ethylene oxide)



### PLASTICS RESISTANCE CHARTS

	Alcohol	Aldehyde	es Alkali	Ester	Ether	Hydro- carbons	Ketones	Diluted acids	Conc. acids	Oxidising acids
EPDM	<b>√</b>	$\checkmark$		$\checkmark\checkmark$	0	$\checkmark\checkmark$	$\sqrt{\checkmark}$			0
ETFE	$\checkmark\checkmark$	$\sqrt{\checkmark}$	$\checkmark\checkmark$	$\checkmark\checkmark$	$\checkmark\checkmark$	$\checkmark\checkmark$	<b>√</b>	$\sqrt{\checkmark}$	$\checkmark\checkmark$	<b>√</b>
FEP	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\checkmark\checkmark$	$\sqrt{}$			$\sqrt{\checkmark}$
MF	$\checkmark\checkmark$			0	0	0	0			
PBT	$\checkmark\checkmark$	$\sqrt{\checkmark}$	√	✓	$\checkmark\checkmark$	$\checkmark$	$\checkmark$	$\sqrt{\checkmark}$	✓	0
PC	√	0	0	$\checkmark\checkmark$	0	0	0			
PE	√	√	$\checkmark\checkmark$	√	0	0	✓	√	<b>√</b>	0
РОМ	√	✓	√	0	√	√	✓	0	0	0
PP	✓	✓	✓	√	0	√	✓	$\sqrt{\checkmark}$	✓	√
PS	0	0	✓	√	0	0	0			
PTFE	$\checkmark\checkmark$									
PVC	<b>√</b>	0	$\checkmark\checkmark$	<b>√</b>	0	0	0			
SAN	0	0	√	$\checkmark\checkmark$	0	<b>√</b>	0			
UF	$\sqrt{}$	$\sqrt{\checkmark}$	0	$\checkmark\checkmark$	$\checkmark\checkmark$	$\checkmark\checkmark$	$\sqrt{\checkmark}$	√	0	0
√√	Very goo	d resistanc	ee							

Good to limited resistance

### TECHNICAL INFORMATION



#### Glass qualities

Glass type	Linear expansion coefficient α (20°C/68°F; 300°C/572°F) DIN ISO 7991	Transformation temperature T g	Hydrolytic class DIN ISO 719	Acid class DIN 12116	Alkali class DIN ISO 695
AR-Glas® (soda glass)	9.1 · 10 <sup>-6</sup> K <sup>-1</sup>	+525 °C/+977 °F	3	1	2
DURAN® borosilicate glass 3.3	3.3 · 10 <sup>-6</sup> K <sup>-1</sup>	+525 °C/+977 °F	1	1	2
FIOLAX® (borosilicate glass)	4.9 · 10 <sup>-6</sup> K <sup>-1</sup>	+565 °C/+1049 °F	1	1	2

If the product description does not include the glass type, the quality is corresponding to the details given for AR-Glas®.

Registered trademarks AR-Glas®	Schott AG, Germany
Assistent®	Glaswarenfabrik Karl Hecht GmbH & Co KG, Germany
CERAN®	Schott AG, Germany
Combitips®, Combitips® Plus	Eppendorf AG, Germany
D 263®	Schott AG, Germany
DURAN® borosilicate glass 3.3	Schott AG, Germany
Finnpipette®	Thermo Fisher Scientific Oy, Finland
FIOLAX®	Schott AG, Germany
Galinstan®	Geratherm Medical AG, Germany
LABOGAZ®	Application des Gaz sas, France
Lupolen®	Basell nv, the Netherlands
Micro Life®	Roland Birke, Germany
NASARA®	Chang Lim Kim, Republic of Korea
Parafilm®	Bemis Company, Inc., USA
Plexiglas®	Evonik Röhm GmbH, Germany
Polysine®	Gerhard Menzel B.V. & Co. KG, Germany
Sprout®	Heathrow Scientific LLC, USA
SuperFrost®	Gerhard Menzel B.V. & Co. KG, Germany
Viton®	E. I. Dupont de Nemours, USA

All registered trademarks mentioned in the catalogue are registered property of the respective owner.





## **Blood Test and Urinalysis**



#### Inoculation Loops, Hooks and Needles

for blood coagulation tests and microscopical as well as bacteriological purposes (smears)

### Hooks made of nickel-chromium steel wire, stainless without handle

	Wire thickness	Length angled part	Length
40033010	approx. 0.5 mm	approx. 5 mm	approx. 55 mm



#### with glass handle

	Wire thickness	Length angled part	Total length
40034010	approx. 0.5 mm	approx. 5 mm	approx, 200 mm



### Loops made of nickel-chromium steel wire, stainless without handle

	Wire thickness	Loop diameter	Length
40035010	approx. 0.5 mm	approx. 3-4 mm	approx. 50 mm



#### with glass handle

	Wire thickness	Loop diameter	Total length	
40036010	approx. 0.5 mm	approx. 3-4 mm	approx. 200 mm	



### Needles made of nickel-chromium steel wire, stainless without handle

	Wire thickness	Length
40037010	approx. 0.6 mm	approx. 40 mm







### Needles made of nickel-chromium steel wire, stainless, with glass handle

	Wire thickness	Total length	
40038010	approx. 0.6 mm	approx. 200 mm	



#### Needle holders according to Kolle

#### made of aluminium with plastic handle, sterilisable

Diameter approx. 8.5 mm

**40039016** Length approx. 16 cm **40039025** Length approx. 25 cm



#### Inoculation loops with needle, CE

#### Loop capacity 1 µl, white

Disposable, for inoculating nutrient media, made of polystyrene, gamma-sterilised

Packing: 1000 pieces (50 bags of 20 pieces)

**40040010** Length approx. 195 mm



#### Loop capacity 10 µl, blue

Disposable, for inoculating nutrient media, made of polystyrene, gamma-sterilised

Packing: 1000 pieces (50 bags of 20 pieces)

**40041010** Length approx. 200 mm



#### **Blood Lancets**

#### Safety blood lancets Safe Lite II

CE 0459

User safety: Needle is fully shielded before and after use User convenience: Pre-loaded, button-operated design Patient safety: Disposable, sterilised by gamma irradiation Patient comfort: High-quality, ultrasharp tri-bevel needle,

high-speed penetration

Efficiency: Different types of points and penetration depths are

suitable for most capillary blood requirements

Application: Blood glucose and other diagnostic in-vitro tests

**Shelf life:** 5 years Packing unit: 100 pieces

	Specification	Penetration depth	Colour code
40365011	18G blade	approx. 1.8 mm	green
40365012	28G needle	approx. 1.8 mm	violet
40365013	26G needle	approx. 1.8 mm	yellow
40365014	26G needle	approx. 2.4 mm	blue
40365015	21G needle	approx. 1.8 mm	orange
40365016	21G needle	approx. 2.4 mm	pink



#### **Blood lancets**

CE 0297

Disposable, gamma-sterilised, individually sealed, no danger of infection, burr-free, optimal, sharp lancet tip, right insertion depth, good blood discharge, handy lancet shaft, good handling, made of stainless steel.

The asymmetrical shape in connection with a material thickness of only 0.16 mm leads to an one-sided cut and therefore decreases the cracking of the wound.

The sensation of pain is reduced because of the minor skin injury and the healing of the wound happens faster.

Packing: 200 pieces/box

40366010 Material thickness approx. 0.16 mm









### Blood Diluting Pipettes, Enzyme Test Pipettes and Capillary Pipettes

#### **Blood diluting pipettes**

#### according to Thoma, red, with division

for red corpuscles (erythrocytes) 1:101 White back, DIN 12750, fused blue graduation "ASSISTENT-PERMANENT", 11 marks Packing: 10 pieces/box

**40355010** Standard type, for export outside EU only

**40355710** CE type



#### according to Thoma, white, with division

for white corpuscles (leucocytes) 1:11 White back, DIN 12750, fused blue graduation "ASSISTENT-PERMANENT", 11 marks Packing: 10 pieces/box

**40357010** Standard type, for export outside EU only

**40357710** CE type



#### according to Thoma, white, without division

for white corpuscles (leucocytes) 1:11 White back, DIN 12750, fused blue graduation "ASSISTENT-PERMANENT", 3 marks (0.5-1-11) Packing: 10 pieces/box

**40358710** CE type

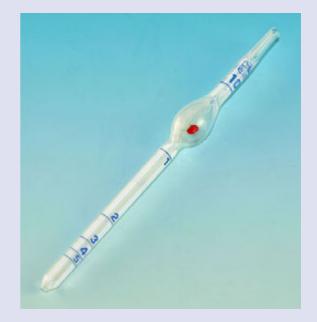


#### **Blood diluting pipettes according to Malassez-Potain**

fused blue graduation "ASSISTENT-PERMANENT" Division at 1, 2, 3, 4 and 5

		for dilutions of	Mixture ratio	Type	for blood cells
4	40359001	1:100, 1:200, 1:300, 1:400, 1:500	1:101	Standard type	red
4	40359002	1:10, 1:20, 1:30, 1:40, 1:50	1:11	Standard type	white
4	40359701	1:100, 1:200, 1:300, 1:400, 1:500	1:101	CE type	red
4	40359702	1:10, 1:20, 1:30, 1:40, 1:50	1:11	CE type	white

**40359001** and **40359002** for export outside EU only



#### according to Thoma, red, without division

for red corpuscles (erythrocytes) 1:101 White back, DIN 12750, fused blue graduation "ASSISTENT-PERMANENT"

**40356710** CE type



#### Enzyme test pipettes

#### **Conformity certified**

Clear glass, with elongated, strong tip, precision type, for partial delivery (not calibrated to tip), calibrated to deliver (Ex), short delivery time, zero point at top, main points, fused amber graduation "ASSISTENT-PERMANENT", length approx. 35 cm, amber. Available with individual certificate on request (against extra charge). Packing: 10 pieces/box

	40545718	40545724	40545730	40545736	40545760
Division	0.01	0.01	0.02	0.05	0.1
Capacity	0.5 ml	1 ml	2 ml	5 ml	10 ml
Colour code	2 x yellow	yellow	black	red	orange
Tolerance	5 µl	7 μΙ	10 μΙ	30 μΙ	50 µl

 ${\bf 40545718}$  in addition to DIN, not conformity certified, does not meet the requirements of the standard







#### Accessories for blood pipettes

#### **Mouthpieces**

	Material	Version
40360001	Polystyrene	red
40360002	Polystyrene	milk-white



#### Mouthpieces with silicone tubing

Length approx. 150 mm

	Material	Version
40361001	Polystyrene	red
40361002	Polystyrene	milk-white

Pipetting by mouth is prohibited according to current regulations. We reject any kind of product liability in case of using mouthpiece with rubber tubing.

We recommend our pipetting aids no. 40558010 and 40558001.



### Capillary pipettes and accessories for prothrombin determination

#### Glass tubes for coagulation

with round bottom, without rim, clear glass

	Diameter	Length
40514020	approx. 12 mm	approx. 55 mm



#### Pipettes, clear glass, with rubber teat

Spare rubber teat: no. 42620010

**40514030** 1 mark each at 0.5 and 1.0 ml



#### Hematocrit tubes according to Wintrobe, CE

for determination of the volume of blood corpuscles, fused white graduation "ASSISTENT-PERMANENT", clear glass, double series in different colours white/red

**40535010** Division 0-105 : 1 mm



#### **Blood Sedimentation Apparatus and Accessories**

#### **Blood sedimentation apparatus**

#### Stainless steel, MACRO

with tilting device for rapid sedimentation Complete with: Blood sedimentation pipettes no. 40380010, protecting caps for pipettes, blood mixing tubes with rubber stoppers no. 40379010, special rubber caps no. 40377015 directions for use in an individual carton.

Pipettes with fused graduation "ASSISTENT-PERMANENT".

40367003with 3 pipettes40367005with 5 pipettes40367010with 10 pipettes



Stable model, with tilting device for rapid sedimentation (3 and 5 tests only). With marking area.

Complete with:

Blood sedimentation pipettes no. 40380010, Senkograd olives according to Dr. Schütz no. 40377014, blood mixing tubes with rubber stoppers no. 40379010 directions for use in an individual carton.

Pipettes with fused graduation "ASSISTENT-PERMANENT"

**40377003** with 3 pipettes **40377005** with 5 pipettes **40377010** with 10 pipettes

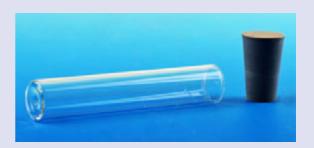
#### **Blood mixing tubes**

Dimensions approx. 60 x 11/12 mm, suitable for all blood sedimentation apparatus

**40379010** with rubber stopper











#### Pipettes and accessoires

#### Special rubber caps

to be put on the pipette tip for filling by an insertion of a syringe needle. The cap can be used 10 to 20 times, closes automatically after insertion. Cleaning by rinsing in water.

**40377015** Dimensions approx. 15 x 0.75 mm



#### Rubber olives "Senkograd"

for filling of pipettes by puncturing with syringe - air bubbles are avoided. No aspiration, no valve. Fine adjustment of zero point by slightly turning the olive.

Safe transport of filled pipette, easy cleaning of rubber olive by rinsing in water, reusable.

40377014 according to Dr. Schütz



#### Blood sedimentation pipettes according to Westergren-Katz, CE

DIN EN ISO 13079, clear glass, fused blue graduation "ASSISTENT-PERMANENT", macro method, division 0-200 mm : 1 mm Packing: 10 pieces/box

Amber graduation is also available.

**40380010** Length 300 mm **40380015** Length 305 mm



#### Blood sedimentation pipettes, micro, CE

Clear glass, fused blue graduation "ASSISTENT-PERMANENT" Amber graduation is also available.

	Division	Packing/box	Length	
40382010	0-200 · 1 mm	10 pieces	300 mm	



### **Blood sedimentation pipettes according to Westergren-Adler, CE** with shoulder

	40385010
Division	0-200 : 1 mm
Distance between tip+lower edge of shoulder	approx. 240 mm
Total length	approx. 300 mm



#### **Brushes for Westergren pipettes**

**40388001** Dimensions approx. 410 x 70 x 4 mm



#### **Suction rubber caps**

for placing on top of the blood sedimentation pipette (macro or micro).

Blood is drawn from the mixing tube up to the zero mark of the pipette by turning the moistened suction rubber cap.

Filled pipette with attached suction rubber cap at top is fit in through crossbar opening of Plexiglas® apparatus onto rubber pad at base and is fixed by tightening screw. When drying pipettes, fix them in same way, but tips should not touch pad.

**40389010** Capacity approx. 2 ml



## Assistent

### **BLOOD TEST AND URINALYSIS**



#### **Blood Test Devices**

#### Hemometers

#### in solid case

with 2 glass colour standards, for hemoglobin examinations according to the Sahli method (hydrochloric acid hematine). Measuring tubes and Sahli pipettes with fused graduation "ASSISTENT-PERMANENT" with directions for use

#### consisting of:

Measuring tube no. 40457010
Brush no. 40458010
Stand no. 40459010
Sahli pipette no. 40460010
Mouthpiece with rubber tubing no. 40361002
Bottle with screw cap no. 41314010
Glass rod no. 40470010
Dropping pipette no. 40471010

Pipetting by mouth is prohibited according to current regulations. We reject any kind of product liability in case of using mouthpiece with rubber tubing.

We recommend our pipetting aids no. 40558010 and 40558001.

**40455010** for export outside EU only



#### in cardboard box

with 2 glass colour standards, for hemoglobin examinations according to the Sahli method (hydrochloric acid hematine). Measuring tubes and Sahli pipettes with fused graduation "ASSISTENT-PERMANENT" with directions for use

#### consisting of:

Measuring tube no. 40457010
Brush no. 40458010
Stand no. 40459010
Sahli pipette no. 40460010
Mouthpiece with rubber tubing no. 40361002
Bottle with screw cap no. 41314010
Glass rod no. 40470010
Dropping pipette no. 40471010

Pipetting by mouth is prohibited according to current regulations. We reject any kind of product liability in case of using mouthpiece with rubber tubing.

We recommend our pipetting aids no. 40558010 and 40558001.

**40456010** for export outside EU only



#### Hemometer measuring tubes with gram scale

g/dl = grams of hemoglobin in 100 ml blood

**40457010** Length approx. 120 mm



#### Hemometer measuring tubes with double scale

Double scale = gram scale g/dl and hemometer units "HE" Length approx. 120 mm

**40457002** 16 g/dl = 100 HE



#### Brushes for hemometer measuring tubes

with cotton tip

**40458010** Dimensions approx. 140 x 60 x 9 mm



#### **Hemometer stand**

with 2 glass colour standards and plate made of frosted glass, without measuring tube

40459010 Hemometer stand



#### Hemometer stirring rods

Clear glass

**40470010** Dimensions approx. 140 x 3 mm Ø



#### Hemometer dropping pipettes

Clear glass

	Wall thickness	Dimensions
40471010	approx. 0.9 mm	approx. 140 x 6 mm Ø







#### Hemoglobin pipettes

#### according to Sahli, 20 µl, conformity certified, CE

White back, fused amber graduation "ASSISTENT-PERMANENT", calibrated to contain = In, (hemometer pipettes)
Available with individual certificate on request (against extra charge).

	Tolerance	Packing/box	Length	
40460710	0.4 μΙ	10 pieces	approx. 12.5 cm	



#### according to Sahli, 20 µl, for export outside EU only

Standard type, white back, fused blue graduation "ASSISTENT-PERMANENT", calibrated to contain = In, (hemometer pipettes)

	Tolerance	Packing/box	Length
40460010	0.4 μΙ	10 pieces	approx. 12.5 cm



#### Blood counting pad

#### according to Schilling

Useful form for daily practice in the laboratory

**40467010** 50 blank forms



#### **Blood capillaries**

for determination of the coagulation time, for blood typing and similar purposes, cut ends Packing: 100 pieces/plastic tube

**40560010** Length approx. 90 mm



#### Nissl tubes

for the volumetric determination of fibrin, fused blue graduation "ASSISTENT-PERMANENT", capacity approx. 3 ml, with directions for use - "heat fibrin according to Schulz"

**41145010** Packing: 3 pieces/box



#### Pipetting device

Simple to clean, can be used again Sterilisable up to +134 °C/+273.2 °F

**40559010** with interchangeable receivers for microbiological



#### Fermentation saccharometer

#### according to Dr. Einhorn with measuring tube

Fused graduation "ASSISTENT-PERMANENT" in ml and % for gas and sugar Packing: Each in a box

41370010 Graduation white



#### **Measuring tube**

for above fermentation saccharometer Fused amber graduation "ASSISTENT-PERMANENT"

**41370020** Mark at 10 ml







#### **Tubes for urinalysis**

Clear glass, U-form, with stem and circular base **41375010** Height approx. 135 mm



#### **Micropipettes and Capillaries**

#### Volume capillaries, disposable

calibrated to contain from end to end, conformity certified, CE, with capillary holder no. 40553001 (short tube with rubber teat) 250 pieces per pack - 4 packs in a carton Accuracy  $\leq$   $\pm$  0.5 %

Filling and discharging can be effected with or without capillary holder.

Heparinised volume capillaries are also available (all sizes) on order of adequate quantities.

	Capacity	Precision
40551003	1 μΙ	≤ 1.5 %
40551006	2 μΙ	≤ 1 %
40551012	5 μΙ	≤ 1 %
40551015	10 μΙ	≤1%
40551018	20 μΙ	≤ 1 %
40551021	25 μΙ	≤1%
40551024	50 μl	≤ 1 %
40551027	100 μΙ	≤ 2 %

40551003 and 40551006 not conformity certified



#### **Capillary holder**

with rubber teat and stopper

**40553001** Length of glass tube approx. 35 mm



#### Disposable capillary pipettes according to Prof. Delbrück, CE

conformity certified, calibrated to contain = In from end to end, heparinised

Filled pipette is being emptied in reaction tube by shaking. Length approx. 30.5 mm, precision  $\leq$  1 %, accuracy  $\leq$   $\pm$  0.5 % Packing: Tube of 100 pieces

**40554020** Capacity 20 μl **40554050** Capacity 50 μl



#### Micropipettes with ring mark

#### Disposable, CE

Calibrated to contain = In, conformity certified Packing: 250 pieces/pack - 4 packs/carton (except 200 µl: 200 pieces/pack)

Accuracy: Difference between mean and nominal value in % Precision: Percentage of standard deviation in relation to average Tolerance: Difference between upper and lower limit of admissible deviation

The tolerance is guaranteed by statistical quality control.

Pipetting by mouth is prohibited according to current regulations. We reject any kind of product liability in case of using mouthpiece with rubber tubing.

We recommend our pipetting aids no. 40558010 and 40558001.

	Capacity	Colour code	Precision	Accuracy
40555003	1-2-3-4-5 µl	white	≤ 0.6 %	≤±0.3%
40555006	10 μΙ	orange	≤ 0.5 %	≤ ± 0.25 %
40555009	20 μΙ	black	≤ 0.5 %	≤ ± 0.25 %
40555012	20 + 40 µl	2 x red	≤ 0.5 %	≤ ± 0.25 %
40555015	25 µl	2 x white	≤ 0.5 %	≤ ± 0.25 %
40555018	40 µl	2 x red	≤ 0.5 %	≤ ± 0.25 %
40555021	50 μl	green	≤ 0.5 %	≤ ± 0.25 %
40555024	50 + 100 μl	blue	≤ 0.5 %	≤ ± 0.25 %
40555027	100 μΙ	blue	≤ 0.5 %	≤ ± 0.25 %
40555030	200 μΙ	red	≤ 0.5 %	≤ ± 0.25 %

40555003 Mark at 5  $\mu$ l is conformity certified



#### Pipetting aids

#### Spare adapter made of PVC

Transparent, resistant to steam sterilisation at +121 °C/+249.8 °F **40557001** for article no. 40558010







#### Spare adapter made of PVC, with silicone tubing

Adapter and tubing resistant to steam sterilisation at +121 °C (+249.8 °F), 2 bar, for article no. 40557010, 3 pieces/pack **40557002** Length approx. 500 mm



#### Spare suction bellows made of silicone

Autoclavable at +121 °C/+249.8 °F, 3 pieces/pack **40558002** for Micro-Pipex no. 40558001



#### Pipetting aid "micro-classic"

for pipetting with disposable micropipettes and other small pipettes up to approx. 1 ml, autoclavable at +121 °C/+248.8 °F (2 bar) Most suitable for working with a microscope because of the advantageous, right-angled position of the pipette. Very easy to handle.

The pipetting aid may not be used for capillaries calibrated to contain end to end!

**40558010** with adapter and tubing



#### **Pipetting aid Micro-Pipex**

Cone Ø max. 5 mm, autoclavable at +121 °C/+249.8 °F Contaminated disposable micropipettes up to 50  $\mu$ l can be dropped without touching because of the releasing device, which is integrated in the appliance.

The pipetting aid may not be used for capillaries calibrated to contain end to end!

40558001

for pipetting liquids by using disposable micropipettes with a ring mark as well as many pipettes up to approx. 1 ml



#### Hematocrit capillaries and sealing material, CE

#### Micro hematocrit capillaries, heparinised

Disposable, fire-polished ends; inside diameter equally over the total length (conicity 0.02 mm).

Ungraduated for a volume of 40  $\mu$ l, for use in hematocrit centrifuges. Manufactured according to international specifications, with colour code. Heparinised over the entire internal surface, with sodium heparin

with a red colour code at one end

Packing: 100 pieces in a tube, 10 tubes in a box

	Inside Ø	Outside Ø	Length
40563010	1.1 - 1.2 mm	approx. 1.5 mm	75 mm ± 1 mm



Disposable, fire-polished ends; inside diameter equally over the total length (conicity 0.02 mm).

Ungraduated for a volume of 40  $\mu$ l, for use in hematocrit centrifuges. Manufactured according to international specifications, with colour code.

with blue colour code at one end

Packing: 100 pieces in a tube, 10 tubes in a box

	Inside Ø	Outside Ø	Length
40564010	1.1 - 1.2 mm	approx. 1.5 mm	75 mm ± 1 mm

#### Micro hematocrit capillaries, heparinised, with mark at 60 mm

with sodium heparin, fire-polished end Filling of the tubes up to the mark by capillary effect. Can be closed with sealing material no. 40566010 Packing: 100 pieces in a tube, 10 tubes in a box

	Inside Ø	Outside Ø	Length
40565010	0.55 mm ± 0.05 mm	1.55 mm ± 0.05 mm	75 mm ± 0.5 mm

#### Hematocrit sealing material

Non-drying, for sealing micro hematocrit capillaries Each plate has numbered positions on both sides for placing capillaries. This sealing material prevents the draining of the blood sample.

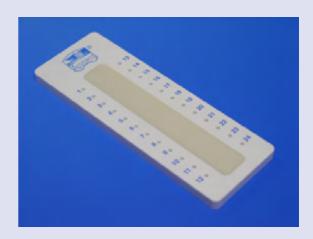
One plate is enough for sealing several hundred capillaries.

40566010 in plastic plates















#### Counters, manual

#### Four figures, with button for manual counting

The casing made of chrome-plated steel lies comfortably in the hand. The manual counter is being held with the forefinger at the finger bow. The counter is turned back to zero by using the lateral reset button.

**40344010** Counting 0 - 9999



#### Blood cell counters, CE

#### for manual differential counting

Electronic counters and storage devices for the microscopical analysis of differential blood count.

The microscopical image can be monitored continuously, and the resulting figures can be recorded "blindly". Each instrument comes with directions for use.

Counting limit max. 1000

	Memory options	Version
40345010	8	AC-8
40345012	12	AC-12
40345015	15	AC-15
40345612	12	AC-12 with rechargeable battery
40345615	15	AC-15 PC

**40345015** Buttons with LED display, four defined programmes and one free counting programme

40345612 Off-the-grid

40345615 for connecting with a PC





ISO 7712, precise, uniform shape, disposable, with constriction in the upper part for cotton plug Capillary tip inside Ø of approx. 1 mm, body approx. 90 x 7 mm Ø 250 pieces/box - 1000 pieces/carton

	Total length	Version	
40567001	approx. 150 mm	short form	
40567002	approx. 230 mm	long form	
40567091	approx. 150 mm	short form, with cotton plug	
40567092	approx. 230 mm	long form, with cotton plug	





#### Pasteur pipettes made of glass

with attached, long tip

	Packing/box	Total length	Body
40568010	25 pieces (in bag)	approx. 155 mm	approx. 95 x 7-8 mm Ø



#### made of polyethylene

500 pieces/box - 3000 pieces/carton **40569001** Capacity micro, 0.5 ml

**40569002** Capacity 1 ml **40569003** Capacity 3 ml



#### **Precision Cuvettes**

#### Disposable, made of polystyrene, macro

Optically excellent transparency. Deepened windows as a protection against scratches. Arrow marking of the transmission direction

	40705010
Light path	10 mm
Application range	from 340 nm on
Windows	approx. 10 x 35 mm
Dimensions	approx. 12.5 x 12.5 x 45 mm
Capacity	min. 2.5 ml, max. 4.5 ml
Standard deviation at 360 nm	± 0.005 extinction units



#### Disposable, made of polystyrene, semi-micro

Optically excellent transparency. Deepened windows as a protection against scratches. Arrow marking of the transmission direction

	40706010
Light path	10 mm
Application range	from 340 nm on
Windows	approx. 5 x 23 mm
Dimensions	approx. 12.5 x 12.5 x 45 mm
Capacity	min. 1.5 ml, max. 3.0 ml
Standard deviation at 360 nm	± 0.005 extinction units









#### Precision cuvettes, optical glass, height outside 45 mm, width 12.5 mm

Two opposite sides and bottom optically processed, the other two sides frosted on the outside, without cover, common type for serial

40710010	Light path 10 ± 0.1 mm
40710020	Light path 20 ± 0.1 mm
40710040	Light path 40 ± 0.2 mm
40710050	Light path 50 ± 0.2 mm



#### Precision cuvettes, optical glass, height outside 40 mm, width 24 mm

Two opposite sides and bottom optically processed, the other two sides frosted on the outside, without cover

40712005	Light path 5 ± 0.1 mm
40712010	Light path 10 ± 0.1 mm
40712020	Light path 20 ± 0.1 mm
40712040	Light path 40 ± 0.2 mm
40712050	Light path 50 ± 0.2 mm



### Precision cuvettes, optical glass, height outside 50 mm,

Two opposite sides and bottom optically processed, the other two sides frosted on the outside, without cover

40713009 Light path  $10 \pm 0.1 \text{ mm}$ 



#### Precision cuvettes with grooved cover made of PTFE

Light path indicated on each cuvette. Height outside 45 mm, width 12.5 mm

Light path $1 \pm 0.01$ mm, special optical glass
Light path 2 ± 0.01 mm, special optical glass
Light path $5 \pm 0.01$ mm, special optical glass
Light path 10 ± 0.01 mm, special optical glass
Light path 20 ± 0.02 mm, special optical glass
Light path 40 ± 0.02 mm, special optical glass
Light path $50 \pm 0.02$ mm, special optical glass
Light path $1 \pm 0.01$ mm, quartz glass
Light path 2 ± 0.01 mm, quartz glass
Light path 5 ± 0.01 mm, quartz glass
Light path 10 $\pm$ 0.01 mm, quartz glass
Light path 20 ± 0.02 mm, quartz glass
Light path 40 ± 0.02 mm, quartz glass
Light path 50 $\pm$ 0.02 mm, quartz glass



All four sides and bottom optically processed.

Light path indicated on each cuvette.

Height outside 45 mm, width 12.5 mm

40717010Light path  $10 \pm 0.01$  mm, special optical glass40717020Light path  $20 \pm 0.01$  mm, special optical glass40717610Light path  $10 \pm 0.01$  mm, quartz glass40717620Light path  $20 \pm 0.01$  mm, quartz glass



Two opposite sides and bottom optically processed, the other two sides frosted on the outside, funnel-shaped top.

Light path indicated on each cuvette.

Width of inner gap 4 mm, height outside 45 mm, width 12.5 mm

40720005	Light path 5 ± 0.01 mm, special optical glass
40720010	Light path 10 ± 0.01 mm, special optical glass
40720020	Light path 20 ± 0.02 mm, special optical glass
40720040	Light path 40 ± 0.02 mm, special optical glass
40720050	Light path 50 ± 0.02 mm, special optical glass
40720605	Light path 5 ± 0.01 mm, quartz glass
40720610	Light path 10 ± 0.01 mm, quartz glass
40720620	Light path 20 ± 0.02 mm, quartz glass
40720640	Light path 40 ± 0.02 mm, quartz glass
40720650	Light path 50 ± 0.02 mm, quartz glass

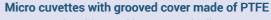












Two opposite sides and bottom optically processed, the other two sides frosted on the outside, funnel-shaped top.

Light path indicated on each cuvette.

Light path 10 ± 0.01 mm, width of inner gap 2 mm,

height outside 25 mm, width 12.5 mm

Width of inner gap also available with 4 mm on request.

**40722010** made of special optical glass

**40722610** made of quartz glass



#### Cover made of PTFE, grooved

When ordering, please indicate catalogue number and light path of the cuvette!

**40729010** for light path 10 mm



#### Stirring spatula made of plastic, with crossbar

Crossbar improves mixing of samples, especially in rectangular cuvettes

	Length	Crossbar
40734010	approx. 120 mm	approx. 9 mm



#### **Urinometers**

#### according to Vogel

#### without thermometer

1.000 - 1.060 g/cm<sup>3</sup>

Division 0.001 g/cm³, reference temperature +20 °C/+68 °F, length

approx. 15 cm

with steel metal ballast

**40240010** for export outside EU only **40240710** CE type, tolerance ± 0.001 g/cm<sup>3</sup>



#### Urinometers according to Vogel with thermometer

1.000 - 1.060 g/cm<sup>3</sup>

Division 0.001 g/cm³, reference temperature +20 °C/+68 °F, length

approx. 17 cm

with steel metal ballast

**40240720** CE type, tolerance ± 0.001 g/cm<sup>3</sup>



#### Glass jar with base and spout

for urinometers

**40241010** Dimensions approx. 175 x 28 mm



#### Urinometer, large model with glass jar

1.000 - 1.060 g/cm<sup>3</sup>

Urinometer no. 40240010 or no. 40240710 with jar no. 40241010 in a box

**40242010** for export outside EU only

**40242710** CE type



#### Urinometer, small model

#### according to Squibb

 $1.000\text{-}1.060~g/cm^{3},$  with steel metal ballast, Division 0.002 g/cm³, reference temperature +20 °C/+68 °F, length approx. 9 cm

**40245010** for export outside EU only **40245710** CE type, tolerance ± 0.002 g/cm<sup>3</sup>



#### Glass jar with base and spout

for urinometers no. 40245010 and 40245710 **40247010** Dimensions approx. 110 x 20 mm







#### Urinometer with glass jar

 $1.000 - 1.060 \, \text{g/cm}^3$ , urinometer no. 40245010 or no. 40245710 with glass jar no. 40247010 in a box

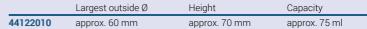
**40248010** for export outside EU only

**40248710** CE type



#### **Urine jars**

made of glass, curved shape, with spout, without handle, without scale





#### Urine specimen cups

Clear glass, with frosted label for inscription, with spout, without handle, conical, stackable

**44125010** Capacity approx. 150 ml





#### Water Bath with Thermostat

#### Thermostatic water bath, CE

#### **Digital**

Complete with Plexiglas® tank no. 43194001 (without accessories) All immersing, bare metal parts are made of stainless steel. Fully electronic wear-free temperature control with digital display. Cooling coil and connection for external use are available as spare parts.

#### Technical data

Temperature display / resolution: LED / 0.1 K Temperature setting / resolution: digital / 0.1 K

Temperature control: adjustable nominal value limit and alarm circuit Operating temperature range:

+5 °C / +41 °F above room temperature up to +100 °C / +212 °F Operating temperature range with external cooling:

 $-30 \,^{\circ}\text{C}$  /  $-22 \,^{\circ}\text{F}$  up to  $+100 \,^{\circ}\text{C}$  /  $+212 \,^{\circ}\text{F}$  Pump capacity: max. 5 l/min.

	43180010
Heating	1000 watts
Dimensions	approx. 120 x 130 x 330 mm (w x d x h)
Voltage	230 volts
Safety class	3 (DIN 12876)
Weight	3 kg
Pressure	max. 0.12 bar
Temperature constancy	± 0.1 K



#### Accessories for thermostatic water bath

#### ThermoClean DC - Stabilising solution for water baths

Plastic bottle containing 100 ml concentrate for 100 l water

#### **Properties**

- suitable for all kinds of thermostats and circulation pumps made of metal, glass or any plastics
- can also be used for closed temperature control systems, e.g. pH blood gas analyser
- prevents algae and bacterial growth, no odour formation
- no obstructions in tubings and temperature control system
- frequent cleaning of the tank is unnecessary
- solution is without aggressive phosphates and oxidising or reducing substances
- only minor pH value change of the water
- solvent-free
- prevents foam formation, even with strong circulation

#### Application

Take 1 ml of the solution for 1 l of distilled water (Clean the tank before use!)

**43170001** Concentrate methylene blue

43170003 Concentrate clear







#### Flow monitors made of plastic (SAN)

Transparent, for control of the water flow **43178010** for tubing of 6-11 mm inside Ø



#### Plexiglas® tanks with inclined bottom

for better circulation

**43187003** Dimensions approx. 43 x 13 x 15 cm



#### Water bath racks made of Plexiglas®

for hanging into the tank

	Holes	for	Ø
43188002	16	16 small bottles	approx. 23 mm
43188003	20	20 centrifuge or test tubes	approx. 18 mm
43188004	24	24 reaction tubes	approx. 11 mm
43188006	24	24 coagulometer tubes up to approx. 12 mm Ø	approx. 13 mm



#### Plexiglas® tank without inclined bottom

for thermostatic water bath no. 43180010

**43194001** Dimensions approx. 34.5 x 14 x 15.5 cm



#### Water bath racks made of stainless steel

Circular; fits into a beaker, low form, 1000 ml for 9 tubes up to approx. 18 mm  $\emptyset$ 

**44263010** Diameter approx. 10 cm



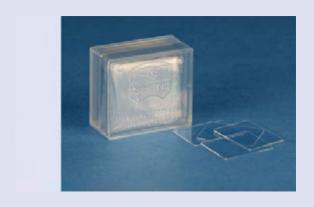
## **Counting Chambers and Hemocytometers**

#### Cover glasses for hemocytometers, CE

#### **Different sizes**

Packing: 10 pieces/box, thickness 0.4 mm

4041271030 x 30 mm4041571020 x 26 mm4041671022 x 22 mm4041771024 x 24 mm



### Hemocytometers

without CE marking, for export outside EU only complete in plastic case

consisting of:

1 erythrocyte pipette

1 leucocyte pipette

2 rubber tubings with mouthpieces

1 counting chamber

2 optically plane cover glasses

directions for use

**40420002** Hemocytometers, Thoma double ruling

40421002 Hemocytometers, Neubauer double ruling

**40422002** Hemocytometers, improved Neubauer double ruling

**40422012** Hemocytometers, improved Neubauer double ruling,

bright-line

40429002 Hemocytometers, Fuchs-Rosenthal double ruling

Other types are available on request.

Pipetting by mouth is prohibited according to current regulations. We reject any kind of product liability in case of using mouthpiece with rubber tubing.

We recommend our pipetting aid no. 40558010 and 40558001.



# Assistent Assistent

# **BLOOD TEST AND URINALYSIS**

#### **Counting chambers**

#### made of special optical glass

Assistent® counting chambers are precision measuring instruments. They are used to count the number of particles per volume unit of a liquid.

The counting chambers are supplied with CE mark as per IVD directive 98/79/EC. Counting chambers without CE mark are available for use outside the European Union only.

The size of the counting chambers is approx. 76 x 32 mm. The lateral fields for inscription are separated by grooves from the three ground and polished supports.

The central support is deeper than the outer ones and is referred to as "depth of chamber".

The depth (tolerance  $\pm\,2$  %) depends on the ruling - see the following descriptions.

The rulings are engraved into the central support. Counting chambers with double ruling are common. The central support of those chambers is divided by an additional groove.

#### Counting chambers bright-line

The central support is coated by a rhodium layer wherein the rulings are engraved. The coating provides a sharp contrast and the lines appear brightly illuminated.

#### Special production

Other depths are available on request.

#### **Packing**

Counting chamber, with 2 optically plane cover glasses, in a transparent plastic box

#### **Counting chambers Thoma**

for counting thrombocytes and erythrocytes for export outside EU only, chamber depth 0.1 mm

#### Ruling

Large central square: 1 mm<sup>2</sup>

consisting of

groups of 16 squares  $0.2 \times 0.2 \text{ mm}$  - surface area  $0.04 \text{ mm}^2$  (result from the intermediate line at every 1st, 6th, 11th and 16th square) divided into 400 small squares  $0.05 \times 0.05 \text{ mm}$  - surface area  $0.0025 \text{ mm}^2$ 

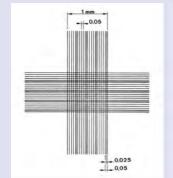
40440001 Single ruling, without clamps, without CE mark
 40440002 Double ruling, without clamps, without CE mark
 40440003 Double ruling, without clamps, without CE mark

#### **Counting chambers Thoma**

Chamber depth 0.1 mm, CE

40440701 Single ruling, without clamps40440702 Double ruling, without clamps40440703 Double ruling, with clamps

**40440712** Double ruling, bright-line, without clamps





#### **Counting chambers Neubauer**

for counting erythrocytes and leucocytes for export outside EU only, chamber depth 0.1 mm

#### Ruling

9 large squares of 1 mm<sup>2</sup> each = 9.0 mm<sup>2</sup>.

Ruling like Thoma - additionally 4 squares in the corners each divided into 16 equal squares

40441001 Single ruling, without clamps, without CE mark
40441002 Double ruling, without clamps, without CE mark
40441003 Double ruling, with clamps, without CE mark

**40441012** Double ruling, bright-line, without clamps, without CE

mark



Chamber depth 0.1 mm, CE

40441701 Single ruling, without clamps40441702 Double ruling, without clamps40441703 Double ruling, with clamps

**40441712** Double ruling, bright-line, without clamps



for counting erythrocytes and leucocytes for export outside EU only, chamber depth 0.1 mm

Ruling

9 large squares of 1 mm<sup>2</sup> = 9 mm<sup>2</sup>

The central square of 1 mm $^2$  contains 25 groups of squares divided into 16 mini squares of 0.05 x 0.05 mm each.

Triple marginal lines **at all sides** of the square groups distinguish this ruling from Neubauer. The middle line is decisive for the counting.

**40442002** Double ruling, without clamps, without CE mark **40442012** Double ruling, bright-line, without clamps, without CE

mark

#### **Counting chambers improved Neubauer**

Chamber depth 0.1 mm, CE

**40442702** Double ruling, without clamps

**40442712** Double ruling, bright-line, without clamps

#### Counting chambers Bürker

for counting thrombocytes or erythrocytes for export outside EU only, chamber depth 0.1 mm

Ruling

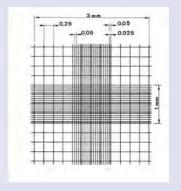
9 large squares - surface area 1 mm² each = 9 mm²

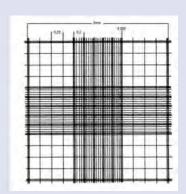
Each large square is divided into 16 groups of squares 0.2 x 0.2 mm.

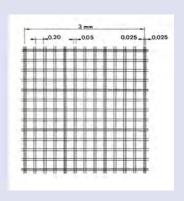
Additionally there are small squares of an surface area of 0.0025 mm<sup>2</sup> each.

40443001 Single ruling, without clamps, without CE mark
40443002 Double ruling, without clamps, without CE mark
40443003 Double ruling, with clamps, without CE mark
40443013 Double ruling, bright-line, with clamps, without CE

mark











Chamber depth 0.1 mm, CE

40443701 Single ruling, without clamps40443702 Double ruling, without clamps40443703 Double ruling, with clamps

**40443712** Double ruling, bright-line, without clamps Double ruling, bright-line, with clamps

#### **Counting chambers Türk**

for export outside EU only, chamber depth 0.1 mm

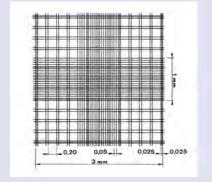
Ruling

Total surface area: 9 mm<sup>2</sup>

The overall size and the central square correspond to the Neubauer ruling.

The groups of squares in the corners are divided by double lines.

**40444002** Double ruling, without clamps, without CE mark



#### **Counting chambers Türk**

Chamber depth 0.1 mm, CE

**40444702** Double ruling, without clamps

### **Counting chambers Bürker-Türk**

for export outside EU only, chamber depth 0.1 mm

Ruling

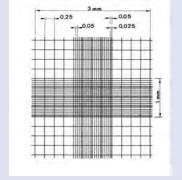
combination of Buerker and Thoma

9 large squares of 1 mm² each

consisting of 16 groups of squares of 0.2 x 0.2 mm

Large central square: 16 small squares of 0.05 x 0.05 mm - surface area of 0,0025 mm $^{2}$  each

**40445002** Double ruling, without clamps, without CE mark **40445003** Double ruling, with clamps, without CE mark



#### **Counting chambers Bürker-Türk**

Chamber depth 0.1 mm, CE

**40445702** Double ruling, without clamps **40445703** Double ruling, with clamps



#### **Counting chambers Nageotte**

for the examination of lumbar fluid for export outside EU only, chamber depth 0.5 mm

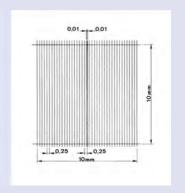
Ruling

Total area: 100 mm<sup>2</sup>

divided into 40 rectangles of 10 x 0.25 mm each = 2.5 mm<sup>2</sup>

The middle of the ruling is marked by a double line.

**40446001** Single ruling, without clamps, without CE mark **40446002** Double ruling, without clamps, without CE mark



#### **Counting chambers Nageotte**

Chamber depth 0.5 mm, CE

**40446701** Single ruling, without clamps **40446702** Double ruling, without clamps

#### **Counting chambers Thoma new**

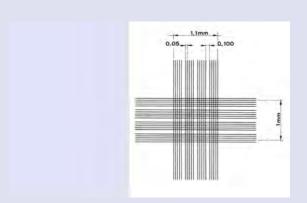
for export outside EU only, chamber depth 0.1 mm

Ruling

Total surface area: 1.21 mm<sup>2</sup>

divided into 16 groups of squares like Thoma ruling, but without marginal squares, where the erythrocytes easily agglomerate at the triple lines.

**40447002** Double ruling, without clamps, without CE mark



### **Counting chambers Thoma new**

Chamber depth 0.1 mm, CE

40447701 Single ruling, without clamps40447702 Double ruling, without clamps40447703 Double ruling, with clamps

### **Counting chambers Fuchs-Rosenthal**

for counting cells in cerebrospinal fluid for export outside EU only, chamber depth 0.2 mm

Rulina

Total surface area: 16 mm<sup>2</sup> 16 squares of 1 mm<sup>2</sup> each

each consisting of 16 mini squares of 0.25 x 0.25 mm -

surface area 0.0625 mm² each

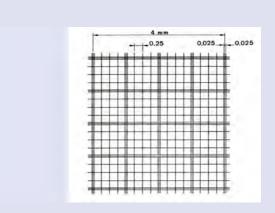
40449001 Single ruling, without clamps, without CE mark
40449002 Double ruling, without clamps, without CE mark
40449003 Double ruling, with clamps, without CE mark

**40449012** Double ruling, bright-line, without clamps, without CE

mark

**40449013** Double ruling, bright-line, with clamps, without CE

mark





#### **Counting chambers Fuchs-Rosenthal**

Chamber depth 0.2 mm, CE

40449701 Single ruling, without clamps40449702 Double ruling, without clamps40449703 Double ruling, with clamps

**40449712** Double ruling, bright-line, without clamps **40449713** Double ruling, bright-line, with clamps

#### **Counting chambers Jessen**

for counting cells in cerebrospinal fluid for export outside EU only, chamber depth 0.4 mm

#### Ruling

Total surface area: 25 mm², volume: 10 mm³ 25 groups of squares of 1 mm² each consisting of 16 small squares 0.25 x 0.25 mm - surface area 0.0625 mm² each

**40450002** Double ruling, without clamps, without CE mark

### **Counting chambers Jessen**

Chamber depth 0.4 mm, CE

**40450702** Double ruling, without clamps

#### Counting chambers Schilling-Kreuznetz (cross-shaped ruling)

for export outside EU only, chamber depth 0.1 mm

#### Ruling

Total surface area: 9.0 mm<sup>2</sup> Central square: 9 groups of squares with mini squares of 0.0025 mm<sup>2</sup> each The corner squares are divided into 25 small squares

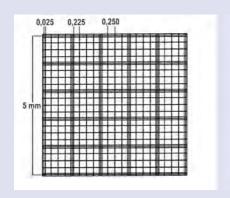
of 0.04 mm<sup>2</sup> each

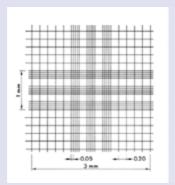
**40452002** Double ruling, without clamps, without CE mark

#### **Counting chambers Schilling-Kreuznetz**

Chamber depth 0.1 mm, CE

**40452702** Double ruling, without clamps







#### **Counting chambers Malassez**

for export outside EU only, chamber depth 0.2 mm

#### Ruling

Total surface area: 5.0 mm² (2 x 2.5 mm) 100 rectangles 0.20 x 0.25 mm

consisting of

25 fields divided into 20 squares of 0.05 x 0.05 mm -

surface area 0.0025 mm² each

25 fields divided into 5 rectangles of 0.20 x 0.05 mm -

surface area 0.01 mm² each

25 fields divided into 4 rectangles of 0.25 x 0.05 mm -

surface area 0.0125 mm² each

25 fields of 0.20 x 0.25 mm - surface area 0.05 mm  $^{\!2}$  each - without

division

**40453001** Single ruling, without clamps, without CE mark **40453002** Double ruling, without clamps, without CE mark



Chamber depth 0.2 mm, CE

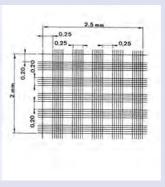
**40453701** Single ruling, without clamps **40453702** Double ruling, without clamps

#### **Counting chambers according to McMaster**

for veterinary medicine (e.g. helminth eggs counting) with 2 counting areas, cover glass with 2 counting grids glued on 3 supports

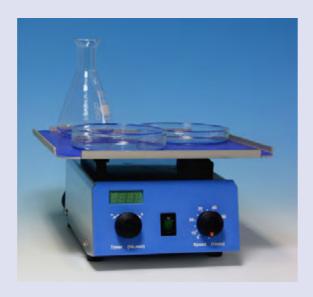
	Counting area	Dimensions
40454010	10 x 10 x 0.5 mm	approx. 76 x 32 mm











**Shakers and Mixers** 

### **Rocking shakers**

#### Small model, CE

with variable number of revolutions and digital display.

The electronic feedback control of the device ensures a smooth start as well as a constant and accurate speed. The rocking platform is designed to rock along the middle axis.

A provided, anti-slip mat holds small containers. Optionally available is a removable, washable plastic plate.

The rocking shaker comes with an illuminated "ON/OFF" switch and a speed control of the shaking frequency. The timer can be set up to max. 99 hours. The device turns off after the expiration of the set time

Motor: Brushless AC motor with electronic feedback speed control

	40348022
Max. charge	1 kg
Voltage	110 or 230 volts (see rating plate)
Weight	2.2 kg
Size of platform	210 x 210 mm
Total dimensions	213 x 213 x 110 mm
Tilt angle	adjustable to 5° or 7° (7° preset)
Shaking rate	steplessly adjustable from 5-50 rpm
Shaking motion	teetering



#### Large model, CE

with variable number of revolutions

The tilt angle can be adjusted to 3°, 6°, 9° or 12° (adjusted to 12° on delivery). The electronic feedback control of the device ensures a smooth start as well as a constant and accurate speed.

The rocking platform is designed to rock along the middle axis. The provided, rubber-like and anti-slip mat holds Petri dishes, microplates and other small containers.

The rocking shaker comes with an illuminated "ON/OFF" switch and a speed control of the shaking frequency.

Motor: Brushless DC motor with electronic feedback speed control

	40348014
Voltage	230 volts, 50 hertz, 15 watts
Size of platform	420 x 350 mm
Total dimensions	520 x 350 x 100 mm
Cable	approx. 1.5 m with plug
Weight	approx. 3.8 kg
Shaking rate	steplessly adjustable from 10-100 rpm



#### Shaker with platform, CE

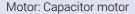
The revolutions are being measured opto-electronically and readjusted electronically.

The supporting device for the shaking platform attachment is driven by an eccentric mechanism of 3 mm lifting capacity (from edge to edge). The rotation of the eccentric driveshaft is transmitted from powerful ball bearings to the supporting device.

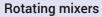
Four tubular connecting pieces prevent the supporting device from turning. In contrast to the traditional single-point suspension, these silicone connecting pieces symmetrically adapt themselves to the centre of rotation. The result is an uniform, horizontal and circular rotation at every point of the supporting device.

A toggle switch permits different functions: "0" = "OFF", "I" = "Continuous operation" and "II" = "Timer". The timer can be set from 1 to 60 minutes.

The shaking platform is equipped with an anti-slip rubbery mat, which holds small containers securely in place. The mat can be easily cleaned with water and detergent.



	40348018
Voltage	230 volts, 50 hertz, 40 watts
Cable	approx. 1.5 m with plug
Total dimensions	approx. 150 x 160 x 103 mm (l x w x h)
Size of platform	approx. 200 x 400 mm
Total weight	approx. 4.7 kg (device 4060 g, platform 650 g)
Motor	Capacitor motor
Shaking rate	steplessly adjustable from 100-1100 rpm



#### with removable rolls, CE

Tumbling rotating mixer with five synchronous, diagonally eccentric and removable PVC rolls

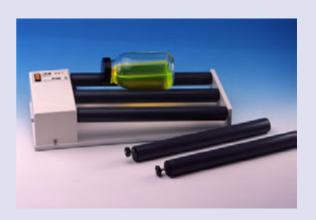
The synchronous rolls are designed as a consistently rotating surface for sample bottles etc. These bottles are rotating around its long axis and rocking along its contact surface.

In case of using large containers, the rolls can be removed. Rolls are optionally available without tumbling motion (but only rotating). This device is especially designed for the constant mixing of samples (e.g. whole blood) for haematological determination and for the gentle mixing of other cell suspensions. It also prevents sedimentation or dispersion of other samples such as colours, paints, oils and cosmetics etc.

#### with cable and Schuko plug

	40347010
Voltage	230 volts, 50 hertz
Roll length	320 mm
Dimensions	430 x 180 x 95 mm (l x w x h)
Weight	approx. 3.7 kg
Speed	approx. 36 rpm
Loading weight	max. 2.0 kg





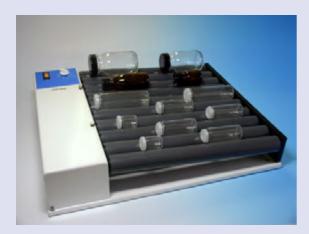




#### Rotating mixer with integral rolls, CE

Tumbling rotating mixer with five synchronous, diagonally eccentric PVC rolls.

	40348010	40348026	
Voltage	110 or 230 V, 50 Hz	230 V, 50 Hz	
Dimensions	430 x 180 x 95 mm	332 x 180 x 95 mm	
Roll length	approx. 330 mm	approx. 200 mm	
Speed	approx. 35 rpm	approx. 32 rpm	



### Tumbling rotating mixer with variable speed control, CE

Five or ten synchronously rotating PVC rolls provide an uniform and gently tumbling mixing of the tubes etc. These bottles are rotating around its long axis and rocking along its contact surface. This device is especially designed for the uniform mixing of medical laboratory tests (e.g. whole blood) for haematological determinations and other cell suspension samples. It also prevents sedimentation or dispersion of other samples such as colours, paints, oils and cosmetics etc.

Voltage 110 or 230 volts, roll length approx. 324 mm

	40349006	40349012	40349018
Max. charge	2.0 kg	2.0 kg	5.0 kg
Speed	2-30 rpm, steplessly adjustable	10-80 rpm, steplessly adjustable	2-30 rpm, steplessly adjustable
Weight	3.8 kg	3.8 kg	7.6 kg
Dimensions	436 x 180 x 105 mm	436 x 180 x 105 mm	436 x 358 x 105 mm
Rolls	5 (not removable)	5 (not removable)	10 (removable)
Motor	Shaded-pole motor, 40 watts	Shaded-pole motor, 40 watts	Shaded-pole motor, 90 watts



#### Rotary mixer, CE

The device consists of a solid base body, in which the drive, the electrical components and the bearing for the swash plate can be found. The swash plate is furnished with a screw thread (left-hand thread) and screwed to the bearing journal. The swash plate is composed of 60 holes with three different diameters in order to carry sample bottles.

20 holes of 10 mm diameter; 20 holes of 12.5 mm diameter and 20 holes of 15.5 mm diameter.

The sample bottles, inserted in the swash plate, are held in position by an elastic clamping device so that they cannot fall out during the process of mixing. The base frame is painted in an acid-proof manner. The swash plate is made of plastic which is, to the greatest extent, resistant to chemicals and solvents. During one revolution of the swash plate, the sample tubes once rotate around their own axis, resulting in a pivoting of the tube contents from the top to the bottom and back. The swash plate rotates at a fixed speed of approx. 6 rpm.

This contributes to a steady, gentle mixing of the samples.

	40350010
Width	200 mm
Length	200 mm
Swash plate	220 mm Ø
Voltage	230 volts, 50/60 hertz, 6 watts
Height	250 mm
Weight	approx. 2.5 kg



### Shakers with digital display

#### 3D movement, CE

The soft 3D movement of this shaker is ideal for low foaming agitation as well as DNA extractions. The platform holds Petri dishes, microplates and other small containers. A detachable plastic platform is optionally available.

- brushless AC motor with electronic feedback speed control
- shaking frequency: steplessly adjustable 5 50 rpm
- maximum time limit: 99 hours
- tilt angle: 5° or 7° (preset at 7°)
- platform: approx. 217 x 217 mm

#### 40351010

Max. charge	1 kg
Voltage	110 volts or 230 volts (see rating plate)
Weight	approx. 2.2 kg
Dimensions	approx. 213 x 213 x 110 mm
Shaking rate	steplessly adjustable from 5-50 rpm



# Assistent Assistent

# **BLOOD TEST AND URINALYSIS**



#### Shaker with digital display, CE

#### without attachment

The microprocessor technology of this shaker allows the data transfer by RS 232 interface for computer control. The special indexing mechanism stops the shaking platform always at a defined position.

The powerful laboratory shaker with linear reciprocal motion and 20 mm stroke is especially designed to shake flasks for biological cultures and Erlenmeyer flasks in sizes of 250 and 500 ml.

- designed to be used continuously
- speed control: 40 to 200 rpm in steps of 10 rpm
- feedback control by a micro controller
- two-line alphanumeric display with 16 characters each to show speed and time of operation
- maximum time limit: 99 days, 23 hours and 59 minutes shortest unit 1 minute

**40353010** Maximum load 1.5 kg



#### Standard attachments including respective clamps

without shaker, for shaker no. 40353010

**40353030** for 6 Erlenmeyer flasks 250 ml **40353034** for 4 Erlenmeyer flasks 500 ml



### Mini centrifuge

#### Sprout®, CE

This compact mini centrifuge is ideal for quick spin-downs of reaction tubes (micro cell separations and HPLC samples). Ergonomically designed lid with automatic start-stop for one-handed operation. Rotor accelerates quickly to 6000 rpm (RCF max. 2000 x g). As a safety feature, the rotor will not operate if the lid is open. Rubber footplate keeps unit stable and deadens vibration smooth. Durable, easy to clean ABS finish, with rack for reaction tubes. With 2 rotors of polycarbonate. Easy snapspin rotor change Rotor 1: circular, for 6 tubes of 1.5 and 2.0 ml and - with included adapters - for 6 tubes of 0.4 and 0.5 ml Rotor 2: rectangular, for two strips of 8 PCR tubes of 0.2 ml or for 16 single PCR tubes of 0.2 ml with connecting cable and safety plug

	Voltage	Dimensions	Weight
40352010	230 V, 50/60 Hz, 0.1 A	approx. 153 x 128 x 104 mm	approx. 795 g



### Reaction tubes made of polypropylene, with lid

suitable for mini centrifuge no. 40352010 **49040010** Capacity approx. 1.5 ml







**Microscopy and Staining** 



# **Storage Folders and Cases**

### Slide folders made of cardboard

#### without lid

**42698010** for 20 microscope slides of 76 x 26 mm



#### with lid

### for microscope slides of 76 x 26 mm

42700001	for 1 microscope slide
42700002	for 2 microscope slides
42700003	for 3 microscope slides
42700005	for 5 microscope slides
42700010	for 10 microscope slides
42700020	for 20 microscope slides



### Slide cases, frame made of polypropylene, antistatic

Black, with numbered plastic grooves (antistatic, resistant to xylene), imprinted from 1-100, stackable  $\,$ 

**42701020** for 100 microscope slides of 76 x 26 mm







#### Slide cases, wooden frame, antistatic

Black-coated, bottom part and lid are connected by metal hinges and clasps, with numbered plastic grooves (antistatic, resistant to xylene) and numbered index.

**42701010** for 100 microscope slides of 76 x 26 mm



#### Slide cases, wooden frame, antistatic

Black-coated, bottom part and lid are connected by metal hinges and clasps, with numbered plastic grooves (antistatic, resistant to xylene) and numbered index.

**42702010** for 50 microscope slides of 76 x 26 mm



Black-coated, bottom part and lid are connected by metal hinges and clasps, with numbered plastic grooves (antistatic, resistant to xylene) and numbered index.

**42703010** for 25 microscope slides of 76 x 26 mm



# Slide cases made of polypropylene, for 100 microscope slides of $76 \times 26 \text{ mm}$

made of solid polypropylene, with hinged lid, stackable, dimensions approx.  $210 \times 168 \times 33/34$  mm

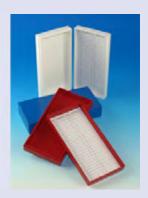
**42704001** White **42704002** Blue **42704003** Red



# Slide boxes made of polystyrene, for 50 microscope slides of $76 \times 26 \text{ mm}$

Storage boxes made of polystyrene with tight-closing lid, removable index card and numbered bottom, stackable

**42705002** Blue **42705003** Red **42705010** White



### **Cover Glasses for Microscopy**

The cover glasses are manufactured from cover glass D 263\$ M, a colourless borosilicate glass, according to the requirements of ISO 8255

Appropriate manufacturing processes guarantee low tolerances.

The outstanding features of D 263® M include:

- Virtually free of any colour distortion because supertransparent and colourless
- Excellent internal glass quality with very low levels of inclusions, striae, bubbles, streaks, etc.
- · High spectral transmission
- Excellent flatness
- Optimum resistance to chemical attack
- Refractive index finely adapted to microscopes

#### Cover glasses for microscopy

#### in boxes of 100 - special thickness, CE

Cover glasses are available in different thicknesses:

 $0 = 0.08 - 0.12 \, \text{mm}$ 

 $1 = 0.13 - 0.16 \, \text{mm}$ 

 $1.5 = 0.16 - 0.19 \, \text{mm}$ 

2 = 0.19 - 0.23 mm

Cover glasses will be regularly supplied in standard thickness 1. Cover glasses of thicknesses 0 - 1.5 and 2 are special designs and cannot be returned or exchanged.



# Assistent

# MICROSCOPY AND STAINING



### Cover glasses in boxes of 100 - thickness 1, CE

in plastic boxes, 10 boxes in a carton (1000 glasses) Special sizes are available as well.

	Dimensions:
40990101	10 x 10 mm
40990103	12 x 12 mm
40990106	15 x 15 mm
40990109	18 x 18 mm
40990112	20 x 20 mm
40990115	22 x 22 mm
40990118	24 x 18 mm
40990121	24 x 24 mm
40990122	25 x 25 mm
40990124	26 x 21 mm
40990127	30 x 24 mm
40990130	32 x 22 mm
40990133	32 x 24 mm
40990136	36 x 24 mm
40990139	40 x 22 mm
40990142	40 x 24 mm
40990145	40 x 25 mm
40990148	46 x 24 mm
40990151	50 x 24 mm
40990157	55 x 24 mm
40990160	55 x 25 mm
40990166	60 x 24 mm



### in boxes of 50 - thickness 1, CE

in plastic boxes, 20 boxes in a carton (1000 glasses) Special sizes are available as well.

	Dimensions:
41000103	12 x 12 mm
41000106	15 x 15 mm
41000109	18 x 18 mm
41000112	20 x 20 mm
41000115	22 x 22 mm
41000118	24 x 18 mm
41000121	24 x 24 mm
41000124	26 x 21 mm
41000127	30 x 24 mm
41000133	32 x 24 mm
41000136	36 x 24 mm
41000139	40 x 22 mm
41000142	40 x 24 mm
41000148	46 x 24 mm
41000151	50 x 24 mm
41000154	50 x 25 mm
41000163	60 x 22 mm
41000166	60 x 24 mm



#### Cover glasses in boxes of 100 - thickness 1, CE - circular

10 boxes in a carton (1000 glasses) Special sizes are available as well.

	Diameter:
41001103	3 mm
41001105	5 mm
41001108	8 mm
41001110	10 mm
41001112	12 mm
41001113	13 mm
41001114	14 mm

**41001115** 15 mm **41001117** 17 mm

**41001118** 18 mm **41001120** 20 mm

**41001122** 22 mm **41001124** 24 mm

**41001125** 25 mm **41001130** 30 mm



in plastic boxes of 50 pieces, except:  $26 \times 21$  and  $32 \times 24$  mm of 100 pieces, 20 or 10 boxes in a carton (1000 glasses) Special sizes are available as well.

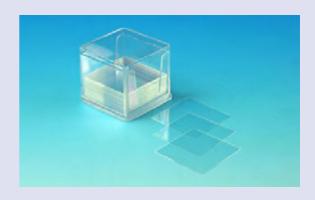
	Dimensions:
41014509	18 x 18 mm
41014512	20 x 20 mm
41014515	22 x 22 mm
41014521	24 x 24 mm
41014524	26 x 21 mm
41014533	32 x 24 mm
41014542	40 x 24 mm
41014551	50 x 24 mm

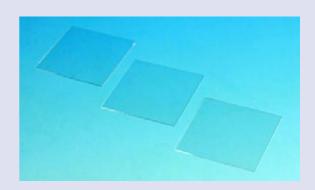
### Selected thickness 0.17 ± 0.02 mm, CE

in plastic boxes of 50 pieces, except:  $26 \times 21$  and  $32 \times 24$  mm of 100 pieces, 20 or 10 boxes in a carton (1000 glasses) Special sizes are available as well.

	Dimensions:
41015609	18 x 18 mm
41015612	20 x 20 mm
41015615	22 x 22 mm
41015621	24 x 24 mm
41015624	26 x 21 mm
41015633	32 x 24 mm
41015642	40 x 24 mm
41015651	50 x 24 mm

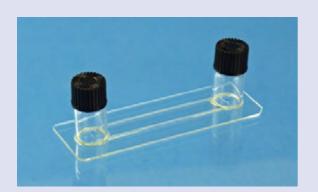






# Assistent MICROSCOPY AND STAINING





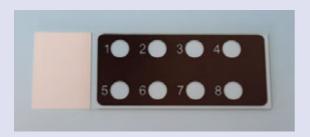
# **Diagnostic Microscope Slides**

#### Micro Life microscope slides

#### Micro Life®

Microscope slide, special pipette and directions for use for observation of long-term cultures of microorganisms

**42426010** The "living" microscope slide



### Immunofluorescent printed slides, CE

#### Black epoxy coating, 8 numbered circles of approx. 6 mm Ø

	Packing/box	Thickness	Dimensions	
42420010	100 pieces	approx. 1 mm	approx. 75 x 25 mm	



### Black epoxy coating, 3 circles of approx. 14 mm Ø

	Packing/box	Thickness	Dimensions
42421010	100 pieces	approx. 1 mm	approx. 75 x 25 mm



### Black epoxy coating, 3 numbered circles of approx. 10 mm Ø

	Packing/box	Thickness	Dimensions	
42422010	100 pieces	approx. 1 mm	approx. 75 x 25 mm	



### Black epoxy coating, 10 circles of approx. 6 mm Ø

	Packing/box	Thickness	Dimensions	
42423010	100 pieces	approx. 1 mm	approx. 75 x 25 mm	



# Immunofluorescent printed slides, CE, blue epoxy coating, 1 circle of approx. 8 mm $\emptyset$

	Packing/box	Thickness	Dimensions
42424010	100 pieces	approx. 1 mm	approx. 75 x 25 mm



# **Staining Equipment**

#### Staining stands

made of Plexiglas®

**41218010** with 3 Hellendahl jars made of glass no. 42460010



#### made of hardwood

**41220010** with 3 rectangular glass jars approx. 40 x 20 mm no. 41230010



#### made of hardwood

**41221010** with 6 rectangular glass jars approx. 40 x 20 mm

no. 41230010



#### Staining stand made of Plexiglas®, empty, with 3 holes

suitable for staining jars, circular, no. 41231010 bottles, 50 ml, no. 41301006, 41303006, 41311006, 41313006 bottles with frosted label, 50 ml, no. 41321010 pipette bottles, 50 ml, no. 42600008 and 42601008









#### Staining stands made of hardwood

with 3 circular glass jars no. 41231010 **41224010** Holes of approx. 48-49 mm Ø



#### made of hardwood

with 6 circular glass jars no. 41231010 41225010 Holes of approx. 48-49 mm Ø



#### made of hardwood

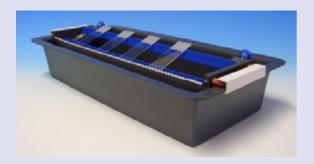
with 3 oval glass jars no. 41232010 **41226010** Holes of approx. 40 x 20 mm



#### made of hardwood

with 6 oval glass jars no. 41232010

with 6 oval glass jars no. 41232010			
	Dimensions	Holes	
41227010	approx. 265 x 70 mm	approx. 40 x 20 mm	



# **Staining Accessories**

### Staining bridge made of PVC with staining tray

Large type, extensible, for dishes and basins of 38 cm to 62 cm, can be fixed at a slanted or horizontal position, complete with staining tray made of PVC and 2 clamps made of PVC

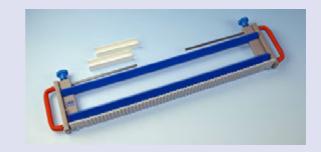
**41185010** Dimensions approx. 38 x 17 x 8 cm



### Staining bridge made of PVC, without tray

Large type, extensible, can be fixed at a slanted or horizontal position, with 2 clamps

**41186010** for dishes and basins of 38 cm to 62 cm



#### Spare staining tray made of PVC

also suitable as storage dish for pipettes etc.

**41187010** Dimensions approx. 38 x 17 x 8 cm



### Staining rack with glass tray

Metal rack made of plastic-coated wire with glass tray no. 42900004

**41190010** Glass tray approx. 22 x 15 cm



#### Spare staining rack

made of plastic-coated wire (without glass tray)

**41191010** for trays of approx. 22 x 15 cm



### Staining tray made of stainless steel with tilting rack

Slanted sides

**41192010** Tray size approx. 24 x 14 x 4 cm



# Assistent

# **MICROSCOPY AND STAINING**



#### Staining rack made of stainless steel

with reliable device which tilts the microscope slides, suitable for glass trays no. 42900004 (without tray)

**41198010** Length approx. 22 cm



#### Staining rack made of stainless steel according to Bongert

with glass tray no. 42900004

**41200010** Glass tray approx. 22 x 15 cm



## **Staining Troughs and Jars**

# Glass jars with ground-in cover with knob and staining rack made of stainless steel

suitable for serial stainings, especially for the method according to Papanicolaou.

for microscope slides 26 mm wide

41201014 for 14 microscope slides
41201024 for 24 microscope slides
41201042 for 42 microscope slides
41201098 for 98 microscope slides



#### Staining rack circular, made of stainless steel, without jar

for microscope slides 26 mm wide

	for	Outside Ø
41202014	14 microscope slides	approx. 83 mm
41202024	24 microscope slides	approx. 96 mm
41202042	42 microscope slides	approx. 137 mm
41202098	98 microscope slides	approx. 191 mm



#### Glass jars with ground-in cover with knob

suitable for staining rack no. 41202014, 41202024, 41202042, 41202098

	for	Outside Ø	Height
41203014	14 microscope slides	approx. 100 mm	approx. 170 mm
41203024	24 microscope slides	approx. 120 mm	approx. 170 mm
41203042	42 microscope slides	approx. 160 mm	approx. 170 mm
41203098	98 microscope slides	approx. 220 mm	approx. 170 mm



#### Staining trough

consisting of:

Glass trough with cover and staining tray made of stainless steel, for staining of 10 microscope slides (without microscope slides) suitable for microscope slides of approx. 76 x 26 mm, width up to approx. 45 mm

Spare parts/accessories:

41205010 Staining trough

41205001 Glass trough with cover, approx. 9 x 7 x 6.5 cm

41205002 Glass trough without cover

41205003 Glass cover

41205004 Staining tray made of stainless steel

41205005 Staining tray made of stainless steel with extended



consisting of:

3 Glass troughs with cover no. 41205001

1 Staining tray no. 41205004

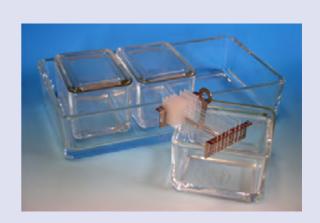
1 Glass tray 27.5 x 15 x 6 cm no. 42900005

41210010 This set is recommended for serial stainings and in

order to avoid stains.











# **Staining Utensils**

Staining trough made of glass with cover Rectangular

**41230010** Dimensions approx. 85 x 40 x 20 mm



### Staining jars made of glass with cover, cylindrical

**41231010** Dimensions approx. 85 x 40 mm Ø



#### Oval

**41232010** Dimensions approx. 85 x 40 mm



### Staining prisms made of glass according to Borel

suitable for staining jars, circular, no. 41231010

11224010	annray OF mana	annray 6F nama
	Width	Height
	J ,	



### **Staining Dishes and Staining Bottles**

#### Staining dishes

#### according to Schiefferdecker, SMG glass

with cover, for 10 microscope slides of approx. 76 x 26 mm or for 20 slides back to back

42450110 Dishwasher-safe



### according to Schiefferdecker

with cover, for 10 microscope slides of approx. 76 x 26 mm or for 20 slides back to back

**42450010** Soda glass

#### according to Hellendahl, SMG glass, with extension

with cover, for 8 microscope slides of approx. 76 x 26 mm or for 16 slides back to back

42460110 Dishwasher-safe



#### Staining dishes according to Hellendahl, with extension

with cover, for 8 microscope slides of approx. 76 x 26 mm or for 16 slides back to back

**42460010** Soda glass

#### according to Hellendahl, SMG glass, without extension

with cover, for 8 microscope slides of approx. 76 x 26 mm or for 16 slides back to back, dimensions approx. 85 x 35 x 95 mm

42461110 Dishwasher-safe

#### according to Hellendahl, without extension

with cover, for 8 microscope slides of approx. 76 x 26 mm or for 16 slides back to back, dimensions approx.  $85 \times 35 \times 95 \text{ mm}$ 

**42461010** Soda glass





#### Coplin staining jars made of polypropylene

with screw cap, for 10 microscope slides of approx. 76 x 26 mm

	autoclavable up to	Max. temperature for use	Height
42470020	+121 °C/+249.8 °F (2 bar)	+125 °C/+257 °F	approx. 94 mm



#### Staining jars according to Coplin, SMG glass

with cover, for 10 microscope slides of approx. 76 x 26 mm

42470110 Dishwasher-safe



#### Staining jars according to Coplin

with cover, for 10 microscope slides of approx. 76 x 26 mm

42470010 Soda glass

### Staining troughs with cover, SMG glass

with cover, suitable for staining tray no. 42481110 Dimensions approx. 105 x 85 x 80 mm

42480110 Dishwasher-safe



#### Staining troughs with cover

suitable for staining tray no. 42481010 Dimensions approx. 105 x 85 x 80 mm

42480010 Soda glass



#### Staining trays, SMG glass

fitting into trough no. 42480110,

for 10 microscope slides of approx. 76 x 26 mm or any other width up to approx. 50 mm (or for 20 slides back to back)

42481110 Dishwasher-safe



#### **Staining trays**

fitting into trough no. 42480010 for 10 microscope slides of approx. 76 x 26 mm or any width up to approx. 50 mm (or for 20 slides back to back)

**42481010** Soda glass

#### Wire handles

for staining trays no. 42481010 and 42481110

**42482010** Wire handles



### Staining bottles / Pipette bottles

#### Pipette bottles made of clear glass

with ground-in interchangeable pipette with olive at top

**42600008** Capacity 50 ml **42600016** Capacity 100 ml



### Pipette bottles made of amber glass

with ground-in interchangeable pipette with olive at top

**42601008** Capacity 50 ml **42601016** Capacity 100 ml



#### Rubber teats made of siliconised latex

suitable for pipette bottles, Pasteur pipettes etc.

	Capacity	Opening Ø
42620010	approx. 2 ml	approx. 4-5 mm



# Assistent

# **MICROSCOPY AND STAINING**



## Staining stands made of hardwood

### with 3 amber pipette bottles

no. 42601008, capacity 50 ml **42608010** without rubber teats **42608020** with rubber teats



#### with 3 pipette bottles, clear glass

no. 42600008, capacity 50 ml **42609010** without rubber teats **42609020** with rubber teats



### with 6 amber pipette bottles

no. 42601008, capacity 50 ml42610010 without rubber teats42610020 with rubber teats



# Staining stands made of hardwood with 6 pipette bottles, clear glass

no. 42600008, capacity 50 ml **42611010** without rubber teats **42611020** with rubber teats



# Microscope Slides, Spot Plates and Accessories

### Microscope slides

#### with 1 cavity, CE

Clear glass, ground edges

	Packing/box	Thickness	Dimensions
42410010	50 pieces	approx. 1.5 mm	approx. 76 x 26 mm



### Microscope slides with 2 cavities, CE

Clear glass, ground edges

	Packing/box	Thickness	Dimensions
42411010	50 pieces	approx. 1.5 mm	approx. 76 x 26 mm



#### with 3 cavities, CE

Clear glass, ground edges

	Packing/box	Thickness	Dimensions
42412010	50 pieces	approx. 1.5 mm	approx. 76 x 26 mm



### with 1 cavity of approx. 22 mm Ø, CE

Clear glass, ground edges

	Packing/box	Thickness	Cavity	Dimensions
42415010	20 pieces	3-4 mm	approx. 1.75 mm deep	approx. 76 x 26 mm



## Glass plates with 12 cavities

Frosted surface, individually packed

	Cavities	Dimensions
42417010	approx. 1.8 mm deep, approx. 16 mm Ø	approx. 76 x 60 x 5 mm



### Glass plates with 24 cavities

Frosted surface, individually packed

	Cavities	Dimensions
42418010	approx. 1.6 mm deep, approx. 16 mm Ø	approx. 140 x 85 x 3 mm



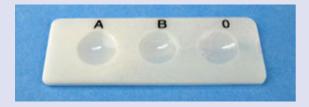




#### Glass plates with 30 cavities

Blank surface, individually packed

	Dimensions	Cavities
42419010	approx. 180 x 130 x 6 mm	approx. 2 mm deep, approx. 22 mm Ø



#### Microscope slides made of opal glass, CE, marked A, B, 0

for blood typing, with frosted label, ground edges, with 3 polished cavities

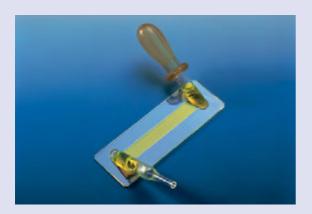
	Cavities	Dimensions
42430010	approx. 1.75 mm deep, approx. 20 mm Ø	approx. 120 x 40 x 3 mm



# Microscope slides made of opal glass, CE, marked Anti-A, Anti-B, Anti-AB, Anti-Rh

for blood typing, with frosted label, ground edges, with 4 polished cavities

	Cavities	Dimensions
42432010	approx. 1.75 mm deep, approx. 20 mm Ø	approx. 130 x 40 x 3 mm



#### Microscope slide pipette

This system combines the function of pipette and microscope slide. The cover glass with standard thickness 1 - in correct flatness - enables microscopic contrasting procedures such as bright field, dark field, transmitted light-polarisation, fluorescence, phase contrast and interference contrast.

Quick cleaning and - after that - immediate use for serial examinations e.g. in hydrobiology for plankton or the microscopic control of biological floc in sewage treatment plants.

Other areas of application: Chemical or physical tests, e.g. crystal growth or the precipitation of metal salts.

Heat-resistant up to +180 °C/+356 °F (when using a silicone teat) and resistant to diluted acids and alkaline solutions.

	Microscope	Cover glass		Observation field
	slide	thickness	Capacity	dimensions
424	<b>27010</b> 76 x 26 mm	approx. 0.15 mm	approx. 1	approx. 40 x 8 x 0.25 mm
			ml	



### **Dissecting needles**

made of chromium-nickel steel, stainless, with wooden handle

	Handle length	Total length
42712010	approx. 100 mm	approx. 140 mm

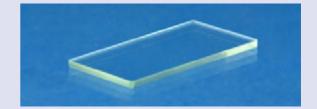


### Blood smear slides and glass spot plates

#### Blood smear slides according to Undritz, CE

Clear glass, both sides polished, bevelled edges and corners

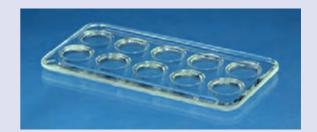
	Thickness	Dimensions
40619010	1.6 - 1.7 mm	approx. 40 x 20 mm



#### Glass spot plates with 10 cavities

Börner test slides for flocculation tests, with 10 numbered cavities, two edges at the bottom

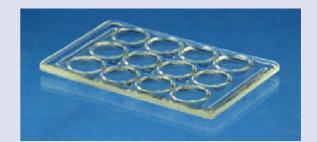
	Dimensions	Cavity Ø	Cavity
40623010	approx. 105 x 55 x 5 mm	approx. 14 mm	approx. 2 mm deep



#### Glass spot plates with 12 cavities

for flocculation tests, with 12 numbered cavities, two edges at the bottom

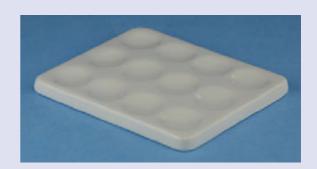
	Dimensions	Cavity Ø	Cavity
40624010	approx. 89 x 57 x 4 mm	approx. 15 mm	approx. 0.8 mm deep



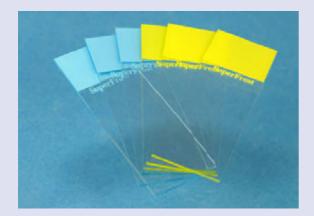
#### Porcelain plate for spot tests with 12 cavities

Glazed

	Dimensions	Cavity Ø	Cavity
40625010	annrox 115 x 91 x 12 mm	approx 17 mm	annrox 2 mm deen







## Microscope Slides

### SuperFrost®, CE

#### **Cut edges**

Fully developed marking system for all preparations in medical and scientific laboratories.

The microscope slides SuperFrost® have a coated labelling field in one of 6 standard colours.

Preparations can be identified or marked according to urgency, examination method, staining technique etc. The coating of the labelling field is resistant to common solvents.

Dimensions: approx. 76 x 26 mm

Thickness: approx. 1 mm Packing: 50 pieces/box

 42408010
 blue

 42408020
 yellow

 42408030
 green

 42408040
 orange

 42408050
 rose

 42408060
 white



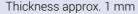
# SuperFrost® Plus, ground edges 90°

A permanent positive charge has been placed on these microscope slides.

Therefore they attract electrostatically fresh frozen tissue section and cytology preparations, binding them to the slides.

Recommended for anatomic and molecular pathology laboratories. The microscope slides SuperFrost® Plus have proven to be superior for cell adhesion in cytocentrifuge preparations in standard Papanicolaou smears.

Preparations can be marked and identified by the coated labelling field. The coating of the labelling field is resistant to common solvents.



	Packing/box	Dimensions	Colour code	
42409110	72 pieces	approx. 75 x 25 mm	white	П



70



#### Polysine®, ground edges 90°

These slides come with a permanent adhesive. This provides superior cell and tissue adhesion and saves money and time by eliminating the need for expensive adhesives and time-consuming coating techniques.

These glass slides attract electrostatically and chemically

- fresh frozen tissue sections
- formalin fixed, paraffin embedded tissue sections
- cytocentrifuge preparations and cytology smears
- alcohol fixed, paraffin embedded tissues
- Bouin's or non-crosslinking fixed, paraffin embedded tissue sections

Thickness approx. 1 mm

	Packing/box	Dimensions	Colour code
42409210	72 pieces	approx. 75 x 25 mm	white



Fully developed marking system for all preparations in medical and scientific laboratories.

The microscope slides SuperFrost® have a coated labelling field in one of 6 colours, packing 50 pieces, dimensions approx. 76 x 26 mm. Preparations can be identified or marked according to urgency, examination method, staining technique etc. The coating of the labelling field is resistant to common solvents.

Thickness approx. 1 mm

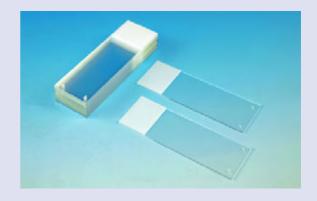
42409010	blue
42409020	yellow
42409030	green
42409040	orange
42409050	rose
42409060	white

#### Microscope slides ELKA, cut edges, half-white, CE

Standard thickness, selected glass quality, non-corrosive, cleaned, ready for use

Packing: 50 pieces/box - 5000 pieces/carton

	Thickness	Dimensions
42400010	approx. 1 mm	approx. 76 x 26 mm





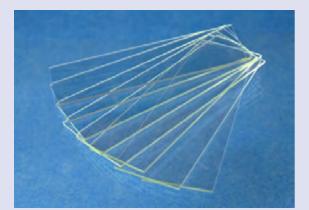




#### Microscope slides ELKAmed ECO, cut edges, CE

Proven glass quality, cleaned, ready for use Packing: 50 pieces/box, 2500 pieces/carton

	Thickness	Dimensions
42400110	approx. 1 mm	approx. 76 x 26 mm



#### Microscope slides ELKA, ground edges 90°, half-white, CE

Standard thickness, selected glass quality, non-corrosive, cleaned, ready for use

Packing: 50 pieces/box - 5000 pieces/carton

	Thickness	Dimensions
42401010	approx. 1 mm	approx. 76 x 26 mm



#### Microscope slides ELKA, cut edges, half-white, extra thin, CE

Selected glass quality, non-corrosive, cleaned, ready for use Packing: 50 pieces/box - 5000 pieces/carton

 Thickness
 Dimensions

 42404010
 0.6-0.8 mm
 approx. 76 x 26 mm



#### Microscope slides, with frosted end, cut edges, half-white, CE

Selected glass quality, non-corrosive, cleaned, ready for use, dimensions approx. 76 x 26 mm, thickness approx. 1 mm Packing: 50 pieces/box, 5000 pieces/carton

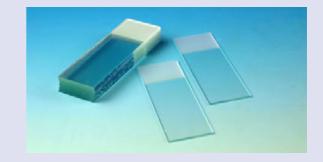
**42406010** with frosted end on both sides **42406020** with frosted end on one side



# Microscope slides ELKAmed ECO, cut edges, with frosted end on both sides, CE

Proven glass quality, cleaned, ready for use Packing: 50 pieces/box, 2500 pieces/carton

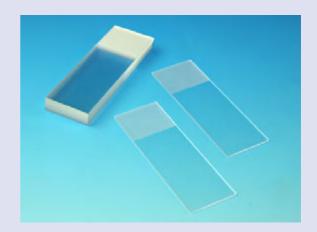
	Thickness	Dimensions
42406110	approx. 1 mm	approx. 76 x 26 mm



# Microscope slides, with frosted end, ground edges 90°, half-white, $\ensuremath{\text{CE}}$

Selected glass quality, non-corrosive, cleaned, ready for use, dimensions approx. 76 x 26 mm, thickness approx. 1 mm Packing: 50 pieces/box, 5000 pieces/carton

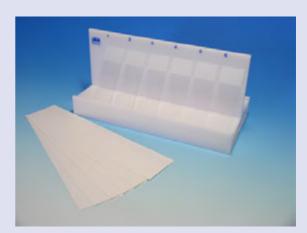
**42407010** with frosted end on both sides **42407020** with frosted end on one side



#### Drying rack made of Plexiglas® for 12 microscope slides

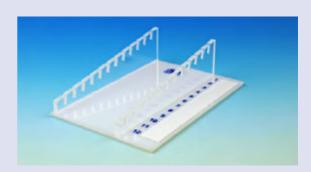
for the drying of coloured slides with 12 numbered positions. The microscope slides are placed vertically on replaceable blotting paper. In the base of the drying rack is storing place for 2 packs of paper. Every drying rack comes with 2 packs of paper.

	Dimensions	Article
41238010	Height 105 mm	Drying rack
41238020	approx. 200 x 45 mm	Blotting paper 25 sheets/pack



## Rack made of Plexiglas®

with numbering 1-12 and field for inscriptions **41240010** for 12 microscope slides



# Assistent Assistent

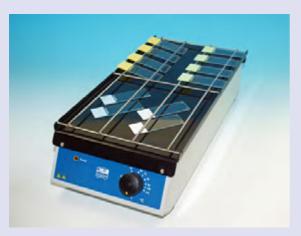
# **MICROSCOPY AND STAINING**



#### Microscope slide dispenser

Dustproof, practical storage, no finger prints by removing slides through touching the sides only, without slides

**42440010** for 72 microscope slides of standard size 76 x 26 mm



## Microscope slide drying bench with heating, CE

speeds up the preparation of up to 48 slides of standard size 76 x 26 mm. The slides can be placed in any position:

- on bars
- against bars
- flat on heating foil

	42395010
Weight	approx. 1.5 kg
Dimensions	approx. 400 x 186 x 105 mm (I x w x h)
Heating element	Heating foil
Case	Painted aluminium
Capacity	max. 150 W 230 V 50/60 Hz
Heating temperature	from room temperature up to max. +100 °C/+212 °F



## Glass plates

## for detection of trichinae

	Fields	Dimensions
41956028	28	approx. 230 x 50 mm



## **Equipment for Microscopy and Staining**

## Equipment

#### **Bottles for cedar oil**

with interchangeable ground-in, amber pipette, plastic cap and glass rod

	Total height	Capacity	Ø	Height of flask
40920010	approx. 100 mm	approx. 40 ml	approx. 54 mm	approx. 60 mm



#### Lens tissue paper

Special paper for cleaning optical glass Packing: 500 pieces/dispenser box

**41019010** Dimensions approx. 90 x 72 mm



#### **Cover glass forceps**

Nickel-plated, bent

**41020010** Length approx. 105 mm



#### Histokitt

Mounting medium for histology/microscopy. Light-resistant, neutral, colourless, does not affect colour of the specimen, soluble e.g. in benzene, chloroform, dioxane, xylene in UN certified tinplate bottle

	Hardening time	Capacity	Cold-resistant
41025010	20 minutes	500 ml	down to -17 °C/+1.4 °F



## Petri dishes made of glass

with cover, sterilisable up to +121 °C/+249.8 °F

	Height of base	Cover Ø
41042006	approx. 1.2 cm	approx. 4 cm
41042012	approx. 1.5 cm	approx. 6 cm
41042018	approx. 1.5 cm	approx. 8 cm
41042024	approx. 2 cm	approx. 10 cm
41042030	approx. 2 cm	approx. 12 cm
41042036	approx. 2.5 cm	approx. 15 cm
41042042	approx. 5 cm	approx. 20 cm



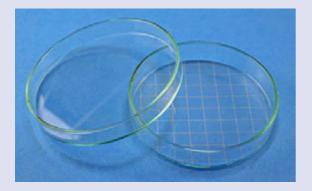




#### Petri dishes made of polystyrene

Disposable, with vents and cover, packing: 480 pieces/box

**41043010** Diameter approx. 90 mm



#### Petri dishes made of glass with grid and cover

for examining trichinae

Size of grid Dimensions Petri dishes
41044010 approx. 10 x 10 mm approx. 10 x 2 cm



#### Petri dishes with cover, DURAN® borosilicate glass 3.3

Cover approx. 10 cm Ø, height of base approx. 2 cm
41045002 Base with 2 equal compartments
41045003 Base with 3 equal compartments
41045004 Base with 4 equal compartments



## Drigalski spatulas made of glass

for bacteriological work - equal spreading

Total length Side length Width of spatula Rod Ø
41049010 approx. 146 mm approx. 35 mm approx. 45 mm approx. 5 mm



#### Marker pens

with clip, fineliner - for writing on glass, waterproof

**41181004** red **41181008** black **41181010** blue



## Glass-writing diamond pen

**41182010** Total length approx. 150 mm



## **Bottles for Canada balsam with ground-on cap**

with glass rod 4 mm Ø

	Capacity	Rod length
41710030	approx. 30 g	approx. 92 mm
41710060	approx. 60 g	approx. 120 mm



#### **Bottles for Canada balsam with loose cap**

with glass rod 4 mm Ø

	Capacity	Rod length
41720030	approx. 30 g	approx. 92 mm
41720060	approx. 60 g	approx. 120 mm



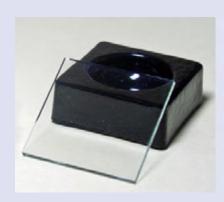
## Staining blocks (Vaccine dishes), clear glass

with one cavity and cover made of clear glass

**42020010** Dimensions approx. 4 x 4 cm







**Staining blocks (Vaccine dishes), black glass** with one cavity and cover made of clear glass **42021010** Dimensions approx. 4 x 4 cm





**Liquid Handling** 





#### **Assimat**

#### **Dispenser Assimat**

#### The economic dispenser for the daily routine

All parts which come in contact with liquids are made of polypropylene (PP), polyethylene (PE) and ethylene-propylene-diene rubber (EPDM rubber). This allows for precise dispensing of many media.

#### Limitations of use:

Liquids which do not affect the materials of the device can be dispensed with respect to the following limits:

- Vapour pressure up to 500 mbar
- Density up to 13.6 g/cm<sup>3</sup>
- Temperature up to +40 °C (+104 °F)

Liquids that should not be dispensed include e.g. concentrated or oxidising acids, non-polar solvents like hydrocarbons and halogenated hydrocarbons.

Accuracy ≤ ± 1.2 %\*, coefficient of variation ≤ 0.2 %\*

\* Final test values refer to the nominal volume (max. volume), which is imprinted on the device, at same temperature (+20 °C/+68 °F) of device, surrounding area and distilled water as well as at smooth, jerk-free operation.

#### Advantages:

- economical dispensing of non-aggressive liquids
- easy cleaning and maintenance
- all wearing parts, also pistons and cylinders, easily replaceable
- faultless volume adjustment, easy to read
- if required, dispensing cartridge easily and economically replaceable
- the lifting effect of a spring pushes the piston up, therefore the dispensing cartridge is being filled automatically
- directly attachable to standard bottles with GL 45 threads

	Division	Capacity
40163010	0.2 ml	1.0 - 10 ml
40163025	0.5 ml	2.5 - 25 ml

#### consisting of:

- 1 Assimat no. 40163...
- 2 dispensing cartridges no. 40164...
- 1 discharge tube no. 40165001
- 1 filling tube no. 40165...
- 2 adapters PP (GL 45/32 and GL 45/S 40)

Directions for use (without bottle)



#### **Accessories for Assimat**

#### **Dispensing cartridge**

consisting of piston (PE) and cylinder (PP) Pack of 3 pieces

**40164010** for 10 ml **40164025** for 25 ml



## Filling tube made of polypropylene

Pack of 2 pieces

**40165002** Length approx. 250 mm **40165003** Length approx. 500 mm



## Discharge tube made of polypropylene

Individually packed

**40165001** Standard type (for 10 and 25 ml)



#### Valve set

**40165004** consisting of 1 filling valve and 1 discharge valve, 2

seals







## **Piston Pipettes**

#### Single channel pipettes and accessories

# CappTrio Single channel pipettes fix including 3 detachable volume knobs

Volume change by quickly replacing the pre-calibrated volume knobs. Completely autoclavable (except volume knobs). Ideal for everyday work.

40101003Volume μl 2, 10 and 2040101006Volume μl 25, 50 and 10040101009Volume μl 200, 500 and 1000

40101110 customer-specific

**Knobs** 

40102110 customer-specific

#### **Knobs for variable volume**

**40102113** 2 - 20 μl **40102116** 10 - 1000 μl **40102119** 100 - 1000 μl



## **Knobs for fixed volume**

Volume 2 µl 40102003 40102006 Volume 5 µl 40102009 Volume 10 µl 40102012 Volume 20 µl 40102015 Volume 25 µl 40102018 Volume 50 µl 40102021 Volume 100 µl 40102024 Volume 200 µl Volume 500 µl 40102027 40102030 Volume 1000 µl





#### **Capp Combi stand**

expendable by attaching the plug connector

**40104010** for up to 3 pipettes



#### Disposable pipette tips, yellow

Conformity certified, transparent, autoclavable, removable, made of non-wetting plastic - also suitable for piston pipettes from Brand, Eppendorf, La Fontaine, Gilson, Lab Systems

**40110010** for volumes 1-100 μl



#### Disposable pipette tips, blue

Conformity certified, transparent, autoclavable, removable, made of non-wetting plastic - also suitable for piston pipettes from Brand, Eppendorf, La Fontaine, Gilson, Lab Systems

**40111010** for volumes 101-1000 μl



#### Disposable pipette tips, colourless

Conformity certified, for Brand, Labsystems Finnpipette® **40112010** for volumes 500-5000 µl









#### Digital, conformity certified

Capillary piston pipette, digital type, variable, volume fixing by locking lever, complete with precision glass capillary and directions for use

- · is continuously variable and fixable with one hand
- can pipette nearly all kinds of liquids, even aggressive ones
- the pipetting liquid comes only in contact with chemically resistant materials (glass, stainless steel, PTFE and plastic)
- no air cushion because the PTFE or stainless steel plunger displaces directly; in this way extremely low spreading, which can be ignored in most cases
- Precision capillaries and plastic tips are reusable, which, in turn, leads to fewer expenses and garbage
- maintenance-free, replacement of capillaries and tips very easy, no readjustment necessary
- Capillaries and piston seals can be sterilised according to any method
- highest precision and accuracy possible because of precision capillaries and precision plastic tips
- Devices, capillaries and repair sets are marked with the well-known colour code

	Division	Capacity	Colour code	Coefficient of variation	Accuracy
40131008	0.01 µl	2.5-10 µl	orange	≤ 0.8 %	≤ ± 1.0 %
40131016	0.1 µl	5-25 µl	2x white	≤ 0.5 %	≤±0.8%
40131024	0.1 µl	10-50 μΙ	green	≤ 0.4 %	≤ ± 0.6 %
40131032	0.1 µl	20-100 μl	blue	≤ 0.4 %	≤±0.6%

Accuracy and coefficient of variation refer to distilled water at +20  $^{\circ}\text{C}$  (+68  $^{\circ}\text{F})$  and the maximum volume.



## Macro Assipettor digital, conformity certified

Piston pipette, digital volume display, variable, continuously adjustable - volume specification by locking lever, complete with precision plastic tip and directions for use

Accuracy ≤ ± 0.5 %, coefficient of variation ≤ 0.2 %

Accuracy and coefficient of variation refer to distilled water at +20  $^{\circ}\text{C}$  (+68  $^{\circ}\text{F})$  and the maximum volume.

	Division	Capacity	Colour code
40132006	1 μΙ	100-500 μΙ	green
40132012	1 μΙ	200-1000 μΙ	yellow
40132018	10 μΙ	1-5 ml	red
40132024	10 μΙ	2-10 ml	orange



#### Assipettor fix, conformity certified

Capillary piston pipette, fixed volume, complete with precision capillary and directions for use

	Capacity	Colour code	Coefficient of variation	Accuracy
40140004	5 μΙ	white	≤ 0.8 %	≤ ± 1.0 %
40140012	10 μΙ	orange	≤ 0.8 %	≤ ± 1.0 %
40140020	20 µl	black	≤ 0.5 %	$\leq$ $\pm$ 0.8 %
40140028	50 µl	green	≤ 0.4 %	$\leq$ $\pm$ 0.6 %
40140036	100 μΙ	blue	≤ 0.4 %	$\leq$ ± 0.6 %
40140042	200 μΙ	red	≤ 0.2 %	$\leq$ $\pm$ 0.5 %

Accuracy and coefficient of variation refer to distilled water at +20  $^{\circ}\text{C}$  (+68  $^{\circ}\text{F})$  and the maximum volume.



**40135010** made of Plexiglas®





## Accessories and spare parts for Assipettor

Precision capillaries for Assipettor digital, 25  $\mu$ l

Packing: 100 pieces/tube

40134030 Conformity certified



# Tips made of polypropylene for macro Assipettors digital no. 40132...

Conformity certified, dispenser box fitting into the macro Assipettor stand no. 40135010, packing: 10 tips/dispenser box

40137006for 500 μl40137012for 1000 μl40137018for 5 ml40137024for 10 ml









made of polyethylene, conformity certified Packing: 3 pieces

**40138006** for 500 μl **40138012** for 1000 μl **40138018** for 5 ml **40138024** for 10 ml



#### **Precision capillaries for Assipettors fix**

Conformity certified Packing: 100 pieces/tube

**40144004** for 5 μl **40144020** for 20 μl



#### **Repair sets for Assipettors fix**

conformity certified

consisting of: 1 Allen key, 3 PTFE seals\*, 1 mounting block for seals\*, 1 plunger rod (with seal\*), 3 O-rings for capillary mounting, 1 setting gauge, 1 screw, 1 screwdriver (\* for sizes from 20  $\mu$ l)

**40146004** for fix 5 μl **40146020** for fix 200 μl



#### **Spare plunger rods for Assipettors fix**

Conformity certified, made of stainless steel, for sizes from size 20 µl with PTFE seal Packing: 3 pieces/tube

**40147004** for 5 μl **40147042** for 200 μl



#### Precision capillaries for Assipettors fix and digital

Conformity certified

	for	Packing/box
40154012	fix + digital 10 μl	100 pieces/tube
40154028	fix + digital 50 μl	100 pieces/tube
40154036	fix + digital 100 μl + Assipettor fix, 200 μl	50 pieces/tube



#### Spare seals made of PTFE

Conformity certified, complete with mounting block Pack of 3 pieces

**40155020** for Assipettor fix, 20 μl + digital, 25 μl **40155028** for Assipettor fix + digital, 50 μl

**40155036** for Assipettor fix + digital, 100 μl + fix, 200 μl



#### Repair sets for Assipettors digital and fix

Conformity certified

consisting of: 1 Allen key, 3 PTFE seals\*, 1 mounting block for seals\*, 1 plunger rod (with seal\*), 3 O-rings for capillary mounting, 1 setting gauge, 1 screw, 1 screwdriver (\* for sizes from  $20~\mu$ l)

 40156012
 for fix + digital 10 μl

 40156020
 for fix 20 μl + digital 25 μl

 40156028
 for fix + digital 50 μl

 40156036
 for fix + digital 100 μl



#### Spare plunger rods for Assipettors digital and fix

Conformity certified, made of stainless steel, for sizes from 20  $\mu l$  with PTFE seal

Packing: 3 pieces/tube

40157012 for fix + digital 10 μl
 40157020 for fix 20 μl + digital 25 μl
 40157028 for fix + digital 50 μl
 40157036 for fix + digital 100 μl









#### **Assi-Stepper**

**Manual dispenser,** conformity certified, for quick and easy repetitive dispensing of liquids.

In combination with **PD tips** (precision dispenser tips), **up to 49 repetitive pipetting steps** can be done without refilling. The Assi-Stepper can be used with many devices, due to the easy operation together with the directly displacing PD tips.

Its flexibility is very useful, among other things, in the **microbiological**, **immunologic** and **biochemical** field. Optimal filling of the individual cavities in microplates. Ideal for serial pipetting. The device is **not** resistant to steam sterilisation.

The manual dispenser is suitable for PD-tips of Brand, Encode™ tips,

Repet tips, Combitips®, Combitips® plus and other compatible dispenser tips.

Liquids which do not affect polypropylene and HDPE may be pipetted.

**40122010** Working temperature range: +15 °C/+59 °F

up to +40 °C/+104 °F



#### Spare support

for Assi-Stepper no. 40122010 **40122001** made of plastic



#### Precision dispenser tips, non-sterile, conformity certified

for Assi-Stepper

Piston made of HDPE, cylinder made of PP

Working temperature: +15 °C/+59 °F up to +40 °C/+104 °F

	Capacity	Packing unit	
40123004	0.1 ml	100 tips	
40123008	0.5 ml	100 tips	
40123012	1.0 ml	100 tips	
40123016	1.25 ml	100 tips	
40123020	2.5 ml	100 tips	
40123024	5 ml	100 tips	
40123028	10 ml	100 tips	
40123032	12.5 ml	100 tips	
40123036	25 ml	50 tips	
40123040	50 ml	25 tips	



## Precision dispenser tips, sterile, conformity certified

for Assi-Stepper

β-sterile, free of endotoxin, individually wrapped

Piston made of HDPE, cylinder made of PP

Working temperature: +15 °C/+59 °F up to +40 °C/+104 °F

	Capacity	Packing unit
40124004	0.1 ml	100 tips
40124008	0.5 ml	100 tips
40124012	1.0 ml	100 tips
40124016	1.25 ml	100 tips
40124020	2.5 ml	100 tips
40124024	5 ml	100 tips
40124028	10 ml	100 tips
40124032	12.5 ml	100 tips
40124036	25 ml	25 tips
40124040	50 ml	25 tips

The precision dispenser tips (PD tips), conformity certified, CE-IVD

- meet the requirements of DIN ISO 8655
- are made of high-quality raw materials without chemical additives
- are manufactured without softening agents, lubricants or other additives.
- are available non-sterile and sterile/free of endotoxin
- an adapter is available for the sizes 25 and 50 ml.





#### Adapters for dispenser tips 25 and 50 ml, non-sterile

Polypropylene, autoclavable

**40125010** Packing: 10 pieces/box



Polypropylene, autoclavable, individually wrapped **40126010** Packing: 5 pieces

## **Digital Burettes and Accessories**

"Contiburette µ 10", CE, without motor

Conformity certified up to 100 ml, with thread connection A 32, without bottle
Complete with

- discharge tube, bent
- suction tube
- 2 additional thread adapters A 45 and A 40
- directions for use

Continuous supply and measurement in the most common volume range from 0.01 up to 100 ml - using only one device.

It is possible to titrate even larger volumes up to max. 9999.99 ml.

- can be calibrated
- electronic measuring system
- liquid supplied is indicated to two decimal places
- minimal setting units 10 μl
- no glass piston, no valves, minimal dead volume
- self-venting, measuring errors due to trapped gas or air bubbles are being avoided
- mechanical parts made of highly acid-resistant aluminium oxide (99.7 Al<sub>2</sub>O<sub>3</sub>)
- free rotatable on the bottle
- including two batteries AA 1.5 V for approx. 500 operating hours

	Temperature range	Dimensions	Weight
40210010	+10 +40 °C / +50 +104 °F	approx. 170 x 96 x 60 mm	approx. 360 g



Conformity certified up to 100 ml, with thread connection A 32, without bottle, with plug-in power supply

Features like no. 40210010

Temperature range	Supply quantity	Dimensions
<b>40212010</b> +10 +40 °C / +50 +104	approx. 15 ml per	approx. 170 x 96 x 60
°F	minute	mm





#### Spare discharge tube made of PTFE

**40210020** for no. 40210010 and 40212010



## **Dispenser Digital and Variable**

#### Dispenser digital

# Type "Easy Calibration", conformity certified, with standard valve, without bottle

Safety is a key aspect of the bottle-top dispenser:

- No risk of spilling because the dispenser is screwed directly onto the reagent bottle (thread adapters are included – additional adapters are available).
- No contact with aggressive media because the wetted piston is fully coated even in lifted condition.
- The discharge tube is made of FEP, with integrated valve.
- The bottle label is always visible because of movable discharge tube.
- · Connection facility for drying tube.
- High precision by means of precisely ground cylinders made of borosilicate glass, precision valves, exact and easily readable digital display.
- Volume steplessly adjustable
- Universal fields of application in the entire laboratory field of medicine, chemistry, microbiology, industry, water management, schools and universities etc.
- not suitable for hydrofluoric acid, fluorine compounds, strong alkaline solutions.
- The device can be sterilised up to +121 °C (+249.8 °F), 2 har
- with thread A 45, FEP filling tube, FEP discharge tube, bent, and directions for use.

Coefficient of variation ≤ 0.1 %, accuracy ≤ ± 0.6 %

	Division	Capacity	with thread adapter
40173002	0.01 ml	0.2-2 ml	A 25 A 28 A 32 A 38 S 40
40173005	0.02 ml	0.5-5 ml	A 25 A 28 A 32 A 38 S 40
40173010	0.05 ml	1.0-10 ml	A 25 A 28 A 32 A 38 S 40
40173025	0.10 ml	2.5-25 ml	A 32 A 38 S 40
40173050	0.20 ml	5.0-50 ml	A 32 A 38 S 40







## Dispenser variable

## Conformity certified, with standard valve, without bottle

Description see dispenser digital no. 40173...

		•			
	D	0 '1	20.00	Coefficient of	
	Division	Capacity	with thread adapter	variation	Accuracy
40183006	0.01 ml	0.05-0.5 ml	A 22 A 25 A 28 A 32	≤ 0.2 %	≤±1.0%
40183012	0.05 ml	0.2-2 ml	A 25 A 28 A 32 A 38 S 40	≤ 0.1 %	≤±0.6%
40183018	0.1 ml	0.5-5 ml	A 25 A 28 A 32 A 38 S 40	≤ 0.1 %	≤±0.6%
40183024	0.2 ml	1.0-10 ml	A 25 A 28 A 32 A 38 S 40	≤ 0.1 %	≤±0.6%
40183030	0.5 ml	2.5-25 ml	A 32 A 38 S 40	≤ 0.1 %	$\leq \pm~0.6~\%$
40183036	1.0 ml	5.0-50 ml	A 32 A 38 S 40	≤ 0.1 %	$\leq$ $\pm$ 0.6 %
40183042	1.0 ml	10-100 ml	A 32 A 38 S 40	≤ 0.1 %	$\leq$ ± 0.6 %



## Accessories for dispensers no. 40173... and no. 40183...

## SafetyPrimeTM venting valve for venting bubble-free

for updating the dispensers with standard valve

**40175010** for dispensers 1-100 ml



## Discharge tubes made of FEP with integrated valve

with safety screw cap

	for dispensers	Length
40187001	1, 2, 5, 10 ml	90 mm
40187002	25, 50, 100 ml	120 mm
40187011	0.5 ml	90 mm
40187012	25, 50, 100 ml	120 mm

40187012 and 40187011 with fine tip



## Discharge tubing made of PTFE, flexible

**40188001** for 1, 2, 5, 10 ml **40188002** for 25, 50, 100 ml



## Thread bottles, amber glass

with screw cap made of polypropylene Resistant to steam sterilisation up to +121 °C/+249.8 °F

	Capacity	Thread	Pattern
40190018	250 ml	A 32 mm	square
40190024	500 ml	A 32 mm	square
40190030	1000 ml	A 45 mm	square
40190036	2500 ml	A 45 mm	round



## **Thread adapters**

	Outside thread	for bottle thread	Material
40193004	32 mm	A 22	Polypropylene
40193008	32 mm	A 25	Polypropylene
40193012	32 mm	A 28	Polypropylene
40193016	32 mm	A 30	Polypropylene
40193020	45 mm	A 32	Polypropylene
40193028	32 mm	A 45	Polypropylene
40193032	32 mm	A 25	ETFE
40193036	32 mm	A 28	ETFE
40193040	45 mm	A 38	ETFE
40193044	32 mm	A 45	ETFE
40193048	32 mm	S 40	Polypropylene
40193052	45 mm	S 40	Polypropylene



## Adapters for standard grounds

made of polypropylene, thread outside 32 mm

40194019with joint size 19/2640194024with joint size 24/2940194029with joint size 29/32









#### Filling tubes made of FEP

Length individually adjustable

	for dispensers	Length
40199002	0.5 - 10 ml	125-240 mm
40199003	0.5 - 10 ml	195-350 mm
40199004	25 - 100 ml	250-480 mm



## **Multichannel Pipette**

#### CF

Conformity certified, variable with digital display and 8 channels, for precise and safe pipetting of liquids

The operation principle is air displacement in the range of 50 to 300  $\mu$ l in steps of 5  $\mu$ l.

Highest quality, technical perfection and light weight are the main features of this pipette, which is suitable for all microtitration techniques.

It offers excellent results in precision and accuracy. The tips can be attached easily with a new tip cone construction.

	Division	Capacity	Precision	Accuracy
40120010	5 μΙ	50-300 µl	< 0.5 % to < 0.8 %	< 1.0 % to < 1.5 %



## Special tips made of polypropylene, CE

300  $\mu$ l, for no. 40120010, autoclavable at +121 °C/+249.8 °F

**40120001** Packing: 96 pieces/tray rack **40120002** Packing: 1000 pieces/box





# Volumetric Instruments and Accessoires

# Assistent

## **VOLUMETRIC INSTRUMENTS AND ACCESSORIES**

## Certificates for instruments, conformity certified

#### Load certificate and single certificate

#### **Batch** certificate

Our conformity certified volumetric glass instruments are furnished with a batch marking. Every complete packaging unit comes with a test certificate.

The test certificate contains information about test object, measuring conditions, average value and standard deviation among other things.

The batch certificate can be requested subsequently. Therefore we need article and batch number.

The batch number is made up of production year followed by the batch, e.g. 16.3

#### Individual certificate of performance

The delivery of volumetric glass instruments with individual certificate of performance is possible on request. The volumetric glass instrument gets an individual number. The number is attached to the volumetric glass instrument in addition to the batch number and is contained in the individual certificate of performance, e.g. 16.3 0024.

Further information in the individual certificate of performance: Information about test object, ascertained weigh value, measuring conditions.

# Volumetric instruments in compliance with USP (United States Pharmacopeia)

Our volumetric instruments are manufactured according to current DIN EN ISO standards. Do you require volumetric instruments which comply with the standards of USP? We manufacture volumetric instruments with the error limits corresponding to the ASTM standards, which current USP describes in Chapter 31. The measurements of ungraduated volumetric glass instruments meet the current DIN EN ISO standards; error limits specified in the ASTM standards are observed when adjusting. One batch certificate, with which we confirm the compliance with ASTM standards, is supplied per packing unit. Normally the production takes place order-related.

#### Volumetric instruments with DAkkS calibration certificate

Our volumetric instruments can be delivered with DAkkS calibration certificate upon request.

The volumetric glass instruments are checked by an external DAkkS testing laboratory. The testing laboratory issues the calibration certificate. The volumetric glass instruments get an individual serial number for identification.



Order numbers for volumetric instruments with certificate using the example of a volumetric pipette, conformity certified, 10 ml:

**Batch certificate:** 42556**0**52 - Number remains,

batch certificate comes with every

PU

Individual certificate of performance: 42556**6**52 – 3rd position righthand changes from 0 to 6 USP batch certificate: 42556**4**52 – 3rd position

righthand changes from 0 to 4 42556**8**52 – 3rd position

righthand changes from 0 to 8



#### **Burettes**

are manufactured according to DIN EN ISO 385.

#### Accuracy classes

- Conformity certified

in accordance with class AS, waiting time: 30 s, short delivery times Graduation with ring marks at main points.
Conformity mark and batch number are printed on each burette. A

batch certificate is included in each original packing.

#### - Standard type

Higher accuracy than standard / class B

Tolerance: 1.5 times of the official tolerance of class AS Short line graduation

No waiting time is claimed for class B according to the standard.

#### Calibration

Burettes are calibrated to deliver (marked "Ex").

#### Stopcocks

straight and lateral - with interchangeable standard ground plugs and reliable retaining devices;

strong quality, reinforced joints, calibrated faceted tips

#### Micro burettes

#### according to Bang

Standard type, with lateral stopcock with interchangeable plug, Schellbach stripe and stable plexiglas® base, fused blue graduation "ASSISTENT-PERMANENT", short line graduation, calibrated to deliver (Ex)

Each in a box.

Stopcocks are available with PTFE plug or safety needle valve stopcock with spindle on request.

	Division	Tolerance	Capacity	
40521008	0.01 ml	0.015 ml	2 ml	
40521012	0.02 ml	0.015 ml	5 ml	
40521016	0.02 ml	0.03 ml	10 ml	





## Micro burettes for use with a stand

for use with a stand, standard type, with straight stopcock with interchangeable plug and Schellbach stripe, fused blue graduation "ASSISTENT-PERMANENT", short line graduation, calibrated to deliver (Ex) Each in a box.

Stopcocks are available with PTFE plug or safety needle valve stopcock with spindle on request.

	Division	Tolerance	Capacity	
40523008	0.01 ml	0.015 ml	2 ml	
40523012	0.02 ml	0.015 ml	5 ml	
40523016	0.02 ml	0.03 ml	10 ml	



#### Accessories for burettes

#### **Burette tips**

AR-Glas® (soda glass), with rubber tubing, for burettes with tubing connection

**40780009** Length approx. 60 mm







# Burettes with Schellbach stripe, DURAN® borosilicate glass 3.3

#### with straight stopcock with glass plug

Standard type, within 1.5 times of the official tolerance of class AS, short line graduation, short delivery time, fused blue graduation "ASSISTENT-PERMANENT"

	Division	Tolerance	Capacity
40791015	0.02 ml	0.030 ml	10 ml
40791022	0.05 ml	0.045 ml	25 ml
40791025	0.1 ml	0.075 ml	25 ml
40791050	0.1 ml	0.075 ml	50 ml

#### with straight stopcock with glass plug, conformity certified

Graduation with ring marks at main points, delivery time 35-45 s Available with individual certificate of performance, USP batch certificate or DAkkS calibration certificate. Please indicate the request in your order! (see chapter beginning)

	Division	Tolerance	Capacity
40791715	0.02 ml	0.020 ml	10 ml
40791722	0.05 ml	0.030 ml	25 ml
40791750	0.1 ml	0.050 ml	50 ml



# Burettes with Schellbach stripe, DURAN® borosilicate glass 3.3, with lateral stopcock with glass plug, conformity certified

Graduation with ring marks at main points, delivery time 35-45 s Available with individual certificate of performance, USP batch certificate or DAkkS calibration certificate. Please indicate the request in your order! (see chapter beginning)

	Division	Tolerance	Capacity
40792715	0.02 ml	0.020 ml	10 ml
40792722	0.05 ml	0.030 ml	25 ml
40792750	0.1 ml	0.050 ml	50 ml



## with straight stopcock with PTFE plug

Standard type, within 1.5 times of the official tolerance of class AS, short line graduation, short delivery time, fused blue graduation "ASSISTENT-PERMANENT"

	Tolerance	Division	Capacity	
40793022	0.045 ml	0.05 ml	25 ml	
40793025	0.075 ml	0.1 ml	25 ml	
40793050	0.075 ml	0.1 ml	50 ml	







# Burettes with Schellbach stripe, DURAN® borosilicate glass 3.3, with straight stopcock with PTFE plug, conformity certified

Graduation with ring marks at main points Delivery time 35-45 s

Available with individual certificate of performance, USP batch certificate or DAkkS calibration certificate. Please indicate the request in your order! (see chapter beginning)

	Division	Tolerance	Capacity
40793715	0.02 ml	0.020 ml	10 ml
40793722	0.05 ml	0.030 ml	25 ml
40793750	0.1 ml	0.050 ml	50 ml



## with safety needle valve stopcock and PTFE spindle

Standard type, within 1.5 times of the official tolerance of class AS, short line graduation, short delivery time, fused blue graduation "ASSISTENT-PERMANENT"

	Division	Tolerance	Capacity
40795015	0.02 ml	0.030 ml	10 ml
40795022	0.05 ml	0.045 ml	25 ml
40795025	0.1 ml	0.075 ml	25 ml
40795050	0.1 ml	0.075 ml	50 ml



# Burettes with Schellbach stripe, DURAN® borosilicate glass 3.3, with safety needle valve stopcock, PTFE spindle, conformity certified

Graduation with ring marks at main points, delivery time 35-45 s Available with individual certificate of performance, USP batch certificate or DAkkS calibration certificate. Please indicate the request in your order! (see chapter beginning)

	Division	Tolerance	Capacity	
40795715	0.02 ml	0.020 ml	10 ml	
40795722	0.05 ml	0.030 ml	25 ml	
40795750	0.1 ml	0.050 ml	50 ml	



# Burettes, amber glass, DURAN® borosilicate glass 3.3

## with straight stopcock and glass plug

Standard type, within 1.5 times of the official tolerance of class AS, short line graduation, short delivery time, fused white graduation "ASSISTENT-PERMANENT"

	Tolerance	Capacity	
40811025	0.075 ml	25 ml : 0.1	
40811050	0.100 ml	50 ml · 0 1	







#### with lateral stopcock and glass plug

Standard type, within 1.5 times of the official tolerance of class AS, short line graduation, short delivery time, fused white graduation "ASSISTENT-PERMANENT"

	Tolerance	Capacity
40812025	0.075 ml	25 ml : 0.1
40812050	0.100 ml	50 ml : 0.1



#### **Schilling burettes**

## Automatic burette according to Dr. Schilling

Standard type, tolerance 1.5 times of the official tolerance of class AS

- improved special pinch cock with titration screw for precise regulation
- Plastic burette clamp, chemical-resistant, allows discharge drop by drop by slightly pushing
- Storage bottles made of polyethylene, with plastic base, filling of the burette by slightly pressing the bottle, in doing so automatic zero point adjustment
- · Plastic tubing as riser
- Upper part of the burette is closed, design like the Pellet titration burette; thus soiling is being avoided
- Burette with Schellbach stripe and fused graduation "ASSISTENT-PERMANENT", calibrated, faceted outlet tip

#### Spare parts:

- Base no. 40823001 or 40823002
- Bottle
- Burette no. 40821...
- Clamp
- Discharge tubing, natural rubber
- Filling tubing made of PVC

	Division	Tolerance	Capacity	Bottle capacity
40820005	0.05 ml	0.050 ml	5 ml	500 ml
40820010	0.05 ml	0.050 ml	10 ml	500 ml
40820015	0.1 ml	0.100 ml	15 ml	500 ml
40820025	0.1 ml	0.100 ml	25 ml	1000 ml
40820050	0.1 ml	0.100 ml	50 ml	1000 ml



#### Spare burettes for no. 40820...

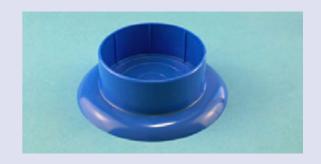
Standard type, tolerance 1.5 times of the official tolerance of class

	Division	Tolerance	Capacity
40821005	0.05 ml	0.050 ml	5 ml
40821010	0.05 ml	0.050 ml	10 ml
40821015	0.1 ml	0.100 ml	15 ml
40821025	0.1 ml	0.100 ml	25 ml
40821050	0.1 ml	0.100 ml	50 ml



## Base made of polyethylene (HDPE) for no. 40820...

40823001 suitable for plastic bottles of 500 ml 40823002 suitable for plastic bottles of 1000 ml



## Burettes DURAN® borosilicate glass 3.3, clear glass with tubing connection

3		
	Division	(
40796015	0.02 ml	1

	Division	Capacity
40796015	0.02 ml	10 ml
40796022	0.05 ml	25 ml
40796025	0.10 ml	25 ml
40796050	0.10 ml	50 ml



#### with straight stopcock

	Division	Capacity	
40797015	0.02 ml	10 ml	
40797022	0.05 ml	25 ml	
40797025	0.10 ml	25 ml	
40797050	0.10 ml	50 ml	







#### with lateral stopcock

	Division	Capacity
40798015	0.02 ml	10 ml
40798022	0.05 ml	25 ml
40798025	0.10 ml	25 ml
40798050	0.10 ml	50 ml



## with straight stopcock with PTFE plug

	Division	Capacity
40799015	0.02 ml	10 ml
40799022	0.05 ml	25 ml
40799025	0.10 ml	25 ml
40799050	0.10 ml	50 ml



## **Burette stopcocks**

## Straight, soda-lime glass

with interchangeable standard ground plug, ground joint size 12.5, bore 2 mm  $\emptyset$ 

**41550010** with glass plug **41550020** with PTFE plug



## Straight, DURAN® borosilicate glass 3.3

with interchangeable standard ground plug, ground joint size 12.5, bore 2 mm  $\emptyset$ 

**41551010** with glass plug **41551020** with PTFE plug



#### Burette stopcocks, lateral, soda-lime glass

with interchangeable standard ground plug, ground joint size 12.5, bore 2 mm  $\emptyset$ 

**41552010** with glass plug



#### Lateral, DURAN® borosilicate glass 3.3

with interchangeable standard ground plug, ground joint size 12.5, bore 2 mm  $\emptyset$ 

**41553010** with glass plug



#### Safety needle valve stopcock, lateral, AR-Glas® (soda glass)

with spindle made of PTFE, for burettes

**41554010** Bore 2.5 mm Ø



Safety needle valve stopcock, lateral, DURAN® borosilicate glass 3.3

with spindle made of PTFE, for burettes

**41555010** Bore 3 mm Ø









# One-way stopcocks, DURAN® borosilicate glass 3.3

with glass plug, solid

DIN 12541, with reliable retaining device (screw thread or rubber cap)

	Bore	Outside Ø
41503002	2.5 mm	Joint size 14.5 mm
41503004	4 mm	Joint size 18.8 mm
41503006	6 mm	Joint size 21.5 mm



DIN 12541, with reliable retaining device (screw thread or rubber cap)

	Bore	Outside Ø
41504002	2.5 mm	Joint size 14.5 mm
41504004	4 mm	Joint size 18.8 mm



## One-way stopcocks, soda-lime glass

with glass plug, solid

with reliable retaining device (screw thread)

	Bore	Thread
41510010	2 mm	12.5



#### with plug made of PTFE

with reliable retaining device (screw thread or rubber cap)

	Bore	Thread
41511010	2 mm	12.5



# Two-way stopcocks (patent stopcocks), DURAN® borosilicate glass.3.3

#### with glass plug, solid

with double oblique bore, with reliable retaining device (screw thread)

	Bore	Thread
41522010	2.5 mm	14.5



## with plug made of PTFE

with double oblique bore, with reliable retaining device

	Bore	Thread
41523010	2.5 mm	14.5



### Stopcock grease

### Silicone stopcock grease

Medium viscosity, excellent heat and cold resistance without considerable change of the consistency between -50 °C/-58 °F and +150 °C/+302 °F

**41480035** 35 g tube



### **Accessories for Burettes**

### Burette stands, base approx. 18 x 10 cm

made of steel

**40860010** Rod approx. 450 x 10 mm Ø



### Burette stands, base approx. 21 x 13 cm

made of steel

**40861010** Rod approx. 750 x 12 mm Ø **40861020** Rod approx. 1000 x 12 mm Ø

### Bossheads, double

made of zinc die cast

**40862020** for rods up to 16 mm Ø



### Universal bossheads, double

made of zinc die cast, revolvable **40863010** for rods up to 20 mm Ø









**Clamps** 

made of zinc die cast, without bosshead, with round jaws Handle (hollow) approx. 150 x 12 mm, total length 240 mm

Opening up to approx. 12 - 25 mm 40865040 Opening up to approx. 20 - 40 mm



made of zinc die cast, without bosshead, with round jaws Handle (hollow) approx. 150 x 12 mm Ø, total length 260 mm

Opening up to approx. 38 - 60 mm



### Rings without bosshead

made of malleable iron

Handle (hollow) approx. 180 x 12 mm Ø

	Inside Ø	Outside Ø
40868007	approx. 50 mm	approx. 70 mm
40868010	approx. 80 mm	approx. 100 mm
40868013	approx. 110 mm	approx. 130 mm



#### Rings with bosshead

made of malleable iron, for rods up to 16 mm Ø

	Inside Ø	Outside Ø
40869007	approx. 50 mm	approx. 70 mm
40869010	approx. 80 mm	approx. 100 mm
40869013	approx. 110 mm	approx. 130 mm



### **Burette clamps for one burette**

made of zinc die cast, with bosshead Opening up to approx. 20 mm

40870010 for rods up to 13 mm Ø



### **Burette clamps for two burettes**

made of zinc die cast, with bosshead Opening up to approx. 20 mm

for rods up to 13 mm Ø 40871010



### **Condenser clamps**

made of malleable iron, without bosshead, revolving **40875010** Opening up to approx. 65 mm





### **Volumetric Flasks**

are manufactured in accordance with DIN EN ISO 1042.

#### Accuracy classes

- Conformity certified in accordance with class A

Conformity mark and batch number are printed on each volumetric flask. A batch certificate is included in each original packing.

- Standard type

Higher accuracy than standard / class B

Tolerance: 1.5 times of the official tolerance of class A

#### Calibration

Volumetric flasks are calibrated to contain (marked "In").

### Standard ground joint

The stopper is interchangeable.

Please order glass stoppers separately if flasks with glass stoppers are required.

# Volumetric flasks, standard type, DURAN® borosilicate glass 3.3

### without stopper, without ground

fused blue graduation "ASSISTENT-PERMANENT", with rim

	Tolerance	Capacity
42089012	0.038 ml	10 ml
42089020	0.06 ml	20 ml
42089028	0.06 ml	25 ml
42089040	0.15 ml	50 ml
42089048	0.15 ml	100 ml
42089060	0.23 ml	200 ml
42089064	0.23 ml	250 ml
42089076	0.38 ml	500 ml
42089080	0.6 ml	1000 ml
42089092	1.2 ml	3000 ml
42089096	1.8 ml	5000 ml
42089099	3.0 ml	10000 ml

 $42089099\ \mbox{in}$  addition to DIN - in conformity with the basic requirements of the standard





# $\label{thm:continuous} \mbox{Volumetric flasks, standard type, DURAN@ borosilicate glass 3.3, with standard ground joint and stopper made of polyethylene$

Tolerance 1.5 times of the official tolerance of class A, fused blue graduation "ASSISTENT-PERMANENT"

	Tolerance	Capacity	Joint size
42094004	0.038 ml	5 ml	7/16
42094008	0.06 ml	5 ml	10/19
42094012	0.038 ml	10 ml	7/16
42094016	0.06 ml	10 ml	10/19
42094020	0.06 ml	20 ml	10/19
42094024	0.09 ml	20 ml	12/21
42094028	0.06 ml	25 ml	10/19
42094032	0.09 ml	25 ml	12/21
42094036	0.09 ml	30 ml (*)	12/21
42094040	0.15 ml	50 ml	12/21
42094044	0.12 ml	50 ml	14/23
42094048	0.15 ml	100 ml	12/21
42094052	0.15 ml	100 ml	14/23
42094056	0.15 ml	150 ml (*)	14/23
42094060	0.23 ml	200 ml	14/23
42094064	0.23 ml	250 ml	14/23
42094068	0.23 ml	300 ml (*)	14/23
42094072	0.38 ml	400 ml (*)	19/26
42094076	0.38 ml	500 ml	19/26
42094080	0.6 ml	1000 ml	24/29
42094084	0.9 ml	1000 ml	29/32
42094088	0.9 ml	2000 ml	29/32
42094092	1.2 ml	3000 ml	29/32
42094096	1.8 ml	5000 ml	34/35
42094099	3.0 ml	10000 ml (*)	45/40

<sup>500</sup> ml B.

<sup>\*</sup> in addition to DIN





# Volumetric flasks, conformity certified, DURAN® borosilicate glass 3.3

### with standard ground joint and stopper made of polyethylene

Fused blue graduation "ASSISTENT-PERMANENT"

Available with individual certificate of performance, USP batch certificate or DAkkS calibration certificate. Please indicate the request in your order! (see chapter beginning)

	(	-1 3/	
	Tolerance	Capacity	Joint size
42096004	0.025 ml	5 ml	7/16
42096008	0.04 ml	5 ml (*)	10/19
42096012	0.025 ml	10 ml	7/16
42096016	0.04 ml	10 ml (*)	10/19
42096020	0.04 ml	20 ml	10/19
42096024	0.06 ml	20 ml (*)	12/21
42096028	0.04 ml	25 ml	10/19
42096032	0.06 ml	25 ml (*)	12/21
42096040	0.06 ml	50 ml	12/21
42096044	0.10 ml	50 ml (*)	14/23
42096048	0.10 ml	100 ml	12/21
42096052	0.10 ml	100 ml	14/23
42096060	0.15 ml	200 ml	14/23
42096064	0.15 ml	250 ml	14/23
42096076	0.25 ml	500 ml	19/26
42096080	0.4 ml	1000 ml	24/29
42096084	0.6 ml	1000 ml (*)	29/32
42096088	0.6 ml	2000 ml	29/32
42096096	1.2 ml	5000 ml	34/35
42096099	2.0 ml	10000 ml (*)	45/40

<sup>\*</sup> in addition to DIN



# Volumetric flasks, conformity certified, DURAN® borosilicate glass 3.3, with standard ground joint, without stopper

Fused blue graduation "ASSISTENT-PERMANENT" Available with individual certificate of performance, USP batch certificate or DAkkS calibration certificate. Please indicate the request in your order! (see chapter beginning)

request in you	request in your order: (see chapter beginning)			
	Tolerance	Capacity	Joint size	
42097004	0.025 ml	5 ml	7/16	
42097008	0.04 ml	5 ml	10/19	
42097012	0.025 ml	10 ml	7/16	
42097016	0.04 ml	10 ml (*)	10/19	
42097020	0.04 ml	20 ml	10/19	
42097024	0.06 ml	20 ml (*)	12/21	
42097028	0.04 ml	25 ml	10/19	
42097032	0.06 ml	25 ml (*)	12/21	
42097040	0.06 ml	50 ml	12/21	
42097044	0.10 ml	50 ml (*)	14/23	
42097048	0.010 ml	100 ml	12/21	
42097052	0.010 ml	100 ml (*)	14/23	
42097060	0.15 ml	200 ml	14/23	
42097064	0.15 ml	250 ml	14/23	
42097076	0.25 ml	500 ml	19/26	
42097080	0.4 ml	1000 ml	24/29	
42097084	0.6 ml	1000 ml (*)	29/32	
42097088	0.6 ml	2000 ml	29/32	
42097096	1.2 ml	5000 ml	34/35	
42097099	2.0 ml	10000 ml (*)	45/40	



# Amber glass, with standard ground joint and stopper made of polyethylene, conformity certified

Fused white graduation "ASSISTENT-PERMANENT" Available with individual certificate of performance, USP batch certificate or DAkkS calibration certificate. Please indicate the request in your order! (see chapter beginning)

	Tolerance	Joint size	Capacity
42102008	0.04 ml	10/19	5 ml
42102016	0.04 ml	10/19	10 ml
42102020	0.04 ml	10/19	20 ml
42102028	0.04 ml	10/19	25 ml
42102040	0.06 ml	12/21	50 ml
42102044	0.10 ml	14/23	50 ml
42102048	0.10 ml	12/21	100 ml
42102052	0.10 ml	14/23	100 ml
42102060	0.15 ml	14/23	200 ml
42102064	0.15 ml	14/23	250 ml
42102076	0.25 ml	19/26	500 ml
42102080	0.4 ml	24/29	1000 ml
42102088	0.6 ml	29/32	2000 ml



<sup>\*</sup> in addition to DIN





### Volumetric flasks for sugar analyses

DURAN® borosilicate glass 3.3, standard type, fused blue graduation "ASSISTENT-PERMANENT", without stopper, with 2 marks

**42109008** Capacity 50/55 ml **42109016** Capacity 100/110 ml



# Volumetric flasks, trapezoidal, conformity certified, DURAN® borosilicate glass 3.3

with standard ground joint and interchangeable stopper made of polyethylene, fused blue graduation "ASSISTENT-PERMANENT" The base is considerably larger than of standard volumetric flasks with same volume, thus improved stability.

Available with individual certificate of performance, USP batch certificate or DAkkS calibration certificate. Please indicate the request in your order! (see chapter beginning)

	Tolerance	Capacity	Joint size
42110006	0.025 ml	1 ml	7/16
42110012	0.025 ml	2 ml	7/16
42110018	0.025 ml	5 ml	7/16
42110024	0.025 ml	10 ml	7/16
42110030	0.04 ml	20 ml	10/19
42110036	0.04 ml	25 ml	10/19
42110042	0.06 ml	50 ml	12/21



### Overflow volumetric flasks, DURAN® borosilicate glass 3.3

for water analysis

These flasks are also available in other sizes.

	Capacity	Height approx.	
42115006	22.7 ml	7 cm	
42115012	43.5 ml	8 cm	
42115018	95 ml	8 cm	
42115024	97 ml	9.5 cm	
42115030	157 ml	11 cm	
42115036	160 ml	11 cm	
42115042	164 ml	11 cm	
42115048	250 ml	14 cm	
42115054	355 ml	13 cm	
42115060	365 ml	12.5 cm	
42115066	420 ml	13 cm	
42115072	428 ml	16.5 cm	
42115078	432 ml	15 cm	





### **Measuring Cylinders**

The measuring cylinders tall form are manufactured in accordance with DIN EN ISO 4788.

#### Accuracy classes

- Conformity certified in accordance with class A Graduation with ring marks at main points. Conformity mark and batch number are printed on each cylinder. A batch certificate is included in each original box.

- Standard type corresponding to class B, however higher accuracy Tolerance: 1.5 times of the official tolerance of class A Short line graduation

### Calibration

Measuring cylinders are calibrated to contain (marked "In")

### Measuring cylinders, tall form

### DURAN® borosilicate glass 3.3, hexagonal base

Standard type, fused blue graduation "ASSISTENT-PERMANENT"

	Division	Capacity
42170012	0.2 ml	10 ml
42170018	0.5 ml	25 ml
42170024	1 ml	50 ml
42170030	1 ml	100 ml
42170048	2 ml	250 ml
42170060	5 ml	500 ml
42170066	10 ml	1000 ml
42170072	20 ml	2000 ml





# Measuring cylinders, tall form, DURAN® borosilicate glass 3.3, hexagonal base, conformity certified

Fused blue graduation "ASSISTENT-PERMANENT" Available with individual certificate of performance, USP batch certificate or DAkkS calibration certificate. Please indicate the request in your order! (see chapter beginning)

	Division	Capacity
42172012	0.2 ml	10 ml
42172018	0.5 ml	25 ml
42172024	1 ml	50 ml
42172030	1 ml	100 ml
42172048	2 ml	250 ml
42172060	5 ml	500 ml
42172066	10 ml	1000 ml
42172072	20 ml	2000 ml



### **DURAN®** borosilicate glass 3.3, hexagonal base

Standard type, fused amber graduation "ASSISTENT-PERMANENT"

	Division	Capacity
42180006	0.1 ml	5 ml
42180012	0.2 ml	10 ml
42180018	0.5 ml	25 ml
42180024	1 ml	50 ml
42180030	1 ml	100 ml
42180048	2 ml	250 ml
42180060	5 ml	500 ml
42180066	10 ml	1000 ml
42180072	20 ml	2000 ml





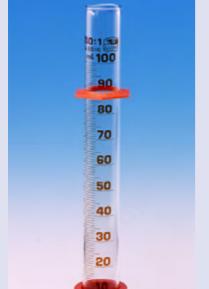


# Measuring cylinders, tall form, DURAN® borosilicate glass 3.3, hexagonal base, conformity certified

Fused amber graduation "ASSISTENT-PERMANENT"

Available with individual certificate of performance, USP batch certificate or DAkkS calibration certificate. Please indicate the request in your order! (see chapter beginning)

	Division	Capacity
42182006	0.1 ml	5 ml
42182012	0.2 ml	10 ml
42182018	0.5 ml	25 ml
42182024	1 ml	50 ml
42182030	1 ml	100 ml
42182048	2 ml	250 ml
42182060	5 ml	500 ml
42182066	10 ml	1000 ml
42182072	20 ml	2000 ml



# AR-Glas® (soda glass), with interchangeable hexagonal base and protecting ring made of polyethylene (HDPE)

Standard type, fused amber graduation "ASSISTENT-PERMANENT", base and protecting ring alkali- and acid-resistant, resistant to temperatures up to +120 °C/+248 °F

	Division	Capacity
42190012	0.2 ml	10 ml
42190018	0.5 ml	25 ml
42190024	1 ml	50 ml
42190030	1 ml	100 ml
42190048	2 ml	250 ml
42190060	5 ml	500 ml
42190066	10 ml	1000 ml

42190066 made of borosilicate glass 3.3



### Measuring cylinders, tall form, AR-Glas® (soda glass), circular base

Standard type, fused amber graduation "ASSISTENT-PERMANENT". Tolerance 1.5 times of the official tolerance of class A

	Division	Capacity
42200006	0.1 ml	5 ml
42200012	0.2 ml	10 ml
42200018	0.5 ml	25 ml
42200024	1 ml	50 ml
42200030	1 ml	100 ml
42200036	2 ml	150 ml
42200042	2 ml	200 ml
42200048	2 ml	250 ml
42200060	5 ml	500 ml (*)
42200066	10 ml	1000 ml (*)
42200072	20 ml	2000 ml (*)

<sup>\*</sup> with hexagonal base



### Tall form

for hydrometers, alcoholmeters etc. for DIN EN ISO 4788 (except 15 ml, 60 ml, 150 ml, 200 ml)

	Height	Outside Ø	Capacity
44400006	approx. 115 mm	approx. 14 mm	approx. 5 ml
44400012	approx. 140 mm	approx. 14 mm	approx. 10 ml
44400015	approx. 110 mm	approx. 19 mm	approx. 15 ml
44400018	approx. 170 mm	approx. 19 mm	approx. 25 ml
44400024	approx. 200 mm	approx. 24 mm	approx. 50 ml
44400026	approx. 175 mm	approx. 28 mm	approx. 60 ml
44400030	approx. 260 mm	approx. 29 mm	approx. 100 ml
44400036	approx. 210 mm	approx. 39 mm	approx. 150 ml
44400042	approx. 265 mm	approx. 39 mm	approx. 200 ml
44400048	approx. 335 mm	approx. 39 mm	approx. 250 ml
44400060	approx. 390 mm	approx. 48 mm	approx. 500 ml (*)
44400066	approx. 440 mm	approx. 65 mm	approx. 1000 ml (*)
44400072	approx. 490 mm	approx. 85 mm	approx. 2000 ml (*)

<sup>\*</sup> with hexagonal base







#### Low form

for DIN EN ISO 4788 (except 150 ml, 200 ml and 300 ml)

	Outside Ø	Capacity	Height
44401006	approx. 17 mm	approx. 5 ml	approx. 80 mm
44401012	approx. 20 mm	approx. 10 ml	approx. 100 mm
44401018	approx. 24 mm	approx. 25 ml	approx. 125 mm
44401024	approx. 29 mm	approx. 50 ml	approx. 150 mm
44401030	approx. 39 mm	approx. 100 ml	approx. 170 mm
44401036	approx. 48 mm	approx. 150 ml	approx. 170 mm
44401042	approx. 48 mm	approx. 200 ml	approx. 195 mm
44401048	approx. 48 mm	approx. 250 ml	approx. 225 mm (higher than DIN)
44401054	approx. 48 mm	approx. 300 ml	approx. 290 mm
44401060	approx. 65 mm	approx. 500 ml	approx. 255 mm
44401066	approx. 80 mm	approx. 1000 ml	approx. 295 mm
44401072	approx. 105 mm	approx. 2000 ml	approx. 345 mm

### **Measuring Cylinders**

Measuring cylinders low form are manufactured in accordance with DIN EN ISO 4788.

### Accuracy class

Standard type

Accuracy according to standard / class B Short line graduation

### Calibration

Measuring cylinders are calibrated to contain (marked "In")

### Measuring cylinders, low form

### with circular base

AR-Glas® (soda glass), standard type, fused amber graduation "ASSISTENT-PERMANENT"

	Tolerance	Division	Capacity
42205006	0.1 ml	0.5 ml	5 ml
42205012	0.2 ml	1 ml	10 ml
42205018	0.5 ml	1 ml	25 ml
42205024	1 ml	2 ml	50 ml
42205030	1 ml	2 ml	100 ml
42205036	2 ml	5 ml	150 ml
42205042	2 ml	5 ml	200 ml
42205048	2 ml	5 ml	250 ml
42205060	5 ml	10 ml	500 ml
42205066	10 ml	20 ml	1000 ml
42205072	20 ml	50 ml	2000 ml





## Measuring cylinders, low form, with interchangeable hexagonal plastic base and protecting ring made of polyethylene (HDPE)

AR-Glas® (soda glass), standard type, fused amber graduation "ASSISTENT-PERMANENT", base and protecting ring alkali-resistant and acid-proof, resistant to temperatures up to +120 °C / +248 °F

	Tolerance	Division	Capacity
42206012	0.2 ml	1 ml	10 ml
42206024	1 ml	2 ml	50 ml
42206030	1 ml	2 ml	100 ml
42206048	2 ml	5 ml	250 ml
42206060	5 ml	10 ml	500 ml



### **Mixing Cylinders**

are manufactured in accordance with DIN EN ISO 4788.

#### **Accuracy class**

Standard type

Higher accuracy than standard / class B

Tolerance: 1.5 times of the official tolerance of class A

Short line graduation

#### Calibration

Mixing cylinders are calibrated to contain (marked "In")

### Standard type

## AR-Glas® (soda glass), circular base, with stopper made of polyethylene

Fused amber graduation "ASSISTENT-PERMANENT"

	Division	Capacity	Joint size
42210012	0.2 ml	10 ml	10/19
42210018	0.5 ml	25 ml	14/23
42210024	1 ml	50 ml	19/26
42210030	1 ml	100 ml	24/29
42210048	2 ml	250 ml	29/32



# AR-Glas® (soda glass), with interchangeable hexagonal base and protecting ring made of polyethylene (HDPE), with stopper made of polyethylene

Fused amber graduation "ASSISTENT-PERMANENT", base and protecting ring acid-proof and alkali-resistant, temperature-resistant up to +120  $^{\circ}\text{C}/+248~^{\circ}\text{F}$ 

	Division	Joint size	Capacity
42211018	0.5 ml	14/23	25 ml
42211024	1 ml	19/26	50 ml
42211030	1 ml	24/29	100 ml
42211048	2 ml	29/32	250 ml
42211060	5 ml	34/35	500 ml







### Sperm cylinders with funnel top, CE

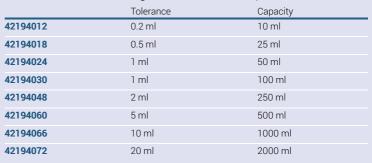
Clear glass, with approximate scale, fused amber graduation "ASSISTENT-PERMANENT"
Total height approx. 90 mm

**42220010** Division 10 ml: 1 ml



### made of polypropylene, hexagonal base, tall form, blue graduation

DIN 12681 and ISO 6706, graduation resistant up to +60 °C/+140 °F







# Measuring cylinders made of polypropylene, hexagonal base, tall form, embossed scale

DIN 12681 and ISO 6706, sterilisable at +121  $^{\circ}$ C/+249.8  $^{\circ}$ F

	Tolerance	Capacity
42195012	0.2 ml	10 ml
42195018	0.5 ml	25 ml
42195024	1 ml	50 ml
42195030	1 ml	100 ml
42195048	2 ml	250 ml
42195060	5 ml	500 ml
42195066	10 ml	1000 ml
42195072	20 ml	2000 ml



# Measuring cylinders, plastic, made of polymethylpentene (PMP), hexagonal base, tall form, embossed scale

DIN 12681 and ISO 6706, clear, sterilisable at +121 °C/+249.8 °F

	Tolerance	Capacity
42196012	0.2 ml	10 ml
42196018	0.5 ml	25 ml
42196024	1 ml	50 ml
42196030	1 ml	100 ml
42196048	2 ml	250 ml
42196060	5 ml	500 ml
42196066	10 ml	1000 ml
42196072	20 ml	2000 ml







### made of polypropylene, circular base, low form, embossed scale

Transparent, resistant up to +80 °C/+176 °F

	Tolerance	Capacity
42208018	0.5 ml	25 ml
42208024	1 ml	50 ml
42208030	2 ml	100 ml
42208048	5 ml	250 ml
42208060	10 ml	500 ml
42208066	20 ml	1000 ml



# with spout and handle made of glass, with scale

Height approx. 230 mm

 Capacity
 Outside Ø

 42281066
 approx. 1 litre
 approx. 90 mm

 42281072
 approx. 2 litres
 approx. 127 mm



### made of polypropylene, with scale

Transparent (urine measuring jugs)

	Division	Capacity
42283024	2 ml	50 ml
42283030	2 ml	100 ml
42283048	5 ml	250 ml
42283060	10 ml	500 ml
42283066	20 ml	1000 ml
42283072	50 ml	2000 ml
42283078	50 ml	3000 ml
42283084	100 ml	5000 ml





## Measuring jugs with spout and handle made of polypropylene, with scale

Embossed scale, high clarity, ergonomic handle for secure grip, functional spout to minimise spills, suitable for microwave Autoclavable up to +121 °C/+249.8 °F (2 bar), maximum temperature +125 °C/+257 °F

	Division	Max. Ø	Capacity	Height
42284024	2 ml	40 mm	50 ml	70 mm
42284030	2 ml	50 mm	100 ml	80 mm
42284048	5 ml	74 mm	250 ml	120 mm
42284060	10 ml	95 mm	500 ml	140 mm
42284066	20 ml	117 mm	1000 ml	181 mm
42284072	50 ml	152 mm	2000 ml	213 mm
42284078	50 ml	172 mm	3000 ml	242 mm
42284084	100 ml	204 mm	5000 ml	270 mm



### **Measuring Jugs**

### Conical, polypropylene

Transparent, embossed scale, round base, autoclavable

	Capacity	Division	Height
42255042	100 ml	2 ml	approx. 120 mm
42255048	250 ml	5 ml	approx. 160 mm
42255054	500 ml	10 ml	approx. 180 mm
42255060	1000 ml	20 ml	approx. 270 mm



### Bell shape

Clear glass, graduated

	Division	Capacity
42260006	1 ml	5 ml
42260012	1 ml	10 ml
42260018	1 ml	15 ml
42260024	1 ml	25 ml
42260030	1 ml	30 ml
42260036	2 ml	50 ml









### according to Gay-Lussac with ground-in stopper, unadjusted

42570008	Capacity 5 cm <sup>3</sup>
42570016	Capacity 10 cm <sup>3</sup>
42570024	Capacity 25 cm³
42570032	Capacity 50 cm <sup>3</sup>
42570040	Capacity 100 cm <sup>3</sup>



### according to Gay-Lussac with ground-in stopper, precisely adjusted

42571008	Capacity 5 cm³
42571016	Capacity 10 cm <sup>3</sup>
42571024	Capacity 25 cm³
42571032	Capacity 50 cm <sup>3</sup>
42571040	Capacity 100 cm <sup>3</sup>



# according to Gay-Lussac with ground-in stopper, precisely adjusted up to three decimal places

42571308	Capacity 5 cm³
42571316	Capacity 10 cm <sup>3</sup>
42571324	Capacity 25 cm <sup>3</sup>
42571332	Capacity 50 cm <sup>3</sup>
42571340	Capacity 100 cm <sup>3</sup>



### Pycnometers with ground-in thermometer, precisely adjusted

Side capillary with ground-on cap joint size 7.5 Flask of Erlenmeyer form, thermometer ground joint size 10/19, blue filling, +10 °C + 35 °C/+50 °F +95 °F: 0.2

 42572016
 Capacity 10 cm³

 42572024
 Capacity 25 cm³

 42572032
 Capacity 50 cm³

 42572040
 Capacity 100 cm³



# with ground-in thermometer, precisely adjusted up to three decimal places

Side capillary with ground-on cap joint size 7.5 Flask of Erlenmeyer form, thermometer ground joint size 10/19, blue filling,  $+10 \, ^{\circ}\text{C} + 35 \, ^{\circ}\text{C} / +50 \, ^{\circ}\text{F} + 95 \, ^{\circ}\text{F} : 0.2$ 

 42572308
 Capacity 5 cm³

 42572316
 Capacity 10 cm³

 42572324
 Capacity 25 cm³

 42572332
 Capacity 50 cm³

 42572340
 Capacity 100 cm³

### **Demeter pipettes (Diluting pipettes)**

DIN 12838 and DIN 12839, soda glass, with ring marks, fused amber graduation "ASSISTENT-PERMANENT", calibrated for blowing out up to 1 ml, other marks calibrated to deliver (Ex), length approx. 25 cm

	Tolerance	Marks at
42574001	0.05/0.005 ml	1.0/1.1 ml
42574002	0.05/0.05/0.005 ml	0.5/1.0/1.1 ml
42574004	0.05/0.05/0.005/0.005 ml	1.0/2.0/2.1/2.2 ml





### **Measuring Pipettes**

are manufactured in accordance with DIN EN ISO 835.

#### Accuracy classes

- Conformity certified

in accordance with class AS, waiting time: 5 s, short delivery times Graduation with ring marks at main points Conformity mark and batch number are printed on each pipette. A batch certificate is included in each original box.

### - Standard type

Higher accuracy than standard / class B.
Tolerance: 1.5 times of the official tolerance of class AS
No waiting time is claimed for class B according to the standard.

#### Calibration

Calibrated to deliver (marked "Ex"): for volumes from 0.5 ml Calibrated to contain (marked "In"): for volumes of 0.1 and 0.2 ml

### Standard type

### made of polypropylene

Calibrated to deliver "Ex", resistant to breakage. Exposure to temperature up to +60 °C/+140 °F will not cause permanent exceeding of error limits.

Cleaning temperature below +60 °C/+140 °F recommended to preserve marks and inscriptions.

Suction tube outside max. 8 mm Ø

	Division	Capacity	Length	Error limit
42525020	0.1 ml	1 ml	300 mm ± 10 mm	± 0.02 ml
42525028	0.1 ml	2 ml	300 mm ± 10 mm	± 0.02 ml
42525040	0.01 ml	5 ml	330 mm ± 10 mm	± 0.05 ml
42525048	0.1 ml	10 ml	320 mm ± 10 mm	± 0.1 ml





# Measuring pipettes, standard type, clear glass, total delivery (calibrated up to the tip), serological pipettes

Short line graduation, standard type, tolerance 1.5 times of the official tolerance of

class AS, short delivery time, zero point at top, fused amber graduation "ASSISTENT-PERMANENT"

Packing: 10 pieces/box

	Tolerance	Division	Capacity
42539016	0.008 ml	0.01 ml	0.5 ml
42539020	0.010 ml	0.01 ml	1 ml
42539036	0.015 ml	0.02 ml	2 ml
42539040	0.045 ml	0.1 ml	5 ml
42539044	0.045 ml	0.05 ml	5 ml
42539048	0.075 ml	0.1 ml	10 ml
42539052	0.150 ml	0.1 ml	20 ml
42539056	0.150 ml	0.1 ml	25 ml
42539060	0.300 ml	0.2 ml	50 ml



# Measuring pipettes, standard model, clear glass, total delivery (calibrated up to the tip)

Short line graduation, standard type, tolerance 1.5 times of the official tolerance of

class AS, short delivery time, zero point at top, fused blue graduation "ASSISTENT-PERMANENT"

Packing: 10 pieces/box

	Division	Tolerance	Capacity
42540004	0.001 ml	0.0015 ml	0.1 ml
42540008	0.001 ml	0.003 ml	0.2 ml
42540016	0.01 ml	0.008 ml	0.5 ml
42540020	0.01 ml	0.010 ml	1 ml
42540036	0.02 ml	0.015 ml	2 ml
42540040	0.1 ml	0.045 ml	5 ml
42540044	0.05 ml	0.045 ml	5 ml
42540048	0.1 ml	0.075 ml	10 ml
42540052	0.1 ml	0.150 ml	20 ml
42540056	0.1 ml	0.150 ml	25 ml
42540060	0.02 ml	0.300 ml	50 ml







### Measuring pipettes, conformity certified

### Clear glass, total delivery (calibrated up to the tip)

Graduation with ring marks at main points, short delivery time, fused amber graduation "ASSISTENT-PERMANENT", zero point at top Packing: 10 pieces/box

	Tolerance	Division	Capacity
42541016	0.005 ml	0.01 ml	0.5 ml
42541020	0.007 ml	0.01 ml	1 ml
42541036	0.01 ml	0.02 ml	2 ml
42541040	0.03 ml	0.1 ml	5 ml
42541044	0.03 ml	0.05 ml	5 ml
42541048	0.05 ml	0.1 ml	10 ml
42541052	0.1 ml	0.1 ml	20 ml
42541056	0.1 ml	0.1 ml	25 ml
42541060	0.1 ml	0.2 ml	50 ml

42541060 in addition to DIN



### Safety pipettes

### Safety measuring pipettes with interchangeable, ground-in piston

Standard type, tolerance 1.5 times of the official tolerance of class AS, fused amber graduation "ASSISTENT-PERMANENT", calibrated, fire-polished, solid tip, zero point at top Packing: Each in a solid plastic tube

	Division	Capacity
42548020	0.01 ml	1 ml
42548036	0.02 ml	2 ml
42548044	0.05 ml	5 ml
42548048	0.1 ml	10 ml
42548052	0.1 ml	20 ml
42548056	0.1 ml	25 ml



### Pipettes made of glass, ungraduated

Diameter approx. 7 mm

 42569012
 Length approx. 12 cm

 42569015
 Length approx. 15 cm

 42569020
 Length approx. 20 cm

 42569025
 Length approx. 25 cm



### **Equipment for pipettes**

Pipette holders made of Plexiglas®

with field for inscription for 12 pipettes

**42583010** Numbering 1-12



### Pipette trays made of PVC

Stackable

**42585010** Dimensions approx. 47 x 17 x 8 cm



### **Cover made of PVC**

Transparent

**42586010** for pipette tray no. 42585010



### Pipette stands made of Plexiglas®

Sloping, for measuring pipettes and volumetric pipettes, cavities approx. 17.5 mm, width approx. 123 mm

	for	Height	Length
42590006	6 pipettes	approx. 181 mm	approx. 188 mm
42590012	12 pipettes	approx. 190 mm	approx. 350 mm







Racks for pipettes, Plexiglas®

Circular, base with foam pad to protect the pipette tips

42593010 for 20 pipettes



### **Volumetric Pipettes**

are manufactured in accordance with DIN EN ISO 648. On request the pipettes are available with safety bulb.

### Accuracy classes

- Conformity certified

in accordance with class AS, waiting time: 5 s, short delivery times Conformity mark and batch number are printed on each volumetric pipette. A batch certificate is included in each original box.

- Standard type

Higher accuracy than standard / class B Tolerance: 1.5 times of the official tolerance of class AS

No waiting time is claimed for class B according to the standard.

#### Calibration

Calibrated to deliver (marked Ex)

### Standard type

#### with 1 mark

Fused amber graduation "ASSISTENT-PERMANENT"

	Tolerance	Capacity	Packing/box	
42550004	0.0075 ml	0.5 ml	10 pieces	
42550008	0.01 ml	1 ml	10 pieces	
42550016	0.015 ml	2 ml	10 pieces	
42550024	0.015 ml	3 ml	10 pieces	
42550028	0.020 ml	4 ml	10 pieces	
42550032	0.020 ml	5 ml	10 pieces	
42550036	0.020 ml	6 ml	10 pieces	
42550040	0.020 ml	7 ml	10 pieces	
42550052	0.030 ml	10 ml	10 pieces	
42550056	0.045 ml	11 ml	10 pieces	
42550064	0.045 ml	20 ml	6 pieces	
42550068	0.045 ml	25 ml	6 pieces	
42550080	0.075 ml	50 ml	6 pieces	
42550084	0.12 ml	100 ml	6 pieces	









Resistant to breakage, calibrated to deliver "Ex". Exposure to temperatures up to +60 °C/+140 °F will not cause permanent exceeding of error limits, cleaning temperature below +60 °C/+140 °F recommended to preserve marks and inscriptions

	Capacity	Length	Pattern	Error limit
42560008	1 ml	300 mm ± 10 mm	Straight	± 0.02 ml
42560016	2 ml	300 mm ± 10 mm	Straight	± 0.02 ml
42560032	5 ml	300 mm ± 10 mm	with bulb	± 0.03 ml
42560056	10 ml	440 mm ± 10 mm	with bulb	± 0.04 ml
42560068	25 ml	450 mm ± 10 mm	with bulb	± 0.06 ml
42560080	50 ml	460 mm ± 10 mm	with bulb	± 0.1 ml



### Volumetric pipettes, conformity certified

#### with 1 mar

Class AS within the official tolerance, fused amber graduation "ASSISTENT-PERMANENT"

Available with individual certificate of performance, USP batch certificate or DAkkS calibration certificate. Please indicate the request in your order! (see chapter beginning)

	Tolerance	Capacity	Packing/box
42556004	0.005 ml	0.5 ml	10 pieces
42556008	0.007 ml	1 ml	10 pieces
42556016	0.01 ml	2 ml	10 pieces
42556020	0.01 ml	2.5 ml	10 pieces
42556024	0.01 ml	3 ml	10 pieces
42556028	0.015 ml	4 ml	10 pieces
42556032	0.015 ml	5 ml	10 pieces
42556040	0.015 ml	7 ml	10 pieces
42556044	0.02 ml	8 ml	10 pieces
42556048	0.02 ml	9 ml	10 pieces
42556052	0.02 ml	10 ml	10 pieces
42556060	0.03 ml	20 ml	6 pieces
42556064	0.03 ml	20 ml	6 pieces
42556068	0.03 ml	25 ml	6 pieces
42556072	0.05 ml	40 ml	6 pieces
42556076	0.05 ml	50 ml	6 pieces
42556080	0.05 ml	50 ml	6 pieces
42556084	0.08 ml	100 ml	6 pieces



### Volumetric pipettes, conformity certified, with 2 marks

Class AS within the official tolerance, fused amber graduation "ASSISTENT-PERMANENT"

	Tolerance	Packing/box	Capacity
42557004	0.005 ml	10 pieces	0.5 ml
42557008	0.007 ml	10 pieces	1 ml
42557016	0.01 ml	10 pieces	2 ml
42557024	0.01 ml	10 pieces	3 ml
42557028	0.015 ml	10 pieces	4 ml
42557032	0.015 ml	10 pieces	5 ml
42557064	0.03 ml	6 pieces	20 ml
42557080	0.05 ml	6 pieces	50 ml





### **Automatic Burettes and Accessories**

Automatic burettes are manufactured in accordance with DIN EN ISO 385.

#### **Accuracy classes**

- Conformity certified

in accordance with class AS, waiting time: 30 s, short delivery times Graduation with ring marks at main points

Conformity mark and batch number are printed on each burette. A batch certificate is included in each original box.

#### - Standard type

Higher accuracy than standard / class B

Tolerance: 1.5 times of the official tolerance of class AS Short line graduation

No waiting time is claimed for class B according to the standard.

#### Calibration

Automatic burettes are calibrated to deliver (marked "Ex")

#### Stopcocks

straight and lateral - with interchangeable standard ground plugs and reliable retaining devices;

strong quality, reinforced joints, calibrated faceted tips

### Automatic burettes, standard type

### DURAN® borosilicate glass 3.3, with stopcock between burette and bottle

Burette with Schellbach stripe, fused blue graduation "ASSISTENT-PERMANENT"

consisting of:

- Automatic burette
- Bottle 2 I with standard ground 29/32 no. 41916054
- Rubber bulb no. 40850001

	Tolerance	Division	Capacity	Stopcock/Plug
48400022	0.045 ml	0.05 ml	25 ml	Both stopcocks with glass plug
48400025	0.075 ml	0.1 ml	25 ml	Both stopcocks with glass plug
48400050	0.075 ml	0.1 ml	50 ml	Both stopcocks with glass plug
48400122	0.045 ml	0.05 ml	25 ml	Both stopcocks with PTFE plug
48400125	0.075 ml	0.1 ml	25 ml	Both stopcocks with PTFE plug
48400150	0.075 ml	0.1 ml	50 ml	Both stopcocks with PTFE plug
48400322	0.045 ml	0.05 ml	25 ml	*
48400325	0.075 ml	0.1 ml	25 ml	*
48400350	0.075 ml	0.1 ml	50 ml	*

<sup>\*</sup> Intermediate stopcock with PTFE plug, lateral safety needle valve stopcock and PTFE spindle





# Automatic burettes, standard type, DURAN® borosilicate glass 3.3, without stopcock between burette and bottle

Burette with Schellbach stripe, fused blue graduation "ASSISTENT-PERMANENT" consisting of:

- Automatic burette
- Bottle 2 I with standard ground 29/32 no. 41916054
- Rubber bulb no. 40850001

	Tolerance	Division	Capacity	Stopcock/Plug
48410022	0.045 ml	0.05 ml	25 ml	Delivery stopcock with glass plug
48410025	0.075 ml	0.1 ml	25 ml	Delivery stopcock with glass plug
48410050	0.075 ml	0.1 ml	50 ml	Delivery stopcock with glass plug
48410122	0.045 ml	0.05 ml	25 ml	Delivery stopcock with PTFE plug
48410125	0.075 ml	0.1 ml	25 ml	Delivery stopcock with PTFE plug
48410150	0.075 ml	0.1 ml	50 ml	Delivery stopcock with PTFE plug
48410222	0.045 ml	0.05 ml	25 ml	Lateral safety needle valve stopcock+PTFE spindle
48410225	0.075 ml	0.1 ml	25 ml	Lateral safety needle valve stopcock+PTFE spindle
48410250	0.075 ml	0.1 ml	50 ml	Lateral safety needle valve stopcock+PTFE spindle



### **Rubber bulbs for automatic burettes**

One bulb, with valve - made of flexible PVC (free of cadmium)

	Inside Ø of the tubing	Tube length	Outside Ø of the tubing
40850001	approx. 4 mm	approx. 400 mm	approx. 8-9 mm



### Rubber bulbs for automatic burettes (double with net)

with valve - made of flexible PVC (free of cadmium), bulb in net made of latex

	Tube length	Inside Ø of the tubing	Outside Ø of the tubing
40850002	approx. 350 mm	approx. 4 mm	approx. 8-9 mm









### Automatic burettes, conformity certified

### DURAN® borosilicate glass 3.3, with stopcock between burette and bottle

Class AS, with Schellbach stripe, fused blue graduation "ASSISTENT-PERMANENT",

delivery time 35-45 s

consisting of:

- Automatic burette
- Bottle 2 I with standard ground 29/32 no. 41916054
- Rubber bulb no. 40850001

Available with individual certificate of performance, USP batch certificate or DAkkS calibration certificate. Please indicate the request in your order! (see chapter beginning)

	Division	Tolerance	Capacity	Stopcock/Plug
48415015	0.02 ml	0.020 ml	10 ml	Stopcocks with glass plug
48415022	0.05 ml	0.030 ml	25 ml	Stopcocks with glass plug
48415050	0.1 ml	0.050 ml	50 ml	Stopcocks with glass plug
48415315	0.02 ml	0.020 ml	10 ml	*
48415322	0.05 ml	0.030 ml	25 ml	*
48415350	0.1 ml	0.050 ml	50 ml	*

<sup>\*</sup> Intermediate stopcock with PTFE plug, lateral safety needle valve stopcock and PTFE spindle

### DURAN® borosilicate glass 3.3, without stopcock between burette and bottle

Class AS, with Schellbach stripe, fused blue graduation "ASSISTENT-PERMANENT", delivery time 35-45 s

Lateral safety needle valve stopcock with PTFE spindle consisting of:

- · Automatic burette
- Bottle 2 I with standard ground 29/32 no. 41916054
- Rubber bulb no. 40850001

Available with individual certificate of performance, USP batch certificate or DAkkS calibration certificate. Please indicate the request in your order! (see chapter beginning)

	Division	Tolerance	Capacity
48416215	0.02 ml	0.020 ml	10 ml
48416222	0.05 ml	0.030 ml	25 ml
48416250	0.1 ml	0.050 ml	50 ml



### Automatic burettes, conformity certified, DURAN® borosilicate glass 3.3 amber,

with stopcock between burette and bottle

Standard type, fused white "ASSISTENT-PERMANENT" graduation Both stopcocks with glass plug consisting of:

- Automatic burette
- Bottle 2 I with standard ground 29/32 no. 41917054
- Rubber bulb no. 40850001

	Division	Tolerance	Capacity
48452015	0.02 ml	0.050 ml	10 ml
48452025	0.1 ml	0.075 ml	25 ml
48452050	0.1 ml	0.100 ml	50 ml



### DURAN® borosilicate glass 3.3 amber, without stopcock between burette and bottle

Standard type, burette with Schellbach stripe, fused white "ASSISTENT-PERMANENT" graduation Delivery stopcock with glass plug consisting of:

- Automatic burette
- Bottle 2 I with standard ground 29/32 no. 41917054
- Rubber bulb no. 40850001

	Division	Tolerance	Capacity
48462015	0.02 ml	0.050 ml	10 ml
48462025	0.1 ml	0.075 ml	25 ml
48462050	0.1 ml	0.100 ml	50 ml









### **Bottles for automatic burettes**

### with standard ground, clear glass

Total height approx. 200 mm, joint size 29/32

41916048 Capacity 1000 ml 41916054 Capacity 2000 ml



### with standard ground, amber glass

Total height approx. 200 mm, joint size 29/32

**41917048** Capacity 1000 ml **41917054** Capacity 2000 ml

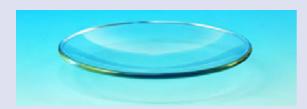




# **Laboratory Equipment**

# LABORATORY EQUIPMENT







### Evaporating dishes made of glass

### Watch glasses

DIN 12 341, fused rim

40010005Ø approx. 5 cm40010006Ø approx. 6 cm40010007Ø approx. 7 cm40010008Ø approx. 8 cm40010009Ø approx. 9 cm40010010Ø approx. 10 cm40010011Ø approx. 11 cm40010012Ø approx. 12 cm40010014Ø approx. 15 cm40010015Ø approx. 16 cm40010018Ø approx. 18 cm40010020Ø approx. 20 cm	40010004	Ø approx. 4 cm
40010007       Ø approx. 7 cm         40010008       Ø approx. 8 cm         40010009       Ø approx. 9 cm         40010010       Ø approx. 10 cm         40010011       Ø approx. 11 cm         40010012       Ø approx. 12 cm         40010014       Ø approx. 14 cm         40010015       Ø approx. 15 cm         40010016       Ø approx. 18 cm	40010005	Ø approx. 5 cm
40010008       Ø approx. 8 cm         40010009       Ø approx. 9 cm         40010010       Ø approx. 10 cm         40010011       Ø approx. 11 cm         40010012       Ø approx. 12 cm         40010014       Ø approx. 15 cm         40010015       Ø approx. 16 cm         40010018       Ø approx. 18 cm	40010006	Ø approx. 6 cm
40010009Ø approx. 9 cm40010010Ø approx. 10 cm40010011Ø approx. 12 cm40010012Ø approx. 12 cm40010014Ø approx. 14 cm40010015Ø approx. 15 cm40010016Ø approx. 16 cm40010018Ø approx. 18 cm	40010007	Ø approx. 7 cm
40010010       Ø approx. 10 cm         40010011       Ø approx. 11 cm         40010012       Ø approx. 12 cm         40010014       Ø approx. 14 cm         40010015       Ø approx. 15 cm         40010016       Ø approx. 16 cm         40010018       Ø approx. 18 cm	40010008	Ø approx. 8 cm
40010011       Ø approx. 11 cm         40010012       Ø approx. 12 cm         40010014       Ø approx. 14 cm         40010015       Ø approx. 15 cm         40010016       Ø approx. 16 cm         40010018       Ø approx. 18 cm	40010009	Ø approx. 9 cm
40010012       Ø approx. 12 cm         40010014       Ø approx. 14 cm         40010015       Ø approx. 15 cm         40010016       Ø approx. 16 cm         40010018       Ø approx. 18 cm	40010010	Ø approx. 10 cm
40010014       Ø approx. 14 cm         40010015       Ø approx. 15 cm         40010016       Ø approx. 16 cm         40010018       Ø approx. 18 cm	40010011	Ø approx. 11 cm
40010015       Ø approx. 15 cm         40010016       Ø approx. 16 cm         40010018       Ø approx. 18 cm	40010012	Ø approx. 12 cm
<b>40010016</b> Ø approx. 16 cm <b>40010018</b> Ø approx. 18 cm	40010014	Ø approx. 14 cm
<b>40010018</b> Ø approx. 18 cm	40010015	Ø approx. 15 cm
and the second second	40010016	Ø approx. 16 cm
<b>40010020</b> Ø approx. 20 cm	40010018	Ø approx. 18 cm
	40010020	Ø approx. 20 cm



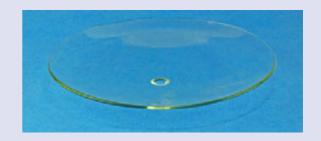
### ground in pairs

40011005	Ø approx. 5 cm
40011006	Ø approx. 6 cm
40011007	Ø approx. 7 cm
40011008	Ø approx. 8 cm
40011009	Ø approx. 9 cm
40011010	Ø approx. 10 cm
40011011	Ø approx. 11 cm
40011012	Ø approx. 12 cm
40011014	Ø approx. 14 cm
40011015	Ø approx. 15 cm
40011016	Ø approx. 16 cm
40011018	Ø approx. 18 cm
40011020	Ø approx. 20 cm



#### Evaporating dishes made of glass with hole in centre

40012004	Ø approx. 4 cm
40012005	Ø approx. 5 cm
40012006	Ø approx. 6 cm
40012007	Ø approx. 7 cm
40012008	Ø approx. 8 cm
40012009	Ø approx. 9 cm
40012010	Ø approx. 10 cm
40012011	Ø approx. 11 cm
40012012	Ø approx. 12 cm
40012014	Ø approx. 14 cm
40012015	Ø approx. 15 cm
40012016	Ø approx. 16 cm
40012018	Ø approx. 18 cm
40012020	Ø approx. 20 cm



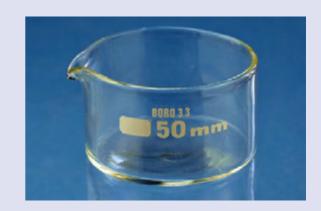
#### **Crystallising dishes**

#### with spout, borosilicate glass 3.3

Cylindrical, flat bottom

	Height	Outside Ø
41969040	approx. 25 mm	approx. 40 mm
41969050	approx. 30 mm	approx. 50 mm
41969060	approx. 35 mm	approx. 60 mm
41969070	approx. 40 mm	approx. 70 mm
41969080	approx. 45 mm	approx. 80 mm
41969095	approx. 55 mm	approx. 95 mm

Crystallising dishes without spout and other sizes are available as well.



#### Weighing bottles

#### Tall form

Bottles made of borosilicate glass 3.3, with interchangeable ground joint cover, with frosted label

	Capacity	Outside Ø	Height
44250001	approx. 10 ml	approx. 25 mm	approx. 40 mm
44250002	approx. 20 ml	approx. 30 mm	approx. 50 mm
44250003	approx. 40 ml	approx. 40 mm	approx. 50 mm
44250004	approx. 45 ml	approx. 35 mm	approx. 70 mm
44250005	approx. 70 ml	approx. 40 mm	approx. 80 mm
44250006	approx. 110 ml	approx. 50 mm	approx. 80 mm







#### Weighing bottles, low form

Bottles made of borosilicate glass 3.3, with interchangeable ground joint cover, with frosted label, height approx. 30 mm

	Capacity	Outside Ø
44251010	approx. 10 ml	approx. 30 mm
44251011	approx. 15 ml	approx. 35 mm
44251012	approx. 20 ml	approx. 40 mm
44251013	approx. 30 ml	approx. 50 mm
44251014	approx. 45 ml	approx. 60 mm
44251016	approx. 80 ml	approx. 80 mm



#### Glass tanks

#### Fine ground rim

made of clear glass

	Width	Height	Length
40070001	approx. 10 cm	approx. 15 cm	approx. 15 cm
40070002	approx. 13 cm	approx. 18 cm	approx. 18 cm
40070003	approx. 15 cm	approx. 20 cm	approx. 20 cm
40070004	approx. 18 cm	approx. 22 cm	approx. 25 cm
40070005	approx. 22 cm	approx. 24 cm	approx. 30 cm
40070006	approx. 23 cm	approx. 26 cm	approx. 36 cm
40070011	approx. 22 cm	approx. 15 cm	approx. 30 cm

(Outside dimensions)



#### Specimen jars (Museum jars)

#### made of clear glass, with ground cover plate

	Height	Length	Width
42660002	approx. 100 mm	approx. 50 mm	approx. 50 mm
42660003	approx. 150 mm	approx. 80 mm	approx. 60 mm
42660004	approx. 150 mm	approx. 105 mm	approx. 50 mm
42660006	approx. 200 mm	approx. 120 mm	approx. 80 mm
42660007	approx. 200 mm	approx. 130 mm	approx. 130 mm
42660008	approx. 225 mm	approx. 200 mm	approx. 100 mm

Dimensions given are external.



### Specimen jars (museum jars) made of clear glass, without cover plate

	Length	Height	Width
42661010	approx. 105 mm	approx. 120 mm	approx. 50 mm

Dimensions given are external.



#### Narrow neck bottles

#### Clear glass, with thread and screw cap

Screw caps are heat-resistant up to +110 °C / +230 °F.

	Capacity	Thread
41322012	30 ml	GL 18
41322018	50 ml	GL 18
41322030	100 ml	GL 22
41322054	250 ml	GL 22
41322066	500 ml	GL 25
41322072	1000 ml	GL 28



#### Amber glass, with thread and screw cap

Screw caps are heat-resistant up to +110 °C / +230 °F.

	Capacity	Thread
41323018	50 ml	GL 18
41323030	100 ml	GL 22
41323048	200 ml	GL 22
41323054	250 ml	GL 22
41323066	500 ml	GL 25
41323072	1000 ml	GL 28









#### Wide neck bottles

#### Clear glass, with thread and screw cap

Screw caps are heat-resistant up to +110  $^{\circ}\text{C}$  / +230  $^{\circ}\text{F}.$ 

	Capacity	Thread
41324006	25 ml	GL 28
41324012	30 ml	GL 32
41324018	50 ml	GL 32
41324030	100 ml	GL 40
41324036	125 ml	GL 40
41324042	150 ml	GL 45
41324048	200 ml	GL 55
41324054	250 ml	GL 55
41324060	300 ml	GL 55
41324066	500 ml	GL 55
41324072	1000 ml	GL 68

#### Amber glass, with thread and screw cap

Screw caps are heat-resistant up to +110 °C / +230 °F.

	Capacity	Thread
41325006	25 ml	GL 28
41325012	30 ml	GL 32
41325018	50 ml	GL 32
41325024	75 ml	GL 40
41325030	100 ml	GL 40
41325036	125 ml	GL 40
41325042	150 ml	GL 45
41325048	200 ml	GL 55
41325054	250 ml	GL 55
41325060	300 ml	GL 55
41325066	500 ml	GL 55
41325072	1000 ml	GL 68



#### Screw caps

#### for narrow neck and wide neck bottles

made of urea resin molding compound, black, sealing of Lupolen®, heat-resistant up to +110 °C/+230 °F.



#### Reagent bottles with scale

## Clear glass, with blue screw cap and blue pouring ring made of polypropylene

	Capacity	Thread
41330106	50 ml	GL 32
41330112	100 ml	GL 45
41330118	250 ml	GL 45
41330124	500 ml	GL 45
41330130	1000 ml	GL 45
41330136	2000 ml	GL 45
41330142	5000 ml	GL 45
41330148	10000 ml	GL 45



#### Clear glass, without screw cap and pouring ring

DURAN® borosilicate glass 3.3, with thread ISO, autoclavable

	Capacity	Thread	
41330006	50 ml	GL 32	
41330012	100 ml	GL 45	
41330018	250 ml	GL 45	
41330024	500 ml	GL 45	
41330030	1000 ml	GL 45	
41330036	2000 ml	GL 45	













#### Clear glass, with red screw cap and red pouring ring

Borosilicate glass 3.3, screw cap made of PBT, pouring ring made of ETFE, resistant up to max. +200  $^{\circ}$ C/+392  $^{\circ}$ F, thread GL 45

41331212Capacity 100 ml41331218Capacity 250 ml41331224Capacity 500 ml41331230Capacity 1000 ml41331236Capacity 2000 ml41331242Capacity 5000 ml

## Reagent bottles with scale, amber glass, with blue screw cap and blue pouring ring

Borosilicate glass 3.3, resistant up to max. +140 °C/+284 °F

	Capacity	Thread
41331106	50 ml	GL 32
41331112	100 ml	GL 45
41331118	250 ml	GL 45
41331124	500 ml	GL 45
41331130	1000 ml	GL 45
41331136	2000 ml	GL 45
41331142	5000 ml	GL 45

## Square laboratory reagent bottles, clear glass, with blue screw cap and blue pouring ring

Borosilicate glass 3.3, resistant up to +140 °C/+284 °F, thread GL 80

 41333124
 Capacity 500 ml

 41333130
 Capacity 1000 ml

 41333136
 Capacity 2000 ml

 41333142
 Capacity 5000 ml

## Square laboratory reagent bottles, amber glass, with blue screw cap and blue pouring ring

Borosilicate glass 3.3, resistant up to +140 °C/+284 °F, thread GL 80

 41334124
 Capacity 500 ml

 41334130
 Capacity 1000 ml

 41334136
 Capacity 2000 ml

 41334142
 Capacity 5000 ml



#### **Pouring rings**

made of polypropylene, blue, resistant up to +135 °C/+275 °F

	for	Thread
41335010	bottles from 100 ml	GL 45
41335032	bottles of 50 ml	GL 32



#### **Screw caps**

Polypropylene, transparent, with seal, resistant up to +135 °C/+275 °F

also available in red or blue

	for	Thread
41336010	bottles from 100 ml	GL 45
41336032	bottles of 50 ml	GL 32



## YOUTILITY Laboratory bottles, DURAN® borosilicate glass 3.3, clear glass

with retrace code, complete with pouring ring and screw cap made of polypropylene  $\,$ 

The specially shaped gripping zones on both sides of the bottle permit easier and safer handling.

The slimmer YOUTILITY bottle shape allows a more optimal use, especially with smaller sized or gloved hands.

The screw cap features a secure grip, fast opening and quick closing. with easy-to-read scale and labelling area.

All spare parts are autoclavable.

(without marking rings, without labels)

	Capacity	Height	Diameter	Thread
41340014	125 ml	approx. 124 mm	approx. 55 mm	GL 45
41340018	250 ml	approx. 158 mm	approx. 66 mm	GL 45
41340024	500 ml	approx. 193 mm	approx. 78 mm	GL 45
41340036	1000 ml	approx. 253 mm	approx. 93 mm	GL 45







## YOUTILITY Laboratory bottles, DURAN® borosilicate glass 3.3, amber glass

with retrace code, **complete with pouring ring and screw cap** made of polypropylene

The specially shaped gripping zones on both sides of the bottle permit easier and safer handling.

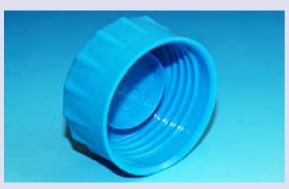
The slimmer YOUTILITY bottle shape allows a more optimal use, especially with smaller sized or gloved hands.

The screw cap features a secure grip, fast opening and quick closing. with easy-to-read scale and labelling area.

All spare parts are autoclavable.

(without marking rings, without labels)

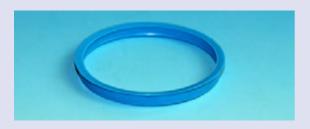
	Capacity	Height	Diameter	Thread
41341014	125 ml	approx. 124 mm	approx. 55 mm	GL 45
41341018	250 ml	approx. 158 mm	approx. 66 mm	GL 45
41341024	500 ml	approx. 193 mm	approx. 78 mm	GL 45
41341036	1000 ml	approx. 124 mm	approx. 55 mm	GL 45



#### Screw caps for YOUTILITY laboratory bottles

made of polypropylene, colour cyan

**41342010** Thread GL 45



#### Pouring rings for YOUTILITY laboratory bottles

made of polypropylene, colour cyan

**41343010** Thread GL 45



#### Marking rings for YOUTILITY laboratory bottles

Single rings are not available!

41344010

made of silicone, available in sets of 16 rings(2 rings each of the following colours: red, orange, yellow, green, blue, violet, black, white)



#### Labels, self-adhesive, for YOUTILITY laboratory bottles

Temperature-resistant at -40 °C +150 °C/-40 °F +302 °F The labels are made of polyester. Cleanly removable.

with indicator for autoclaving  $\!\!\!/$  steam sterilisation according to class 1.

Suitable for use in refrigerators and freezers, autoclaves, incubators and water baths.

in box of 200 labels each

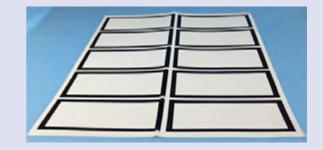
**41345010** Rectangular for bottles  $36 \times 70$  mm, circular for screw caps  $30 \text{ mm} \varnothing$ 



#### Self-adhesive labels for inscription

White, non-fade plastic foil, resistant to chemicals, with black border

	for bottles	Dimensions
41278001	up to approx. 250 ml	approx. 74 x 37 mm
41278002	from approx. 500 ml	approx. 105 x 52 mm



#### **Protective coating for labels**

	for article	for labels
41278091	41278001	approx. 74 x 37 mm
41278092	41278002	approx. 105 x 52 mm



#### **Bottle brushes**

for all types of laboratory bottles, with special head brush for cleaning

the bottle bottom

	Brush length	Total length	Brush Ø	
41279010	approx. 100 mm	approx, 420 mm	approx, 55 mm	



## Bottles with conical shoulder, narrow neck, clear glass, with stopper made of polyethylene

with standard ground

	Joint size	Capacity
41280006	14.5	50 ml
41280012	14/23	100 ml
41280018	19/26	250 ml
41280024	24/29	500 ml
41280030	29/32	1000 ml
41280036	29/32	2000 ml

On request also available with label and fused inscription.













#### Narrow neck, clear glass, with glass stopper

with standard ground

	Joint size	Capacity
41281006	14.5	50 ml
41281012	14/23	100 ml
41281018	19/26	250 ml
41281024	24/29	500 ml
41281030	29/32	1000 ml
41281036	29/32	2000 ml

On request also available with label and fused inscription.

## Bottles with conical shoulder, narrow neck, amber glass, with stopper made of polyethylene

with standard ground

	Joint size	Capacity
41282006	14.5	50 ml
41282012	14/23	100 ml
41282018	19/26	250 ml
41282024	24/29	500 ml
41282030	29/32	1000 ml
41282036	29/32	2000 ml

On request also available with label and fused inscription.

#### Narrow neck, amber glass, with glass stopper

with standard ground

	Joint size	Capacity
41283006	14.5	50 ml
41283012	14/23	100 ml
41283019	19/26	250 ml
41283024	24/29	500 ml
41283030	29/32	1000 ml
41283036	29/32	2000 ml

On request also available with label and fused inscription.

### Wide neck, clear glass, with stopper made of polyethylene

with standard ground

	Joint size	Capacity
41284006	24/29	50 ml
41284012	29/32	100 ml
41284018	34/35	250 ml
41284024	45/40	500 ml
41284030	60/46	1000 ml

On request also available with label and fused inscription.



## Bottles with conical shoulder, wide neck, clear glass, with glass stopper

with standard ground

	Joint size	Capacity
41285006	24/20	50 ml
41285012	29/22	100 ml
41285018	34/40	250 ml
41285024	45/27	500 ml
41285030	60/46	1000 ml

On request also available with label and fused inscription.



with standard ground

	Joint size	Capacity
41286006	24/29	50 ml
41286012	29/32	100 ml
41286018	34/35	250 ml
41286024	45/40	500 ml
41286030	60/46	1000 ml

On request also available with label and fused inscription.



with standard ground

	Joint size	Capacity
41287006	24/20	50 ml
41287012	29/22	100 ml
41287018	34/40	250 ml
41287024	45/27	500 ml
41287030	60/46	1000 ml

On request also available with label and fused inscription.

#### Bottles with conical shoulder, narrow neck, clear glass

with stopper made of polyethylene (HDPE) and frosted label for inscriptions  $% \left( \frac{1}{2}\right) =\frac{1}{2}\left( \frac{1}{2}\right) +\frac{1}{2}\left( \frac{1}{2}\right)$ 

**41321010** Capacity 50 ml, joint size 14/23









# Assistent

## LABORATORY EQUIPMENT



### Narrow neck bottles

#### Clear glass

with ground-in glass stopper

	Capacity	Ø	Height without stopper
41301006	50 ml	approx. 41.5 mm	approx. 77 mm
41301012	100 ml	approx. 51.5 mm	approx. 103 mm
41301018	250 ml	approx. 69 mm	approx. 131 mm
41301024	500 ml	approx. 85 mm	approx. 163 mm
41301030	1000 ml	approx. 106.5 mm	approx. 199 mm



#### **Amber glass**

with ground-in glass stopper

	Capacity	Ø	Height without stopper
41303006	50 ml	approx. 41.5 mm	approx. 77 mm
41303012	100 ml	approx. 51.5 mm	approx. 103 mm
41303018	250 ml	approx. 69 mm	approx. 131 mm
41303024	500 ml	approx. 85 mm	approx. 163 mm
41303030	1000 ml	approx. 106.5 mm	approx. 199 mm
41303036	2000 ml	approx. 132 mm	approx. 245 mm



#### Wide neck bottles

#### **Clear glass**

with ground-in glass stopper

	Capacity	Ø	Height without stopper
41311006	50 ml	approx. 41.5 mm	approx. 76 mm
41311012	100 ml	approx. 51.5 mm	approx. 95 mm
41311018	250 ml	approx. 69 mm	approx. 128 mm
41311024	500 ml	approx. 85 mm	approx. 162 mm
41311030	1000 ml	approx. 106.5 mm	approx. 187 mm



#### Amber glass

with ground-in glass stopper

	Capacity	Ø	Height without stopper
41313006	50 ml	approx. 41.5 mm	approx. 76 mm
41313012	100 ml	approx. 51.5 mm	approx. 95 mm
41313018	250 ml	approx. 69 mm	approx. 128 mm
41313024	500 ml	approx. 85 mm	approx. 162 mm
41313030	1000 ml	approx. 106.5 mm	approx. 187 mm
41313036	2000 ml	approx. 132 mm	approx. 238 mm



#### Dropping bottles made of amber glass

with thread DIN 18, without cap

41314005Capacity 5 ml41314010Capacity 10 ml41314015Capacity 15 ml41314020Capacity 20 ml41314030Capacity 30 ml41314050Capacity 50 ml41314060Capacity 100 ml



#### Pipette kit for no. 41314...

consisting of: screw cap, suction bulb (blue or red) and glass pipette suitable, DIN 18

**41315005** for 5 ml blue - 41315006 red **41315010** for 10 ml blue - 41315011 red **41315020** for 20 ml blue - 41315021 red **41315030** for 30 ml blue - 41315031 red **41315050** for 10 ml blue - 41315051 red **41315060** for 100 ml blue - 41315061 red



#### Dropping screw caps for no. 41314...

413161.. UNI 1, fast dropping, 4 holes, white or red
413162.. UNI 2, slow dropping, 2 holes, white or red
413163.. Tamper-evident, white, red, yellow, black

**413164..** with child safety lock, white

Last two positions of article number stand for colour: 01=red, 02=white, 03=yellow, 04=black
Please indicate in your order!



#### Dropping bottles TK, clear glass

with flat glass stopper

	Capacity	Ø	Height	
41318006	50 ml	approx. 44 mm	approx. 92 mm	
41318012	100 ml	approx. 55 mm	approx. 106 mm	







#### **Amber glass**

with flat glass stopper

	Capacity	Ø	Height
41319006	50 ml	approx. 44 mm	approx. 92 mm
41319012	100 ml	approx. 55 mm	approx. 106 mm



#### Bottles made of polyethylene, with screw cap

#### Narrow neck

LDPE, flexible

	Capacity	Thread
49100006	30 ml	GL 14
49100012	50 ml	GL 18
49100018	100 ml	GL 18
49100024	250 ml	GL 25
49100030	500 ml	GL 25
49100036	1000 ml	GL 28
49100042	2000 ml	GL 28
49100048	5000 ml	GL 40

49100048 with handle



#### Wide neck

LDPE, flexible

	Capacity	Thread	
49101012	50 ml	GL 32	
49101018	100 ml	GL 32	
49101024	250 ml	GL 40	
49101030	500 ml	GL 50	
49101036	1000 ml	GL 65	
49101042	2000 ml	GL 65	



#### Washing bottles made of polyethylene

LDPE, flexible, with spray tube

	Capacity	Thread
49102018	100 ml	GL 18
49102024	250 ml	GL 25
49102030	500 ml	GL 25
49102036	1000 ml	GL 28



#### Bottles made of polypropylene, with conical shoulder

#### Narrow neck

with interchangeable stopper made of polyethylene

	Capacity	Joint size
49108018	100 ml	14/23
49108024	250 ml	19/26
49108030	500 ml	24/29
49108036	1000 ml	29/32



#### Dropping bottles made of polyethylene, with dropping tip

LDPE, with attached cap

	Capacity	Thread	
49103004	10 ml	GL 14	
49103008	20 ml	GL 14	
49103012	30 ml	GL 14	
49103016	50 ml	GL 18	
49103020	100 ml	GL 18	
49103024	250 ml	GL 25	
49103028	500 ml	GL 25	



#### Bottles made of polyethylene, high shoulder

LDPE, narrow neck, with screw cap

	Capacity	Thread
49105012	50 ml	GL 18
49105018	100 ml	GL 18
49105024	250 ml	GL 25
49105030	500 ml	GL 25
49105036	1000 ml	GL 28







## Square bottles made of polyethylene, with screw cap, narrow neck HDPE

	Capacity	Thread
49116012	50 ml	GL 18
49116018	100 ml	GL 25
49116024	250 ml	GL 25
49116030	500 ml	GL 25
49116036	1000 ml	GL 25



### Square bottles made of polyethylene, with screw cap, wide neck $% \left( 1\right) =\left( 1\right) \left( 1$

HDPE

<u></u>	Capacity	Thread
49116924	250 ml	GL 50
49116930	500 ml	GL 65
49116936	1000 ml	GL 65



#### Bottles made of LDPE, narrow neck, brown

with screw cap, contents protected against UV radiation, for light-sensitive liquids

	Capacity	Thread
49112018	100 ml	GL 18
49112024	250 ml	GL 25
49112030	500 ml	GL 25
49112036	1000 ml	GL 28



#### Bottles made of polypropylene, wide neck

with screw cap and scale, autoclavable up to max. +121  $^{\circ}$ C / +249.8  $^{\circ}$ F

	Capacity	Thread
49115012	50 ml	GL 32
49115018	100 ml	GL 32
49115024	250 ml	GL 40
49115030	500 ml	GL 50
49115036	1000 ml	GL 65



#### Spray bottles made of polyethylene

LDPE, with adjustable jet made of polypropylene

**49119010** Capacity approx. 1000 ml



## Bottles for analysis of drinking water according to DIN EN ISO 5667-3, with sodium thiosulphate

#### Sterile, disposable, made of polypropylene, wide neck,

quite transparent, square, with scale, individually labelled with lot number and note "sterile R" (=sterilised by irradiation)
According to the revision of the drinking water regulation effective

since November 2011 (modified on 14.12.2012). for sampling of possibly chlorinated water

(= pre-dispensed 20 mg/1 l)

Minimum order quantity 1 packing unit

	Capacity	Packing unit	Dimensions
49125020	125 ml	350 pieces	approx. 92 x 50 mm Ø
49125024	250 ml	216 pieces	approx. 115 x 50 mm Ø
49125030	500 ml	120 pieces	approx. 145 x 50 mm Ø
49125036	1000 ml	72 pieces	approx. 175 x 50 mm Ø



### Bottles for analysis of drinking water according to DIN EN ISO 5667-3, without sodium thiosulphate

#### Sterile, disposable, made of polypropylene, wide neck,

quite transparent, square, with scale, individually labelled with lot number and note "sterile R" (=sterilised by irradiation)

According to the revision of the drinking water regulation effective since November 2011 (modified on 14.12.2012).

for sampling of open water, lakes, rivers etc.

Minimum order quantity 1 packing unit

	Capacity	Packing unit	Dimensions
49126020	125 ml	350 pieces	approx. 92 x 50 mm Ø
49126024	250 ml	216 pieces	approx. 115 x 50 mm Ø
49126030	500 ml	120 pieces	approx. 145 x 50 mm Ø
49126036	1000 ml	72 pieces	approx. 175 x 50 mm Ø

#### Square bottles and collecting containers





#### Urine collecting container, polypropylene

with handle, embossed scale, with white cover made of polycarbonate, sterilisable

	Division	Capacity	Dimensions	
44116010	20 ml	2000 ml	approx. 220 x 150 mm Ø	



#### Urine collecting containers made of SAN, CE

Transparent, approximate scale on two sides, with cover

	Capacity	Temperature for use	
49117020	2000 ml	max. +70 °C/+158 °F	



#### Urine collecting bottles made of polyethylene

HDPE, with screw cap and approximate scale

	Scale up to	Capacity
49117010	2000 ml	2500 ml



#### Urine collecting containers, polyethylene, amber

Disposable, made of HDPE, with screw cap and embossed scale, not autoclavable

	Capacity	Scale up to
49118010	2000 ml	2000 ml

#### **Aspirator bottles**



#### Aspirator bottles made of polyethylene, narrow neck

with stopcock, handle and screw cap

	Capacity	Ø	Height
49130005	5 litres	approx. 165 mm	approx. 335 mm
49130010	10 litres	approx. 210 mm	approx. 420 mm
49130025	25 litres	approx. 280 mm	approx. 525 mm
49130050	50 litres	approx. 365 mm	approx. 605 mm

**49130025** and **49130050** with two handles



#### Spare stopcock

made of polypropylene

	Opening	Connection
49131010	10 mm	3/4"



#### Boiling flasks, beakers and accessories

Kjeldahl flasks, DURAN® borosilicate glass 3.3

DIN 12360, with rim, without standard ground

**41870018** Capacity 250 ml **41870024** Capacity 500 ml











#### Beakers, tall form, DURAN® borosilicate glass 3.3

DIN 12331, with scale

	Capacity	Diameter	Height
41929024	50 ml	approx. 38 mm	approx. 70 mm
41929030	100 ml	approx. 48 mm	approx. 80 mm
41929036	150 ml	approx. 54 mm	approx. 95 mm
41929042	250 ml	approx. 60 mm	approx. 120 mm
41929048	400 ml	approx. 70 mm	approx. 130 mm
41929054	600 ml	approx. 80 mm	approx. 150 mm
41929060	800 ml	approx. 90 mm	approx. 175 mm
41929066	1000 ml	approx. 95 mm	approx. 180 mm
41929072	2000 ml	approx. 120 mm	approx. 240 mm

#### Beakers, borosilicate glass 3.3, tall form

DIN 12331, with scale

	Capacity	Diameter	Height
41929118	25 ml	approx. 28 mm	approx. 60 mm
41929124	50 ml	approx. 38 mm	approx. 70 mm
41929130	100 ml	approx. 48 mm	approx. 80 mm
41929136	150 ml	approx. 54 mm	approx. 95 mm
41929142	250 ml	approx. 60 mm	approx. 120 mm
41929148	400 ml	approx. 70 mm	approx. 130 mm
41929154	600 ml	approx. 80 mm	approx. 150 mm
41929160	800 ml	approx. 90 mm	approx. 175 mm
41929166	1000 ml	approx. 95 mm	approx. 180 mm
41929172	2000 ml	approx. 120 mm	approx. 240 mm

#### Beakers, DURAN® borosilicate glass 3.3, low form

DIN 12331, with scale

	Capacity	Diameter	Height
41930004	25 ml	approx. 34 mm	approx. 50 mm
41930008	50 ml	approx. 42 mm	approx. 60 mm
41930012	100 ml	approx. 50 mm	approx. 70 mm
41930016	150 ml	approx. 60 mm	approx. 80 mm
41930020	250 ml	approx. 70 mm	approx. 95 mm
41930024	400 ml	approx. 80 mm	approx. 110 mm
41930028	600 ml	approx. 90 mm	approx. 125 mm
41930032	800 ml	approx. 100 mm	approx. 135 mm
41930036	1000 ml	approx. 105 mm	approx. 145 mm
41930040	2000 ml	approx. 132 mm	approx. 185 mm
41930044	3000 ml	approx. 152 mm	approx. 210 mm
41930048	5000 ml	approx. 170 mm	approx. 270 mm



#### Beakers, borosilicate glass 3.3, low form

DIN 12331, with scale

	Capacity	Diameter	Height
41930104	25 ml	approx. 34 mm	approx. 50 mm
41930108	50 ml	approx. 42 mm	approx. 60 mm
41930112	100 ml	approx. 50 mm	approx. 70 mm
41930116	150 ml	approx. 60 mm	approx. 80 mm
41930120	250 ml	approx. 70 mm	approx. 95 mm
41930124	400 ml	approx. 80 mm	approx. 110 mm
41930128	600 ml	approx. 90 mm	approx. 125 mm
41930132	800 ml	approx. 100 mm	approx. 135 mm
41930136	1000 ml	approx. 105 mm	approx. 145 mm
41930140	2000 ml	approx. 132 mm	approx. 185 mm
41930144	3000 ml	approx. 152 mm	approx. 210 mm
41930148	5000 ml	approx. 170 mm	approx. 270 mm



#### Griffin beakers made of polymethylpentene (PMP)

Antistatic, transparent, with rim and spout, printed red scale Autoclavable up to +121 °C/+249.8 °F (2 bar)

Max. temperature +150 °C/+302 °F

	Capacity	Division	Diameter	Height
41934006	10 ml	2 ml	approx. 25 mm	approx. 35 mm
41934012	25 ml	1 ml	approx. 31 mm	approx. 47 mm
41934018	50 ml	5 ml	approx. 40 mm	approx. 60 mm
41934024	100 ml	5 ml	approx. 49 mm	approx. 70 mm
41934030	150 ml	5 ml	approx. 56 mm	approx. 80 mm
41934036	250 ml	5 ml	approx. 68 mm	approx. 94 mm
41934042	400 ml	10 ml	approx. 77 mm	approx. 109 mm
41934048	600 ml	25 ml	approx. 91 mm	approx. 125 mm
41934060	1000 ml	50 ml	approx. 102 mm	approx. 149 mm
41934066	2000 ml	100 ml	approx. 133 mm	approx. 183 mm



#### Griffin beakers made of polypropylene

Low form, transparent, ISO 7056 and DIN 12331 (glass), antistatic, with rim and spout, printed blue scale Max. temperature +135  $^{\circ}\text{C}/+275~^{\circ}\text{F}$ 

Suitable for steam sterilisation at +121 °C/+249.8 °F

	Capacity	Division	Diameter	Height
41935006	10 ml	2 ml	approx. 25 mm	approx. 35 mm
41935012	25 ml	1 ml	approx. 31 mm	approx. 47 mm
41935018	50 ml	5 ml	approx. 40 mm	approx. 60 mm
41935024	100 ml	5 ml	approx. 49 mm	approx. 70 mm
41935030	150 ml	5 ml	approx. 56 mm	approx. 80 mm
41935036	250 ml	5 ml	approx. 68 mm	approx. 94 mm
41935042	400 ml	10 ml	approx. 77 mm	approx. 109 mm
41935048	600 ml	25 ml	approx. 91 mm	approx. 125 mm
41935060	1000 ml	50 ml	approx. 102 mm	approx. 149 mm
41935066	2000 ml	100 ml	approx. 133 mm	approx. 183 mm
41935072	3000 ml	200 ml	approx. 174 mm	approx. 217 mm
41935078	5000 ml	500 ml	approx. 185 mm	approx. 248 mm









for beakers made of glass or plastic, measuring jugs etc.

	Brush length	i otai iength	Brusn Ø	
41936010	approx. 140 mm	approx. 430 mm	approx. 85/60 mm	



#### Erlenmeyer flasks, DURAN® borosilicate glass 3.3, narrow neck

DIN ISO 1773, with scale

	Capacity	Neck diameter	Diameter	Height
41940012	25 ml	approx. 22 mm	approx. 42 mm	approx. 75 mm
41940018	50 ml	approx. 22 mm	approx. 51 mm	approx. 90 mm
41940024	100 ml	approx. 22 mm	approx. 64 mm	approx. 105 mm
41940030	200 ml	approx. 34 mm	approx. 79 mm	approx. 131 mm
41940036	250 ml	approx. 34 mm	approx. 85 mm	approx. 145 mm
41940042	300 ml	approx. 34 mm	approx. 87 mm	approx. 156 mm
41940048	500 ml	approx. 34 mm	approx. 105 mm	approx. 180 mm
41940054	1000 ml	approx. 42 mm	approx. 131 mm	approx. 220 mm
41940060	2000 ml	approx. 50 mm	approx. 166 mm	approx. 280 mm
41940066	3000 ml	approx. 51 mm	approx. 187 mm	approx. 310 mm
41940072	5000 ml	approx. 51 mm	approx. 220 mm	approx. 365 mm



#### Erlenmeyer flasks, borosilicate glass 3.3, narrow neck

DIN ISO 1773, with scale

	•			
	Capacity	Neck diameter	Diameter	Height
41940112	25 ml	approx. 22 mm	approx. 42 mm	approx. 75 mm
41940118	50 ml	approx. 22 mm	approx. 51 mm	approx. 90 mm
41940124	100 ml	approx. 22 mm	approx. 64 mm	approx. 105 mm
41940130	200 ml	approx. 34 mm	approx. 79 mm	approx. 131 mm
41940136	250 ml	approx. 34 mm	approx. 85 mm	approx. 145 mm
41940142	300 ml	approx. 34 mm	approx. 87 mm	approx. 156 mm
41940148	500 ml	approx. 34 mm	approx. 105 mm	approx. 180 mm
41940154	1000 ml	approx. 42 mm	approx. 131 mm	approx. 220 mm
41940166	3000 ml	approx. 51 mm	approx. 187 mm	approx. 310 mm
41940172	5000 ml	approx. 51 mm	approx. 220 mm	approx. 365 mm



#### Erlenmeyer flasks, DURAN® borosilicate glass 3.3, wide neck

DIN 12385, with scale

	Capacity	Neck diameter	Diameter	Height
41941012	25 ml	approx. 31 mm	approx. 43 mm	approx. 70 mm
41941018	50 ml	approx. 34 mm	approx. 51 mm	approx. 85 mm
41941024	100 ml	approx. 34 mm	approx. 64 mm	approx. 105 mm
41941030	200 ml	approx. 50 mm	approx. 79 mm	approx. 131 mm
41941036	250 ml	approx. 50 mm	approx. 85 mm	approx. 140 mm
41941042	300 ml	approx. 50 mm	approx. 87 mm	approx. 156 mm
41941048	500 ml	approx. 50 mm	approx. 105 mm	approx. 175 mm
41941054	1000 ml	approx. 50 mm	approx. 131 mm	approx. 220 mm
41941060	2000 ml	approx. 72 mm	approx. 153 mm	approx. 276 mm



#### Erlenmeyer flasks, borosilicate glass 3.3, wide neck

DIN 12385, with scale

	Capacity	Neck diameter	Diameter	Height
41941112	25 ml	approx. 31 mm	approx. 43 mm	approx. 70 mm
41941118	50 ml	approx. 34 mm	approx. 51 mm	approx. 85 mm
41941124	100 ml	approx. 34 mm	approx. 64 mm	approx. 105 mm
41941130	200 ml	approx. 50 mm	approx. 79 mm	approx. 131 mm
41941136	250 ml	approx. 50 mm	approx. 85 mm	approx. 140 mm
41941142	300 ml	approx. 50 mm	approx. 87 mm	approx. 156 mm
41941148	500 ml	approx. 50 mm	approx. 105 mm	approx. 175 mm
41941154	1000 ml	approx. 50 mm	approx. 131 mm	approx. 220 mm
41941160	2000 ml	approx. 72 mm	approx. 153 mm	approx. 276 mm
41941166	3000 ml	approx. 78 mm	approx. 190 mm	approx. 320 mm
41941172	5000 ml	approx. 78 mm	approx. 220 mm	approx. 373 mm



## Erlenmeyer flasks, borosilicate glass 3.3, narrow neck, with blue screw cap

with scale, resistant up to max. +140 °C/+284 °F

	Capacity	Height	Diameter	Thread
41943124	100 ml	approx. 100 mm	approx. 64 mm	GL 25
41943136	250 ml	approx. 140 mm	approx. 85 mm	GL 32
41943148	500 ml	approx. 175 mm	approx. 105 mm	GL 32
41943154	1000 ml	approx. 215 mm	approx. 131 mm	GL 32







## Erlenmeyer flasks, baffled bottom, DURAN® borosilicate glass 3.3, for suspension cultures, with thread

When cultivating microorganisms in Erlenmeyer flasks on an orbital shaker, the oxygen intake is frequently the limiting factor for cell growth. The Erlenmeyer flask with four bottom baffles disrupts the laminar flow to create a turbulent flow. The gas exchange surface of the liquid is increased, thereby increasing the oxygen intake.

The thread GL 45 allows the use of the following closures:

- screw caps with membrane GL 45 for autoclaving
- plugs of 30 mm, e.g. made of cotton, silicone foam or pulp for cultivation
- screw caps GL 45 for storage of media and reagents

**41945036** Capacity 250 ml **41945048** Capacity 500 ml **41945054** Capacity 1000 ml



# Erlenmeyer flasks, baffled bottom, DURAN® borosilicate glass 3.3, for suspension cultures, with membrane screw cap and pouring ring

Thread GL 45

**41946036** Capacity 250 ml **41946048** Capacity 500 ml **41946054** Capacity 1000 ml



## Screw caps with membrane, made of polypropylene, for baffled Erlenmeyer flasks

Blue, with welded-in PTFE membrane for pressure equalisation, suitable for flasks 250, 500 and 1000 ml

**41947010** Thread GL 45



#### **Lead rings**

Closed (O-shape), vinyl-coated, lead core

 42111001
 for flasks 125-500 ml

 42111002
 for flasks 250-1000 ml

 42111003
 for flasks 500-2000 ml

 42111004
 for flasks 1000-4000 ml



#### Test tubes, centrifuge tubes and accessories

#### Test tubes with side tube

AR-Glas® (soda glass), with moulded socket, without ground, wall thickness approx. 1.2 mm

**42763010** Dimensions approx. 180 x 20 mm Ø



#### Test tubes, graduated

Standard type, AR-Glas® (soda glass), round bottom, with spout, fused white graduation "ASSISTENT-PERMANENT", short line graduation, precisely calibrated Packing: 10 pieces in a plastic bag

	Graduation	Dimensions	
42765005	5 ml : 0.1 ml	approx. 110 x 12 mm Ø	
42765010	10 ml : 0.1 ml	approx. 160 x 13 mm Ø	
42765020	20 ml : 0.1 ml	approx. 200 x 15 mm Ø	
42765025	25 ml : 0.5 ml	approx. 180 x 18 mm Ø	









AR-Glas® (soda glass), with standard ground 12/21 and stopper made of polyethylene (HDPE), packing: 5 pieces in a plastic bag

	Capacity	Wall thickness	Dimensions
42766010	10 ml : 0.1 ml	approx. 1.0 mm	approx. 180 x 13 mm Ø
42766020	20 ml : 0.1 ml	approx. 0.9 mm	approx. 220 x 15 mm Ø



#### Test tubes with stopper

Round bottom, with standard ground 12/21 and stopper made of polyethylene (HDPE), dimensions approx. 160 x 16 mm  $\emptyset$ , wall thickness approx. 1.2 mm

**42767010** AR-Glas® (soda glass) **42767030** DURAN® borosilicate glass 3.3



#### Test tubes with stopper and ring marks

AR-Glas® (soda glass), with standard ground 12/21 and stopper made of polyethylene (HDPE)

	Ring marks	Wall thickness	Dimensions	
42768002	at 5 and 10 ml	approx. 1.2 mm	approx. 160 x 16 mm Ø	



#### Test tubes / Centrifuge tubes, disposable

AR-Glas® (soda glass), round bottom, rimless, wall thickness approx. 0.5 mm  $\,$ 

Tests (with water) have proven the usability in centrifuges at 4000 rpm

	Packing/box	Dimensions
42769045	200 pieces	approx. 100 x 16 mm Ø
42769051	100 pieces	approx. 160 x 16 mm Ø



#### Test tubes "ELKA"

AR-Glas® (soda glass), round bottom, with rim

	Packing/box	Wall thickness	Outside Ø	Length
42770021	100 pieces	approx. 0.5 mm	approx. 10 mm	approx. 100 mm
42770027	100 pieces	approx. 0.5 mm	approx. 12 mm	approx. 100 mm
42770033	100 pieces	approx. 0.6 mm	approx. 14 mm	approx. 130 mm
42770045	100 pieces	approx. 0.5 mm	approx. 16 mm	approx. 100 mm
42770048	100 pieces	approx. 0.5 mm	approx. 16 mm	approx. 120 mm
42770051	100 pieces	approx. 0.5 mm	approx. 16 mm	approx. 160 mm
42770057	100 pieces	approx. 0.5 mm	approx. 18 mm	approx. 160 mm
42770060	100 pieces	approx. 0.5 mm	approx. 18 mm	approx. 180 mm
42770063	100 pieces	approx. 0.5 mm	approx. 20 mm	approx. 180 mm
42770069	50 pieces	approx. 0.8 mm	approx. 24 mm	approx. 160 mm
42770072	50 pieces	approx. 0.8 mm	approx. 24 mm	approx. 200 mm
42770078	50 pieces	approx. 0.8 mm	approx. 30 mm	approx. 200 mm
42770251	200 pieces	approx. 0.5 mm	approx. 16 mm	approx. 160 mm



#### Test tubes, FIOLAX® (borosilicate glass)

Round bottom, with rim

	Packing/box	Wall thickness	Length	Outside Ø
42771015	100 pieces	approx. 0.45 mm	approx. 70 mm	approx. 8 mm
42771021	100 pieces	approx. 0.45 mm	approx. 100 mm	approx. 10 mm
42771027	100 pieces	approx. 0.45 mm	approx. 100 mm	approx. 12 mm
42771033	100 pieces	approx. 0.45 mm	approx. 130 mm	approx. 14 mm
42771045	100 pieces	approx. 0.6 mm	approx. 100 mm	approx. 16 mm
42771051	100 pieces	approx. 0.6 mm	approx. 160 mm	approx. 16 mm
42771060	100 pieces	approx. 0.55 mm	approx. 180 mm	approx. 18 mm
42771063	100 pieces	approx. 0.55 mm	approx. 180 mm	approx. 20 mm
42771075	100 pieces	approx. 0.55 mm	approx. 120 mm	approx. 20 mm
42771251	200 pieces	approx. 0.6 mm	approx. 160 mm	approx. 16 mm







#### Test tubes, heavy wall

AR-Glas® (soda glass), round bottom, rimless

	`	· · ·		
	Packing/box	Wall thickness	Length	Outside Ø
42775003	500 pieces	approx. 0.65 mm	approx. 50 mm	approx. 6-6.5 mm
42775006	2000 pieces	approx. 0.7 mm	approx. 27 mm	approx. 7 mm
42775009	100 pieces	approx. 0.65 mm	approx. 35 mm	approx. 6 mm
42775012	100 pieces	approx. 0.7 mm	approx. 40 mm	approx. 8 mm
42775015	200 pieces	approx. 0.9 mm	approx. 80 mm	approx. 10-11 mm
42775018	100 pieces	approx. 0.9 mm	approx. 70 mm	approx. 10-11 mm
42775021	100 pieces	approx. 0.9 mm	approx. 100 mm	approx. 10 mm
42775024	200 pieces	approx. 0.7 mm	approx. 75 mm	approx. 12 mm
42775027	100 pieces	approx. 0.7 mm	approx. 100 mm	approx. 12 mm
42775030	100 pieces	approx. 0.9 mm	approx. 100 mm	approx. 14 mm
42775033	100 pieces	approx. 0.9 mm	approx. 130 mm	approx. 14 mm
42775036	100 pieces	approx. 0.9 mm	approx. 75 mm	approx. 15 mm
42775039	100 pieces	approx. 0.9 mm	approx. 85 mm	approx. 15 mm
42775042	100 pieces	approx. 0.9 mm	approx. 135 mm	approx. 15 mm
42775045	100 pieces	approx. 0.8 mm	approx. 100 mm	approx. 16 mm
42775051	100 pieces	approx. 0.8 mm	approx. 160 mm	approx. 16 mm
42775054	100 pieces	approx. 1 mm	approx. 100 mm	approx. 18 mm
42775060	100 pieces	approx. 1 mm	approx. 180 mm	approx. 18 mm
42775251	200 pieces	approx. 0.8 mm	approx. 160 mm	approx. 16 mm

42775009 Durham tubes

42775024 Kahn tubes, Urastrat tubes, tubes for Combs test 42775027 Centrifuge tubes for examination of mastic and blood typing



#### Kapsenberg caps

Test tube caps with handle, anodised aluminium, silver-coloured

**42776051** for tubes of 16 mm Ø **42776057** for tubes of 18 mm Ø



#### Labocap caps

with handle, anodised aluminium, heat-resistant (max. +140  $^{\circ}$ C/ +284  $^{\circ}$ F), stainless

**427771..** for tubes of 15-16 mm Ø **427772..** for tubes of 17-18 mm Ø

Last two positions of article number stand for colour: 04=blue, 08=yellow, 12=green, 16=red, 20=silver Please indicate in your order!



#### Flat bottom tubes

Soda glass, rimless, heavy wall, wall thickness approx. 1 mm, packing: 100 pieces/box

**42779065** Dimensions approx. 65 x 15 mm Ø **42779070** Dimensions approx. 70 x 22 mm Ø



#### Test tubes, heavy wall, with rim

AR-Glas® (soda glass), round bottom, wall thickness approx. 1 mm, packing: 100 pieces/box

**42780010** Dimensions approx. 160 x 16 mm Ø



#### Test tubes with screw cap

Soda glass, round bottom, heavy wall, with thread GL 18, sterilisable up to +121 °C/+249.8 °F, wall approx. 1 mm packing: 100 pieces/box

**42782045** Dimensions approx. 100 x 16 mm Ø **42782051** Dimensions approx. 160 x 16 mm Ø



#### Test tubes, DURAN® borosilicate glass 3.3, rimless

Round bottom, heavy wall

	Wall thickness	Dimensions	
42787021	approx. 1.0 mm	approx. 100 x 10 mm Ø	
42787024	approx. 1.0 mm	approx. 75 x 12 mm Ø	
42787027	approx. 1.0 mm	approx. 100 x 12 mm Ø	
42787033	approx. 1.0 mm	approx. 130 x 14 mm Ø	
42787048	approx. 1.2 mm	approx. 150 x 16 mm Ø	
42787051	approx. 1.2 mm	approx. 160 x 16 mm Ø	
42787054	approx. 1.2 mm	approx. 150 x 19 mm Ø	
42787060	approx. 1.2 mm	approx. 180 x 18 mm Ø	



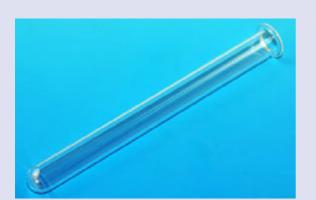




#### Test tubes, DURAN® borosilicate glass 3.3, with rim

Round bottom, heavy wall

	Wall thickness	Dimensions
42788021	approx. 1.0 mm	approx. 100 x 10 mm Ø
42788024	approx. 1.0 mm	approx. 75 x 12 mm Ø
42788027	approx. 1.0 mm	approx. 100 x 12 mm Ø
42788033	approx. 1.2 mm	approx. 130 x 14 mm Ø
42788048	approx. 1.2 mm	approx. 150 x 16 mm Ø
42788051	approx. 1.2 mm	approx. 160 x 16 mm Ø
42788054	approx. 1.2 mm	approx. 150 x 19 mm Ø
42788060	approx. 1.2 mm	approx. 180 x 18 mm Ø
42788063	approx. 1.2 mm	approx. 180 x 20 mm Ø
42788066	approx. 1.2 mm	approx. 200 x 24 mm Ø
42788078	approx. 1.4 mm	approx. 200 x 30 mm Ø
42788081	approx. 1.4 mm	approx. 200 x 38 mm Ø



#### Test tubes according to Uhlenhut

AR-Glas ® (soda glass), round bottom, with broad rim, for bacteriological and serological purposes, wall thickness approx. 1 mm, packing: 100 pieces/box

**42793050** Dimensions approx. 100 x 10 mm Ø



#### Test tube brushes with cotton end

	Galvanised wire	for tubes	Total length	Bristle with cotton
42760010	1.6 mm	16-20 mm Ø	approx. 300 mm	approx. 80 x 20 mm Ø
42760020	1.0 mm	10-12 mm Ø	approx. 160 mm	approx. 50 x 10 mm Ø
42760030	1.6 mm	approx. 25 mm Ø	approx. 330 mm	approx. 110 x 26 mm Ø



#### Glass vials, rolled rim, with plastic snap-cap

	Packing/box	Capacity	Dimensions
42783004	690 pieces	approx. 2 ml	approx. 36 x 11.5 mm Ø
42783008	154 pieces	approx. 5 ml	approx. 24 x 24 mm Ø
42783012	154 pieces	approx. 8 ml	approx. 34 x 24 mm Ø
42783016	154 pieces	approx. 10 ml	approx. 41 x 24 mm Ø
42783020	130 pieces	approx. 15 ml	approx. 48 x 26 mm Ø
42783024	130 pieces	approx. 20 ml	approx. 60 x 26 mm Ø
42783028	108 pieces	approx. 30 ml	approx. 72 x 28 mm Ø
42783032	84 pieces	approx. 60 ml	approx. 106 x 32 mm Ø

Minimum order quantity: 1 box



#### Test tubes, flat bottom, for globules

Clear glass, rimless, with transparent lamellar plug, packing: 300 pieces/box

**42784010** Dimensions approx. 52.5 x 8 mm Ø

Minimum order quantity: 1 box



#### Glass vials, rolled rim, with plastic snap-cap

	Packing/box	Capacity	Dimensions
42785004	200 pieces	approx. 3 ml	approx. 30 x 19 mm Ø
42785008	200 pieces	approx. 5 ml	approx. 40 x 19 mm Ø
42785012	200 pieces	approx. 10 ml	approx. 45 x 22 mm Ø
42785016	200 pieces	approx. 25 ml	approx. 50 x 30 mm Ø
42785020	200 pieces	approx. 30 ml	approx. 75 x 28 mm Ø
42785024	200 pieces	approx. 40 ml	approx. 80 x 30 mm Ø
42785028	200 pieces	approx. 50 ml	approx. 100 x 30 mm Ø
42785032	100 pieces	approx. 100 ml	approx. 145 x 34 mm Ø

Minimum order quantity: 1 box



#### Wooden test tube holders

Packing: 10 pieces

with spring

**42810010** for tubes up to approx. 20 mm Ø



#### Packing: 10 pieces

with spring

**42811010** for tubes up to approx. 30 mm  $\emptyset$ 



#### Brushes for conical centrifuge tubes

	Brush Ø	Total length	Brush
40937010	14 mm top - 30 mm below	approx. 270 mm	approx. 80 mm long



#### Centrifuge tubes, conical, rimless, ungraduated

Packing: 100 pieces/box

	Capacity	Dimensions	Material
40938007	15 ml	approx. 112 x 17 mm	DURAN® borosilicate glass 3.3
40938010	15 ml	approx. 112 x 17 mm	AR-Glas® (soda glass)
40938014	14.5 ml	approx. 100 x 17 mm	AR-Glas® (soda glass)
40938021	15.5 ml	approx. 105 x 17 mm	AR-Glas® (soda glass)







#### Centrifuge tubes, conical, rimless, graduated

Fused white graduation "ASSISTENT-PERMANENT", with mark at 15 ml.

Capacity 10-15 ml, dimensions approx. 112 x 17 mm Available with blue or amber graduation on request. Packing unit 10 pieces, 100 pieces/box.

	Graduation	Material
40939001	10 ml: 0.1	AR-Glas® (soda glass)
40939002	15 ml: 0.1	AR-Glas® (soda glass)
40939301	10 ml: 0.1	DURAN® borosilicate glass 3.3
40939302	15 ml: 0.1	DURAN® borosilicate glass 3.3



#### Centrifuge tubes, conical, with rim, ungraduated

Packing: 100 pieces/box

	Capacity	Material	Dimensions
40940010	15 ml	AR-Glas® (soda glass)	approx. 112 x 17 mm
40940014	14.5 ml	AR-Glas® (soda glass)	approx. 100 x 17 mm
40940310	15 ml	DURAN® borosilicate glass 3.3	approx. 112 x 17 mm



#### Centrifuge tubes, conical, with rim, graduated

Fused white graduation "ASSISTENT-PERMANENT", with mark at 15 ml.

Available with blue or amber graduation on request. Dimensions approx. 112 x 17 mm

Packing unit 10 pieces, 100 pieces/box

	Graduation	Material
40942001	10 ml : 0.1	AR-Glas® (soda glass)
40942002	15 ml : 0.1	AR-Glas® (soda glass)
40942301	10 ml : 0.1	DURAN® borosilicate glass 3.3
40942302	15 ml : 0.1	DURAN® borosilicate glass 3.3



### Centrifuge tubes, conical, with stopper of polyethylene, ungraduated

with interchangeable standard ground Capacity 10-15 ml, joint size 12/21 Dimensions approx. 115 x 17 mm Packing: 5 pieces

40943010 AR-Glas® (soda glass)

**40943310** DURAN® borosilicate glass 3.3



#### Centrifuge tubes, conical, with stopper of polyethylene, graduated

with interchangeable standard ground AR-Glas® (soda glass), fused white graduation "ASSISTENT-PERMANENT"

	Graduation	Joint size	Packing/box	Dimensions
40944010	10 ml : 0.1	12/21	5 pieces	approx. 115 x 17 mm



## Centrifuge tubes, short conical bottom, ungraduated, AR-Glas® (soda glass)

Cylindrical, rimless, packing: 100 pieces/box

	Capacity	Dimensions	
40946001	10-15 ml	approx. 98 x 17 mm	
40946002	10-15 ml	approx. 107 x 17 mm	
40946003	25-30 ml	approx. 100 x 24/25 mm	



## Centrifuge tubes, short conical bottom, graduated, AR-Glas® (soda glass)

Rimless, fused white graduation "ASSISTENT-PERMANENT"

	Packing/box	Graduation	Dimensions
40947001	10 pieces	10-15 ml : 0.2	approx. 98 x 17 mm



## Centrifuge tubes, short conical bottom, ungraduated, DURAN® borosilicate glass 3.3

Cylindrical, rimless, capacity 10-15 ml, packing: 100 pieces/box

**40948001** Dimensions approx. 98 x 17 mm **40948002** Dimensions approx. 107 x 17 mm



## Centrifuge tubes, short conical bottom, graduated, DURAN® borosilicate glass 3.3

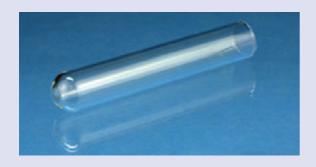
Cylindrical, rimless, fused white graduation "ASSISTENT-PERMANENT"

Packing: 10 pieces

	Graduation	Dimensions
40949001	10-15 ml : 0.2	approx. 98 x 17 mm







## Centrifuge tubes, round bottom, ungraduated, AR-Glas ${\bf @}$ (soda glass)

Cylindrical, rimless, thick wall

	Capacity	Packing/box	Dimensions
40950001	10-15 ml	100 pieces	approx. 98 x 17 mm
40950002	10-15 ml	100 pieces	approx. 107 x 17 mm
40950003	25-30 ml	100 pieces	approx. 100 x 24-25 mm
40950004	50-55 ml	50 pieces	approx. 98 x 33-35 mm
40950005	70-100 ml	40 pieces	approx. 115 x 40 mm
40950016	10-12 ml	100 pieces	approx. 100 x 16 mm



#### Centrifuge tubes, round bottom, graduated, AR-Glas® (soda glass)

Rimless, fused white graduation "ASSISTENT-PERMANENT"

	Division	Packing/box	Capacity	Dimensions
40951001	-	10 pieces	10-15 ml	approx. 98 x 17 mm
40951002	-	10 pieces	10-15 ml	approx. 107 x 17 mm
40951003	-	10 pieces	25 ml	approx. 100 x 24/25 mm
40951004	-	5 pieces	50 ml	approx. 98 x 33-35 mm



#### Rubber stoppers for centrifuge tubes

**40955010** suitable for 17 mm Ø (10-15 ml)



#### Cellulose stoppers for centrifuge tubes and test tubes

**40956010** suitable for 16/17 mm Ø



## Centrifuge tubes, round bottom, ungraduated, DURAN® borosilicate glass 3.3

Cylindrical, rimless, thick wall

	Capacity	Packing/box	Dimensions
40958001	10-15 ml	100 pieces	approx. 98 x 17 mm
40958002	10-15 ml	100 pieces	approx. 107 x 17 mm
40958003	25-30 ml	100 pieces	approx. 100 x 24/25 mm
40958004	50-55 ml	50 pieces	approx. 98 x 33-35 mm
40958016	10-12 ml	100 pieces	approx. 100 x 16 mm



## Centrifuge tubes, round bottom, graduated, DURAN $\circledR$ borosilicate glass 3.3

Cylindrical, rimless, fused white graduation "ASSISTENT-PERMANENT"

	Division	Packing/box	Capacity	Dimensions
40959001	0.2 ml	10 pieces	10-15 ml	approx. 98 x 17 mm
40959002	0.2 ml	10 pieces	10-15 ml	approx. 107 x 17 mm
40959003	0.5 ml	10 pieces	25 ml	approx. 100 x 24/25 mm
40959004	2 ml	5 pieces	50 ml	approx. 98 x 33-35 mm



#### Centrifuge tubes with screw cap, conical, AR-Glas® (soda glass)

Ungraduated, with thread GL 14

The screw caps are gas-sterilisable up to +121  $^{\circ}$ C/+249.8  $^{\circ}$ F using ethylene oxide.

	Capacity	Packing/box	Dimensions	
40070010	10-15 ml	100 pieces	approx 112 x 17 mm	



### Centrifuge tubes with screw cap, round bottom, AR-Glas® (soda glass)

Cylindrical, ungraduated, with thread GL 14

The screw caps are gas-sterilisable up to +121 °C/+249.8 °F using ethylene oxide.

	Capacity	Packing/box	Dimensions	
40976010	10-15 ml	100 pieces	approx. 98 x 17 mm	







### Centrifuge tubes ASTM, DURAN® borosilicate glass 3.3

#### Cylindrica

DIN 51793, fused blue graduation "ASSISTENT-PERMANENT", ASTM D 96, with conical bottom

	40930010
Graduation 0 - 0.5 ml	0.05 ml
Graduation 0.5 - 2 ml	0.1 ml
Graduation 2 - 3 ml	0.2 ml
Graduation 3 - 5 ml	0.5 ml
Graduation 5 - 10 ml	1 ml
Graduation 25 - 100 ml	25 ml
Graduation 10 - 25 ml	5 ml



#### Pear shape

DIN 51793, fused blue graduation "ASSISTENT-PERMANENT", ASTM D 96, with cylindrical bottom

	40931010
Graduation 0 - 1.5 ml	0.1 ml
Graduation 3 - 5 ml	0.5 ml
Graduation 1.5 - 3 ml	0.5 ml
Graduation 5 - 10 ml	1 ml
Graduation 25 - 100 ml	25 ml
Graduation 10 - 25 ml	5 ml



#### Calcium chloride tubes

#### **U-shape**

Clear glass, with two side arms

	Length	Outside Ø
40895010	approx. 100 mm	approx. 16 mm
40895012	approx. 125 mm	approx. 15 mm
40895015	approx. 150 mm	approx. 20 mm



#### with 2 stopcock stoppers

Clear glass, with two side arms

	Joint size	Length	Outside Ø
40896010	12/21	approx. 100 mm	approx. 16 mm
40896012	12/21	approx. 125 mm	approx. 16 mm
40896015	14/23	approx. 150 mm	approx. 20 mm



# Extraction apparatus according to Soxhlet, DURAN® borosilicate glass 3.3 $\,$

#### with Allihn condenser

with standard grounds, flask joint size 29/32 Joint sizes and capacity of extractors are durably marked.

consisting of:

Extractor no. 41155...

Allihn condenser no. 41153...

Round bottom flask no. 41913...

	Capacity of flask	Extraction capacity	Condenser
41150006	100 ml	30 ml	Joint size 29/32
41150012	100 ml	70 ml	Joint size 34/35
41150018	250 ml	100 ml	Joint size 45/40
41150024	500 ml	150 ml	Joint size 45/40
41150030	500 ml	200 ml	Joint size 45/40
41150036	500 ml	250 ml	Joint size 45/40



#### with Dimroth condenser

with standard grounds, flask joint size 29/32 Joint sizes and capacity of extractors are durably marked.

consisting of:

Extractor no. 41155...

Dimroth condenser no. 41154...

Round bottom flask no. 41913...

	Capacity of flask	Extraction capacity	Condenser
41151006	100 ml	30 ml	Joint size 29/32
41151012	100 ml	70 ml	Joint size 34/35
41151018	250 ml	100 ml	Joint size 45/40
41151024	500 ml	150 ml	Joint size 45/40
41151030	500 ml	200 ml	Joint size 45/40
41151036	500 ml	250 ml	Joint size 45/40
41151042	500 ml	300 ml	Joint size 60/46
41151048	1000 ml	500 ml	Joint size 60/46
41151054	2000 ml	1000 ml	Joint size 71/51



#### Spare parts for extraction apparatus

#### Allihn condensers

DURAN® borosilicate glass 3.3

	suitable for	Condenser	
41153029	capacity 30 ml	Joint size 29/32	
41153034	capacity 70 ml	Joint size 34/35	
41153045	capacity 100 ml	Joint size 45/40	











#### **Dimroth condensers**

DURAN® borosilicate glass 3.3

	suitable for	Condenser
41154029	capacity 30 ml	Joint size 29/32
41154034	capacity 70 ml	Joint size 34/35
41154045	capacity 100 ml	Joint size 45/40
41154060	capacity 500 ml	Joint size 60/46
41154071	capacity 1000 ml	Joint size 71/51

#### **Extractors**

DURAN® borosilicate glass 3.3, with cone joint size 29/32

	Extraction capacity	Socket
41155006	30 ml	Joint size 29/32
41155012	70 ml	Joint size 34/35
41155018	100 ml	Joint size 45/40
41155024	150 ml	Joint size 45/40
41155030	200 ml	Joint size 45/40
41155036	250 ml	Joint size 45/40
41155042	300 ml	Joint size 60/46
41155048	500 ml	Joint size 60/46
41155054	1000 ml	Joint size 71/51

#### **Round bottom flasks**

DURAN® borosilicate glass 3.3, with standard ground, reinforced neck with joint size durably marked without stopper

	Joint size	Capacity
41913006	29/32	50 ml
41913008	14/23	50 ml
41913010	19/26	50 ml
41913012	29/32	100 ml
41913014	14/23	100 ml
41913015	19/26	100 ml
41913018	29/32	250 ml
41913024	29/32	500 ml
41913030	29/32	1000 ml
41913036	29/32	2000 ml



#### Condensers

# **Liebig condensers, DURAN® borosilicate glass 3.3, without ground** with tube fused-in

41981020 Length of jacket approx. 20 cm41981030 Length of jacket approx. 30 cm41981040 Length of jacket approx. 40 cm



#### 

DIN 12576

	Length	Cone and socket
41982008	approx. 16 cm	Joint size 14/23
41982016	approx. 16 cm	Joint size 19/26
41982024	approx. 25 cm	Joint size 19/26
41982032	approx. 25 cm	Joint size 24/29
41982040	approx. 25 cm	Joint size 29/32
41982048	approx. 40 cm	Joint size 24/29
41982056	approx. 40 cm	Joint size 29/32



## Allihn bulb condensers, DURAN® borosilicate glass 3.3, with 2 standard grounds

DIN 12581

	Length	Cone and socket	
41987008	approx. 16 cm	Joint size 14/23	
41987016	approx. 16 cm	Joint size 19/26	
41987024	approx. 25 cm	Joint size 19/26	
41987032	approx. 25 cm	Joint size 24/29	
41987040	approx. 25 cm	Joint size 29/32	
41987048	approx. 40 cm	Joint size 24/29	
41987056	approx. 40 cm	Joint size 29/32	



# Coil condensers, DURAN® borosilicate glass 3.3, without standard ground

with tubing connection at top and at bottom

 41990064
 Length of jacket approx. 20 cm

 41990072
 Length of jacket approx. 30 cm

 41990080
 Length of jacket approx. 40 cm













## Coil condensers, DURAN® borosilicate glass 3.3, with 2 standard grounds

with tubing connection at top and at bottom

	Length	Cone and socket	
41990008	approx. 16 cm	Joint size 14/23	
41990016	approx. 16 cm	Joint size 19/26	
41990024	approx. 25 cm	Joint size 19/26	
41990032	approx. 25 cm	Joint size 24/29	
41990040	approx. 25 cm	Joint size 29/32	
41990048	approx. 40 cm	Joint size 24/29	
41990056	approx. 40 cm	Joint size 29/32	

## Coil condensers according to Dimroth, DURAN® borosilicate glass 3.3, with 2 standard grounds

DIN 12591

with tubing connection at top

	Length	Cone and socket
41996008	approx. 16 cm	Joint size 14/23
41996016	approx. 16 cm	Joint size 19/26
41996024	approx. 25 cm	Joint size 19/26
41996032	approx. 25 cm	Joint size 24/29
41996040	approx. 25 cm	Joint size 29/32
41996048	approx. 40 cm	Joint size 24/29
41996056	approx. 40 cm	Joint size 29/32

### Condenser tube, DURAN® borosilicate glass 3.3, with standard ground

	Length	Cone
41998010	100 cm	Joint size 29/32

#### **Tubing connectors**

made of glass, straight

both sides with olive

**44160008** Dimensions approx. 80 x 8 mm **44160010** Dimensions approx. 100 x 10 mm **44160012** Dimensions approx. 120 x 12 mm



#### **Tubing connectors made of glass, T-shape**

with olives

	Side length	Outside Ø
44161006	approx. 55 mm	approx. 6 mm
44161008	approx. 45 mm	approx. 8 mm
44161010	approx. 50 mm	approx. 10 mm



#### made of polypropylene

for tubing of different diameters

**44171010** for tubing of approx. 5-17 mm inside  $\emptyset$ 



#### made of polypropylene, T-shape

	Total height	Length of tube	for inside Ø of the tubing
44173004	approx. 15 mm	approx. 20 mm	approx. 3-4 mm
44173006	approx. 23 mm	approx. 30 mm	approx. 4-5 mm
44173008	approx. 31 mm	approx. 40 mm	approx. 6-7 mm
44173010	approx. 39 mm	approx. 55 mm	approx. 8-9 mm
44173012	approx. 47 mm	approx. 69 mm	approx. 10-11 mm



#### made of polypropylene, Y-shape

Distance bot outside)	h legs (outside to	Total height	for inside Ø of the tubing
<b>44174004</b> approx. 14 m	nm	approx. 24 mm	approx. 3 mm
<b>44174006</b> approx. 21 m	nm	approx. 35 mm	approx. 4-5 mm
<b>44174008</b> approx. 34 m	nm	approx. 54 mm	approx. 6-7 mm
<b>44174010</b> approx. 40 m	nm	approx. 64 mm	approx. 8-9 mm
<b>44174012</b> approx. 47 m	nm	approx. 74 mm	approx. 10-11 mm



#### Safety valves

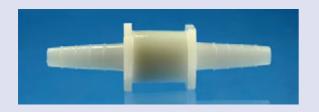
made of DURAN® borosilicate glass 3.3

**42856010** for tubing of approx. 8-9 mm inside  $\emptyset$ 



# Assistent

## LABORATORY EQUIPMENT



#### made of polyethylene (HDPE)

**42860010** for tubing of approx. 6-9 mm inside  $\emptyset$ 



#### Washing bottles

#### with interchangeable standard ground and spray tubes

made of DURAN® borosilicate glass 3.3, joint size 29/32

**43091048** Capacity 250 ml **43091060** Capacity 500 ml **43091066** Capacity 1000 ml



#### Spare spray tubes

DURAN® borosilicate glass 3.3, with standard ground, joint size 29/32

for washing bottles

 43092048
 for capacity 250 ml

 43092060
 for capacity 500 ml

 43092066
 for capacity 1000 ml



#### Automatic tilting pipettes, flasks and accessories

## Automatic tilting pipettes with standard ground and bottle, clear glass

Bottle 1000 ml, joint size 29/32 Spare bottle no. 41916048

 41875003
 Capacity 5 ml

 41875006
 Capacity 10 ml

 41875009
 Capacity 20 ml

 41875012
 Capacity 25 ml

 41875015
 Capacity 50 ml

 41875018
 Capacity 100 ml



## Automatic tilting pipettes, DURAN® borosilicate glass 3.3, without bottle

with standard ground, joint size 29/32

41877003Capacity 5 ml41877006Capacity 10 ml41877009Capacity 20 ml41877012Capacity 25 ml41877015Capacity 50 ml41877018Capacity 100 ml



#### **Vacuum Desiccators**

#### with interchangeable cover with knob

DIN 12491, borosilicate glass 3.3, tested for tension, vacuum tightness and pressure

	Capacity	Inside Ø	
41160010	approx. 0.7 l	approx. 10 cm	
41160015	approx. 2.4 l	approx. 15 cm	
41160020	approx. 5.8 l	approx. 20 cm	
41160025	approx. 10.5 l	approx. 25 cm	
41160030	approx. 18.5 l	approx. 30 cm	



#### with interchangeable cover with socket

DIN 12491, borosilicate glass 3.3, socket joint size 24/29

41161015Inside Ø approx. 15 cm41161020Inside Ø approx. 20 cm41161025Inside Ø approx. 25 cm







#### with interchangeable cover with socket and stopcock

DIN 12491, borosilicate glass 3.3, socket joint size 24/29

	Inside Ø	Capacity
41162015	approx. 15 cm	approx. 2.4 l
41162020	approx. 20 cm	approx. 5.8 l
41162025	approx. 25 cm	approx. 10.5 l

## Desiccators Novus with interchangeable cover with knob and side tube

DIN 12491, DURAN® borosilicate glass 3.3, side tube joint size 24/29

	Inside Ø	Capacity
41163015	approx. 15 cm	approx. 2.4 l
41163020	approx. 20 cm	approx. 5.8 l
41163025	approx. 25 cm	approx. 10.5 l



#### Porcelain plates for desiccators

with many small holes, without base

	suitable for upper inside Ø	Outside Ø
41175010	10 cm	approx. 90 mm
41175015	15 cm	approx. 140 mm
41175020	20 cm	approx. 189 mm
41175025	25 cm	approx. 241 mm
41175030	30 cm	approx. 290 mm



#### Spare stopcock for desiccator cover with socket

**41177024** with standard ground 24/29



#### Spare stopcock for desiccator with side tube

**41178024** with standard ground 24/29



#### Litmus paper

#### Blue

Colour changes from blue to red when the nature of the solution changes from alkaline to acidic

	Booklet	Test strips	Range
42005010	100 test strips	approx. 75 x 10 mm	pH 8.0 - 5.0



#### Red

Colour changes from red to blue when the nature of the solution changes from acidic to alkaline

	Booklet	Test strips	Range
42006010	100 test strips	approx. 75 x 10 mm	pH 5.0 - 8.0



#### Universal indicator paper

Graduation pH 1 - 2 - 3 - 5 - 6 - 7 - 8 - 9 - 10 - 12 - 14 Reel in plastic rotary box

	pH range	Reel	
42007010	1 - 14	5 m x 7 mm	



#### Refill pack of 3 reels

without graduation, without plastic box **42008010** Spare reels for no. 42007010







#### **Indicator sticks**

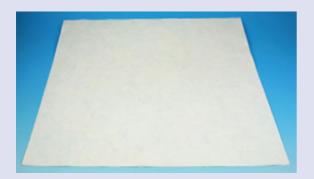
pH 4-7 not bleeding, packs of 100 test sticks **42009020** Merck no. 109542.0001



#### pH 0-14 not bleeding

for rapid determination of pH value of water. Colours do not fade or fuse even in alkaline solutions. Distinct colour change facilitates comparison with colour chart.

**42009010** Packs of 100 test sticks



#### Filter media

#### Filter paper sheets

Smooth, medium fast according to DIN 53137, thickness 0.15 mm, paper weight 70 g/m², rate of filtration 20 s Packing: 100 pieces

**41250045** Dimensions approx. 45 x 45 cm **41250058** Dimensions approx. 58 x 58 cm



#### Filter paper circles

Grained, fast filtration according to DIN 53137, thickness 0.20 mm, paper weight 75 g/m², rate of filtration 10-12 s Packing: 100 pieces

41255007	Diameter approx. 70 mm
41255009	Diameter approx. 90 mm
41255011	Diameter approx. 110 mm
41255012	Diameter approx. 125 mm
41255015	Diameter approx. 150 mm
41255018	Diameter approx. 185 mm
41255055	Diameter approx. 55 mm



#### Filter paper folded

Smooth, medium fast according to DIN 53137, suitable for the analysis of fats (due to low ether-soluble residue),

thickness 0.16 mm, paper weight 70 g/m², rate of filtration 22 s Packing: 100 pieces

41260011	Diameter approx. 110 mm
41260012	Diameter approx. 125 mm
41260015	Diameter approx. 150 mm
41260018	Diameter approx. 185 mm
41260024	Diameter approx. 240 mm
41260027	Diameter approx. 270 mm
41260032	Diameter approx. 320 mm
41260038	Diameter approx. 385 mm



#### Filtering flasks, Erlenmeyer shape, DURAN® borosilicate glass 3.3

with plastic hose connection

These filtering flasks with plastic hose connection comply with the regulations of the German Product Safety Act.

41265036	Capacity 250 ml
41265042	Capacity 500 ml
41265048	Capacity 1000 ml
41265054	Capacity 2000 ml



#### Assembly set for no. 41265...

with removable plastic hose connection, short and long screw and seals

**41266010** Hose connection Ø approx. 9 mm













#### Filtering flasks, Erlenmeyer shape, borosilicate glass 3.3

DIN EN ISO 6556, with glass hose connection We recommend the use of filtering flasks with plastic hose connection no. 41265... as these comply with the regulations of the German Product Safety Act.

	Capacity	Height	
41270036	250 ml	approx. 145 mm	
41270042	500 ml	approx. 175 mm	
41270048	1000 ml	approx. 230 mm	
41270054	2000 ml	approx. 255 mm	

#### Filtering jars

Clear glass, cylindrical, with spout

**41271006** Capacity 50 ml **41271012** Capacity 100 ml **41271018** Capacity 250 ml

#### Filter funnels

DURAN® borosilicate glass 3.3, porosity 4

Filter funnels in other sizes and porosities are also available.

	Capacity	Stem Ø	Disc Ø
41272006	50 ml	approx. 10 mm	approx. 35 mm
41272012	75 ml	approx. 10 mm	approx. 45 mm
41272030	500 ml	approx. 22 mm	approx. 95 mm

#### Filter heads, DURAN® borosilicate glass 3.3, without filter disc

with funnel made of polypropylene and 2 seals Suitable filter disc: see no. 41273...

	for disc Ø	Thread size	Capacity
41273024	24 mm	28 mm	30 ml
41273050	50 mm	54 mm	250 ml
41273090	90 mm	95 mm	1000 ml



#### Filter discs, DURAN® borosilicate glass 3.3

with glass rim, porosity 4, suitable for filter heads no. 41273...

**41273924** Disc 24 mm Ø **41273950** Disc 50 mm Ø **41273990** Disc 90 mm Ø

Other porosities are also available.



#### Glass rings

#### **Raschig rings**

Packing: 1 kg

 41400003
 Dimensions approx. 3 x 3 mm

 41400004
 Dimensions approx. 4 x 4 mm

 41400005
 Dimensions approx. 5 x 5 mm

 41400006
 Dimensions approx. 6 x 6 mm

 41400007
 Dimensions approx. 7 x 7 mm

 41400008
 Dimensions approx. 8 x 8 mm

 41400010
 Dimensions approx. 10 x 10 mm



#### Glass beads

#### made of clear glass, spherical, solid, polished

Packing: 1 kg

41401001 Diameter approx. 1 mm 41401002 Diameter approx. 2 mm 41401003 Diameter approx. 3 mm 41401004 Diameter approx. 4 mm 41401005 Diameter approx. 5 mm 41401006 Diameter approx. 6 mm 41401007 Diameter approx. 7 mm 41401008 Diameter approx. 8 mm 41401010 Diameter approx. 10 mm



#### **Boiling stones**

#### **Grade A**

Anti-bumping granules, for preparative applications
The effect of these granules remains even with several interruptions
of the boiling process in vacuum distillation. Long durability.

**41402010** Packing: 250 g



# Assistent

# LABORATORY EQUIPMENT



#### Glass wool (Filter cotton)

#### Superfine

**41408002** Box of approx. 30 g **41408003** Packing of 1 kg

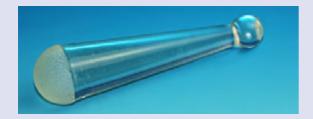


#### Mortars

#### made of borosilicate glass 3.3

Rough inside, with spout

	Capacity	Height	Outside Ø
47028008	approx. 125 ml	approx. 60 mm	approx. 80 mm
47028010	approx. 225 ml	approx. 75 mm	approx. 100 mm
47028012	approx. 400 ml	approx. 90 mm	approx. 120 mm
47028015	approx. 700 ml	approx. 110 mm	approx. 150 mm



#### Pestles

#### made of borosilicate glass 3.3

with rough grinding surface

	Length	Head Ø	for mortars Ø
47029008	110 mm	28 mm	80 mm
47029010	130 mm	31 mm	100 mm
47029012	150 mm	36 mm	120 mm
47029015	180 mm	40 mm	150 mm



#### Mortars and pestles

#### Mortars made of melamine

	Diameter	Capacity	Height
47032001	approx. 12 cm	approx. 400 ml	approx. 8 cm
47032002	approx. 15 cm	approx. 700 ml	approx. 9 cm



#### Pestles made of melamine

	Length	Head
47033001	approx. 13 cm	approx. 4 cm Ø
47033002	approx. 15 cm	approx. 4 cm Ø



#### Phosphorus spoons

#### made of iron

	Bowl	Length
42515010	approx. 20 mm Ø	approx. 45 cm



#### Spoons and spatulas

#### Sampling spoons with groove and spatula

made of stainless steel, spoon approx. 18 x 32 mm

**42516010** Length approx. 190 mm



#### Chemical spoons, double

made of stainless steel

**42517001** Length approx. 150 mm

Spoon end approx. 17x23 mm and 22x30 mm

**42517002** Length approx. 180 mm

Spoon end approx. 22x30 mm and 29x40 mm

**42517003** Length approx. 210 mm

Spoon end approx. 22x30 mm and 29x40 mm







#### **Pharmacist spoons**

made of stainless steel, spoon approx. 16 x 32 mm

42518010 Length approx. 150 mm



#### Pharmacist spoons, double

made of stainless steel, spoon end approx.  $18 \times 36 \text{ mm}$  and  $10 \times 30 \text{ mm}$ 

Length approx. 170 mm 42519010



#### **Spoon spatulas**

made of stainless steel

Length approx. 150 mm, spoon approx. 36x26 mm, spatula approx. 32x22 mm 42520001

42520002 Length approx. 180 mm, spoon approx. 40x28 mm,

spatula approx. 36x26 mm

Length approx. 210 mm, spoon approx. 40x28 mm, spatula approx. 36x26 mm 42520003



#### **Pharmacist spatulas**

made of stainless steel, with wooden handle

42521001 Total length approx. 190 mm, spatula approx. 100x18

42521002 Total length approx. 230 mm, spatula approx. 130x20

42521003 Total length approx. 250 mm, spatula approx. 150x22



#### Weighing boats and weighing scoops

#### Measuring scoops made of polypropylene

White, also suitable as weighing scoop

	Capacity	Length
44240006	2 ml	approx. 60 mm
44240012	5 ml	approx. 82 mm
44240018	10 ml	approx. 100 mm
44240024	25 ml	approx. 135 mm
44240030	50 ml	approx. 160 mm
44240036	100 ml	approx. 200 mm
44240042	250 ml	approx. 260 mm
44240048	500 ml	approx. 315 mm
44240054	1000 ml	approx. 385 mm



#### **Weighing scoops**

made of stainless steel

**44245010** Length approx. 170 mm



#### Weighing boats made of DURAN® borosilicate glass 3.3

	Capacity	Total length
44248003	approx. 3 ml	approx. 70 mm
44248006	approx. 6 ml	approx. 80 mm
44248010	approx. 10 ml	approx. 105 mm



#### **Communicating vessels**

Clear glass, with wooden base

for educational purposes

**41954010** with 4 different tubes







#### Clear glass, with wooden base

for educational purposes

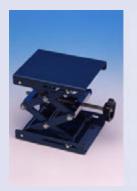
**41955010** with 1 large tube and 4 different capillary tubes



#### Radiometers (Light mills, Crooke's radiometers)

#### Clear glass, with base

	Height	Ø
42757002	approx. 13 cm	approx. 8 cm



#### Laboratory lifter

#### made of aluminium alloy, powder-coated

The lab jack is characterised by a high-quality workmanship and high stability.

Height manually adjustable.

	Platform	Height	Static load
42011010	approx. 160 x 130 mm	approx. 6 - 25 cm	max. 7 kg (DIN 12897)



#### Cork borer set

#### made of brass tubing

Nickel-plated, with handles

	for holes of	Set of
41593006	5-11 mm Ø	6 pieces
41593012	5-19 mm Ø	12 pieces



#### **Cork stoppers**

#### First-class quality, low-porous

	Height	Bottom Ø	Outside Ø
41594009	17 mm	6 mm	9 mm
41594013	22 mm	10 mm	13 mm
41594014	22 mm	11 mm	14 mm
41594015	22 mm	12 mm	15 mm
41594016	22 mm	13 mm	16 mm
41594018	22 mm	15 mm	18 mm
41594019	23 mm	16 mm	19 mm
41594020	26 mm	17 mm	20 mm
41594022	26 mm	18 mm	22 mm
41594023	26 mm	19 mm	23 mm
41594026	27 mm	22 mm	26 mm
41594030	27 mm	26 mm	30 mm
41594036	27 mm	32 mm	36 mm
41594040	27 mm	36 mm	40 mm



Dimensions are approximate.

#### **Stoppers**

# Octagonal top stoppers with standard joint made of polyethylene (HDPE)

#### resistant to acid and alkali

42990007	Joint size 7/16
42990010	Joint size 10/19
42990012	Joint size 12/21
42990014	Joint size 14/23
42990019	Joint size 19/26
42990024	Joint size 24/29
42990029	Joint size 29/32
42990034	Joint size 34/35
42990045	Joint size 45/40



#### Glass stoppers with standard ground

Hexagonal top, made of DURAN® borosilicate glass 3.3

	•
42992007	Joint size 7/16
42992010	Joint size 10/19
42992012	Joint size 12/21
42992014	Joint size 14/23
42992019	Joint size 19/26
42992024	Joint size 24/29
42992029	Joint size 29/32
42992034	Joint size 34/35
42992045	Joint size 45/40







#### Melting point determination

#### Melting point determination device according to Thiele

DURAN® borosilicate glass 3.3

**43004010** Dimensions approx. 120 x 20 mm



#### Melting point determination tubes, open ends

100 pieces packed in a glass tube

**43005010** Dimensions approx. 90 x 1.5 mm Ø outside



#### Melting point determination tubes, one end closed

100 pieces packed in a glass tube

**43006010** Dimensions approx. 90 x 1.5 mm Ø outside



#### **Crucible tongs**

Nickel-chromium steel, stainless, double bent

**43010010** Length approx. 22 cm



#### Magnesia grooves

#### DIN 40680, thermal resistance approx. 560 K

for laboratory test samples and the incineration of small quantities of substances

Packing 25 pieces

**42065010** Dimensions approx. 100 x 9 mm

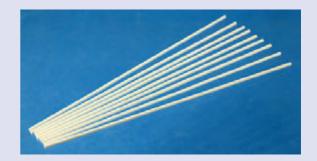


#### Magnesia rods

#### DIN 40680, thermal resistance approx. 560 K

Packing 25 pieces

	Ø	Length
42066010	approx. 1.8 mm	approx. 140 mm



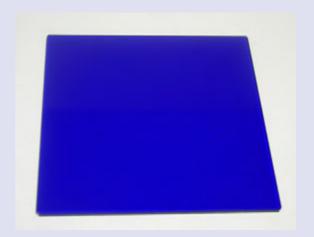
#### Blue glass plates

Thickness 2.5 - 3.0 mm

 41910004
 Dimensions approx. 5 x 5 cm

 41910008
 Dimensions approx. 5 x 10 cm

 41910012
 Dimensions approx. 10 x 10 cm





#### **Laboratory Film**

#### PARAFILM® M

Physical properties:

Toxicity: non-toxic

Melting point:  $+60 \,^{\circ}\text{C}/+140 \,^{\circ}\text{F}$ Flash point:  $+301 \,^{\circ}\text{C}/+573.8 \,^{\circ}\text{F}$ 

Temperature range (continuous use): -45 °C bis +50 °C/-49 °F

un to +122°

Stretching ability: 200 % Ultimate elongation: 300 %

**Gas permeability** in 24 hours at +23 °C/+73.4 °F with 50 % relative

humidity:

Oxygen: ≤ 350 cm³/m² Nitrogen: ≤ 105 cm³/m²

Carbon dioxide: ≤ 1100 cm³/m²

Water vapour permeability in 24 hours at +37 °C/+98.6 °F and

90 % relative humidity: 0.8 g/m<sup>2</sup>

#### **Double roll**

Flexible, moisture-resistant, gas-permeable sealing film for the laboratory.

Test tubes, cylinders, flasks, cultures etc. are being sealed safely due to the soft and smooth film.

Also suitable for damp bandages as wrapping.

Free of plasticisers.

Length Width
42510020 approx. 15 m / 50' approx. 50 cm / 20"





#### Roll in dispenser carton

Width approx. 10 cm / 4"

**42511010** Length approx. 38 m / 125' **42511020** Length approx. 75 m / 250'



#### Laboratory film PARAFILM® M, roll in dispenser carton, small

	Width	Length
42512010	approx. 5 cm / 2"	approx. 75 m / 250'



#### **Ground Joint Flasks and Bottles**

#### Erlenmeyer flasks

## DURAN® borosilicate glass 3.3, without stopper, with standard ground

Reinforced standard ground neck with joint size with label

	Joint size	Capacity
41915006	14/23	25 ml
41915012	29/32	50 ml
41915014	19/26	50 ml
41915018	29/32	100 ml
41915020	19/26	100 ml
41915024	29/32	200 ml
41915030	29/32	250 ml
41915034	45/40	250 ml
41915036	29/32	300 ml
41915042	29/32	500 ml
41915046	45/40	500 ml
41915048	29/32	1000 ml
41915052	45/40	1000 ml
41915056	29/32	2000 ml



#### DURAN® borosilicate glass 3.3, with hollow glass stopper

lodine determination flasks - reinforced standard ground neck with joint size, with label

	Joint size	Capacity
41918006	14/23	25 ml
41918012	29/32	50 ml
41918018	29/32	100 ml
41918020	19/26	100 ml
41918024	29/32	200 ml
41918030	29/32	250 ml
41918036	29/32	300 ml
41918042	29/32	500 ml
41918048	29/32	1000 ml





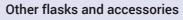


#### Flasks, pear shape

#### Borosilicate glass 3.3, round bottom

with standard ground, volume indicated with label

	Joint size	Capacity
41920004	14/23	5 ml
41920008	14/23	10 ml
41920012	19/26	10 ml
41920020	14/23	25 ml
41920024	19/26	25 ml
41920040	29/32	50 ml
41920044	14/23	50 ml
41920048	19/26	50 ml
41920060	29/32	100 ml
41920064	19/26	100 ml
41920072	29/32	250 ml
41920076	29/32	500 ml
41920080	29/32	1000 ml
41920084	29/32	2000 ml



#### Flasks, pointed shape, made of borosilicate glass 3.3

with standard ground, joint size 14/23, volume indicated, with label

41921006	Capacity 5 ml
41921012	Capacity 10 ml
41921018	Capacity 25 ml
41921024	Capacity 50 ml



#### Flat bottom flasks, narrow neck, DURAN® borosilicate glass 3.3

DIN ISO 1773, with rim, without standard ground, medium length

41924024	Capacity 50 ml
41924030	Capacity 100 ml
41924036	Capacity 250 ml
41924042	Capacity 500 ml
41924048	Capacity 1000 ml
41924054	Capacity 2000 ml





#### Flat bottom flasks

DURAN® borosilicate glass 3.3, with standard ground, mediumlength, reinforced ground neck durably marked with standard ground size, without stopper

	Joint size	Capacity
41911006	29/32	50 ml
41911012	29/32	100 ml
41911015	19/26	100 ml
41911018	29/32	250 ml
41911024	29/32	500 ml
41911030	29/32	1000 ml
41911036	29/32	2000 ml



#### Round bottom flasks, narrow neck, DURAN® borosilicate glass 3.3

DIN ISO 1773, with rim, without standard ground, medium length

41925024	Capacity 50 ml
41925030	Capacity 100 ml
41925036	Capacity 250 ml
41925042	Capacity 500 ml
41925048	Capacity 1000 ml
41925054	Capacity 2000 ml



#### **Round bottom flasks**

DURAN® borosilicate glass 3.3, with standard ground, reinforced neck with joint size durably marked without stopper

	Joint size	Capacity
41913006	29/32	50 ml
41913008	14/23	50 ml
41913010	19/26	50 ml
41913012	29/32	100 ml
41913014	14/23	100 ml
41913015	19/26	100 ml
41913018	29/32	250 ml
41913024	29/32	500 ml
41913030	29/32	1000 ml
41913036	29/32	2000 ml



# Assistent

## LABORATORY EQUIPMENT



#### **Cork rings for flasks**

**41914001** for round bottom flasks 10-100 ml **41914002** for round bottom flasks 250-1000 ml **41914003** for round bottom flasks 2000 ml



#### **Brushes**

with wooden handle and flexible brush Total length approx. 44 cm Length of handle approx. 37 cm Bristle approx. 45 x 20 mm

**41912010** suitable for flasks with joint size from 29/32 on



#### **Ground Glass Joints**

#### Cones with standard ground

DIN 12242, DURAN® borosilicate glass 3.3, reinforced ground joint, solid rim, joint size permanently marked, form B

 42382014
 Joint size 14/23

 42382019
 Joint size 19/26

 42382024
 Joint size 24/29

 42382029
 Joint size 29/32

 42382034
 Joint size 34/35

 42382045
 Joint size 45/40



#### Sockets with standard ground

DIN 12242, DURAN® borosilicate glass 3.3, reinforced ground joint, solid rim, joint size permanently marked, form E

 42383014
 Joint size 14/23

 42383019
 Joint size 19/26

 42383024
 Joint size 24/29

 42383029
 Joint size 29/32

 42383034
 Joint size 34/35

 42383045
 Joint size 45/40



#### Cones with standard ground and extension at bottom

DIN 12242, DURAN® borosilicate glass 3.3, reinforced ground joint, solid rim, joint size permanently marked, form  ${\sf G}$ 

**42384014** Joint size 14/23 **42384024** Joint size 24/29 **42384029** Joint size 29/32



#### Clips made of polyoxymethylene (POM)

for conical ground joints, heat-resistant up to approx. +150  $^{\circ}\text{C}/\text{+}302~^{\circ}\text{F}$ 

	Colour	for
42386010	green	joint size 10/19
42386012	purple	joint size 12/21
42386014	yellow	joint size 14/23
42386019	blue	joint size 19/26
42386024	green	joint size 24/29
42386029	red	joint size 29/32
42386034	orange	joint size 34/35
42386040	yellow	joint size 40/38
42386045	brown	joint size 45/40



#### **Reduction and expansion adapters**

DIN 12257, DURAN® borosilicate glass 3.3, reinforced ground joint, solid rim

	Socket	Cone
42387001	Joint size 14/23	Joint size 19/26
42387002	Joint size 14/23	Joint size 24/29
42387003	Joint size 14/23	Joint size 29/32
42387004	Joint size 19/26	Joint size 24/29
42387005	Joint size 19/26	Joint size 29/32
42387006	Joint size 29/32	Joint size 45/40
42387007	Joint size 24/29	Joint size 34/35
42387008	Joint size 19/26	Joint size 14/23
42387009	Joint size 24/29	Joint size 14/23
42387010	Joint size 29/32	Joint size 14/23
42387011	Joint size 24/29	Joint size 19/26
42387012	Joint size 29/32	Joint size 19/26
42387013	Joint size 29/32	Joint size 24/29
42387014	Joint size 45/40	Joint size 29/32



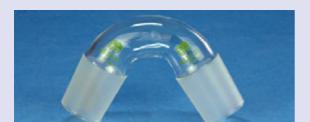




#### Sleeves for ground joints and stoppers, disposable

made of PTFE, self-lubricating The sleeves prevent the ground joints from sticking together. Outstanding chemical resistance at temperatures from  $-200~^{\circ}\text{C}$  to  $+260~^{\circ}\text{C}$  (from  $-328~^{\circ}\text{F}$  to  $+500~^{\circ}\text{F}$ ), thickness approx. 0.05 mm Packing: 10 pieces

42388010for joint size 14/2342388019for joint size 19/2642388024for joint size 24/2942388029for joint size 29/3242388045for joint size 45/40



#### Distilling adapters, still heads and distilling flasks

Bends with 2 cones ground joint size 29/32

DURAN® borosilicate glass 3.3 **41026010** Bent at 75°



#### Still heads

DURAN® borosilicate glass 3.3, with 2 cones and 1 socket

	Socket	Cones
41029010	Joint size 14/23	Joint size 29/32



#### Claisen still heads

DURAN® borosilicate glass 3.3, with 2 cones, thermometer socket and extra socket (boiling capillary)

	Sockets	Cones	
41033010	Joint size 14/23	Joint size 29/32	



#### **Receiver adapters**

DURAN® borosilicate glass 3.3, bent **41036010** Socket joint size 29/32



#### **Distilling flasks**

made of borosilicate glass 3.3, with side tube

	Capacity	Length of side tube	
41037008	100 ml	approx. 200 mm	
41037016	250 ml	approx. 200 mm	
41037024	500 ml	approx. 200 mm	
41037032	1000 ml	approx. 250 mm	



# Assistent Assistent

## LABORATORY EQUIPMENT



#### **Water Analysis**

#### **Equipment for water analysis**

#### **Gas washing bottles according to Drechsel**

Clear glass, with head DIN 12596 with standard ground, joint size and size of bottle indicated, joint size 29/32

 41469012
 Capacity 100 ml

 41469018
 Capacity 250 ml

 41469024
 Capacity 500 ml

 41469030
 Capacity 1000 ml



#### Spare washing bottle heads

DURAN® borosilicate glass 3.3, ground joint size 29/32

41469001 without filter disc



#### Gas washing bottles according to Drechsel with filter disc

Clear glass, **with head** DIN 12596 with standard ground, joint size and size of bottle indicated, joint size 29/32, filter disc 22 mm Ø, porosity 1

 41470012
 Capacity 100 ml

 41470018
 Capacity 250 ml

 41470024
 Capacity 500 ml

 41470030
 Capacity 1000 ml



#### Spare washing bottle heads

DURAN® borosilicate glass 3.3, ground joint size 29/32

41470001 with filter disc



#### **Dean-Stark apparatus**

Xylene method, DURAN® borosilicate glass 3.3

consisting of Round bottom flask, 500 ml, no. 41913024 Liebig condenser, 40 cm, joint size 29/32 no. 41982056 Measuring tube no. 44265020

44265010 Complete

44265020

Spare measuring tube DURAN® borosilicate glass 3.3, with stopcock, fused blue graduation "ASSISTENT-PERMANENT" 10 ml : 0.1, socket at top joint size

29/32, lateral cone joint size 29/32



#### Oxygen bottles according to Winkler

for the determination of the oxygen dissolved in the water Clear glass, with interchangeable stopper made of HDPE, frosted label and precisely adjusted capacity

	Capacity	Joint size
44267010	100-150 ml	14/23
44267020	250-300 ml	19/26



#### **Stopper holders for Winkler bottles**

made of metal

44268010 for no. 44267010 and 44267020



# Assistent

## LABORATORY EQUIPMENT



#### **Shaking bottles**

Clear glass, with stopper made of polyethylene, joint size 19/26 **44272010** with 4 marks at 10, 20, 30 and 40 ml



#### Sediment cones according to Imhoff, made of plastic (SAN)

DIN 12672, transparent, with scale, with screw cap at outlet

0 - 2 ml : 0.1 ml 2 - 10 ml : 0.5 ml 10 - 40 ml : 1 ml 40 - 100 ml : 2 ml 100 - 1000 ml : 50 ml

**44274010** Capacity 1000 ml



## Sediment cones according to Imhoff, made of borosilicate glass 3.3

DIN 12672, without stopcock, with frosted label White graduation

0 - 2 ml : 0.1 ml 2 - 10 ml : 0.5 ml 10 - 40 ml : 1 ml 40 - 100 ml : 2 ml 100 - 1000 ml : 50 ml

**44275010** Capacity 1000 ml



## Sediment cones according to Imhoff, made of borosilicate glass 3.3

DIN 12672, with frosted label White graduation

0 - 2 ml: 0.1 ml 2 - 10 ml: 0.5 ml 10 - 40 ml: 1 ml 40 - 100 ml: 2 ml

Ring mark at 1000 ml

44276010 without stopcock44276020 with stopcock



#### **Wooden racks**

Holes at base 24 mm Ø, holes at top 86 mm Ø

**44277010** for 4 sediment cones **44277020** for 2 sediment cones



#### Cleaning brushes for sediment cones

Galvanised, nylon bristles, with wooden handle

	Upper brush Ø	Lower brush Ø	Brush length	Total length
44279010	approx. 130 mm	approx. 30 mm	approx. 430 mm	approx. 700 mm



#### Water-jet pumps according to Geißler

44280010 made of DURAN® borosilicate glass 3.3



#### Water-jet pumps made of polypropylene

with sleeve nut R 3/4", thread adapter R 1/2", hose connection (olive 10-12 mm  $\emptyset$ ) and vacuum connection (olive 6–10 mm  $\emptyset$ ) with integrated non-return valve,

temperature max. +80 °C/+176 °F (continuously)

44283010 Water-jet pump44283040 Thread adapter R 3/8"44283050 Thread adapter M 22x1







#### Water-jet pumps made of metal

Nickel-plated brass

	Water consumption	Suction volume	Suction power	
44284010	235 l/h	290 l/h at 3.5 bar	up to 800 mbar	



#### Voltameters Hofmann with platinum electrodes

Water decomposition apparatus, for educational purposes

consisting of

- Glass part no. 44287010
- Metal support
- 2 clamps no. 40870010
- 2 platinum electrodes no. 44288010

**44285010** Scale 0-60 ml : 0.2

#### **Voltameters Hofmann with carbon electrodes**

Water decomposition apparatus, for educational purposes

consisting of

- Glass part no. 44287010
- Metal support
- 2 clamps no. 40870010
- 2 carbon electrodes no. 44288010

**44286010** Scale 0-60 ml : 0.2

#### Spare glass part

without support, without electrodes **44287010** Length approx. 56 cm



**44288010** Length approx. 14 cm





#### Spare carbon electrodes

**44289010** Length approx. 12.5 cm



#### **Separatory Funnels**

#### **General information**

- · interchangeable plugs and reliable retaining devices
- interchangeable stoppers made of polyethylene (HDPE), resistant to alkali and acid
- · Socket and neck are reinforced
- · Capacity and joint sizes durably marked

# Separatory funnels, DURAN® borosilicate glass 3.3, conical, with solid glass plug $\,$

DIN ISO 4800, with stopcock Packing: 2 pieces in a box

	Stopper	Stopcock bore	Capacity
42950024	19/26	2.5 mm	50 ml
42950030	19/26	2.5 mm	100 ml
42950048	29/32	4 mm	250 ml
42950060	29/32	4 mm	500 ml
42950066	29/32	6 mm	1000 ml
42950072	29/32	6 mm	2000 ml



#### **DURAN®** borosilicate glass 3.3, conical, with PTFE plug

DIN ISO 4800, with stopcock Packing: 2 pieces in a box

	Stopper	Stopcock bore	Capacity
42951024	19/26	2.5 mm	50 ml
42951030	19/26	2.5 mm	100 ml
42951048	29/32	4 mm	250 ml
42951060	29/32	4 mm	500 ml
42951066	29/32	6 mm	1000 ml
42951072	29/32	6 mm	2000 ml



#### Borosilicate glass 3.3, cylindrical, with solid glass plug

DIN ISO 4800, with stopcock Packing: 2 pieces in a box

	Stopper	Stopcock bore	Capacity
42956024	19/26	2.5 mm	50 ml
42956030	19/26	2.5 mm	100 ml
42956048	29/32	4 mm	250 ml
42956060	29/32	4 mm	500 ml
42956066	29/32	6 mm	1000 ml







## Separatory funnels, borosilicate glass 3.3, pear shape, with solid glass plug

DIN ISO 4800, with stopcock Packing: 2 pieces in a box

	Stopper	Stopcock bore	Capacity
42970024	19/26	2.5 mm	50 ml
42970030	19/26	2.5 mm	100 ml
42970048	29/32	4 mm	250 ml
42970060	29/32	4 mm	500 ml
42970066	29/32	6 mm	1000 ml



#### Borosilicate glass 3.3, pear shape, with PTFE plug

DIN ISO 4800, with stopcock Packing: 2 pieces in a box

	Stopper	Stopcock bore	Capacity
42971024	19/26	2.5 mm	50 ml
42971030	19/26	2.5 mm	100 ml
42971048	29/32	4 mm	250 ml
42971060	29/32	4 mm	500 ml
42971066	29/32	6 mm	1000 ml



#### Borosilicate glass 3.3, according to Squibb, with solid glass plug

with stopcock

Packing: 2 pieces in a box

	Stopper	Stopcock bore	Capacity
42985024	19/26	2.5 mm	50 ml
42985030	19/26	2.5 mm	100 ml
42985048	29/32	4 mm	250 ml
42985060	29/32	4 mm	500 ml
42985066	29/32	6 mm	1000 ml
42985072	29/32	6 mm	2000 ml



## Separatory funnels, borosilicate glass 3.3, according to Squibb, with PTFE plug

with stopcock

Packing: 2 pieces in a box

	Stopper	Stopcock bore	Capacity
42986024	19/26	2.5 mm	50 ml
42986030	19/26	2.5 mm	100 ml
42986048	29/32	4 mm	250 ml
42986060	29/32	4 mm	500 ml
42986066	29/32	6 mm	1000 ml
42986072	29/32	6 mm	2000 ml



#### **Funnels**

#### made of DURAN® borosilicate glass 3.3

Angle of 60°, sloping stem

43990004 approx. 3 cm Ø 43990008 approx. 3.5 cm Ø 43990012 approx. 4 cm Ø 43990016 approx. 4.5 cm Ø 43990020 approx. 5 cm Ø 43990024 approx. 5.5 cm Ø 43990028 approx. 6 cm Ø approx. 7 cm Ø 43990032 43990036 approx. 8 cm Ø 43990040 approx. 10 cm Ø



#### **Analytical funnels**

Borosilicate glass 3.3, angle of 60°, with long stem, ribbed, for rapid filtration

**43991007** 65 mm Ø **43991014** 80 mm Ø **43991021** 110 mm Ø







#### made of soda-lime glass

Angle of 60°, sloping stem

44000004	approx. 3 cm Ø
44000008	approx. 3.5 cm Ø
44000012	approx. 4 cm Ø
44000016	approx. 4.5 cm Ø
44000020	approx. 5 cm Ø
44000024	approx. 5.5 cm Ø
44000028	approx. 6 cm Ø
44000032	approx. 7 cm Ø
44000036	approx. 8 cm Ø
44000040	approx. 10 cm Ø
44000044	approx. 12 cm Ø
44000048	approx. 15 cm Ø
44000056	approx. 20 cm Ø (*)
44000060	approx. 25 cm Ø (*)
44000064	approx. 30 cm Ø (*)

<sup>\*</sup> made of borosilicate glass 3.3



#### Powder funnels made of soda-lime glass

with short, wide stem

	Stem Ø	Stem length	Ø	Total length
44001012	approx. 14 mm	approx. 18 mm	approx. 4 cm	approx. 45 mm
44001020	approx. 18 mm	approx. 25 mm	approx. 5 cm	approx. 55 mm
44001028	approx. 20 mm	approx. 25 mm	approx. 6 cm	approx. 60 mm
44001036	approx. 24 mm	approx. 26 mm	approx. 8 cm	approx. 70 mm
44001040	approx. 26 mm	approx. 27 mm	approx. 10 cm	approx. 80 mm
44001044	approx. 26 mm	approx. 32 mm	approx. 12 cm	approx. 115 mm
44001052	approx. 35 mm	approx. 24 mm	approx. 16 cm	approx. 135 mm

44001052 made of borosilicate glass 3.3



#### Powder funnels made of polypropylene

Transparent

•				
	Stem Ø	Length of stem	Outside Ø	Length
44002030	15 mm	25 mm	65 mm	68 mm
44002036	21 mm	25 mm	80 mm	76 mm
44002040	22 mm	20 mm	100 mm	94 mm
44002044	26 mm	20 mm	120 mm	110 mm
44002048	28 mm	22 mm	150 mm	138 mm

Dimensions given are approximate.



#### Funnels made of polyethylene (HDPE)

	Stem length	Ø
49050003	approx. 40 mm	approx. 6 cm
49050006	approx. 50 mm	approx. 8 cm
49050009	approx. 55 mm	approx. 10 cm
49050012	approx. 60 mm	approx. 12 cm
49050015	approx. 65 mm	approx. 14 cm
49050018	approx. 80 mm	approx. 16 cm
49050021	approx. 85 mm	approx. 20 cm



#### made of polypropylene (analytical funnels)

with fluted inner surface, for rapid filtration

	Ø	Stem length
49051024	approx. 25 mm	approx. 39 mm
49051027	approx. 35 mm	approx. 38 mm
49051030	approx. 45 mm	approx. 44 mm
49051033	approx. 65 mm	approx. 63 mm
49051036	approx. 80 mm	approx. 69 mm
49051039	approx. 100 mm	approx. 82 mm
49051042	approx. 120 mm	approx. 85 mm
49051045	approx. 150 mm	approx. 115 mm
49051048	approx. 180 mm	approx. 143 mm



#### **Glass Tubing and Rods**

#### Tubing made of DURAN® borosilicate glass 3.3

Factory length approx. 1.50 m

Kindly mention required diameter and wall thickness in your order.

42830001 4-5 mm outside Ø - 0.8 mm wall 42830002 6-8 mm outside Ø - 1 mm wall 9-14 mm outside Ø - 1 mm wall, 42830003 15-24 mm outside Ø - 1.2 mm wall, 26-30 mm outside Ø - 1.4 mm wall 32-38 mm outside Ø - 1.4 mm wall, 42830004

40-44 mm outside Ø - 1.6 mm wall, 50 mm outside Ø - 1.8 mm wall

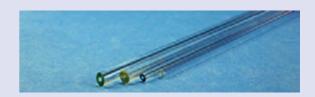


#### Capillary tubing made of DURAN® borosilicate glass 3.3

Factory length approx. 1.50 m

Kindly mention required inside and outside diameter in your order.

	Inside Ø	Outside Ø
42833010	approx. 0.4-2.7 mm	approx. 6-8 mm







Tubing made of AR-Glas® (soda glass)

Rods made of DURAN® borosilicate glass 3.3

Kindly mention required diameter in your order.

Diameter approx. 8 mm

Diameter approx. 4, 5 and 6 mm

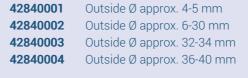
Factory length approx. 1.50 m

Factory length approx. 1.50 m

42835001

42835002

Kindly mention required outside diameter and wall thickness in your order.



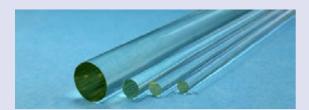


#### Capillary tubing made of AR-Glas® (soda glass)

Factory length approx. 1.50 m

Kindly mention required inside and outside diameter in your order.

	Inside Ø	Outside Ø
42843010	approx. 1-3 mm	approx. 5-7 mm



#### Rods made of AR-Glas® (soda glass)

Factory length approx. 1.50 m

Kindly mention required diameter in your order.

42845002 Diameter approx. 4 and 5 mm 42845003 Diameter approx. 6-12 mm



#### Glass tube cutter with cutting wheel

made of zinc die cast, nickel-plated, for tubes up to approx. 30 mm Ø

42847001 Spare wheels for no. 42847010 42847010 Glass tube cutter with cutting wheel



#### Stirring rods made of glass

Fused ends

	Length	Ø
42850006	approx. 150 mm	approx. 4 mm
42850012	approx. 150 mm	approx. 5 mm
42850018	approx. 150 mm	approx. 6 mm
42850024	approx. 200 mm	approx. 3 mm
42850030	approx. 200 mm	approx. 4 mm
42850036	approx. 200 mm	approx. 5 mm
42850042	approx. 200 mm	approx. 6 mm
42850048	approx. 250 mm	approx. 4 mm
42850054	approx. 250 mm	approx. 6 mm
42850060	approx. 250 mm	approx. 7 mm
42850066	approx. 300 mm	approx. 7 mm
42850072	approx. 300 mm	approx. 8 mm
42850078	approx. 300 mm	approx. 9 mm
42850084	approx. 500 mm	approx. 12 mm



#### **Bunsen Burners and Accessories**

#### Bunsen burners and cartridges

#### All-gas Bunsen burner

with air regulation, needle valve and adjustable nozzle

	Tube Ø	Height	Head Ø
41385010	approx. 13 mm	approx. 160 mm	approx. 17 mm



#### **Bunsen burners**

with air regulation, head approx. 15 mm  $\emptyset$ 

	Tube Ø	for
41390001	approx. 11 mm	natural gas
41390002	approx. 11/8 mm (outer/inner)	propane/butane gas







#### **Bunsen burners**

with stopcock and pilot flame, height approx. 155 mm, head approx. 16 mm Ø

	Tube Ø	for
41391001	approx. 11/9 mm (outside/inside)	natural gas
41391002	approx. 11/9 mm (outside/inside)	propane/butane gas

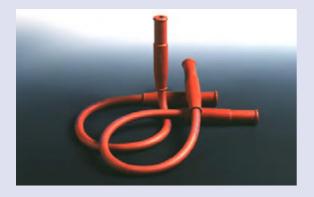


#### Gas burners according to Teclu

with stopcock and pilot flame, tube approx. 13 mm  $\emptyset$ , height approx. 160 mm, base approx. 80 mm  $\emptyset$ 

**41393001** for natural gas

**41393002** for propane/butane gas



#### Safety gas tubing

according to DIN 30665, for all kinds of gases according to worksheet G 260 of the German Technical and Scientific Association for Gas and Water, tested and registered

**41384001** Length 1000 mm **41384002** Length 1500 mm



#### **Bunsen burners LABOGAZ® 470**

with safety valve. Cartridge may always be disconnected easily, provided that burner is not operating.

The burners no. 41395010 and cartridges no. 41395001 are incompatible with burners no. 41396010.

**41395010** Height including cartridge approx. 24 cm

without cartridge



#### **Cartridges with butane gas**

for LABOGAZ® Bunsen burners no. 41395010 Type: CV 470 PLUS

Burners no. 41395010 and cartridges no. 41395001 are incompatible with burners no. 41396010 and cartridges no. 41396020.

UN 2037, class 2 Safety data sheet comes with the item.

	Dimensions	Capacity
41395001	approx. 14 x 11 cm Ø	approx. 450 g (approx. 806 ml)



Assembly system for cartridges without safety valve, gas consumption  $55~\mathrm{g/h}$ 

Burners no. 41396010 and cartridges no. 41396020 are incompatible with burners no. 41395010.

**41396010** without cartridge



for burners LABOGAZ® no. 41396010 Exchange of cartridge is only possible when completely empty. Type: C 206 GLS  $\,$ 

The burners no. 41396010 and cartridges no. 41396020 are incompatible with burners no. 41395010.

UN 2037, class 2 Safety data sheet comes with the item.

**41396020** Capacity approx. 190 g (approx. 314 ml)



with ground-on cap, complete with brass wickholder and wick, each in a box

**43030010** Capacity approx. 100 ml













#### Spirit lamps made of glass without filler tube

with ground-on cap, complete with brass wickholder and wick, each in a box

**43031010** Capacity approx. 100 ml



#### **Spare wicks**

for spirit lamps no. 43030010 and 43031010 **43031020** Length approx. 12 cm



#### Spirit lamps made of stainless steel

with wick

**43033010** Capacity approx. 60 ml



#### Tripods

#### Height approx. 21 cm

made of galvanised iron

	Ø of inside ring	Ø of outside ring	
41090010	approx. 11 cm	approx. 14 cm	



#### Tripods, height approx. 28 cm

made of galvanised iron, suitable for LABOGAZ® Bunsen burners no. 41395010 and 41396010  $\,$ 

	Ø of inside ring	Ø of outside ring	
41091010	approx. 11 cm	approx. 14 cm	



#### Triangles made of iron wire

#### with plain clay tubes

41065004	Length approx. 4 cm
41065006	Length approx. 6 cm
41065008	Length approx. 8 cm
41065010	Length approx. 10 cm



### Laboratory protective plates

#### made of glass ceramic CERAN®

41066001	Dimensions approx. 135 x 135 mm
41066002	Dimensions approx. 155 x 155 mm
41066003	Dimensions approx. 175 x 175 mm



#### **Quadrupods for protective plates**

made of chrome-nickel steel, with 4 legs

	for plates	Height	
41067001	135 x 135 mm	approx. 210 mm	
41067002	155 x 155 mm	approx. 210 mm	
41067003	175 x 175 mm	approx. 220 mm	







#### Iron wire gauzes

#### with ceramic centre

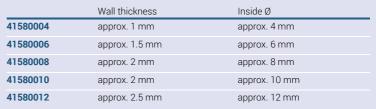
made of galvanised iron wire

	Dimensions	Ceramic centre
41071012	approx. 12 x 12 cm	approx. 80 mm Ø
41071016	approx. 16 x 16 cm	approx. 110 mm Ø
41071020	approx. 20 x 20 cm	approx. 150 mm Ø



### Tubing, stoppers and laboratory mats Laboratory tubing, natural rubber, red

Hardness 50 Shore A





#### **Laboratory tubing, PVC, transparent**

Resistant up to +60 °C/+140 °F

	Wall thickness	Inside Ø
41581004	approx. 1.5 mm	approx. 4 mm
41581006	approx. 1.5 mm	approx. 6 mm
41581008	approx. 1.5 mm	approx. 8 mm
41581010	approx. 2 mm	approx. 10 mm
41581012	approx. 2 mm	approx. 12 mm





#### Laboratory tubing, silicone, transparent, natural-coloured

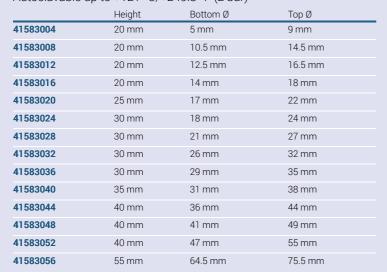
Hardness 60 Shore A, resistant from -60  $^{\circ}$ C/-76  $^{\circ}$ F up to +180  $^{\circ}$ C/+356  $^{\circ}$ F (temporary +250  $^{\circ}$ C/+482  $^{\circ}$ F)

	Wall thickness	Inside Ø
41582004	approx. 1 mm	approx. 4 mm
41582006	approx. 1.5 mm	approx. 6 mm
41582008	approx. 2 mm	approx. 8 mm
41582010	approx. 2 mm	approx. 10 mm
41582012	approx. 2 mm	approx. 12 mm



#### Silicone stoppers, solid

DIN 12871, transparent, hardness 50 Shore A Max. temperature for use -50 °C +180 °C/-58 °F +356 °F (for a short time up to +240 °C/+464 °F) Autoclavable up to +121 °C/+249.8 °F (2 bar)









#### Rubber stoppers, solid

DIN 12871, made of natural rubber, hardness 40 Shore A

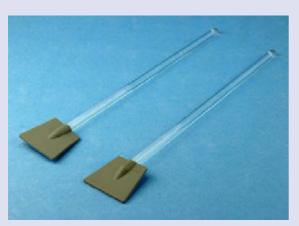
		•	
	Height	Bottom Ø	Top Ø
41590002	20 mm	4 mm	8 mm
41590005	20 mm	5 mm	9 mm
41590008	20 mm	8 mm	12 mm
41590011	19 mm	9 mm	12 mm
41590014	20 mm	10.5 mm	14.5 mm
41590017	25 mm	12 mm	17 mm
41590020	20 mm	14 mm	18 mm
41590023	25 mm	17 mm	22 mm
41590026	30 mm	18 mm	24 mm
41590029	30 mm	21 mm	27 mm
41590032	30 mm	26 mm	32 mm
41590035	30 mm	29 mm	35 mm
41590038	35 mm	31 mm	38 mm
41590041	35 mm	34 mm	41 mm
41590044	40 mm	36 mm	44 mm
41590047	40 mm	41 mm	49 mm
41590050	40 mm	47 mm	55 mm
41590053	45 mm	50.5 mm	59.5 mm
41590056	45 mm	56 mm	65 mm
41590059	55 mm	64.5 mm	75.5 mm
41590062	60 mm	71 mm	83 mm
41590065	65 mm	79 mm	92 mm



#### **Rubber stoppers with hole(s)**

DIN 12871, made of natural rubber, hardness 40 Shore A

	Holes	Bottom Ø	Top Ø	Height	Bore
41591017	1	12 mm	17 mm	25 mm	5 mm
41591020	1	14 mm	18 mm	20 mm	5 mm
41591029	2	21 mm	27 mm	30 mm	6 mm
41591032	2	26 mm	32 mm	30 mm	6 mm
41591035	2	29 mm	35 mm	30 mm	6 mm
41591041	2	34 mm	41 mm	35 mm	6 mm
41591055	2	47 mm	55 mm	40 mm	8 mm



#### Rubber policeman, spade-shaped

made of natural rubber, hardness 40 Shore A, without glass rod (suitable glass rod no. 42850042)

	Dimensions	Bore
41596010	approx. 35 x 25 x 32 mm	approx. 5 mm



#### Laboratory mats made of silicone

temperature resistant up to +260 °C, sterilisable, non-slip, available in 2 colours and 2 sizes

	Dimensions	Colour
41598113	250 x 250 mm	red
41598118	250 x 250 mm	black
41598213	350 x 350 mm	red
41598218	350 x 350 mm	black



#### **Tubing clamps**

#### Band of stainless steel, with thumb screw

41586010	for tubing of 10 mm Ø
41586012	fot tubing of 12 mm Ø
41586014	for tubing of 14 mm Ø
41586017	for tubing of 17 mm Ø
41586019	for tubing of 19 mm Ø
41586021	for tubing of 21 mm Ø
41586022	for tubing of 22 mm Ø
41586025	for tubing of 25 mm Ø
41586027	for tubing of 27 mm Ø
41586030	for tubing of 30 mm Ø



#### **Pinchcocks**

#### according to Mohr

made of nickel-plated brass, sterilisable

	Opening up to	Length
42750050	approx. 12 mm	approx. 50 mm
42750060	approx. 16 mm	approx. 60 mm



#### **Clamps according to Hoffmann**

with swivel jaw, made of nickel-plated brass, sterilisable

	Height inside	Opening to
42755020	approx. 16 mm	approx. 20 mm
42755025	approx. 21 mm	approx. 25 mm
42755030	approx. 25 mm	approx. 30 mm











#### **Pipettors and Pipette Fillers**

#### **Pipettors**

#### macro-Pipex

The macro-Pipex is not dependent on electricity or batteries, but is manually operated.

Pipetting at the touch of a button, whereby a complete stroke delivers approx. 2 ml.

The standard sterile filter acts as safety stop against the penetration of liquids into the device. The flowing out of the pipette is regulated via the lower control button.

Pipetting can be this simple, safe and inexpensive.

- suitable for all conventional pipettes from 0.5 ml on
- inbuilt protection against the penetration of liquids
- · ergonomic design
- · maintenance-free

	Sterile membrane filter	Weight
42575010	0.2 μm	approx. 140 g

#### macro-pipettors

suitable for working with measuring pipettes and volumetric pipettes from 0.1 up to 100 ml.

Standard membrane filter against penetration of liquids. Resistant to steam sterilisation up to +121 °C/+249.8 °F

42576001	Membrane filter. 3 um. unsterile. made of	f
72310001	ivicinibiane miter, o pini, unotenie, made or	

polypropylene and PTFE

**42576002** Silicone adapter, length approx. 44 mm **42576003** Suction bellow with screw connection

**42576004** Valve assembly made of polypropylene, PTFE and

silicone

**42576005** Adapter housing made of polypropylene

**42576010** macro-pipettors with filter

#### Accupipex II with recharger, CE

with adjustable pipette nozzle, ergonomical, for easy serial pipetting, for all pipettes from 0.1 to 100 ml,

8 hours pipetting without recharging, charging display (LED), with storage stand and wall holder

Absorption and discharge speed as well as the operating mode "blow out" and "free outflow" are adjustable. The powerful motor provides for fast pipetting.

Operating and recharging temperature: +10 °C/+50 °F up to +35 °C/+95 °F

Pipette adapter and membrane filter resistant to steam sterilisation for 20 min. at  $+121 \, ^{\circ}\text{C}/+249.8 \, ^{\circ}\text{F}$ .

Pipette adapter: Polypropylene

Filter: PTFE

Battery: AAA 800 mAh 3.6 V

**42577001** Recharger with universal plugs, 230 V 50 Hz

**42577002** Silicone adapter

**42577004** Membrane filter, 0.45 μm, non-sterile

**42577010** Accupipex with recharger



#### Pipettors "pi-pump"

**42578006** for pipettes up to 0.2 ml - without quick-release valve

 42578012
 for pipettes up to 2 ml

 42578018
 for pipettes up to 10 ml

 42578024
 for pipettes up to 25 ml



#### Pipette fillers, standard model

made of natural rubber, red, with 3 valves

**42580010** for measuring pipettes and volumetric pipettes up to 10 ml



#### Pipette fillers, universal model

made of natural rubber, red, with 3 valves, with extended attachment

**42581010** for measuring pipettes and volumetric pipettes

up to 100 ml



#### Pipette fillers "Flip"

made of natural rubber, red, with 2 valves Convenient interior cleaning because of easy removable automatic valve.

**42581020** for measuring pipettes and volumetric pipettes

up to 100 ml







#### **Test Tube Racks**

#### Wooden

#### without pins

One level

**42794001** for 6 tubes up to approx. 22 mm  $\emptyset$  for 12 tubes up to approx. 22 mm  $\emptyset$  **42794013** for 6 tubes up to approx. 30 mm  $\emptyset$ 



#### for 6 tubes, without pins

One level

**42795010** for tubes up to approx. 18 mm Ø



#### for 12 tubes, without pins

Double level

**42796010** for tubes up to approx. 18 mm  $\emptyset$ 



Test tube racks wooden, for 18 tubes, without pins

Double level

**42797010** for tubes up to approx. 18 mm Ø



Wooden test tube racks for 24 tubes, without pins

Double level

**42798010** for tubes up to approx. 18 mm  $\emptyset$ 



for 6 tubes, with 6 pins

One level

**42800010** for tubes up to approx. 18 mm  $\emptyset$ 







for 12 tubes, with 6 pins

Double level

**42801010** for tubes up to approx. 18 mm Ø



for 18 tubes, with 9 pins

Double level

**42802010** for tubes up to approx. 18 mm Ø



for 24 tubes, with 12 pins

Double level

**42803010** for tubes up to approx. 18 mm  $\emptyset$ 



#### Test tube racks made of Plexiglas®

#### for 12 tubes up to approx. 13 mm Ø, without pins

with numbered holes, one level

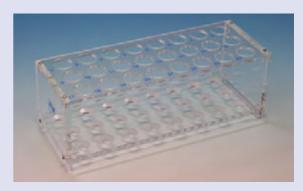
	Length	Width	Height
42807010	approx. 164 mm	approx. 55 mm	approx. 76 mm



#### for tubes up to approx. 18 mm Ø, without pins

with numbered holes

	for	Length	Width	Height
42808006	6 tubes	approx. 165 mm	approx. 55 mm	approx. 75 mm
42808012	12 tubes	approx. 164 mm	approx. 55 mm	approx. 76 mm
42808024	24 tubes	approx. 220 mm	approx. 80 mm	approx. 79 mm
42808033	33 tubes	approx. 310 mm	approx. 80 mm	approx. 80 mm



#### for 12 tubes up to approx. 18 mm Ø, with 6 pins

	Length	Width	Height	
42809012	approx. 165 mm	approx. 70 mm	approx. 75 mm	



#### Test tube racks made of plastic

#### Polypropylene

Stackable, alphanumeric markings, autoclavable at +121 °C/ +249.8 °F, permanently -20 °C/-4 °F to +90 °C/+194 °F, suitable for water baths

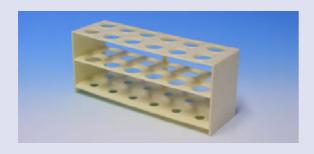
	Ø	Dimensions	for
42813.13	13 mm	265 x 126 x 75 mm	6 x 14 tubes
42813.18	18 mm	265 x 126 x 75 mm	5 x 11 tubes
42813.20	20 mm	265 x 126 x 75 mm	4 x 10 tubes
42813.25	25 mm	265 x 126 x 88 mm	4 x 8 tubes
42813.30	30 mm	265 x 126 x 88 mm	3 x 7 tubes

6th position of article number stands for colour: 1=blue, 2=yellow, 3=red, 4=white

Please indicate in your order!







#### Polystyrene

One level, without pins

**42814010** for 12 tubes up to approx. 20 mm Ø

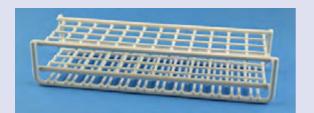


#### Multi tube racks made of polyoxymethylene

Variable by 4 flexible holding areas, suitable for tubes 12 mm Ø up to 30 mm Ø (5 ml up to 50 ml), stackable, autoclavable +121 °C/ +249.8 °F, dimensions approx. 181 x 56 x 76 mm, different colour combinations possible

Packing unit: 2 pieces

42822003	blue/green
42822005	blue/yellow
42822007	pink/white
42822013	blue/blue
42822015	white/white
42822017	pink/pink
42822019	yellow/yellow
42822021	green/green

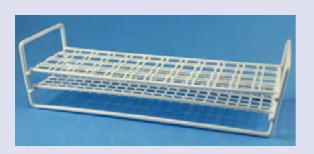


#### Test tube racks made of wire

#### Plastic-coated wire, white

for test tubes or centrifuge tubes

	for	for tubes up to	Height
42815012	12 tubes (3 x 4)	approx. 17 mm Ø	approx. 8 cm
42815024	24 tubes (4 x 6)	approx. 17 mm Ø	approx. 8 cm
42815036	36 tubes (3 x 12)	approx. 17 mm Ø	approx. 8 cm
42815048	48 tubes (4 x 12)	approx. 17 mm Ø	approx. 8 cm
42815248	48 tubes (4 x 12)	approx. 12 mm Ø	approx. 4 cm



#### for 48 (4 x 12) reaction tubes

plastic-coated, with handles

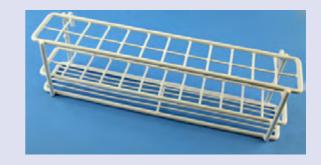
**42818010** Height approx. 4 cm



## Test tube racks made of wire for 24 (2 x 12) test tubes or centrifuge tubes

plastic-coated

	for tubes up to	Dimensions
44131010	approx. 17 mm Ø	approx. 25 x 5 x 7 cm



#### Laboratory tray 1 and accessories

42000008 Complete, consisting of plastic tray, Plexiglas® stand

and 5 bottles

**42000016** Plastic tray, approx. 35 x 25 x 4 cm

42000024 Plexiglas® stand, empty

42000

42000040 Bottles, wide neck, amber glass, 30 ml, with screw cap

and frosted label for inscription (removable)

**42000048** Bottles, narrow neck, amber glass, 50 ml, with screw

cap and frosted label for inscription (removable)



#### **Laboratory tray 2**

**42002008** Complete, consisting of

plastic tray no. 42000016,

rack for tubes no. 42808024,

Plexiglas® stand, no. 42002024,

2 wide neck bottles, 30 ml, no. 42000040

1 narrow neck bottle, 50 ml, no. 42000048

42002024 Plexiglas® stand, small, empty

42002



#### Dishes and disposal boxes

#### Dishes made of melamine, white

Stackable

**49064001** Dimensions approx. 35 x 25 x 4 cm **49064002** Dimensions approx. 29 x 16 x 3.5 cm



# Assistent

## LABORATORY EQUIPMENT









#### Disposal boxes made of polypropylene

Sharps disposal box with cover, for used needles and clinical sharps, according to UN regulation

The UN examination includes:

- emission test
- GS test (meets safety requirements in accordance with German Equipment and Product Safety Act)
- license for the transport of infectious waste
- filling mark
- cover with incorporated closures

**49070002** Capacity 1.8 litres

### **Draining Racks**

#### Draining boards made of Plexiglas®, with trough

White back panel, with 23 pegs

**49025010** Dimensions approx. 35 x 30 cm

#### Draining racks made of wire

Plastic-coated, white, suitable for hanging or standing, for 60 test tubes and 5 flasks, with plastic trough

**49027010** Dimensions approx. 42 x 17 x 61 cm

#### Draining racks made of wire, small

Plastic-coated, white, suitable for hanging or standing, for up to 12 test tubes and 11 flasks, with plastic trough

**49028010** Dimensions approx. 42 x 17 x 30 cm



#### **Specimens Cups**

#### Urine specimen cups

#### made of polypropylene

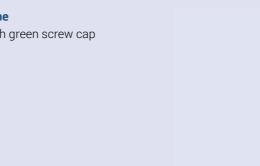
disposable, with scale and marking field, with red snap-on cover and lateral nipple

44115001 Capacity 125 ml



#### Urine specimen cups made of polypropylene

disposable, with scale and marking field, with green screw cap 44115002 Capacity 125 ml





#### **Transport containers**

#### Faecal tubes, CE, with screw cap

made of polypropylene, with spoon and brown screw cap, approx. 76 x 20 mm, approx. 15 ml 44508010

44508020 Protection containers made of polypropylene, with

screw cap, natural-coloured, loose, approx.

30 x 85 mm

suitable for no. 44508010



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## LABORATORY EQUIPMENT









#### **Porcelain Articles**

#### Laboratory equipment made of porcelain

#### **Evaporating dishes, half-round**

with spout, glazed inside and outside

	Height	Capacity	Ø
47000006	approx. 25 mm	approx. 40 ml	approx. 63 mm
47000007	approx. 26 mm	approx. 50 ml	approx. 70 mm
47000008	approx. 34 mm	approx. 75 ml	approx. 80 mm
47000010	approx. 40 mm	approx. 115 ml	approx. 100 mm
47000012	approx. 47 mm	approx. 310 ml	approx. 115 mm
47000015	approx. 45 mm	approx. 370 ml	approx. 150 mm

#### **Evaporating dishes, flat type**

with spout, glazed, DIN 12903

	Height	Capacity	Ø
47002008	approx. 20 mm	approx. 40 ml	approx. 80 mm
47002010	approx. 22 mm	approx. 80 ml	approx. 100 mm

#### **Büchner funnels**

	Capacity	Stem	Filter area Ø	Height
47005040	approx. 25 ml	approx. 37 mm	approx. 40 mm	approx. 76 mm
47005055	approx. 75 ml	approx. 53 mm	approx. 55 mm	approx. 129 mm
47005070	approx. 135 ml	approx. 75 mm	approx. 70 mm	approx. 150 mm
47005090	approx. 290 ml	approx. 75 mm	approx. 90 mm	approx. 165 mm

#### Casseroles

Glazed, with handle

	Ø	Capacity	Height
47015010	approx. 102 mm	approx. 290 ml	approx. 69 mm
47015012	approx. 127 mm	approx. 500 ml	approx. 70 mm



#### Measuring jugs with handle and scale

with spout, cylindrical

	Capacity	Height
47020024	approx. 50 ml	approx. 55 mm
47020030	approx. 100 ml	approx. 72 mm
47020048	approx. 250 ml	approx. 96 mm
47020060	approx. 500 ml	approx. 131 mm
47020066	approx. 1000 ml	approx. 160 mm



#### **Mortars with spout**

Inside rough, outside glazed

	Capacity	Height	Ø
47030006	approx. 20 ml	approx. 32 mm	approx. 60 mm
47030008	approx. 70 ml	approx. 40 mm	approx. 80 mm
47030010	approx. 100 ml	approx. 50 mm	approx. 100 mm
47030013	approx. 300 ml	approx. 63 mm	approx. 130 mm
47030015	approx. 400 ml	approx. 65 mm	approx. 150 mm



#### Pestles with rough grinding surface

made of porcelain

	Length	Head Ø
47031006	approx. 100 mm	approx. 24 mm
47031008	approx. 115 mm	approx. 24 mm
47031010	approx. 135 mm	approx. 30 mm
47031013	approx. 150 mm	approx. 36 mm
47031015	approx. 180 mm	approx. 45 mm



#### **Combustion boats**

Unglazed

	Width	Length	Height	
47035010	approx. 13 mm	approx. 80 mm	approx. 9 mm	



#### **Crucibles without cover**

made of porcelain, medium-high form, glazed

	Height	Ø	Capacity
47040025	approx. 20 mm	approx. 25 mm	approx. 5 ml
47040030	approx. 25 mm	approx. 30 mm	approx. 10 ml
47040035	approx. 28 mm	approx. 35 mm	approx. 13 ml
47040040	approx. 32 mm	approx. 40 mm	approx. 20 ml
47040045	approx. 36 mm	approx. 45 mm	approx. 38 ml
47040050	approx. 40 mm	approx. 50 mm	approx. 50 ml







#### **Covers for crucibles**

made of porcelain

47041025	for 25 mm Ø
47041030	for 30 mm Ø
47041035	for 35 mm Ø
47041040	for 40 mm Ø
47041045	for 45 mm Ø
47041050	for 50 mm Ø

#### **Stirrers**



#### Mini stirrer, CE

Multi-purpose stirrer for easy stirring tasks with adjusted speed. Drive motor, designed for continuous operation. Fixing is possible at any tripod due to the clamp.

Case made of polypropylene fully encapsulated and chemical-resistant.

Supporting bar, stirring rod and central attachment tube are made of stainless steel.

Power: 230 V, 50 Hz, 3 W Speed: approx. 750 rpm fixed Dimensions: approx. 85 x 60 mm Ø

Side arm (supporting bar): approx. 135 x 8 mm  $\emptyset$ 

Stirring volume up to approx. 2 l (liquid)

Weight: approx. 210 g

Suitable stirring rods: 42067002 and 42067003

**42068010** Delivery with stirring rod no. 42067003, without clamp and without stand



#### Stirrer R14, electronic speed control, CE

Handy, solid laboratory stirrer with stepless speed control for continuous operation. The motor can be attached to every stand by means of a clamp.

Standard stirring element is a stirring rod made of stainless steel with wing end, which is adapted for the power of this motor.

Power: 220 V, 50 Hz

Motor: 25 W

Speed: steplessly from 100-2000 rpm Dimensions: approx. 67 x 67 x 121 mm Side arm: approx. 188 x 12 mm

Keyless drill chuck of approx. 38 x 18 mm Ø for stirring rod shafts of

up to 4 mm Ø

Stirring volume up to approx. 5 l (liquid)

Weight: approx. 1.2 kg

**42068014** Delivery with stirring rod, without stand, without clamp



#### Stirrer R18, electronic speed control, CE

The solid laboratory stirrer is driven directly and is ideal for stirring tasks of up to 50 litres (liquid), e.g. in schools and laboratories. Small dimensions, large range of capacity. Also suitable for high-viscosity solutions. Suitable stirring rods: 8 mm shaft diameter (no. 42067004)

Output power: 85 W

**42068018** Delivery without stand, without clamp, without stirring







#### Plastic stirring rods

Diameter approx. 2.5 mm, rod width approx. 3 mm **42067001** In bags of 500 pieces



#### Stirring rods made of stainless steel

with elongated stirring end for dipping into small openings. Total length approx. 120 mm, head approx.  $25 \times 12 \text{ mm}$  (suitable for mini stirrer no. 42068010)

**42067002** Elongated



#### Stirring rods made of stainless steel

with transverse stirring end for maximum stirring power. Total length approx. 120 mm, head approx. 25 x 12 mm (suitable for mini stirrer no. 42068010)

**42067003** Transverse



#### Stirring rods made of stainless steel

suitable for no. 42068018, with transverse stirring end. Total length approx. 350 mm, head approx. 90 x 15 mm, shaft diameter approx. 8 mm

**42067004** Transverse



#### Test tube shaker Reamix, CE

Operation by pressure onto the plate or continuous operation. One-hand operation

Suitable for mixing liquids in test tubes of up to 30 mm  $\emptyset$  as well as in small flasks

Shaking rate infinitely variable.

According to VDE Power: 230 V, 50 Hz Shaking rate: 0-45 Hz

Power switch with indication light

Electronically controlled motor, steplessly adjustable from 0-2800

rpm

Cable 1.5 m long with safety plug

Plate made of polypropylene, chemical-resistant Dimensions: approx. 156 x 150 x 110 mm

Weight: approx. 1.7 kg

**42789010** with double function



Test tube shaker with dual function. Dimensions: approx. 110 x 100 x 90 mm Weight: approx. 1.1 kg

All other specifications as with article no. 42789010

**42789020** Small type





#### Test tube shakers, optoelectronically controlled, CE

for test tubes, small flasks, beakers, reaction vessels, microplates

Circular shaking motion with soft start.

Universal attachment for test tubes up to 30 mm Ø in the centre and foam holes with 8, 10 and 15 mm Ø for centrifuge tubes and other tubes.

At low speed the foam platform can hold small beakers or dishes for smooth shaking motions.

Power: 230 V, 50 Hz

Power switch with indication light

Shaded-pole motor 45 W

Speed: steplessly adjustable from 100-2800 rpm Attachment: Polypropylene, chemical-resistant

Shaking rate: 45 Hz Timer: 1-60 minutes

Dimensions: approx. 150 x 160 x 103 mm

Weight: approx. 1.9 kg

**42789030** with dual function







#### **Magnetic Stirrers**

#### Mini magnetic stirrer, CE

in flat housing made of polypropylene, fully encapsulated. The synchronous motor is rated for continuous operation at 500 rpm. This device is suitable for light mixing jobs. The housing is fully encapsulated, construction according to VDE, cable with Europlug.

Cable: 1.5 m

Voltage: 230 V, 50 Hz, 4 W

Dimensions: approx. 147 x 77 x 49 mm

Weight: approx. 350 g

**42069010** for volumes up to 1 litre (liquid)



#### Magnetic stirrer, CE, fully electronic speed control

with cover made of stainless steel.

The motor is being readjusted electronically. No speed fluctuations in case of changing viscosity or in case of power fluctuations.

Power: 230 V, 50 Hz Power consumption: 18 W Motor: brushless drive motor Power switch with indicator light

Speed: steplessly adjustable from 100 - 1100 rpm

Cable: 1.5 m long with safety plug Dimensions: approx. 210 x 245 x 100 mm

Weight: approx. 4.5 kg

**42070020** for volumes up to 50 litres (liquid)



Specifications as with article no. 42070020 Dimensions: approx. 300 x 310 x 100 mm

Weight: approx. 6.5 kg

**42070028** for volumes up to 100 litres (liquid)



#### Magnetic stirrer, CE

with cover made of stainless steel, quiet motor with precise, electronic speed control. Base painted acid-resistant.

Construction according to VDE.

Power: 230 V, 50 Hz Power consumption: 40 W Motor: shaded-pole motor

Power switch with indication light

Speed: steplessly adjustable from 80 - 1600 rpm

Cable: 1.5 m long with safety plug Dimensions: approx. 160 x 160 x 100 mm

Weight: approx. 1.6 kg

Capacity up to approx. 10 litres (liquid)

42070004 without heating



#### Magnetic stirrer, CE, fully electronic speed control

It is not possible to exceed the given set point. No speed fluctuations even with different viscosities of the stirring material. Even fluctuations in the mains supply have no effect on

Specifications as with article no. 42070004

42070012 without heating

#### Mini magnetic stirrer, CE

Power: 230 V, 50 Hz Power consumption: 6 W Motor: stepper motor

Power switch with indication light

Speed: steplessly adjustable from 10 - 1200 rpm

Cable: 1.5 m long with safety plug Dimensions: approx. 110 x 100 x 55 mm

Weight: approx. 0.9 kg

Stirring quantity up to approx. 1 litre (liquid)

42070036 without heating



#### Magnetic stirrer TMA, CE

Cover made of stainless steel, good temperature control. Base painted acid- and alkali-resistant. Precise, electronic speed control. Construction according to VDE.

Power: 230 V, 50 Hz

Power consumption: 40 watts Motor: shaded-pole motor Power switch with indication light Indication light for heating plate

Diameter of heating plate: approx. 130 mm

Heating power: 500 watts

Temperature control: steplessly from room temperature

to +300 °C/+572 °F

Speed: steplessly adjustable from 80 - 1600 rpm

Cable: 1.5 m long with safety plug Dimensions: approx. 150 x 150 x 100 mm

Weight: approx. 2.5 kg

Stirring quantity up to approx. 10 litres (liquid) 42071004 Circular stainless steel heating plate









#### Magnetic stirrer TMA, CE, fully electronic

Fully electronic speed and temperature control with digital display and timer as well as connection for a PT-100 temperature sensor

Power: 230 V, 50/60 Hz Power consumption: 25 W Motor: shaded-pole motor

Power switch and heating plate switch with LED Diameter of heating plate: approx. 130 mm

Heating power: 500 W

Temperature control: steplessly from room temperature

to +350 °C/+662 °F

Speed: steplessly adjustable from 60 - 1600 rpm

LED display, 4 digits

Cable: 1.5 m long with safety plug Dimensions: approx. 210 x 145 x 110 mm

Weight: approx. 2.3 kg

Stirring quantity up to approx. 10 litres (liquid)

Further details such as programmable sensor and heating plate temperature, security system, tolerance of setting, stability with and without PT-100 temperature sensor etc. are listed in the manual.

**42071012** Circular stainless steel heating plate



Fully electronic speed and temperature control, with digital display and timer, as well as connection for PT-100 temperature sensor Dimensions of heating plate: approx. 135 x 135 mm All other specifications as with article no. 42071004

**42072012** Square CERAN® heating plate





#### Magnetic stirrer TMC, CE

Dimensions of heating plate: approx. 135 x 135 mm Heating power: 600 W All other specifications as with article no. 42071004

42072004 Square CERAN® heating plate



#### Mini magnetic stirrer, CE

with heating

Power: 230 V, 50/60 Hz Power consumption: 6 W Motor: stepper motor

Power switch with indication light

Speed: steplessly adjustable from 10 - 1200 rpm

Heating plate: Aluminium anodised

Heating power: 160 W

Temperature: steplessly adjustable from room temperature

to +250 °C/+482 °F

Dimensions heating plate: approx. 90 x 90 mm

Cable 1.5 m long with safety plug

Total dimensions: approx. 110 x 100 x 80 mm

Weight: approx. 1.2 kg

Capacity up to approx. 1 litre (liquid) 42073004 Energy-saving device



#### Magnetic stirring bars

#### **PTFE-coated**

Axially magnetised centre, suitable for high, slim vessels such as measuring cylinders, jars etc.

	Length	Ø
42075001	approx. 12 mm	approx. 4.5 mm
42075002	approx. 15 mm	approx. 4.5 mm
42075003	approx. 20 mm	approx. 6 mm
42075004	approx. 25 mm	approx. 6 mm
42075005	approx. 30 mm	approx. 6 mm
42075006	approx. 40 mm	approx. 8 mm
42075007	approx. 50 mm	approx. 8 mm
42075008	approx. 60 mm	approx. 9 mm
42075009	approx. 70 mm	approx. 9 mm







#### **Retrievers made of PTFE**

for removing the stirring bar from the liquid

**42076010** Dimensions approx. 350 x 8 mm



#### Magnetic stirring bars, PTFE-coated, octagonal

with central ring, suitable for vessels with slightly uneven bottom. The central ring reduces the contact face and the bar automatically gets to the ideal stirring position.

The edged surface creates high turbulences, even with low speed.

	Length	Ø
42077001	approx. 13 mm	approx. 8 mm
42077002	approx. 15 mm	approx. 8 mm
42077003	approx. 25 mm	approx. 8 mm
42077004	approx. 25 mm	approx. 10 mm
42077005	approx. 38 mm	approx. 8 mm
42077006	approx. 38 mm	approx. 10 mm
42077007	approx. 38 mm	approx. 13 mm
42077008	approx. 51 mm	approx. 8 mm
42077009	approx. 51 mm	approx. 10 mm
42077010	approx. 64 mm	approx. 10 mm
42077011	approx. 75 mm	approx. 12 mm



#### PTFE-coated, triangular

suitable for large vessels with flat bottom

These stirring bars create intense turbulences and detach solids.

	Length	Ø	
42078001	approx. 12 mm	approx. 6 mm	
42078002	approx. 20 mm	approx. 8 mm	
42078003	approx. 25 mm	approx. 8 mm	
42078004	approx. 25 mm	approx. 14 mm	
42078005	approx. 35 mm	approx. 10 mm	
42078006	approx. 40 mm	approx. 14 mm	
42078007	approx. 50 mm	approx. 12 mm	
42078008	approx. 55 mm	approx. 14 mm	
42078009	approx. 80 mm	approx. 16 mm	



#### Magnetic stirring bars, PTFE-coated, oval

suitable for round bottom flasks

The shape of the stirring bar ensures a complete mixing.

	Length	Ø
42079001	approx. 20 mm	approx. 10 mm
42079002	approx. 25 mm	approx. 12 mm
42079003	approx. 35 mm	approx. 16 mm
42079004	approx. 40 mm	approx. 20 mm
42079005	approx. 50 mm	approx. 20 mm
42079006	approx. 65 mm	approx. 20 mm
42079007	approx. 70 mm	approx. 20 mm



#### Sand bath

#### TS

for heating sand and liquid material of all kinds.

The bath attachment connected with the device is made of stainless steel

The temperature regulation is controlled by a sensor. Setup according to VDE.

with cable, 1.5 metres, and safety plug Bath approx. 140 x 140 x 55 mm inside

Voltage: 230 V

Power consumption: 600 W

Dimensions: approx. 16 x 15 x 15 cm

Temperature control range: +40 °C +330 °C/+104 °F +626 °F

Weight: approx. 1.3 kg

**42081010** Capacity 1000 ml







#### **Water Distilling Apparatus**

#### CE

with special outlet for practical emptying and cleaning, complete with heater and directions for use, without tubing

Required quantity of cooling water: approx. 45 l/h Temperature of cooling water (discharge): max. +60 °C/+140 °F

#### Spare parts

No. 40225805 Glass part

No. 40225810 Levelling U-tubes made of DURAN®

No. 40225815 Spare O-ring seals made of synthetic rubber (EPDM)

No. 40225820 Quick-action clamping ring, stainless steel

No. 40225825 Set of special accessories for filling connection

No. 40225830 Filling tubes for purifying agent, DURAN®

No. 40225835 Heater 230 V 2500 W

No. 40225840 Distillate discharge tube

	40225010
Conductivity	0.85 µs
Voltage	220 V, 2500 W
Quality	pH 7.06
Distillate temperature	approx. +60 °C/+140 °F
Capacity	approx. 3.5 l/h
Weight	approx. 4 kg



#### Ion exchanger

#### Mixed bed deioniser with conductivity meter, CE

Practical ion exchanger for purified water, according to DAB (German Pharmacopeia) and EuAB (European Pharmacopeia).

Including conductivity meter with inlet hose, outlet hose and wall holder (hose attachments R 3/4").

Blue lightproof cartridge avoids growth of algae.

	Range	Total capacity	Capacity	Dimensions
40075010	0-50 µs/cm	approx. 4250 l at 1 °dH	approx. 45 l	approx. 600 x
	(Conductivity)	salt content	ner hour	100 mm Ø



The used resin filling can be disposed of in the domestic refuse. The empty PE cartridge is recyclable by a recycling station (not in the domestic refuse).

Cartridge with used resins may also be returned to us for free disposal.

**40076010** 2 screw connections



## LABORATORY EQUIPMENT



#### **Aquademat (Demineraliser)**

Demineralisation device - ion exchanger for demineralised water, according to DAB (German Pharmacopeia) and EuAB (European Pharmacopeia).

The exhaustion is indicated by colour indicator. Change of colour from amber to red.

consisting of three filter cartridges, of which the second cartridge is a safety filter and the third one a spare cartridge.

with accessories, wall holder and directions for use.

Dimensions	Capacity	Total capacity
<b>40080010</b> 370 x 2 x 125 mm	approx. 40 l per	approx. 7500 l at 1 °dH salt
Ø	hour	content



#### **Reconditioned cartridge for Aquademat**

for no. 40080010, regenerated cartridge in return of the exhausted one

Notice: Spare cartridge no. 40088010 will be supplied and invoiced if no cartridge has been returned.

**40087010** without hose

#### Spare cartridge (new) for Aquademat

included in set no. 40080010

**40088010** Dimensions H 370 x 125 mm Ø



# Assistent Assistent

## LABORATORY EQUIPMENT



#### Pocket pH meter, CE

Practical, battery-powered device Measuring range: pH 0.0 - 14.0 : 0.1 Electrode approx. 8 x 1.2 cm Ø Delivery including

- interchangeable electrode
- · calibration set
- granulate for standard solutions for pH 4.0 / 6.86 and 9.18
- KCl solution, bottle of approx. 50 ml, for storing the electrode

detailed directions for use

**43252010** Pocket pH meter, CE

**43252001** Spare electrode with substances for standard

solutions, pH 4.0 - 6.86 and 9.18

**43252002** Spare granulate for standard solutions, pH 4.0 - 6.86

and 9.18

**43252003** Spare KCl solution for storing the electrode,

approx. 50 ml



#### Absorbent paper

#### **Rolls of protection paper**

White, one side PE-coated (weight: cellulose 100 g/m $^2$  + PE 25 g/m $^2$ ), protects laboratory benches and drawers Absorption approx. 170 g/m $^2$ 

**44075040** Size 400 mm x 50 m **44075046** Size 460 mm x 50 m **44075060** Size 600 mm x 50 m **44075092** Size 920 mm x 50 m

#### **Sheets of protection paper**

Features like no. 44075... 100 sheets/pack

**44080042** Size 420 x 520 mm **44080046** Size 460 x 570 mm **44080050** Size 500 x 600 mm

## LABORATORY EQUIPMENT



## **Detergents**

#### **Biorex M**

Liquid concentrate for manual cleaning of laboratory equipment

- phosphate-free, alkaline
- easily measurable, self-acting and efficient cleaning. Suitable for glass, porcelain, ceramics, rubber, plastics, silicone, stainless steel
- biodegradable, solvent-free, diluted not sewage-hazardous UN 1824, class 8

Safety data sheet comes with the item.

	Capacity	pH value of 5 % solution
41406010	5 litres	approx. 12.5



## Pipette brushes in sets of 4 pieces

**42588010** for measuring pipettes 1-10 ml



### Pipette brushes for measuring pipettes

Individually

	for measuring pipettes	Dimensions
42589001	1 ml	approx. 410 x 70 x 4.0 mm Ø
42589002	2 ml	approx. 405 x 75 x 4.5 mm Ø
42589005	5 ml	approx. 400 x 75 x 8.0 mm Ø
42589010	10 ml	approx. 400 x 100 x 12.0 mm Ø



# Assistent

## LABORATORY EQUIPMENT



## **Laboratory Timers**

#### Interval timers with alarm

for hanging, standing or lying.

Available in 3 different colours, easy operation

41974016 Running time up to 60 minutes, colour beige
41974024 Running time up to 60 minutes, colour blue
41974032 Running time up to 60 minutes, colour white
41974040 Running time up to 120 minutes, colour white



#### Digital interval timers, CE

- LCD display, 4 digits showing minutes and seconds
- programmable up to 99 min 59 s
- counts down in seconds
- Alarm sounds for 30 s when countdown reaches zero
- Memory recall function
- individual setting for minutes and seconds
- with magnetic back
- incl. battery (button cell LR 44 1.5 V)

**41977010** Silver **41977020** White



#### Digital interval timers, table model, without magnetic back, CE

incl. battery AA 1.5 V

Features as with no. 41977010 and 41977020

**41977030** Silver



#### **Multi-function timers, CE**

Interval timer with stopwatch and clock

- LCD display, 6 digits
- with clip, stand, magnetic back and battery
- with clock
- incl. battery (button cell) 1.5 V LR 44

**41977040** Stopwatch up to 23 h 59 min 59 s

interval timer up to 23 h 59 min 59 s with alarm

## LABORATORY EQUIPMENT



#### Digital interval timers, 2 different timer channels, CE

- with magnet, stand and clip
- large LCD display, 6 digits for hours, minutes and seconds
- separate buttons for hours, minutes and seconds
- two different timer channels
- programmable for 99 h 59 min 59 s
- Stopwatch for counting upwards
- Clock showing standard time
- incl. battery AA 1.5 V

	Weight	Dimensions
41977050	approx. 100 g incl. battery	approx. 76 x 66 x 18 mm

## Digital interval timers with large display, CE

- with magnet and stand
- LCD display, 4 digits showing minutes and seconds
- Countdown 99 min 59 s with acoustic signal
- Countdown in seconds
- incl. battery AAA 1.5 V

	Weight	Dimensions
41977060	approx. 70 g incl. battery	approx. 84 x 77 x 14 mm





## Nurses lapel watch, non-toxic

- with clip, solid metal chain, 5 mm wide
- metal case, silvery polished
- fluorescent hour, minute and second hand
- quartz movement Seiko PC 21, watch glass made of mineral glass, 25 mm  $\emptyset$
- including button cell 1.5 V (SR 66)

**41975006** blue **41975012** green **41975018** orange **41975024** pink **41975030** red **41975036** white





## LABORATORY EQUIPMENT



### **Hand stopwatches**

- Metal case, with 7 jewels
- Graduation 0 60 in 1/5 s and 1/100 min
- Solid version
- shock- and dustproof, water-protected

**41978010** up to 30 minutes



## Stopclocks, table model

Electronic analog table/wall stopclock, clear face with persistent figures and hands. incl. battery AA 1.5 V

	Inner scale	Outer scale
41979010	0-100/100 min	0-60 s, 0-60 min



## Digital stopwatches, black, CE

- LCD display, 7 digits
- Division 0.01 s
- incl. battery (button cell) SR 54 1.55 V
- Functions: Start/Stop/Reset

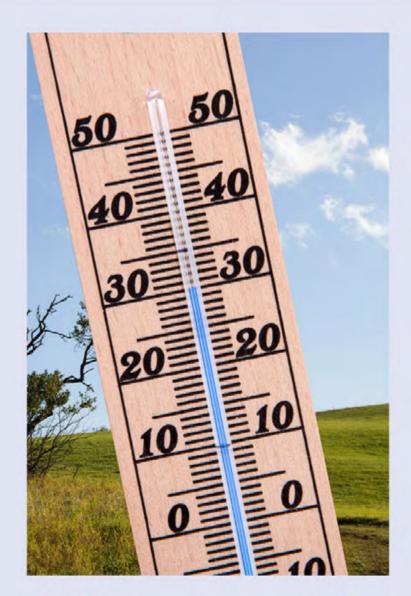
Addition/Reset

Split

Dual measurement

**41980010** Display: 9 h 59 min 59.99 s





**Thermometers** 









## **Laboratory Thermometers**

## **Chemical thermometers**

#### **Mercury filling**

DIN 12770, ordinary glass, division 1 °C/1.8 °F, diameter approx. 7-8 mm Packing: Each in a tube

	Range:
43200008	0+50°C/32+122°F
43200016	100 °C/212 °F
43200024	150 °C/302 °F
43200032	200 °C/392 °F
43200040	250 °C/482 °F
43200048	300 °C/572 °F
43200056	360 °C/680 °F
43200064	420 °C/788 °F

### **Red filling**

Ordinary glass, division 1 °C/1.8 °F, diameter approx. 7-8 mm Packing: Each in a tube

	Range:
43201008	0 +50 °C / 32 +122 °F
43201016	100 °C/212 °F
43201024	150 °C/302 °F
43201032	200 °C/392 °F
43201040	250 °C/482 °F

### Maximum thermometers

## for shaking

DIN 12770, reset of mercury by shaking, division 1 °C/1.8 °F The maximum thermometer +200 °C/+392 °F is being used as control thermometer with sterilisers.

Packing: Each in a tube

	Range	Dimensions
43205024	-10 +150 °C / +14 +302 °F	approx. 260 x 7-8 mm Ø
43205032	-10 +200 °C / +14 +392 °F	approx. 300 x 7-8 mm Ø



## Maximum thermometers for shaking, for steriliser temperature

DIN 12770, short type, with mercury filling, blue reflecting, +80 +220 °C : 2 °C / +176 +428 °F : 3.6 °F Packing: Each in a tube

**43206010** Length approx. 11 cm



### **Pocket thermometers**

#### Prismatic graduated glass

in nickel case with bayonet catch and clip, red or blue filling, division 1 °C/1.8 °F, length approx. 14 cm

43208008 Range -35 +50 °C / -31 +122 °F Range -10 +100 °C / +14 +212 °F 43208016



#### **Precision thermometers**

DIN 12770, ordinary glass, enclosed scale, Richter top finish with knob, suitable for official testing, mercury filling Packing: Each in a tube

	Range	Division	Length
43210001	-10 °C +50 °C / +14 °F +122 °F	0.5 °C / 0.9 °F	approx. 22 cm
43210002	-10 °C +50 °C / +14 °F +122 °F	0.1 °C/0.18 °F	approx. 42 cm
43210003	-10 +100 °C / +14 +212 °F	1 °C/1.8 °F	approx. 30 cm
43210004	-10 +100 °C / +14 +212 °F	0.5 °C / 0.9 °F	approx. 27 cm
43210005	0 +100 °C / 32 +212 °F	0.1 °C/0.18 °F	approx. 55 cm
43210006	-10 +150 °C / +14 +302 °F	1 °C/1.8 °F	approx. 30 cm
43210007	-10 +150 °C / +14 +302 °F	0.5 °C / 0.9 °F	approx. 35 cm
43210008	-10 +200 °C / +14 +392 °F	1 °C/1.8 °F	approx. 35 cm
43210009	-10 +200 °C / +14 +392 °F	0.5 °C / 0.9 °F	approx. 35 cm



#### Distillation thermometers

### with standard ground 14/23

DIN 12770, with mercury filling, blue reflecting, immersion length with ground 75 mm, immersion tube diameter approx. 7 mm

43225024 Range -10 +150 °C : 0.5 °C / +14 +302 °F : 0.9 °F 43225040 Range -10 +250 °C : 1 °C / +14 +482 °F : 1.8 °F 43225056 Range -10 +360 °C: 1 °C / +14 +680 °F: 1.8 °F



### Clinical thermometers without mercury, CE





Classic liquid thermometer made of glass

- can be disinfected completely (the temperature of the cleaning solution and disinfectant must not exceed +42 °C/+107.6 °F)
- non-toxic measuring fluid Galinstan® (eutectic alloy consisting of gallium, indium and tin)
- eco-friendly may be disposed of as domestic waste

	Range	Tolerance
43310010	+35 °C +42 °C/+95 °F +107.6 °F	± 0.1 °C/32.18 °F



### Digital clinical thermometer with signal

Electronic, waterproof, for measuring the body temperature of human and animal, with LCD display and battery LR 41 Each in plastic tube and box, with directions for use

	43315010
Range	+32 °C +42 °C/+89.6 °F +107.6 °F
Measuring time	approx. 1 min at room temperature
Battery life	approx. 250 hours
Accuracy	± 0.1 °C/32.18 °F



### Bath thermometers

#### for hospital

Solid finish, plastic, coloured filling

	Range	Length
43690010	0 °C +50 °C/+32 °F +122 °F	approx. 40 cm



#### Bath thermometer, cylindrical

Floating vertically, coloured filling, completely closed model, shock-protected capillary

	Range	Length
43698010	0 °C +70 °C/+32 °F +158 °F	approx. 24 cm



#### Bath thermometer in square wooden case

with handle, paper scale, coloured filling

	Range	Length
43700010	-10 °C +50 °C/+14 °F +122 °F	approx. 25 cm



#### Bath thermometer in boat shape

made of plastic, assorted colours (blue, rose, white)

	Range	Length
43711010	0 °C +50 °C/+32 °F +122 °F	approx. 16 cm



#### Bath thermometer in fish shape

in plastic frame, coloured filling, measuring range 0 °C/32 °F up to +50 °C/+122 °F

**43720010** blue **43720020** pink



## In- and Outdoor Thermometers

#### **Thermometers**

## based on the principle of Galileo Galilei

Galileo discovered that the density of a liquid changes in proportion to its temperature.

The temperature is indicated by discs hanging from coloured spheres. The weight difference of the spheres is 0.006 g only and ensures an accuracy of 1  $^{\circ}$ C/1.8  $^{\circ}$ F.

The spheres descend slowly when the temperature increases and they rise when the temperature falls. The temperature has to be read from the lowest disc of the high floating spheres.

The liquid is ozone friendly and hardly inflammable. No toxic fumes are emitted.

- free of CFC
- · no cloudiness of the liquid

	43510101	43510102	43510103	43510128
Range	+18 +26 °C / +64.4 +78.8 °F	+18 +24 °C / +64.4 +75.2 °F	+17 +27 °C / +62.2 +80.6 °F	+18 +26 °C / +64.4 +78.8 °F
Division	2 °C / 3.6 °F	1 °C/1.8 °F	1 °C/1.8 °F	2 °C/3.6 °F
Height	33 cm	44 cm	64 cm	28 cm
Spheres	5	7	11	5
	green, cognac, blue, multi- coloured	red, cognac, blue, green, multi- coloured	red, cognac, blue, green, multi- coloured	red, cognac, blue, multi- coloured

6th position of article number stands for colour: 1=blue, 2=multicoloured, 3=cognac, 4=green, 5=red Please indicate in your order!







### Room thermometers, beech wood, natural varnish

with coloured filling, range -30 °C +50 °C/-22 °F +122 °F

**43513010** Length approx. 20 cm



### Freezer-fridge thermometers, digital, CE

- according to EN 13485
- Indication of temperature with corresponding freezer-fridge symbol
- highest and lowest temperature
- switchable °C/°F
- with stand and frame for mounting on surfaces or behind glass (display fridge, vegetable drawer)

	43595010
Range	-30 °C +50 °C / -22 °F +122 °F
Division	0.1 °C/0.18 °F
Weight	approx. 65 g
Dimensions	approx. 72 x 91 x 13 mm
including battery	CR 2032 button cell
Accuracy	± 0.8 °C at -20 °C +10 °C, otherwise ± 1 °C



### Freezer thermometers

Officially tested, with holder

**43599010** Range -35 °C +25 °C / -31 °F +77 °F



## Freezer-fridge thermometers

Cylindrical plastic case, for hanging, coloured filling, range -40 °C +50 °C / -40 °F +122 °F

**43600010** Length approx. 21 cm



## Window thermometers, Vienna type, fittings of metal

Blue filling, range -50 °C +50 °C

**43605010** Length approx. 20 cm



#### **Maximum-minimum thermometers**

Plastic case with push button magnet, environmentally friendly capillary filling, without roof, black

**43646010** Range -35 °C +50 °C/-31 °F +122 °F



#### **Maximum-minimum thermometers**

Plastic case with push button magnet, environmentally friendly capillary filling, with roof, beige

**43647010** Range +35 °C +50 °C/+95 °F +122 °F



#### Sauna hygrometers

Metal, circular, range 0-100 %

**43623010** Diameter approx. 10 cm







#### Manometers (Vacuum gauges) according to Bennert

Each in a box, wooden stand with adjustable mirror glass scale, 0-90 torr

**42085001** with mercury filling



## **Digital Thermometers**

#### Thermometer, electronic, CE

Multi-purpose thermometer, with sensor made of stainless steel and extension cable.

- LCD display
- · Temperature Celsius or Fahrenheit
- Maximum and minimum display with temperature memory
- Hi-Lo alarm, programmable
- · Display for low battery
- Resolution ± 0.1 °C/± 0.18 °F : -19.9 °C/-3.82 °F to +199.9 °C/+391.82 °F (otherwise: ± 1 °C/± 1.8 °F)
- Precision: ± 1 °C/± 1.8 °F: -30 °C/-22 °F to +250 °C/+482 °F, otherwise more than ± 2 °C/± 3.6 °F
- Ambient temperature for plastic case: -10 °C +50 °C/+14 °F +122 °F
- Delivery incl. battery (1.5 V AAA) and directions for use

	43232010	
Range	-50 +300 °C / -58 +572 °F	
Cable	approx. 1 m long	
Metal sensor	approx 13 cm long	



#### Digital thermometer "mini"

Light, electronic digital thermometer with temperature memory function, sensor made of stainless steel, with battery

#### Operating

Right switch set to "ON", left switch set to "TEST" = normal temperature display.

Left switch set to "HOLD" = current display and hold down, °C flashes.

	43235010
Max. ambient temperature for plastic case	-10 °C up to +50 °C
Range	-50 °C +150 °C
Division	0.1 °C at -20 °C +150 °C
Accuracy	± 1 °C for -30 +150 °C
Battery life	approx. 5000 h
Immersion depth	approx. 60 mm



#### Digital pocket thermometers "ThermoJack", CE

Battery-powered, with foldable insertion sensor incl. button cell 3 V

- Folding angle up to 180°
- Accuracy ± 0.5 °C/32.9 °F from 20 °C/-4 °F to +150 °C/+302 °F (otherwise ± 1 °C/33.8 °F)
- Large display
- Temperature Celsius or Fahrenheit

The thermometer automatically switches on at a folding angle of 45°. It switches off when the sensor is folded up again. The thermometer automatically switches off after approx. 10 minutes, if the folding up of the sensor is being omitted. Particularly handy and ideal for frequently changing work sites. The functional thermometer is suitable for temperature measurement of fluid, pasty and semisolid mediums - also for food in accordance with HACCP and EN 13485.

Range		Division	Length insertion sensor
<b>43238010</b> -40 °C	+250 °C / -40 °F +482 °F	0.1 °C/32.18 °F	approx. 60 mm







### Temperature data logger "MicroLite", CE

robust and watertight

Application in all areas where temperature recording is needed, e.g. food sector, transport and storage business, pharmaceutical industry etc.

Free software available (internet download).

#### **Product features**

- Adjustable interval: 1 second up to 1 hour
- Graphic and tabular presentation of measured values
- Export function for Excel
- IP68 waterproof
- USB interface
- Hi-Lo alarm
- · Case of plastic (ABS)
- · with fixing

	43240010
Range	-40 °C +80 °C / -40 °F +176 °F
Division	0.1 °C / 0.18 °F
Lithium battery	1x CR2032 (3 volts)
Memory capacity	32000 measurements
Display	7 segment LCD
Dimensions	approx. 110 x 39 x 26 mm
Weight	approx. 70 g
Connection	USB standard port
Interface	USB 2.0
Accuracy	± 0.3 °C / 0.54 °F



## Maximum-minimum thermometer with digital display, CE

for indoor and outdoor, splash-proof, measuring range -20 °C +50 °C/-4 °F +122 °F, temperature Celsius or Fahrenheit

- present temperature / highest and lowest day temperature
- including button cell 1.5 V AAA

**43653010** green **43653020** black



#### Weather station with sender unit, CE

Barometer (tendency), thermometer, hygrometer, radio-controlled clock, date display

#### Thermometer

- Range -10 °C +60 °C / +14 °F +140 °F
- Resolution 0.1 °C/32.18 °F
- · °C or °F

## Radio-controlled clock

• incl. 3 batteries AA 1.5 V (LR 6)

#### Sensor unit

- with LCD display and LED indicator
- low battery warning
- stand-up device, wall mounting
- range dependent on building structure and placement: max. 100 m from station
- incl. 2 batteries AA 1.5 V (LR 6)

#### 43655010

	43033010
Range	-40 °C +60 °C / -40 °F +140 °F (sensor unit)
Relative humidity	20 - 95 %
Sensor unit	approx. 160 x 43 x 26 mm / 75 g
Station	approx. 180 x 102 x 33 mm / 230 g



### Maximum-minimum thermometer, electronic, CE

for measuring indoor and outdoor temperatures

- present temperature/highest and lowest day temperature
- for hanging or standing
- · extra thin cable for easily leading through window seals
- · waterproof exterior sensor
- · including battery 1.5 V AA

#### 43656010

Measuring range inside	-10 °C +50 °C / +14 °F +122 °F
Measuring range outside	-50 °C +70 °C / -58 °F +158 °F
Cable	approx. 3 m long
Temperature	Celsius/Fahrenheit



Maximum-minimum thermometer, solar-powered, CE

with digital display, for measuring indoor and outdoor temperatures

- present temperature/highest and lowest day temperature
- · for hanging or standing
- extra thin cable for easily leading through window seals
- waterproof exterior sensor
- incl. interchangeable backup round cell battery 1.5 V AA (LR 44, GA 13)
- · Guarantee: 5 years

4	3	6	5	7	0	1	0

	43037010
Measuring range inside	-20 °C +70 °C / -4 °F +158 °F
Measuring range outside	-40 °C +70 °C / -40 °F +158 °F
Cable	approx. 3 m long
Temperature	Celsius/Fahrenheit
Colour	black
Accuracy	± 1 °C/1.8 °F





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## **Rain Gauges**

made of clear plastic, with holder for easier removing. Easily readable scale.

Each graduation mark = 1 mm (1 litre) precipitation per m<sup>2</sup>

Packing: Each in cardboard box

**44278010** Height approx. 25 cm





**Hydrometers** 



## **Hydrometers**

#### **General information:**

- All density hydrometers, if not stated differently, have a reference temperature of 20  $^{\circ}\text{C}/68~^{\circ}\text{F}$
- Baumé hydrometers have a reference temperature of 15 °C/59 °F
- Hydrometers with other reference temperatures are available as well. Please mention the required temperature in your order
- The given lengths must be calculated with a tolerance of ± 2 cm

The hydrometers are with paper scale and steel metal ballast. Packing: Each in protective plastic tube

Density hydrometers can be manufactured with scale according to specific weight on request. Reference temperatures of 15, 20 or 27.5 °C/59, 68 or 81.5 °F are possible.

(In the following charts you can find an abstract of our hydrometers, further executions with other measuring ranges can be found on our website.)

#### **Density hydrometers**

Scale range 0.060 : 0.001 g/cm<sup>3</sup>

46000... without thermometer, approx. 300 mm long

46001... without thermometer, approx. 160 mm long

46004... with thermometer

Length	300 mm	160 mm	350 mm	
Thermomete	rWithout	Without	0+35/40:1°C	
Range	Catalogue	Catalogue	Catalogue	
	no.	no.	no.	
1.000-1.060	46000008	46001008	46004008	
1.060-1.120	46000009	46001009	46004009	
1.120-1.180	46000010	46001010	46004010	
0.700-2.000	46000040	46001040	46004040	Range finder

#### Scale range 0.100 g/cm<sup>3</sup>

46012... without thermometer, division 0.001 g/cm<sup>3</sup>

Length	300 mm
Thermometer	Without
Range	Catalogue no.
0.600-0.700	46012001
0.700-0.800	46012002
0.800-0.900	46012003
0.900-1.000	46012004
1.000-1.100	46012005
1.100-1.200	46012006
1.200-1.300	46012007
1.300-1.400	46012008
1.400-1.500	46012009
1.500-1.600	46012010
1.800-1.900	46012013



## Density hydrometers, scale range 0.200 g/cm<sup>3</sup>

46023... without thermometer, division 0.002 g/cm<sup>3</sup>

46025... with thermometer, division 0.002 g/cm<sup>3</sup>

Length	280 mm	350 mm
Thermometer	Without	0+35/40:1°C
Range	Catalogue no.	Catalogue no.
0.800-1.000	46023002	
1.000-1.200	46023003	46025003
1.200-1.400	46023004	
1.400-1.600	46023005	
1.600-1.800	46023006	

#### without thermometer

Division 0.001 g/cm³, length approx. 35 cm **46022003** Range 1.000-1.200 g/cm³ **46022004** Range 1.200-1.400 g/cm³

## Density hydrometers, different scale ranges, division 0.005 g/cm<sup>3</sup>

#### without thermometer

### Range:

46040001	0.700-1.000 g/cm <sup>3</sup>
46040002	1.000-1.300 g/cm <sup>3</sup>
46040003	1.300-1.600 g/cm <sup>3</sup>
46040005	1.000-1.400 g/cm <sup>3</sup>
46040006	1.400-2.000 g/cm <sup>3</sup>
46040007	1.000-1.500 g/cm <sup>3</sup>

#### with thermometer

	Reference temperature	Division	Range	Length
46041001	+20 °C/+68 °F	0.005 g/cm <sup>3</sup>	0.700-1.000 g/cm <sup>3</sup>	approx. 32 cm

## **Universal hydrometers**

## without thermometer

	Division	Range	Length
46105001	0.010/0.020 g/cm <sup>3</sup>	0.700-2.000 g/cm³	approx. 33 cm
46105003	0.010 g/cm <sup>3</sup>	1.000-2.000 g/cm <sup>3</sup>	approx. 29 cm

#### with thermometer

	Division	Range	Length
46106001	0.010 / 0.020 g/cm <sup>3</sup>	0.700-2.000 g/cm <sup>3</sup>	approx. 41 cm



## Hydrometers according to Baumé

46140... without thermometer

**46141...** with thermometer

Length Thermometer Division	220 mm Without 1 Bé	280 mm Without 0.1 Bé	320 mm 0 +40:1 °C 0.1 Bé
Range	Catalogue no.	Catalogue no.	Catalogue no.
00 - 10		46140027	46141027
10 - 20		46140028	46141028
20 - 30		46140029	46141029
30 - 40		46140030	46141030
40 - 50		46140031	46141031
50 - 60		46140032	46141032
60 - 70		46140033	46141033
Length	240 mm		300 mm
0 - 30	46140001		46141001
0 - 50	46140003		46141003
0 - 70	46140004		46141004

Saccharometers according to Baumé see 46269010

## Alcoholmeters in percentage by weight (% mass)

### without thermometer

Reference temperature +20 °C/+68 °F

	Range	Division	Length	
46165001	0-100	1	approx. 25 cm	
46165004	0-30	0.5	approx. 32 cm	
46165005	30-60	0.5	approx. 32 cm	
46165023	90-100	0.1	approx. 35 cm	

## Alcoholmeters in percentage by volume, reference temperature 20 °C/68 °F

46170... without thermometer

46171... with thermometer

	Range	Division	Length	•	Catalogue
Thermometer			no. Without	no. 0+35/	
					40:1°C
	0-100	1%vol.	260 mm	46170001	46171001
	0-70	1%vol	360 mm	46170002	46171002



## Alcoholmeters according to Richter and Tralles

#### without thermometer

Reference temperature +20 °C/+68 °F

	Range	Division	Length
46175010	0-100 weight % / volume %	1	approx. 25 cm

#### with thermometer

Reference temperature +20 °C/+68 °F

	Range	Division	Length	
46176010	0-100 weight % / volume %	1	approx. 30 cm	

#### **Alcoholmeters according to Tralles**

with glass jar in cardboard box, reference temperature +20 °C/+68 °F

**46178010** Range 0-50: 2 and 50-100: 1 vol%

## Hydrometers for potassium hydroxide

#### without thermometer

	Reference temperature	Range	Length
46197001	+15 °C/+59 °F	0 - 50 : 1° Baumé	approx. 25 cm

### Lactodensimeters according to Gerber

## without thermometer

Reference temperature +20 °C/+68 °F

	Division	Range	Length
46205010	0.5	1.020-1.040	approx. 23 cm

## with thermometer

Reference temperature +20 °C/+68 °F

	Division	Range	Length
46206010	0.5	1.020-1.040	approx. 23 cm

## Lactodensimeters according to Quevenne

#### without thermometer

Reference temperature +20 °C/+68 °F (+15 °C/+59 °F also available)

	Division	Range	Length
46210010	0.001 g/ml	1.015 - 1.040 g/ml	approx. 23 cm

### with thermometer

Reference temperature +20 °C/+68 °F (+15 °C/+59 °F also available)

	Division	Range	Length
46211010	0.001 g/ml	1.015 - 1.040 g/ml	approx. 23 cm



## Hydrometers for sodium chloride

#### without thermometer

with double scale for % weight (Dr. Bischoff) and density (g/cm³), reference temperature +20  $^{\circ}$ C/+68  $^{\circ}$ F

	Range 1	Range 2	Length
46223001	0 - 30 : 0.5 % weight	1.000 - 1.230 : 0.002 g/cm <sup>3</sup>	approx. 27 cm

### Hydrometers for sea water

#### without thermometer

1.000 - 1.040 : 0.0005 g/cm³ reference temperature +20 °C/+68 °F **46236001** Length approx. 25 cm

#### with thermometer

1.000 - 1.040 : 0.0005 g/cm³ reference temperature +20 °C/+68 °F **46236002** Length approx. 27 cm

## Hydrometers for must according to Oechsle

#### without thermometer

0-130: 1 ° Oechsle reference temperature +20 °C/+68 °F **46250010** Length approx. 30 cm

## Hydrometers for wine and must according to Oechsle

#### without thermometer

0-120: 1 ° Oechsle and 0-15: 1 volume %, reference temperature +15 °C or +20 °C/+59 °F or +68 °F **46252010** Length approx. 25 cm

#### Saccharometers according to Baumé

#### without thermometer

	Reference temperature	Range	Length
46269010	+20 °C/+68 °F	0 - 50: 1° Baumé	approx. 16 cm

## Hydrometers for lime milk

#### without thermometer

Reference temperature +20 °C/+68 °F **46199010** Range 0 - 340 : 5.0 g/ml

## Alcoholmeters according to Gay Lussac

#### with thermometer

	Reference temperature	Range	Length	
46181010	+20 °C/+68 °F	0 - 100 : 1	approx. 34 cm	



## Density hydrometers, set of 6 pieces

#### without thermometer

Reference temperature +20 °C/+68 °F

	Division	Range	Length
46120010	0.005 g/cm³	0.700-2.000 g/cm <sup>3</sup>	approx. 18 cm

## Range finders

## without thermometer

	Division	Range
46123020	0.02 g/cm <sup>3</sup>	0.700-2.000 g/cm <sup>3</sup>

## Hydrometers for sodium hydroxide solution

#### without thermometer

	Reference temperature	Range	Length
46224001	+20 °C/+68 °F	0 - 27 : 0.5 % weight	approx. 25 cm

### Hydrometers for phosphoric acid

#### without thermometer

	Reference temperature	Range	Length
46228001	+15 °C/+59 °F	0 - 30 : 0.5 % weight	approx. 27 cm

## Hydrometers for hydrochloric acid

#### without thermometer

with double scale in % weight and density (g/cm³), reference temperature +20 °C/+68 °F

	Range 1	Range 2	Length
46230001	0 - 40 : 0.5 % weight	1.000 - 1.210 : 0.002 g/cm <sup>2</sup>	approx. 27 cm

#### **Saccharimeters**

## without thermometer

according to Brix or Balling, in % weight (% mass sucrose/water), reference temperature +20  $^{\circ}$ C/+68  $^{\circ}$ F, length approx. 28 cm

**46265016** Range 0-20: 0.2 **46265031** Range 0-10: 0.1

### with thermometer

according to Brix or Balling, in % weight (% mass sucrose/water), reference temperature +20  $^{\circ}\text{C}/+68~^{\circ}\text{F}$ 

	Range	Length	
46266001	0-30: 1	approx. 20 cm	
46266003	30-60: 1	approx. 20 cm	
46266007	0-10: 0.1	approx. 28 cm	
46266024	0-30: 0.2	approx. 30 cm	
46266032	10-20: 0.1	approx. 28 cm	
46266040	0-20: 0.1	approx. 38 cm	



## Hydrometers for ammonia

### without thermometer

double scale 0.880-1.000: 0.002 g/cm³

	Reference temperature	Range	Length
46186010	+20 °C/+68 °F	0-36: 0.5 % weight	approx. 27 cm

## Hydrometers for ammonia with thermometer

double scale 0.880-1.000: 0.002 g/cm³

	Reference temperature	Range	Length
46187010	+20 °C/+68 °F	0-36: 0.5 % weight	approx. 30 cm

## Hydrometers for hydrogen peroxide

## without thermometer

	Reference temperature	Range	Length
46227010	+20 °C/+68 °F	0-50: 1 % weight	approx. 27 cm



## Fermenting tubes

made of glass with 2 bulbs and extension

	Tube Ø	Total length
41350010	10-11 mm	approx. 200 mm



#### **Vinometers**

according to Bernadotte made of glass, amber graduation

**44200010** Wine test glasses







**Hospital Equipment** 





## **Equipment for Physician and Hospital**

## Medicine glasses, CE

Conical, with straight rim, with engraved scale in grams and spoons, 50 pieces/box

**41101010** Capacity approx. 25 ml



### Medicine cups, CE

made of polypropylene, disposable, approximate scale, capacity approx. 30 ml, smallest packing unit 80 pieces

 41102001
 colourless

 41102002
 blue

 41102003
 red

 41102004
 yellow

 41102005
 green



## Covers, CE

for medicine cups no. 41102..., 500 pieces in bag, 4000 pieces in carton

**41102015** Colour white



#### **Medicine dispensers**

with print in German: "Morgen" - "Mittag" - "Abend" - "Nacht" ("Morning" - "Noon" - "Evening" - "Night"), with sliding cover made of clear plastic
Packing: 200 pieces

**41103010** White, made of polypropylene, with 4 cases



#### Medicine tray made of polystyrene

White, for 19 medicine cups no. 41102001 and 19 medicine dispensers no. 41103010 (without cups, without dispensers)

**41104010** Dimensions approx. 340 x 440 x 15 mm



## **Medicine tray (without cups)**

consisting of white melamine tray, with Plexiglas  $\mbox{\ensuremath{\mathbb{B}}}$  rack, with area for inscription

**41105010** with 20 holes for medicine cups



#### Medicine spoons made of porcelain

Glazed, with scale in German (1 Teelöffel = 1 teaspoon, 1/2 Esslöffel = 1/2 tablespoon, 1 Esslöffel = 1 tablespoon)

**41111010** White



#### Medicine spoons made of polypropylene

with scale in German (1 Teelöffel = 1 teaspoon, 1 Esslöffel = 1 tablespoon)

**41112010** White



## Feeding cups, CE

made of polypropylene, with approximate scale, without cover **44010010** Capacity approx. 250 ml







## Feeding cup covers, CE

made of polypropylene, suitable for feeding cups no. 44010010

	Dimensions opening	Opening
44011004	approx. 4 mm	round
44011012	approx. 12 mm	round
44011048	approx. 4 x 8 mm	oval



### Tubes made of clear glass, bent

**44020010** 25 pieces/pack



#### Sputum cups, CE

made of polypropylene, with removable hinged lid and funnel inset, individually packed

	Capacity	Colour
43112010	approx. 410 ml	white



## Kidney dishes made of polypropylene, CE

White, sterilisable

**41120010** Length approx. 26 cm



## Kidney dishes made of stainless steel, CE

Sterilisable

**41130010** Length approx. 25 cm



## Bedpans made of polypropylene, CE

with cover, ivory-coloured, sterilisable up to +130  $^{\circ}$ C/+266  $^{\circ}$ F

**43150010** Diameter approx. 32 cm



## Bedpans made of stainless steel, CE

with knob lid, sterilisable

**43155010** Diameter approx. 31 cm



## Urinals made of polyethylene (LDPE) with cover, CE

Approximate scale, for men

**44090010** Capacity 1000 ml



## Urinals made of polycarbonate with cover, CE

Transparent, approximate scale, sterilisable, for men

 Capacity
 Resistant to steam sterilisation
 Hot air

 44092010
 1000 ml
 max. +125 °C/+257 °F
 max. +135 °C/+275 °F







## Urinals made of polycarbonate without cover, CE

Transparent, approximate scale, sterilisable, for men

	Capacity	Resistant to steam sterilisation	Hot air
44093010	1000 ml	max. +125 °C/+257 °F	max. +135 °C/+275 °F



### Urinals made of polyethylene, CE

for women, natural-coloured, approximate scale, with cover, heat-resistant up to +90  $^{\circ}\text{C/+194}\,^{\circ}\text{F}$ 

**44104010** Capacity 1000 ml



## Urinal supports made of wire

with white plastic coating, with chain and cover, for hanging on bed frame

**44108010** for 1 urinal, triangular shape



#### **Brushes for urinals**

with wooden handle

**44106010** Dimensions approx. 470 x 160 x 70 mm



## Nameplate holder

made of Plexiglas®, for hospital bed

	Length	Ø
42325010	approx. 11 cm	approx. 3.5 cm



## Notepad for nameplate holder

**42325020** 25 sheets



## Sand glasses (hourglasses)

in nickel-plated metal case

**42871010** 1/4 minute **42871020** 1/2 minute



## Sand glasses (hourglasses) with clip

in nickel-plated metal case

**42872010** 1/4 minute **42872020** 1/2 minute







Eye baths, CE

made of plastic (SAN), 10 pieces in a plastic bag

	Capacity	Height	Ø	
40302010	approx. 25 ml	approx. 37 mm	approx. 42 mm	



## Eye douches according to Schuster, CE

Clear glass, without stopper

**40303006** Capacity approx. 50 ml **40303012** Capacity approx. 100 ml



## Eye drop bottles according to Strohschein

with ground-in pipette, clear glass, without inscription

Outside Ø upper

Capacity	Bottle height	olive	Total height
<b>40306010</b> approx. 32	approx. 50	approx. 8 mm	approx. 85 mm (incl.
ml	mm		pipette)



## Glass rods, both sides fused, CE

Clear glass, disposable, 100 pieces/pack

	Length	Ø
40320010	approx. 100 mm	approx. 3-4 mm



### Glass rods, with knob and spatula, CE

Clear glass, disposable, 100 pieces/pack

	Length	Ø
40321010	approx. 100 mm	approx. 3-4 mm



## Dropping pipettes, with straight end

Clear glass, solid finish, without rubber teat, 50 pieces/pack Suitable rubber teat: no. 42620010

	Ø	Length
40326010	approx. 7-8 mm	approx. 80 mm



## Dropping pipettes, with bulbous end

Clear glass, solid finish, without rubber teat, 50 pieces/pack Suitable rubber teat: no. 42620010

	Ø	Length
40328010	approx. 6-7 mm	approx. 70 mm



## **Dropping pipettes with 2 extensions**

according to DAB (German Pharmacopeia)

**40334010** Total length approx. 15 cm



## **Dropping pipettes with German inscription**

"Normal 20 Tropfen = 1 g"

**40335010** Length approx. 85 mm



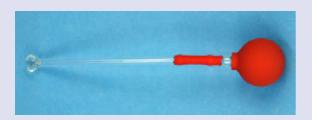




Nasal douches according to Fränkel, CE made of glass
42330010 Capacity approx. 30 g



Nasal douches according to Harke, CE made of glass
42331010 Capacity approx. 100 g



# Tonsil suction set according to Roeder, CE consisting of bulb made of PVC, free of cadmium, with glass connecting piece and rubber hose connection, with 4 suction tubes 42880010 Bulb Ø approx. 51 mm



## Spare tonsil suction tubes, CE

for suction set no. 42880010, total length approx. 180 mm

42881001 Suction part approx. 17 x 13 x 15 mm

42881002 Suction part approx. 20 x 15 x 16 mm

42881003 Suction part approx. 23 x 17 x 18 mm

42881004 Suction part approx. 27 x 20 x 20 mm



### Nasal aspirators according to Muck, CE

Clear glass, with rubber stopper

	Wall thickness	Outside Ø	Length
42896010	1.2 ± 0.05 mm	20.0 ± 0.25 mm	approx. 85 mm



#### Infusion cylinders

with fused graduation "ASSISTENT-PERMANENT", hole at top, olive at bottom, for use in the veterinary medicine

	Division	Capacity
41600018	5 ml	approx. 250 ml
41600030	20 ml	approx. 1000 ml



#### Specula, CE

made of clear glass, length approx. 15.5 cm

4301700122-24 mm Ø4301700228-30 mm Ø4301700334-36 mm Ø4301700441-43 mm Ø







**Dilators, CE** made of glass

	Upper Ø cone	Cone length
41024001	approx. 20 mm	approx. 70 mm
41024002	approx. 28 mm	approx. 80 mm
41024003	approx. 32 mm	approx. 80 mm



### Breast pumps made of glass without ball, CE

with lateral bulb

**40765010** with olive 12 mm



### Breast pumps made of glass with ball, CE

with lateral bulb, with ball made of flexible PVC, free of cadmium, each in a box

**40766010** Ball Ø approx. 51 mm



## Baby feeding bottles made of borosilicate glass 3.3, narrow neck $\,$

with scale

	Neck inside Ø	Capacity
41865010	approx. 20 mm	approx. 250 ml



## Baby feeding bottles made of borosilicate glass 3.3, wide neck

with scale

	Capacity	Neck inside Ø
41866010	approx. 250 ml	approx. 30 mm



#### Protective paper for treatment couch

White, 2 layers, perforated 38 cm, 100% cellulose

44085001Roll 39 cm x 50 m44085002Roll 50 cm x 50 m44085003Roll 55 cm x 50 m44085004Roll 59 cm x 50 m



#### Wire baskets, square

Stainless steel

41075012Dimensions approx. 12 x 12 x 12 cm41075014Dimensions approx. 14 x 14 x 14 cm41075016Dimensions approx. 16 x 16 x 16 cm41075020Dimensions approx. 20 x 20 x 20 cm



### Applicators for cotton, beech wood, unpointed

Round, in bundles of 100 pieces, without cotton

	Length	Ø
44300015	approx. 15 cm	approx. 3 mm
44300020	approx. 20 cm	approx. 3 mm
44300025	approx. 25 cm	approx. 3 mm
44300030	approx. 30 cm	approx. 3 mm







### Applicators for cotton, beech wood, one end pointed

Round, in bundles of 100 pieces, without cotton

	Length	Ø
44301015	approx. 15 cm	approx. 3 mm
44301020	approx. 20 cm	approx. 3 mm
44301030	approx. 30 cm	approx. 3 mm
44301035	approx. 35 cm	approx. 3 mm



#### Cotton sticks with one cotton end

100 pieces/pack

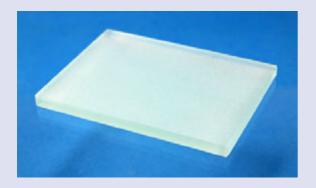
44302010Length approx. 15 cm44302020Length approx. 20 cm44302030Length approx. 23 cm



### Cotton sticks with one large cotton end

50 pieces/pack, cotton end approx. 10 mm  $\emptyset$ 

**44303010** Length approx. 20 cm **44303015** Length approx. 15 cm



#### **Glass plates (Cementum plates)**

made of glass, for dentists, both surfaces frosted (also available with plain surfaces or one frosted surface), ground edges, 10 pieces/box

**44355010** Dimensions approx. 95 x 70 x 6 mm

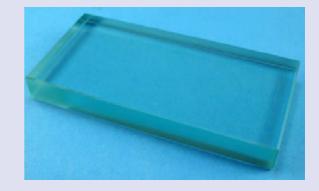


### Cementum blocks made of glass

All surfaces ground and polished, for dentists, each in a box

	Thickness	Dimensions
44356010*	18-20 mm	approx. 150 x 75 mm

<sup>\*</sup>Not available!



### Dappen glasses

10 edges

**41041004** green **41041008** crystal **41041012** rose **41041016** amber



Bent

**44362010** Length approx. 20 cm



#### Wooden tongue depressors, CE

Disposable, splinterproof, length approx. 15 cm, in boxes of 5000 pieces

**44365010** in polybags of 100 pieces **44365020** in small boxes of 100 pieces







#### **Face shields**

Areas of use:

Orthopaedics General surgeries Plastic surgery Brain surgery Urology Ambulance service Dentistry Laboratories

**49075010** made of polycarbonate, autoclavable



#### Kinesiology tape, NASARA®

consists of flexible cotton material, which can be stretched lengthwise by approx. 155-160 %. The tape, with the thermoplastic acrylic glue at the emplastic side, perfectly adjusts to the ambient temperature by stretching or contracting.

The tape is characterised by outstanding adhesive features, high wearing comfort and very good skin tolerance. It is permeable to air and can be easily removed from the skin after the therapy.

Dimensions: 5 m long x 5 cm wide

42884004 beige 42884008 blue 42884012 yellow 42884016 green 42884020 violet 42884024 orange 42884028 pink 42884032 red 42884036 black white 42884040



### **Tape scissors**

Stainless, with titanium coating, hardened blade

	Total length	Blade length
42884110	approx. 20 cm	approx. 8.5 cm



### Massage balls with spiky sensory points

made of flexible PVC, free of cadmium

	Ø	Colour
42882008	approx. 5.5 cm	orange
42882016	approx. 7 cm	green
42882024	approx. 8 cm	yellow
42882032	approx. 9 cm	red
42882040	approx. 10 cm	blue



### Massage balls with spiky sensory points, transparent blue

made of flexible PVC, free of cadmium

**42883006** Diameter approx. 6 cm



## **Cupping Glasses**

## Suction glasses according to Bier, CE, with bulb made of flexible PVC, free of cadmium $\,$

with tube olive at top

	Ø	Height without bulb	
42885003	approx. 3 cm	approx. 50 mm	
42885004	approx. 4 cm	approx. 60 mm	
42885005	approx. 5 cm	approx. 70 mm	
42885006	approx. 6 cm	approx. 80 mm	







### CE, without bulb

with tube olive at top

	Ø	Total height
42886003	approx. 3 cm	approx. 50 mm
42886004	approx. 4 cm	approx. 60 mm
42886005	approx. 5 cm	approx. 70 mm
42886006	approx. 6 cm	approx. 80 mm



### Massage cupping glasses without olive, without bulb, CE

	Height	Ø
42887010	approx. 11 cm	approx. 5 cm
42887020	approx. 9 cm	approx. 3 cm



#### with olive, without bulb, CE

	Height	Ø
42888010	approx. 11 cm	approx. 5 cm
42888020	approx. 9 cm	approx. 3 cm



### with olive and bulb, CE

Bulb made of flexible PVC, free of cadmium

	Ø	Height without bulb
42889001	approx. 3 cm	approx. 9 cm
42889010	approx. 5 cm	approx. 11 cm



### Glass rods for cupping glasses

One end fused, one end conical for removing cupping glass from skin

**42894010** Dimensions approx. 140 x 7 mm



### Cupping glasses, CE, without olive

made of glass

	Ø	Height
42890004	approx. 4 cm	approx. 5.5 cm
42890005	approx. 5 cm	approx. 6 cm



## Cupping glasses, mouth-blown, CE, without olive, without bulb

Borosilicate glass 3.3

42891001Diameter approx. 2.5 cm42891002Diameter approx. 3.5 cm42891003Diameter approx. 4.4 cm42891004Diameter approx. 5.0 cm42891005Diameter approx. 6.5 cm



#### with olive, without bulb, CE

Borosilicate glass 3.3

	Ø	Olive Ø
42892001	approx. 2.5 cm	approx. 9 mm
42892002	approx. 3.5 cm	approx. 9 mm
42892003	approx. 4.4 cm	approx. 10 mm
42892004	approx. 5.0 cm	approx. 10 mm
42892005	approx. 6.5 cm	approx. 10 mm







#### with olive and bulb, CE

Borosilicate glass 3.3, bulb made of flexible PVC, free of cadmium

	Ø	Bulb dimension	
42893001	approx. 2.5 cm	approx. 56 x 51 mm	
42893002	approx. 3.5 cm	approx. 56 x 51 mm	
42893003	approx. 4.4 cm	approx. 61 x 56 mm	
42893004	approx. 5.0 cm	approx. 61 x 56 mm	
42893005	approx. 6.5 cm	approx. 61 x 56 mm	



## **Instrument Trays**

### made of glass, without cover

Sterilisable in hot air up to +180 °C/+356 °F

42900001	Dimensions approx. 12 x 6 x 4 cm
42900002	Dimensions approx. 17 x 9 x 4.5 cm
42900003	Dimensions approx. 20 x 10 x 5 cm
42900004	Dimensions approx. 22 x 15 x 5.5 cm
42900005	Dimensions approx. 27.5 x 15 x 6 cm
42900007	Dimensions approx. 35 x 22 x 7 cm
42900010	Dimensions approx. 20 x 10 x 10 cm



#### **Stainless steel covers**

with knob, for above glass trays, sterilisable in hot air up to  $+180~^{\circ}\text{C}/+356~^{\circ}\text{F}$ 

42905001	Dimensions approx. 12 x 6 cm
42905002	Dimensions approx. 17 x 9 cm
42905003	Dimensions approx. 20 x 10 cm
42905004	Dimensions approx. 22 x 15 cm
42905005	Dimensions approx. 27.5 x 15 cm
42905007	Dimensions approx. 35 x 22 cm
42905010	Dimensions approx. 20 x 10 cm



## Stainless steel covers with knob, with foam pad and weight (glass plate)

Sterilisable in hot air up to +180 °C/+356 °F

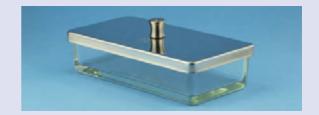
42906001	Dimensions approx. 12 x 6 cm
42906002	Dimensions approx. 17 x 9 cm
42906003	Dimensions approx. 20 x 10 cm
42906004	Dimensions approx. 22 x 15 cm
42906005	Dimensions approx. 27.5 x 15 cm
42906007	Dimensions approx. 35 x 22 cm
42906010	Dimensions approx. 20 x 10 cm



### Instrument trays made of glass with stainless steel cover

Sterilisable in hot air up to +180 °C/+356 °F

42910001	Dimensions approx. 12 x 6 x 4 cm
42910002	Dimensions approx. 17 x 9 x 4.5 cm
42910003	Dimensions approx. 20 x 10 x 5 cm
42910004	Dimensions approx. 22 x 15 x 5.5 cm
42910005	Dimensions approx. 27.5 x 15 x 6 cm
42910007	Dimensions approx. 35 x 22 x 7 cm
42910010	Dimensions approx. 20 x 10 x 10 cm



### made of glass with stainless steel cover

Cover with knob, foam pad and weight (glass plate), sterilisable in hot air up to +180  $^{\circ}\text{C}/+356~^{\circ}\text{F}$ 

42911001	Dimensions approx. 12 x 6 x 4 cm
42911002	Dimensions approx. 17 x 9 x 4.5 cm
42911003	Dimensions approx. 20 x 10 x 5 cm
42911004	Dimensions approx. 22 x 15 x 5.5 cm
42911005	Dimensions approx. 27.5 x 15 x 6 cm
42911007	Dimensions approx. 35 x 22 x 7 cm
42911010	Dimensions approx. 20 x 10 x 10 cm



#### made of stainless steel with stainless steel cover

Sterilisable in hot air up to +180 °C/+356 °F

42915002	Dimensions approx. 16 x 10 x 3 cm
42915003	Dimensions approx. 20 x 10 x 5 cm
42915004	Dimensions approx. 22 x 15 x 5.5 cm
42915005	Dimensions approx. 26 x 15 x 5 cm
42915006	Dimensions approx. 30 x 20 x 5 cm









### Glass jars

for dressing material, cotton, clinical thermometers, forceps and other instruments, with base, without cover

#### Dimensions:

44405006	approx. 10 x 2.5 mm @
44405012	approx. 10 x 5 cm Ø
44405018	approx. 8 x 8 cm Ø
44405024	approx. 10 x 10 cm Ø
44405030	approx. 12 x 12 cm Ø
44405036	approx. 15 x 15 cm Ø
44405042	approx. 18 x 18 cm Ø
44405048	approx. 21 x 21 cm Ø
44405054	approx. 12 x 8 cm Ø
44405060	approx. 20 x 8 cm Ø
44405066	approx. 15 x 10 cm Ø
44405072	approx. 20 x 10 cm Ø
44405078	approx. 30 x 10 cm Ø



with knob, for jars no. 44405...

44409018	for 8 cm Ø
44409024	for 10 cm Ø
44409030	for 12 cm Ø
44409036	for 15 cm Ø
44409042	for 18 cm Ø



Drop-on cover with knob

## Dimensions:

44410018	approx. 8 x 8 cm Ø
44410024	approx. 10 x 10 cm Ø
44410030	approx. 12 x 12 cm Ø
44410036	approx. 15 x 15 cm Ø
44410042	approx. 18 x 18 cm Ø
44410054	approx. 12 x 8 cm Ø
44410060	approx. 20 x 8 cm Ø
44410066	approx. 15 x 10 cm Ø
44410072	approx. 20 x 10 cm Ø







### Glass jars with covers made of stainless steel

Cover with knob

44415018	Dimensions approx. 8 x 8 cm Ø
44415024	Dimensions approx. 10 x 10 cm Ø
44415030	Dimensions approx. 12 x 12 cm Ø
44415036	Dimensions approx. 15 x 15 cm Ø
44415054	Dimensions approx. 12 x 8 cm Ø
44415060	Dimensions approx. 20 x 8 cm Ø
44415066	Dimensions approx. 15 x 10 cm Ø
44415072	Dimensions approx. 20 x 10 cm Ø

#### Covers made of stainless steel

with knob, for jars no. 44405...

44411018	Diameter approx. 8 cm
44411024	Diameter approx. 10 cm
44411030	Diameter approx. 12 cm
44411036	Diameter approx. 15 cm





### Glass jars with cover made of stainless steel with weight

Cover with foam pad and weight (glass plate)

44416018	Dimensions approx. 8 x 8 cm Ø
44416024	Dimensions approx. 10 x 10 cm Ø
44416030	Dimensions approx. 12 x 12 cm Ø
44416036	Dimensions approx. 15 x 15 cm Ø
44416054	Dimensions approx. 12 x 8 cm Ø
44416060	Dimensions approx. 20 x 8 cm Ø
44416066	Dimensions approx. 15 x 10 cm Ø
44416072	Dimensions approx. 20 x 10 cm Ø



### **Cotton dispenser (Delivery without cotton)**

Sterilisable, consisting of glass jar with cover made of stainless steel **44295010** Glass jar approx.  $10 \times 10 \text{ cm } \emptyset$ 









Low form with notch, overlapping cover

	Height	Outside Ø
41050004	approx. 25 mm	approx. 40 mm
41050005	approx. 30 mm	approx. 50 mm
41050006	approx. 35 mm	approx. 60 mm
41050008	approx. 40 mm	approx. 80 mm
41050010	approx. 50 mm	approx. 100 mm
41050012	approx. 60 mm	approx. 120 mm
41050015	approx. 75 mm	approx. 150 mm

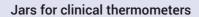
### Glass jars for dressing forceps

including stainless steel cover with aperture

	Height	Outside Ø
41965012	approx. 12 cm	approx. 8 cm
41965020	approx. 20 cm	approx. 8 cm

### Spare stainless steel cover

**41965001** for jars of approx.  $8 \text{ cm } \emptyset$ 



### made of stainless steel

with base, without cover

44440007	Dimensions approx. 9 x 3 cm Ø
44440014	Dimensions approx. 10 x 5 cm Ø
44440021	Dimensions approx. 13 x 5 cm Ø
44440028	Dimensions approx. 17.5 x 5 cm Ø
44440035	Dimensions approx. 13 x 8.5 cm Ø





## Jars made of stainless steel

### with knob cover

44420018	Dimensions approx. 8.5 x 8.5 cm Ø
44420024	Dimensions approx. 10 x 10 cm Ø
44420030	Dimensions approx. 12 x 12 cm Ø
44420036	Dimensions approx. 15 x 15 cm Ø





٨		Boxes	302
A		Breast pumps	290
Accessories for Assimat	81	Brushes for beakers	166
Accessories for dispensers	92 - 94	Brushes for centrifuge tubes	175
Accupipex	230	Brushes for hemometer measuring tubes	21
Adapters for dispenser tips	90	Brushes for sediment cones	213
Adapters for standard grounds	93	Brushes for urinals	284
All-gas Bunsen burners	221	Brushes for Westergren pipettes	19
Allihn condensers	183	Bunsen burners	221 - 222
Analytical funnels	217	Bunsen burners LABOGAZ®	222 - 223
Applicators for cotton	291 - 292	Burette clamps	110
AQUACLEAN	35	Burettes	100 - 106
Aquademat	253	Burette stands	109
Aspirator bottles made of HDPE	163	Burette stopcocks	106 - 107
Assembly set	191	Burette tips	99
Assi-Stepper, manual dispenser	88	bulette tips	99
Assipettor capillary piston pipette fix	85	0	
Assipettor digital	84		
Automatic burettes	138 - 141	Calcium chloride tubes	180
Automatic tilting pipettes	186 - 187	Capillary holder	24
		Capillary tubing	219 - 220
В		Carbon electrodes	215
		Cartridges with butane gas	223
Büchner funnels made of porcelain	240	Casseroles made of porcelain	240
Baby feeding bottles	290 - 291	Cellulose stoppers	178
Bath thermometer	262 - 263	Cementum blocks	293
Bath thermometer for hospital	262	Centrifuge tubes	175 - 179
Beakers	164 - 165	Centrifuge tubes ASTM	180
Beakers made of polypropylene	165	Chemical spoons	195
Bedpans	283	Chemical thermometers	260
Bends	208	Claisen still heads	209
Blood capillaries	22	Clamps	110, 229
Blood counting pad	22	Cleaning agent	255
Blood diluting pipettes	14 - 15	Clinical thermometers	262
Blood lancets	13	Clips for conical ground joints	207
Blood mixing tubes	17	Coil condensers	183 - 184
Blood sedimentation apparatus	17	Combustion boats	241
Blood sedimentation pipettes	18 - 19	Communicating vessels	197 - 198
Blood smear slide	69	Condenser clamps	111
Blotting paper	73	Condenser tube	184
Blue glass plates	201	Cones	207
Boiling stones	193	Cones with standard ground	206
Bosshead, double	109	Cork borer set	198
Bottle brushes	153	Cork rings for flasks	206
Bottles for analysis of drinking water	161		199
Bottles for Canada balsam	77	Cork stoppers	
Bottles for cedar oil	74	Cotton dispenser	301
Bottles made of LDPE	158, 160	Cotton sticks COUNTER	292
Bottles made of polypropylene	160		28
Bottles with conical shoulder	153 - 155	Country, manual	28
Bottles with conical shoulder made of polypropylene	159	Counting chamber according to McMaster	43
Bottles with high shoulder made of LDPE	159	Counting chambers	38 - 43
2011.30 With High offodiate Hidde of LDI L	103	Cover glasses	54

Cover glasses

142

54

Bottles with standard ground



Cover glasses, circular	55	Erlenmeyer flasks, wide neck	167
Cover glasses, selected thickness	55	Evaporating dishes made of glass	144 - 145
Cover glasses for hemocytometers	37	Evaporating dishes made of porcelain	240
Cover glass forceps	75	Extraction apparatus according to Soxhlet	181
Cover made of PTFE, grooved	32	Eye baths	286
Cover made of PVC	133	Eye douches	286
Covers for crucibles	242	Eye drop bottles	286
Covers for medicine cups	280	_	
Covers made of stainless steel	301	F	
Crucibles made of porcelain	241	Face shield	294
Crucible tongs	200	Faecal tubes	239
Crystallising dishes	145	Feeding cup covers	282
Cupping glasses	297 - 298	Feeding cups	281
Cuvettes, semi-micro	31	Fermentation saccharometer	23
		Fermenting tubes	278
D		Filter discs	193
Dannan alagaga	293	Filter funnels	193
Dappen glasses	129	Filter heads	192
Demeter pipettes			
Desiccators	187 - 188	Filtering flasks	191 - 192
Digital burette "Contiburette μ 10"	90	Filtering jars	192
Digital clinical thermometer	262	Filter media	190 - 191
Digital thermometer	267	Flasks, pear shape	204
Dilators made of glass	290	Flasks, pointed shape	204
Dishes made of melamine	237	Flat bottom flasks	204 - 205
Dispenser	80	Flexible brush	206
Dispenser digital	91	Flow monitors	36
Dispenser tips	89	Fluorescence cuvettes	31
Dispenser variable	92	Freezer-fridge thermometers	264
Disposable cuvettes, polystyrene	29	Freezer thermometers	264
Disposable micropipettes with ring mark	25	Funnels	217 - 218
Disposable pipette tips	83	Funnels made of HDPE	219
Disposable volume capillaries	24 - 25	Funnels made of polypropylene	219
Disposal boxes	238		
Dissecting needles	68	G	
Distillation thermometers	261	Gas burners according to Teclu	222
Distilling flasks	209	Gas washing bottles	210
Double rubber bulbs	139	Glass-writing diamond pen	77
Draining boards	238	Glass beads	193
Draining racks	238	Glass covers	61, 300
Drigalski spatulas	76	Glass cylinders	121 - 122
Dropping bottles	157 - 158	Glass jars	300 - 301
Dropping bottles made of LDPE	159	Glass jars for dressing forceps	302
Dropping pipettes	287	Glass jars with cover with knob	61
Dropping screw caps	157	Glass parts	214
Drying rack for microscope slides	73	Glass plates	67 - 69, 74
DURAN® YOUTILITY Laboratory bottles	151 - 152	Glass plates (Cementum plates)	292
Dye-bath set	61	Glass rod for cupping glasses	297
		Glass rods	220, 286 - 287
E		Glass tous	146
_	15	Glass trough	61
Enzyme test pipettes Erlenmeyer flasks	203	Glass trough	220
Erlenmeyer flasks, baffled bottom	168	Glass tubes for coagulation	16
Erlenmeyer flasks, narrow neck	166 - 167	Glass tubing	219 - 220
LIICHITIEYEL HASKS, HALLOW HECK	100-107	Glass-tubility	219-220



Glass vials	174 - 175	M	
Glass wool	194	macro-Pipex	230
Griffin beakers	165	macro Assipettor	84
		macro pipettors	230
H		Magnesia grooves	201
Hematocrit sealing material	27	Magnesia rods	201
Hematocrit tubes	16	Magnetic stirrer	246 - 249
Hemoglobin pipettes	22	Magnetic stirring bars	249 - 251
Hemometer dropping pipettes	21	Manometers	266
Hemometer measuring tubes	21	Marker pens	76
Hemometers	20	Marking rings for YOUTILITY laboratory bottles	152
Hemometer stand	21	Massage balls	295
Hemometer stirring rods	21	Massage cupping glasses	296
Histokitt	75	Maximum-minimum thermometers	265, 268 - 269
Hooks made of nickel-chromium steel wire	11	Maximum thermometers	260 - 261
Hydrometers	272 - 278	Measuring cylinders	118 - 123
Hydrometers for wine and must	276	Measuring cylinders Measuring cylinders, PMP	125
Trydrofficters for wine and mast	210	Measuring cylinders, 1 Mil Measuring cylinders made of polypropylene	124 - 126
I.		Measuring cylinders made or polypropyrene  Measuring jugs	126 - 127
		3, 3	120 - 127
Immunofluorescent printed slides	56 - 57	Measuring jugs made of polypropylene	241
Indicator sticks	190	Measuring jugs made of porcelain	
Infusion cylinders	289	Measuring pipettes	131 - 132
Inoculation loops	12	Measuring pipettes made of polypropylene	130
Instrument trays	298 - 299	Measuring scoops	197
Iron wire gauzes	226	Measuring tube	23, 211
J		Medicine cups	280
The second secon		Medicine dispensers	280
0		Medicine glasses	280
Jars for clinical thermometers	302	Medicine spoons	281
Jar with base and spout	33	Medicine tray	281
		Melting point determination device	200
K		Melting point determination tubes	200
Kapsenberg caps	172	Micro-Pipex	26
Kidney dishes	282	Micro burettes	98 - 99
•	294	Micro cuvettes	32
Kinesiology tape Kjeldahl flasks	163	Micro hematocrit capillaries	27
Njeludili lidsks	103	Micro Life® - Microscope slides	56
ı.		Microscope slide dispenser	74
L		Microscope slide drying bench	74
Labels for YOUTILITY laboratory bottles	153	Microscope slide pipette	68
Laboratory lifter	198	Microscope slides	67, 71 - 73
Laboratory mats	229	Microscope slides made of opal glass	68
Laboratory protective plates made of glass ceramic	225	Microscope slides Polysine®	71
Laboratory timers	256 - 258	Microscope slides Superfrost®	70 - 71
Laboratory tray	237	Mini centrifuge	48
Laboratory tubing	226 - 227	Mini magnetic stirrer	246 - 247, 249
Lactodensimeters	275	Mini stirrer	242
Lead rings	169	Mixing cylinders	123
Lens tissue paper	75	Mortars made of glass	194
Liebig condensers	183	Mortars made of melamine	194
Litmus paper	189	Mortars made of porcelain	241
Loops made of nickel-chromium steel wire	11	Mouthpieces	16
		Multichannel pipette	94



N		Precision capillaries	85 - 86
· ·		Precision cuvettes made of glass	30 - 31
Nameplate holder	285	Precision thermometers	261
Narrow neck bottles	147, 156	Protection containers	239
Nasal aspirators	289	Protection paper	254
Nasal douches	288	Protective coating for labels	153
Needle holders	12	Protective paper for treatment couch	291
Needles made of nickel-chromium steel wire	11 - 12	Pycnometers	128 - 129
Nissl tubes	22	•	
Non-return valves	185 - 186	$\cap$	
Notepad	285	<u>Q</u>	
		Quadrupods for protective plates	225
0		D	
One-way stopcocks	108	R	
Overflow volumetric flasks	117	Rack for microscope slides	73
Oxygen bottles	211	Rack for pipettes	134
		Radiometers	198
P		Rain gauges	270
		Range finders	277
PARAFILM® M	202 - 203	Raschig rings	193
Parts for laboratory tray	237	Reaction tubes	49
Pasteur pipettes	28 - 29	Reagent bottles	149 - 150
Pasteur pipettes made of polyethylene	29	Reamix	245
Pestles made of glass	194	Receiver adapters	209
Pestles made of melamine	195	Reconditioned cartridge	253
Pestles made of porcelain	241	Reduction and expansion adapters	207
Petri dishes	75 - 76	Repair sets	86 - 87
Petri dishes made of polystyrene	76	Retrievers	250
Petri dishes with grid	76	Rings	110
Pharmacist spatulas	196	Rocking shaker	44
Pharmacist spoons	196	Room thermometers	264
Phosphorus spoons	195	Rotary mixer	47
Pinchcocks	229	Rotating mixer	45 - 46
Pipette bottles	65	Round bottom flasks	
Pipette brushes	255		182, 205
Pipette filler	231	Rubber bulbs	139
Pipette holder	133	Rubber caps	18
Pipette kit	157	Rubber olives "Senkograd"	18
Pipette stands	133	Rubber policeman	228
Pipettes with rubber teat	16	Rubber stoppers	178, 228
Pipette trays	133	Rubber teats	65
Pipetting aid	25 - 26		
Pipetting device	23	S	
Pipettors	231	Saccharimeters	277
Plastic base	105	Saccharometers	276
Platinum electrodes	214	Safety gas tubing	222
Plexiglas® stand	237	Safety measuring pipettes	132
Plexiglas® tanks	36	Sampling spoons	195
Pocket pH meter	254	Sand bath	251
Pocket thermometers	261	Sand glasses	285
	69	Sauna hygrometers	265
Porcelain plates for spot tests		Schilling burette	104
Porcelain plates for desiccators	188		149, 151
Pouring rings for VOLITILITY laboratory bettles	151	Screw caps for VOLITILITY laboratory bottles	149, 151
Pouring rings for YOUTILITY laboratory bottles	152	Screw caps with membrane	
Powder funnels	218	Screw caps with membrane	168



Sediment cones	212	Suction glasses
Self-adhesive labels	153	Suction rubber caps
Separatory funnels	215 - 217	'
Shaker	45, 47 - 48	Т
Shaking bottles	212	•
Silicone stoppers	227	Temperature data logger
Single channel pipettes	82	Test tube brushes
Sleeves for ground joints	208	Test tube caps LABOCAP
Slide box	53	Test tube holders
Slide cases	51 - 52	Test tube racks
Slide folders	51	Test tubes
Sockets with standard ground	206	Test tubes, disposable
Spare burettes	105	Test tubes, flat bottom
Spare cartridge	252 - 253	Test tube shakers
Spare discharge tube made of PTFE	91	Thermometer, electronic
		Thermometers based on the principle of Galileo Galil
Spare plunger rade	181 - 182, 230, 254 86 - 87	Thermostatic water bath
Spare plunger rods		Thread adapters
Spare plunger seals for macro Assipettors	86	Thread bottles, amber glass
Spare seals made of PTFE	87	Tips made of polypropylene for macro Assipettors
Spare spray tubes	186	Tongue depressors
Spare stopcock made of polypropylene	163	Tonsil suction set
Spare stopcocks for desiccators	188 - 189	Triangles made of iron wire
Spare suction bellows	26	Tripods
Spare support for Assi-Stepper	88	Tubes for urinalysis
Spare tonsil suction tubes	288	Tubes made of clear glass
Spare wheels	220	Tubing clamps
Special tips	94	
Specimen jars	146 - 147	Tubing connectors
Specula	289	Tubing connectors made of glass
Sperm cylinders	124	Two-way stopcocks
Spirit lamps	223 - 224	1.1
Spoon spatulas	196	U
Spray bottles made of polyethylene	161	Ungraduated pipettes
Sputum cups	282	Universal bosshead, double
Square bottles made of HDPE	160	Universal indicator paper
Staining bridge	58 - 59	Urinals
Staining dishes	63	Urinal supports made of wire
Staining jars	62, 64	Urine collecting bottles made of HDPE
Staining prisms	62	Urine collecting containers
Staining rack	59 - 60	Urine specimen cups
Staining stands	57 - 58	Urine specimen cups, disposable
Staining stands with pipette bottles	66	Urine specimen jars
Staining trays	59, 61, 64 - 65	Urinometer
Staining troughs	61, 64	
Stainless steel covers	298, 302	Urinometers
Stainless steel jars	303	N /
Still heads	208	V
Stirrer	243	Vaccine dishes
		Vinometers
Stirring coatule	221, 244	Voltameters
Stirring spatula	32	Volumetric flasks
Stopcock grease	109	Volumetric flasks, trapezoidal
Stopper holders	211	
Stoppers	199	Volumetric flasks for sugar analyses
Storage stand	83, 85	Volumetric pipettes
		Volumetric pipettes, PP

295 - 296



## W

Washing bottle heads	210
Washing bottles	186
Washing bottles made of LDPE	159
Water-jet pumps	213 - 214
Water bath racks	36 - 37
Water deioniser	252
Water determination device	211
Water distilling apparatus	252
Weather station	269
Weighing boats	197
Weighing bottles	145 - 146
Weighing scoops	197
Wicks	224
Wide neck bottles	148, 156
Window thermometers, Vienna type	265
Wire baskets	291
Wire handles	65
Wire rack	237
Wooden racks	213



40010	144	40190	93	40444	40	40734	32
40011	144	40193	93	40445	40	40765	290
40012	145	40194	93	40446	41	40766	290
40033	11	40199	94	40447	41	40780	99
40034	11	40210	90 - 91	40449	41 - 42	40791	100
40035	11	40212	90	40450	42	40792	101
40036	11	40225	252	40452	42	40793	101 - 102
40037	11	40240	32	40453	43	40795	102 - 103
40038	12	40241	33	40454	43	40796	105
40039	12	40242	33	40455	20	40797	105
40040	12	40245	33	40456	20	40798	106
40041	12	40247	33	40457	21	40799	106
40070	146	40248	34	40458	21	40811	103
40075	252	40302	286	40459	21	40812	104
40076	252	40303	286	40460	22	40820	104
40080	253	40306	286	40467	22	40821	105
40087	253	40320	286	40470	21	40823	105
40088	253	40321	287	40471	21	40850	139
40101	82	40326	287	40514	16	40860	109
40102	82	40328	287	40521	98	40861	109
40104	83	40334	287	40523	99	40862	109
40110	83	40335	287	40535	16	40863	109
40111	83	40344	28	40545	15	40865	110
40112	83	40345	28	40551	24	40866	110
40120	94	40347	45	40553	24	40868	110
40122	88	40348	44 - 46	40554	25	40869	110
40123	89	40349	46	40555	25	40870	110
40124	89	40350	47	40557	25 - 26	40871	110
40125	90	40351	47	40558	26	40875	111
40126	90	40352	48	40559	23	40895	180
40131	84	40353	48	40560	22	40896	180
40132	84	40355	14	40563	27	40920	74
40134	85	40356	15	40564	27	40930	180
40135 40137	85 85	40357	14 14	40565	27 27	40931	180 175
		40358		40566		40937	
40138 40140	86 85	40359 40360	15 16	40567 40568	28 29	40938	175 176
40144	86	40361	16	40569	29	40939	176
40146	86	40365	13	40619	69	40940	176
40147	86	40366	13	40623	69	40942	176
40154	86	40367	17	40624	69	40943	177
40155	87	40307	17 - 18	40625	69	40946	177
40156	87	40377	17 - 18	40705	29	40947	177
40157	87	40379	18	40705	29	40948	177
40163	80	40380	18	40700	30	40949	177
40164	81 81	40385 40388	19 19	40712	30	40950 40951	178 178
40165				40713			
40173	91 92	40389	19 38	40715	31	40955	178
40175		40440		40717		40956	178
40183 40187	92 92	40441 40442	39 39	40720 40722	31	40958	179
						40959	179
40188	93	40443	39 - 40	40729	32	40970	179



40976	179	41186	59	41321	155	41591	228
40990	54	41187	59	41322	147	41593	198
41000	54	41190	59	41323	147	41594	199
41001	55	41191	59	41324	148	41596	228
41014	55	41192	59	41325	148	41598	229
41015	55	41198	60	41326	149	41600	289
41019	75	41200	60	41330	149	41710	77
41020	75	41201	60	41331	150	41720	77
41024	290	41202	60	41333	150	41865	290
41025	75	41203	61	41334	150	41866	291
41026	208	41205	61	41335	151	41870	163
41029	208	41210	61	41336	151	41875	186
41033	209	41218	57	41340	151	41877	187
41036	209	41220	57	41341	152	41910	201
41037	209	41221	57	41342	152	41911	205
41041	293	41223	57	41343	152	41912	206
41042	75	41224	58	41344	152	41913	182, 205
41043	76	41225	58	41345	153	41914	206
41044	76	41226	58	41350	278	41915	203
41045	76	41227	58	41370	23	41916	142
41049	76	41230	62	41375	24	41917	142
41050	302	41231	62	41384	222	41918	203
41065	225	41232	62	41385	221	41920	204
41066	225	41234	62	41390	221	41921	204
41067	225	41238	73	41391	222	41924	204
41071	226	41240	73	41393	222	41925	205
41075	291	41250	190	41395	222 - 223	41929	164
41090	224	41255	190	41396	223	41930	164 - 165
41091	225	41260	191	41400	193	41934	165
41101	280	41265	191	41401	193	41935	165
41102	280	41266	191	41402	193	41936	166
41103	280	41270	192	41406	255	41940	166
41104	281	41271	192	41408	194	41941	167
41105	281	41272	192	41469	210	41943	167
41111	281	41273	192 - 193	41470	210	41945	168
41112	281	41278	153	41480	109	41946	168
41120	282	41279	153	41503	108	41947	168
41130	282	41280	153	41504	108	41954	197
41145	22	41281	154	41510	108	41955	198
41150	181	41282	154	41511	108	41956	74
41151	181	41283	154	41522	108	41965	302
41153	181	41284	154	41523	108	41969	145
41154	182	41285	155	41550	106	41974	256
41155	182	41286	155	41551	106	41975	257
41160	187	41287	155	41552	107	41977	256 - 257
41161	187	41301	156	41553	107	41978	258
41162	188	41303	156	41554	107	41979	258
41163	188	41311	156	41555	107	41980	258
41175	188	41313	156	41580	226	41981	183
41177	188	41314	157	41581	226	41982	183
41178	189	41315	157	41582	227	41987	183
41181	76	41316	157	41583	227	41990	183 - 184
41182	77	41318	157	41586	229	41996	184
	58		158		228		184
41185	28	41319	108	41590	228	41998	184



42000	237	42284	127	42540	131	42775	172
42002	237	42325	285	42541	132	42776	172
42005	189	42330	288	42548	132	42777	172
42006	189	42331	288	42550	135	42779	173
42007	189	42382	206	42556	136	42780	173
42008	189	42383	206	42557	137	42782	173
42009	190	42384	207	42560	136	42783	174
42011	198	42386	207	42569	132	42784	175
42020	77	42387	207	42570	128	42785	175
42021	78	42388	208	42571	128	42787	173
42065	201	42395	74	42572	129	42788	174
42066	201	42400	71 - 72	42574	129	42789	245
42067	244	42401	72	42575	230	42793	174
42068	242 - 243	42404	72	42576	230	42794	232
42069	246	42406	72 - 73	42577	230	42795	232
42070	246 - 247	42407	73	42578	231	42796	232
42071	247 - 248	42408	70	42580	231	42797	233
42072	248 - 249	42409	70 - 71	42581	231	42798	233
42073	249	42410	67	42583	133	42800	233
42075	249	42411	67	42585	133	42801	234
42076	250	42412	67	42586	133	42802	234
42077	250	42415	67	42588	255	42803	234
42078	250	42417	67	42589	255	42807	235
42078	251	42417	67	42590	133	42808	235
42079	251	42419	68		134	42809	235
				42593			
42085	266	42420	56	42600	65	42810	175
42089	112	42421	56	42601	65	42811	175
42094	113	42422	56	42608	66	42813	235
42096	114	42423	56	42609	66	42814	236
42097	115	42424	57	42610	66	42815	236
42102	115	42426	56	42611	66	42818	236
42109	116	42427	68	42620	65	42822	236
42110	116	42430	68	42660	146	42830	219
42111	169	42432	68	42661	147	42833	219
42115	117	42440	74	42698	51	42835	220
42170	118	42450	63	42700	51	42840	220
42172	119	42460	63	42701	51 - 52	42843	220
42180	119	42461	63	42702	52	42845	220
42182	120	42470	64	42703	52	42847	220
42190	120	42480	64	42704	52	42850	221
42194	124	42481	64 - 65	42705	53	42856	185
42195	125	42482	65	42712	68	42860	186
42196	125	42510	202	42750	229	42871	285
42200	121	42511	202	42755	229	42872	285
42205	122	42512	203	42757	198	42880	288
42206	123	42515	195	42760	174	42881	288
42208	126	42516	195	42763	169	42882	295
42210	123	42517	195	42765	169	42883	295
42211	123	42518	196	42766	170	42884	294
42220	124	42519	196	42767	170	42885	295
42255	127	42520	196	42768	170	42886	296
42260	127	42521	196	42769	170	42887	296
42281	126	42525	130	42770	171	42888	296
42283	126	42539	131	42771	171	42889	296
	120	.2003	101		171	.2003	230



42690         297         49510         263         44268         211         45210         2275           476992         297         43595         264         44272         212         46211         275           476992         297         43596         264         44276         212         46272         272           42694         297         43500         264         44276         212         46227         272           42890         289         48505         265         44276         212         46227         272           42900         288         48523         265         44278         270         48280         277           42900         288         48547         265         44278         270         48280         277           42905         298         48547         265         44278         273         46250         276           42910         299         45053         208         44283         213         46250         276           42911         299         43055         208         44288         214         46260         272           42915         299         48565         289								
A2892	42890	297	43510	263	44268	211	46210	275
## Page   ## P								
142994   297   43800   264   44276   212   45277   278   428900   298   43623   265   442778   270   45230   277   42905   298   43643   265   44278   213   40236   276   42906   299   43663   268   44283   213   40252   276   42910   299   43665   269   44286   214   40262   276   42911   299   43665   269   44286   214   40262   276   42915   299   43665   269   44286   214   40265   277   42915   215   43690   268   44288   214   40265   277   42951   215   43690   268   44288   214   40265   277   42951   215   43690   262   44287   214   47000   240   42966   216   43888   262   44287   214   47000   240   42970   216   43710   263   44286   214   47000   240   42977   216   43710   263   44286   214   47000   240   42977   216   43711   263   44296   301   47015   240   42985   216   43720   263   44380   291   47020   241   42990   199   43991   217   44301   299   47028   194   42990   199   43991   217   44301   299   47028   194   42990   199   43991   217   44301   299   47028   194   43006   200   44010   218   44365   293   47035   241   43006   200   44010   281   44362   293   47033   195   43006   200   44010   281   44362   293   47033   195   43006   200   44010   281   44362   293   47033   195   43006   200   44011   282   44365   293   47035   241   43017   289   44000   284   44365   293   47035   241   43017   289   44000   284   44365   293   47035   241   43017   289   44000   284   44365   293   47035   241   43017   289   44000   284   44365   293   47035   241   43017   286   44085   291   44406   300   48416   301   48462   314   43010   328   43015   300   48410   338   43033   224   44086   291   44406   300   48410   338   43033   224   44086   291   44406   300   48410   338   43033   224   44086   291   44406   300   48410   338   43033   224   44086   291   44406   300   48410   338   43033   224   44086   291   44406   300   48410   338   43033   224   44086   291   44406   300   48410   338   43036   293   40075   294   43036   293   43006   293   43006   293   43006   293	42892				44274			276
##   ##   ##   ##   ##   ##   ##   #								
APQ-00   298			43600	264	44276	212	46227	278
A2905   298								
A2906   298	42900	298	43623	265	44278	270	46230	277
A2910   299	42905		43646		44279	213	46236	
## Page	42906		43647			213	46250	276
42915         299         43656         269         44285         214         46269         276           42950         215         43667         269         44286         214         46269         276           42956         215         43698         262         44288         214         47000         240           42970         216         43700         262         44289         215         47005         240           42971         216         43711         263         44295         301         47015         240           42985         216         43720         263         44291         291         47020         241           42986         217         43990         217         44301         292         47028         194           42990         199         43991         217         44301         292         47030         221           43004         200         44001         218         44355         292         47031         241           43005         200         44002         218         44362         293         47033         195           43010         201         44011         282 <td>42910</td> <td>299</td> <td>43653</td> <td>268</td> <td>44283</td> <td>213</td> <td>46252</td> <td>276</td>	42910	299	43653	268	44283	213	46252	276
42950   215	42911	299	43655	269	44284	214	46265	277
42951         215         43690         262         44288         214         47000         240           42970         216         43700         262         44289         215         47005         240           42971         216         43710         262         44289         301         47015         240           42985         216         43720         263         44300         291         47020         241           42986         217         43990         217         44301         292         47028         194           42990         199         43991         217         44302         292         47029         194           42990         199         43000         218         44303         292         47030         241           43004         200         44001         218         44355         292         47031         241           43005         200         44010         281         44362         293         47032         194           43006         200         44010         281         44362         293         47033         195           43017         289         44020         282 <td>42915</td> <td>299</td> <td>43656</td> <td>269</td> <td>44285</td> <td>214</td> <td>46266</td> <td>277</td>	42915	299	43656	269	44285	214	46266	277
42956         215         42568         262         44289         215         47005         240           42970         216         43701         263         44295         215         47005         240           42971         216         43711         263         44295         301         47015         240           42986         217         43990         221         44301         292         47028         194           42990         199         43991         217         44301         292         47029         194           42990         199         43991         217         44302         292         47030         241           42990         199         43991         218         44303         292         47030         241           43005         200         44001         218         44355         292         47032         241           43005         200         44001         281         44356         293         47032         194           43010         200         44011         282         44405         293         47032         293           43017         289         44020         282 <td>42950</td> <td>215</td> <td>43657</td> <td>269</td> <td>44286</td> <td>214</td> <td>46269</td> <td>276</td>	42950	215	43657	269	44286	214	46269	276
42970         216         43700         262         44289         215         47005         240           42971         216         43711         263         44295         301         47015         240           42985         216         43720         263         44300         291         47020         241           42986         217         43990         217         44301         292         47029         194           42992         199         44000         218         44303         292         47030         241           43004         200         44001         218         44355         292         47031         241           43005         200         44002         218         44356         293         47032         194           43006         200         44010         281         44365         293         47035         241           43017         289         44020         282         44400         121         47040         241           43030         223         44075         254         44401         122         47041         242           43031         224         44080         283 <td>42951</td> <td>215</td> <td>43690</td> <td>262</td> <td>44287</td> <td>214</td> <td>47000</td> <td>240</td>	42951	215	43690	262	44287	214	47000	240
42971         216         43711         263         442905         301         47015         240           42986         217         43990         217         44301         292         47028         194           42990         199         43991         217         44302         292         47029         194           42992         199         44000         218         44303         292         47030         241           43004         200         44001         218         44355         292         47031         241           43005         200         44001         218         44356         293         47032         194           43006         200         44010         281         44356         293         47032         194           43010         20         44011         282         44365         293         47032         291           43017         289         44020         282         44400         121         47040         241           43031         224         44080         254         44405         300         48410         132           43031         224         44080         254 <td>42956</td> <td>215</td> <td>43698</td> <td>262</td> <td>44288</td> <td>214</td> <td>47002</td> <td>240</td>	42956	215	43698	262	44288	214	47002	240
42985         216         43720         263         44300         291         47020         241           42986         217         43990         217         44301         292         47028         194           42990         199         43991         217         44302         292         47030         241           43004         200         44001         218         44385         292         47031         241           43006         200         44010         281         44356         293         47032         194           43006         200         44010         281         44356         293         47033         195           43010         200         44011         282         44365         293         47035         241           43017         289         44020         282         44400         121         47040         241           43031         224         44080         254         44401         122         47041         242           43031         224         44085         291         44405         300         48400         138           43031         224         44085         291 <td>42970</td> <td>216</td> <td>43700</td> <td>262</td> <td>44289</td> <td>215</td> <td>47005</td> <td>240</td>	42970	216	43700	262	44289	215	47005	240
42985         216         43720         263         44300         291         47020         241           42986         217         43990         217         44301         292         47028         194           42990         199         43991         217         44302         292         47030         241           43004         200         44001         218         44355         292         47031         241           43006         200         44010         281         44355         292         47033         195           43010         200         44010         281         44352         293         47035         211           43010         200         44010         281         44362         293         47035         241           43010         200         44011         282         44365         293         47035         241           43017         289         44020         282         44400         121         47041         242           43031         224         44085         291         44405         300         48400         138           43031         224         44085         291 <td>42971</td> <td>216</td> <td>43711</td> <td>263</td> <td>44295</td> <td>301</td> <td>47015</td> <td>240</td>	42971	216	43711	263	44295	301	47015	240
42986   217   43990   217   44301   292   47028   194     42990   199   43991   217   44302   292   47029   194     42992   199   44000   218   44303   292   47030   241     43004   200   44001   218   44355   292   47031   241     43005   200   44001   218   44356   293   47032   194     43006   200   44010   281   44356   293   47032   194     43006   200   44011   282   44365   293   47035   241     43010   200   44011   282   44365   293   47035   241     43017   289   44020   282   44400   121   47040   241     43030   223   44075   254   44401   122   47041   242     43031   224   44080   254   44405   300   48400   138     43033   224   44085   291   44409   300   48410   139     43091   186   44090   283   44410   300   48416   140     43092   186   44092   283   44411   301   48462   141     43150   283   44104   284   44416   301   48462   141     43150   283   44104   284   44416   301   48462   141     43150   283   44104   284   44416   301   48462   141     43151   282   44038   284   44440   302   49027   238     43178   36   44115   239   44508   239   49028   238     43188   36   44125   34   46040   273   49050   219     43188   36   44125   34   46041   273   49050   219     43188   36   44125   34   46041   273   49050   219     43188   36   44125   34   46041   273   49050   219     43188   36   44125   34   46041   273   49050   219     43189   36   44116   185   46105   273   49004   237     43200   260   44161   185   46120   277   49075   294     43205   260   44171   185   46123   277   49100   158     43206   261   44173   185   46165   275   49102   159     43238   267   44248   197   46186   278   49110   158     43238   267   44246   197   46186   278   49115   160     43238   267   44265   197   46186   278   49115   160     43240   268   44265   211   46205   275   49116   160     432310   262   44265   211   46205   275   49116   160     43310   262   44265   211   46205   275   49117   162     43310   262   44265   211   46205   275   49117   162     43310   262   44265   211	42985							
42990         199         43991         217         44302         292         47029         194           42992         199         44000         218         44303         292         47031         241           43006         200         44002         218         44356         293         47032         194           43006         200         44011         281         44362         293         47035         241           43017         289         44020         282         44400         121         47040         241           43017         289         44020         282         44400         121         47040         241           43031         224         44080         254         44401         122         47040         241           43033         224         44080         254         44401         122         47040         231           43033         224         44080         254         44401         122         47041         242           43033         224         44085         291         44409         300         48410         139           43032         186         44092         283 <td>42986</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>47028</td> <td></td>	42986						47028	
42992   199								
43004         200         44001         218         44355         292         47031         241           43005         200         44010         281         44386         293         47033         194           43010         200         44011         282         44365         293         47035         241           43017         299         44020         282         44400         121         47040         241           43031         224         44080         254         44401         122         47041         242           43031         224         44080         254         44409         300         48410         138           43033         224         44085         291         44409         300         48410         139           43091         186         44090         283         44411         301         48415         140           43112         282         44093         284         44411         301         48452         141           43150         283         44104         284         44415         301         48462         141           43150         283         44106         284 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
43005   200								
43006         200         44010         281         44362         293         47033         195           43010         200         44011         282         244365         293         47035         241           43017         289         44020         282         44400         121         47040         241           43030         223         44075         254         44401         122         47041         242           43031         224         44080         254         44405         300         48400         138           43033         224         44085         291         44409         300         48410         139           43091         186         44090         283         44411         301         48416         140           43092         186         44092         283         44411         301         48452         141           43112         282         44093         284         44415         301         48452         141           43150         283         44104         284         44416         301         48462         141           43160         284         44420         303 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
43010         200         44011         282         44365         293         47035         241           43017         289         44020         282         44400         121         47040         241           43031         224         44080         254         44401         122         47041         242           43031         224         44080         254         44405         300         48400         133           43033         224         44085         291         44409         300         48410         139           43091         186         44090         283         44411         301         48415         140           43122         282         44093         284         44415         301         48415         140           43150         283         44104         284         44416         301         48462         141           43155         283         44106         284         44420         303         49025         238           43170         35         44108         284         44440         302         49077         238           43178         36         44115         239								
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43091         186         44090         283         44410         300         48415         140           43092         186         44092         283         44411         301         48416         140           43112         282         44093         284         44415         301         48452         141           43150         283         44104         284         44416         301         48462         141           43155         283         44106         284         44420         303         49025         238           43170         35         44108         284         44440         302         49027         238           43178         36         44115         239         44508         239         49028         238           43180         35         44116         162         46022         273         49040         49           43187         36         44122         34         46040         273         49050         219           43188         36         44125         34         46041         273         49051         219           43188         36         44125         34								
43092         186         44092         283         44411         301         48416         140           43112         282         44093         284         44415         301         48452         141           43150         283         44104         284         44416         301         48462         141           43155         283         44106         284         44420         303         49025         238           43170         35         44108         284         44440         302         49027         238           43178         36         44115         239         44508         239         49028         238           43180         35         44116         162         46022         273         49040         49           43187         36         44122         34         46040         273         49050         219           43188         36         44125         34         46041         273         49061         219           43189         36         44125         34         46041         273         49061         219           43189         36         44125         34         <								
43112         282         44093         284         44415         301         48452         141           43150         283         44104         284         44416         301         48462         141           43155         283         44106         284         44420         303         49025         238           43170         35         44108         284         44440         302         49027         238           43178         36         44115         239         44508         239         49028         238           43180         35         44116         162         46022         273         49050         29           43187         36         44122         34         46040         273         49050         219           43188         36         44125         34         46041         273         49050         219           43188         36         44125         34         46041         273         49051         219           43188         36         44125         34         46041         273         49051         219           43189         36         44131         237 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>								
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43155         283         44106         284         44420         303         49025         238           43170         35         44108         284         44440         302         49027         238           43178         36         44115         239         44508         239         49028         238           43180         35         44116         162         46022         273         49040         49           43187         36         44122         34         46040         273         49050         219           43188         36         44125         34         46041         273         49051         219           43194         36         44131         237         46105         273         49064         237           43200         260         44160         184         46106         273         49070         238           43201         260         44161         185         46120         277         49075         294           43205         260         44171         185         46123         277         49100         158           43208         261         44173         185								
43170         35         44108         284         44440         302         49027         238           43178         36         44115         239         44508         239         49028         238           43180         35         44116         162         46022         273         49040         49           43187         36         44122         34         46040         273         49050         219           43188         36         44125         34         46040         273         49051         219           43194         36         44131         237         46105         273         49064         237           43200         260         44160         184         46106         273         49070         238           43201         260         44161         185         46120         277         49075         294           43205         260         44171         185         46123         277         49100         158           43206         261         44173         185         46165         274         49101         158           43208         261         44174         185								
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43180       35       44116       162       46022       273       49040       49         43187       36       44122       34       46040       273       49050       219         43188       36       44125       34       46041       273       49051       219         43194       36       44131       237       46105       273       49064       237         43200       260       44160       184       46106       273       49070       238         43201       260       44161       185       46120       277       49075       294         43205       260       44171       185       46123       277       49100       158         43206       261       44173       185       46165       274       49101       158         43208       261       44174       185       46175       275       49102       159         43210       261       44200       278       46176       275       49103       159         43232       266       44245       197       46181       276       49108       159         43235       267       44248								
43187       36       44122       34       46040       273       49050       219         43188       36       44125       34       46041       273       49051       219         43194       36       44131       237       46105       273       49064       237         43200       260       44160       184       46106       273       49070       238         43201       260       44161       185       46120       277       49075       294         43205       260       44171       185       46123       277       49100       158         43206       261       44173       185       46165       274       49101       158         43208       261       44174       185       46175       275       49102       159         43210       261       44200       278       46176       275       49103       159         43225       261       44240       197       46181       276       49105       159         43232       266       44245       197       46181       276       49108       159         43235       267       44248								
43188       36       44125       34       46041       273       49051       219         43194       36       44131       237       46105       273       49064       237         43200       260       44160       184       46106       273       49070       238         43201       260       44161       185       46120       277       49075       294         43205       260       44171       185       46123       277       49100       158         43206       261       44173       185       46165       274       49101       158         43208       261       44174       185       46175       275       49102       159         43210       261       44200       278       46176       275       49103       159         43225       261       44240       197       46181       276       49108       159         43232       266       44245       197       46181       276       49108       159         43235       267       44248       197       46186       278       49112       160         43240       268       44250 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
43194       36       44131       237       46105       273       49064       237         43200       260       44160       184       46106       273       49070       238         43201       260       44161       185       46120       277       49075       294         43205       260       44171       185       46123       277       49100       158         43206       261       44173       185       46165       274       49101       158         43208       261       44174       185       46175       275       49102       159         43210       261       44200       278       46176       275       49103       159         43225       261       44240       197       46178       275       49105       159         43232       266       44245       197       46181       276       49108       159         43235       267       44248       197       46186       278       49112       160         43238       267       44250       145       46187       278       49115       160         43240       268       44251 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
43200       260       44160       184       46106       273       49070       238         43201       260       44161       185       46120       277       49075       294         43205       260       44171       185       46123       277       49100       158         43206       261       44173       185       46165       274       49101       158         43208       261       44174       185       46175       275       49102       159         43210       261       44200       278       46176       275       49103       159         43225       261       44240       197       46188       275       49105       159         43232       266       44245       197       46181       276       49108       159         43235       267       44248       197       46186       278       49112       160         43238       267       44250       145       46187       278       49115       160         43240       268       44251       146       46197       275       49116       160         43252       254       44263<								
43201       260       44161       185       46120       277       49075       294         43205       260       44171       185       46123       277       49100       158         43206       261       44173       185       46165       274       49101       158         43208       261       44174       185       46175       275       49102       159         43210       261       44200       278       46176       275       49103       159         43225       261       44240       197       46178       275       49105       159         43232       266       44245       197       46181       276       49108       159         43235       267       44248       197       46186       278       49112       160         43238       267       44250       145       46187       278       49115       160         43240       268       44251       146       46197       275       49116       160         43252       254       44263       37       46199       276       49117       162         43310       262       44265 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
43205       260       44171       185       46123       277       49100       158         43206       261       44173       185       46165       274       49101       158         43208       261       44174       185       46175       275       49102       159         43210       261       44200       278       46176       275       49103       159         43225       261       44240       197       46188       275       49105       159         43232       266       44245       197       46181       276       49108       159         43235       267       44248       197       46186       278       49112       160         43238       267       44250       145       46187       278       49115       160         43240       268       44251       146       46197       275       49116       160         43252       254       44263       37       46199       276       49117       162         43310       262       44265       211       46205       275       49118       162								
43206       261       44173       185       46165       274       49101       158         43208       261       44174       185       46175       275       49102       159         43210       261       44200       278       46176       275       49103       159         43225       261       44240       197       46178       275       49105       159         43232       266       44245       197       46181       276       49108       159         43235       267       44248       197       46186       278       49112       160         43238       267       44250       145       46187       278       49115       160         43240       268       44251       146       46197       275       49116       160         43252       254       44263       37       46199       276       49117       162         43310       262       44265       211       46205       275       49118       162								
43208       261       44174       185       46175       275       49102       159         43210       261       44200       278       46176       275       49103       159         43225       261       44240       197       46178       275       49105       159         43232       266       44245       197       46181       276       49108       159         43235       267       44248       197       46186       278       49112       160         43238       267       44250       145       46187       278       49115       160         43240       268       44251       146       46197       275       49116       160         43252       254       44263       37       46199       276       49117       162         43310       262       44265       211       46205       275       49118       162								
43210       261       44200       278       46176       275       49103       159         43225       261       44240       197       46178       275       49105       159         43232       266       44245       197       46181       276       49108       159         43235       267       44248       197       46186       278       49112       160         43238       267       44250       145       46187       278       49115       160         43240       268       44251       146       46197       275       49116       160         43252       254       44263       37       46199       276       49117       162         43310       262       44265       211       46205       275       49118       162								
43225       261       44240       197       46178       275       49105       159         43232       266       44245       197       46181       276       49108       159         43235       267       44248       197       46186       278       49112       160         43238       267       44250       145       46187       278       49115       160         43240       268       44251       146       46197       275       49116       160         43252       254       44263       37       46199       276       49117       162         43310       262       44265       211       46205       275       49118       162							49102	
43232       266       44245       197       46181       276       49108       159         43235       267       44248       197       46186       278       49112       160         43238       267       44250       145       46187       278       49115       160         43240       268       44251       146       46197       275       49116       160         43252       254       44263       37       46199       276       49117       162         43310       262       44265       211       46205       275       49118       162								
43235       267       44248       197       46186       278       49112       160         43238       267       44250       145       46187       278       49115       160         43240       268       44251       146       46197       275       49116       160         43252       254       44263       37       46199       276       49117       162         43310       262       44265       211       46205       275       49118       162	43225	261	44240	197	46178	275	49105	159
43238     267     44250     145     46187     278     49115     160       43240     268     44251     146     46197     275     49116     160       43252     254     44263     37     46199     276     49117     162       43310     262     44265     211     46205     275     49118     162								
43240     268     44251     146     46197     275     49116     160       43252     254     44263     37     46199     276     49117     162       43310     262     44265     211     46205     275     49118     162			44248	197	46186	278	49112	160
43252     254     44263     37     46199     276     49117     162       43310     262     44265     211     46205     275     49118     162	43238	267	44250	145	46187	278	49115	160
43310 262 44265 211 46205 275 49118 162	43240	268	44251	146	46197	275	49116	160
	43252	254	44263	37	46199	276	49117	162
	43310	262	44265	211	46205	275	49118	162
	43315	262	44267	211	46206	275	49119	161



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