CHROMA GLOBE

Your specialist for chromatography and pharmaceutical packaging

Quality

Service

Logistic

TÜVRheinland®
Precisely Right.
Standard **ISO 9001:2015**
Certificate Registr. No. 01 100 2200390

Content

CHROMA GLOBE

Your specialist for chromatography and pharmaceutical packaging

Company Profile

CHROMA GLOBE GbR was founded on November 15th, 2007.

The company's headquarters have been in Kreuzau since 2011, approx. 55 km west of Cologne.

The objective of the company is the production and distribution of high-quality laboratory and pharmaceutical packaging materials.

We aim to manufacture, sell high-quality laboratory and pharmaceutical products. As an independent, flexible, privately owned company managed by the owners, the company's goal is to quickly and reliably supply a worldwide customer base with innovative and high quality products at competitive prices.

We are pleased to announce that we are officially ISO 9001:2015 certified as of July 2024. This certification emphasises our ongoing commitment to the highest quality standards and our commitment to always provide you with first-class products and services.

Our customers are laboratory wholesalers, specialist dealers, manufacturers of analysis equipment, customers in the pharmaceutical industry, as well as laboratories and institutes.

Our range of products includes …

❖ *a wide scope of laboratory glass for laboratories in the chromatography and analysis technology:*

- crimp and screw vials, micro inserts
- septa of different materials, Silicone / PTFE, butyl / PTFE, Viton, PTFE, silicone / aluminum
  crimp closures
  plastic closure
- flaring tools (manual, pneumatic and electric)
  plastic bottles
  syringe filters for HPLC

❖ *for use mainly by pharmaceutical users:*
- Injection vials and infusion bottles
- Injection stoppers, infusion stoppers and septa
- crimp closures, plastic closures
- flaring tools (manual, pneumatic and electric)
  Syringe filters
- Septa for laboratory closures (Schott screw caps GL16 – GL45)

In order to optimize customer service and to increase the flexibility required by the market, the key products – sealing washers (septa), closures and flanging tools – are produced exclusively in-house.

General organisational matters

All standard items are stock items that usually can be despatched within 24 hours after receipt of order. All products are kept absolutely neutral, i.e. no Chroma Globe article numbers are printed or labelled on the packaging of the products.

As we only supply wholesalers or distributors who promote our products as their own brands, we strictly keep up a policy of neutral packaging. Only batch numbers for reasons of traceability in cases of complaint are attached to the product. For the vials additionally a small schematic drawing of the product is labelled on the front side of the PP-Box to enable identification of the content. Customer specific labelling can be carried out against a small surcharge.

We would like to satisfy the consumers with our products. Therefore everybody is welcome to ask for cost-free samples for testing purposes to evaluate the most appropriate product for his instrument/application with regard to technical suitability, convenience in handling and price-performance ratio. This way you have the opportunity to see and decide before placing an order which product suits best your individual needs.

Company Profile

Others

There are no prices included in our catalogue nor separate price lists available. Prices are calculated individually, depending on order quantities. We are prepared to submit special offers for annual call-off orders, as we can take the total delivery quantity and number of call-off deliveries into consideration. In case of orders for special products that are not included in our standard delivery programme, we kindly ask you to consider that these orders can only be carried out after release of samples, drawings or specifications. Furthermore we would like to point out that ordered quantities for special articles on customers' request will be adhered to in principle, however, deliveries can either be up to 10% higher or lower than the original quantity.

Services

- **Technical Support**
    - Autosampler Compatibility
    - Cross-References
    - Application-Specific Questions

- **Sample Service**
    - Cost-free
    - Upon request dispatch directly to the end user

- **Distribution Service**
    - Shipping of standard items within 24 hours
    - Upon request dispatch directly to the end user (neutral delivery)
    - Customer-Specific Labelling
    - Stocking of annual call-off contracts

- **Product Trainings**
    - Product training either at the customer's site or in our company
    - Introduction to the production processes of vials and seals

- **Product Catalogue Support**
    - Texts, tables, drawings and photos as electronic data files

Explanations

- **Cleanroom packed products**
  There are different standards of cleanroom classes globally established. When stated, our products are packed in clean rooms of the class ISO 7 or ISO 8 (acc. to ISO 14644-1) which is identical to the class 10.000 or 100K (acc. to US FED STD 209E) for particles ≥ 0.5 µm. Cleanroom classes represent a hygienic standard often found in the pharmaceutical industry. These special rooms have certified conditions for maximum particles per ft3 or m3 air. To have a comparison: The environment in a normal room contains billions of particles. The Cleanrooms are regularly measured by external authorities to guarantee the specifications. Such rooms have no windows (air-conditioned) and only material with low particle abrasion is allowed there (Plastic instead of wood or cardboard, etc.). The people have to wear special clothing.

- **Durometer**
  Durometer is the hardness of a liner and is expressed in ° shore. The higher the grade the harder the liner; the lower the grade, the softer the liner. The softest liner is 35° shore A and the hardest 70° shore A. Besides the thickness of a liner the hardness is an essential indication when deciding which liner is suitable for the penetration of a certain type of needle (fragile needles, thin or thick needles, sharp or dull needles, etc.)

- **Headspace Neck (bevelled top)**
  A Headspace Neck or Headspace Vial with bevelled top has a crimp neck whose outer edges are bevelled. In contrast to a flat DIN crimp neck the liner only has a very small surface to sit on which is a disadvantage regarding tightness (except for Pharma-Fix septa). Headspace Necks or bevelled crimp necks are only necessary when using the patented PerkinElmer Pressure Release Seal consisting of an Aluminum Cap with a slit, a metal star washer plate and a star-shaped liner. This system only releases excess pressure reliably when using a vial with such a top.

Explanations (Cont.)

- **Micro-Insert**
A Micro-Insert in contrast to a Micro-Vial cannot be sealed on its own. It is neckless and always has to be used within a vial. The diameter of the Micro-Insert is depending on the size of the vial opening. A Micro-Insert reduces the volume, so that a needle is capable of picking up even smallest sample quantities. The longer the top of an Insert the more the volume can be reduced.

- **Micro-Vial**
Micro-Vials can be sealed, but often need an adapter to run in the autosampler. In case they have a conical bottom, they cannot stand by themselves.

- **Microliter Vial (optimised residual emptying)**
Microliter-Vials can be closed independently and do not require an adapter for a safe stand due to their solid flat bottom with inner cone. The inner cone reduces the sample volume in such a way that a needle is still able to hold even small sample quantities. Functionally comparable to a sample vials with integrated or inserted micro insert, but the Micro-Liter vials holds about 5 times the sample volume of a micro insert.

- **Seal**
A Seal is an already assembled closure consisting of a cap and a liner.

- **Silanized**
Silanized vials are used to reduce the adsorption of polar compounds onto the normally polar surface of the glass container. Some compounds like aminoacids, proteins or phenols tend to react with the OH-groups of the glass, even if – as is common for chromatography – 1st hydrolytic class glass is used. Through the silanization process the glass surface is deactivated and so possible reactions between the polar compounds and the glass are eliminated.

Article Number System

Our 8 digital article number comprises the following indications:

Article Group
BV=Bördelverschluss
(Crimp Cap)

Sequential Number

BV 20 0133

Diameter in mm

BK = Bördelkappen/empty Crimp Caps
BV = Bördelverschlüsse/assembled Crimp Caps
CR = Verschließzangen/Crimper
CV = Bördelköpfe/Crimping Heads
DC = Öffnungszangen/Decapper
DV = Öffnungsköpfe/Decapping Heads
ES = Einwegspritzen/Disposable Syringes
FB = Flachbodengläser/Shell Vials
FE = Federn/Springs
FI = Filter/Syringe Filters
FV = Filter Vials

FK = Flaschen-Kit/Vial Kits
FO = Flip-Off Kappen/Caps
FS = Flaschen-Sets/Vials Sets
FT = Flip-Tear-Up Kappen/caps
GC = GC Septen/GC Septa
GW = Gewindeflaschen/Screw Vials
HS = Headspace-Flaschen/Vials
KG = Kurzgewindeflaschen/Short Thread Vials
KP = 2in1 Kits
ME = Mikroeinsätze/Micro-Inserts
ÖS = Öffnungsschneider/ Opening Pliers

PC = Pneumatische Bördelgeräte/Pneumatic Crimping Tools
RR = Rollrandflaschen/ Crimp Neck Vials
SE = Scheiben/Septen/Liners/Septa
SF = Schnappdeckelflaschen/Snap Cap Vials
SK = Schraubenkappen/empty Screw Caps
SN = Schnappringverschlüsse/Snap Ring Closures
SR = Schnappringflaschen/Snap Ring Vials
ST = Stopfen/Stoppers
SV = Schraubverschlüsse/Screw Closures
VR = Vial-Racks
VV = vorverschlossene Flaschen/pre-assembled Vials

Company Profile

Contacts

Customer Service
(for quotes, samples, technical support, etc.):

Phone: +49 (0) 24 22 / 90 41 38-3
Telefax: +49 (0) 24 22 / 90 41 38-7

E-Mail: service@chroma-globe.de

Order Processsing
(for orders, delivery times, open orders, lead times, etc.):

Phone : +49 (0) 24 22 / 90 41 38-2
Telefax: +49 (0) 24 22 / 90 41 38-7

E-Mail: service@chroma-globe.de

General terms and conditions

Orders are based on our general terms and conditions which can be sent to you upon request or can be taken from our website under www.chroma-globe.de, icon "Imprint".

At this point we would like to draw your attention to the following:

Minimum delivery quantities:

Vials/Seals/Septa:	1.000 pieces
Filters/Syringes:	100 pieces
GC Injection Port Septa:	25 pieces
Capillary Connectors:	10 pieces (for Connectors for 2 columns),
	1 piece (for Connectors for 3 columns)
Crimpers/Decappers:	1 piece
2in1 KITs:	10 pieces
Vial Racks/Storage Boxes:	1 piece

The minimum order quantities are independent from the packaging units indicated underneath all products. Minimum order value: 250.00 € Our goods are excluded from exchange, legal regulations remain unaffected hereof.

All information are subject to technical changes!
All data concerning dimensions and volumes are approximate. Specifications, terms and pricing are subject to change. Not all products are available in all countries. Please consult your local sales representative for details.

Remark:
Products mentioned in the catalogue are intended for general laboratory use (for research and development purposes and analytical quality control and/or routine measurements) only. They are not suited for clinical use (diagnostic, therapeutic or prognostic). Chroma Globe GbR does not assume any responsibility for damages due to improper application of our products or due to application of our products in other fields of application. The user has to ensure that the products used are suitable for the planned applications. Application on the human body is strictly forbidden. The user is liable of all damages resulting from such application. Chroma Globe GbR products are suited for qualified personnel only.

1. Crimp Neck Vials and Closures ND8

The vials are preferentially used on instruments of the following manufacturers: Agilent, Beckman, Carlo Erba, CTC, Fisons, PerkinElmer, Shimadzu, Thermo Scientific, VWR (Merck®)/Hitachi, etc.
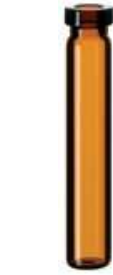
Broad selection of Crimp Neck Vials ND8 available:
• with different volumes
• with flat, round or conical bottom
• in clear or amber glass
• for almost all autosamplers

Micro-Vials often need an adapter to run in the autosampler. They often have a conical bottom shape, so that they cannot stand by themselves, but need an adapter.

1.1 Crimp Neck Vials and Micro-Vials ND8

RR 08 0326	RR 08 0327	RR 08 0328	RR 08 0329	RR 08 0330
0.7ml Crimp Neck Vial, 40 x 7mm, clear glass, 1st hydrol. class	0.7ml Crimp Neck Vial, 40 x 7mm, amber glass, 1st hydrol. class	0.8ml Crimp Neck Vial, 30 x 8.2mm, clear glass, 1st hydrol. class	1.2ml Crimp Neck Vial, 40 x 8.2mm, clear glass, 1st hydrol. class	1.2ml Crimp Neck Vial, 40 x 8.2mm, amber glass, 1st hydrol. Class
R. vol. < 11 µl	R. vol. < 11 µl	R. vol. < 11 µl	R. vol. < 20 µl	R. vol. < 20 µl
10 x 100 pcs. per PP-Box		100 pcs. per PP-Box		

RR 08 0331	RR 08 0332	RR 08 0317	RR 08 0333	RR 08 0334
0.3ml Micro-Vial, 31.5 x 5.5mm, clear glass, 1st hydrol. class, round bottom	0.2ml Micro-Vial, 31.5 x 5.5mm, clear glass, 1st hydrol. class, conical	0.7ml Micro-Vial, 40 x 7mm, clear glass, 1st hydrol. class, conical	0.7ml Micro-Vial, 40 x 7mm, amber glass, 1st hydrol. class, conical	0.4ml Micro-Vial, 30 x 7mm, amber glass, 1st hydrol. class, Conical
R. vol. < 6 µl	R. vol. < 3 µl	R. vol. < 3 µl	R. vol. < 3 µl	R. vol. < 3 µl
10 x 100 pcs. per PP-Box				

Art. No.	CR 08 0001	DC 08 0002	ÖS 08 0150
Description:	Crimper for 8mm Aluminum Crimp Cap	Decapper for 8mm Aluminum Crimp Cap	Opening plier for 8mm Aluminum Crimp Cap (sterilisable for clean room applications)
	Unit = 1 piece per Box		Unit = 1 piece per PE-Bag

1. Crimp Neck Vials and Closures ND8

1.2.1 Natural Rubber/TEF and RedRubber/PTFE Seals

- Temperature resistant from -40°C up to 120°C for Natural Rubber resp. up to 160°C for RedRubber.
- Natural Rubber harder to penetrate with more fragmentation during penetration than RedRubber.
- Natural Rubber ideal for multiple injections due to high resealability, but not as clean as the synthetic RedRubber.
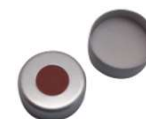
Art. No.	BV 08 0818	BV 08 0438	BV 08 0727
Cap:	Aluminum Cap clear lacquered, 4mm centre hole		
Septa:	Nat. Rubber red-orange/TEF transparent	RedRubber/PTFE transparent	RedRubber/PTFE beige
Durometer:	60° shore A	45° shore A	45° shore A
Thickness:	1,0mm	1,0mm	1,0mm
100 pcs. per PE-Bag			

1.2.2 Silicone/PTFE Seals

- Temperature resistant from -60° C to 200° C
- Preferably only for single injections
- Different hardnesses to meet the respective needle types
- Silicone septa coated on both sides for low particle formation during penetration
- Cleaner than Natural Rubber or as RedRubber

Art. No.	BV 08 0324	BV 08 0753	BV 08 0522	BV 08 0523	BV 08 1418
Cap:	Aluminum Cap clear lacquered, 4mm centre hole				
Septa:	Silicone white/ PTFE red	Silicone cream/ PTFE red	PTFE red/Silicone white/PTFE red	Silicone white/ PTFE red, **SLIT**	**ZeroPEAK Septa,** Silikon natural/ PTFE beige
Durometer:	45° shore A	55° shore A	45° shore A	45° shore A	38° shore A
Thickness:	1,0mm	1,5mm	1,0mm	1,0mm	1,0mm
100 pcs. per PE-Bag					

1.2.3 Other Crimp Seals and PE Push-On Cap

- PTFE is very inert and temperature resistant, however, problems with leakage due to the inflexibility and thinness of the material
- Only for single injections for non-critical HPLC analysis
- Viton is resistant to a variety of corrosive organic substances; temperature resistant from -40°C to 240°C, main application in the petrochemical industry

Art. No.	BV 08 0984	BV 08 0546	BV 08 0547	SC 08 1245	SC 08 1360
Cap:	Aluminum Cap, clear lacquered, 4mm centre hole, with roll grove	Aluminum Cap, clear lacquered, 4mm centre hole	Aluminum Cap, clear lacquered, 4mm centre hole	8mm PE Push-On Cap, blue, with thinned penetration area	8mm PE Push-On Cap, transparent, with thinned penetration area
Septa:	PTFE virginal	Viton black	Viton black		
Durometer:	53° shore A	70° shore A	70° shore A		
Thickness:	0,25mm	1,0mm	1,5mm		
100 pieces per PE-Bag					

2. Screw Thread Vials and Closures ND8

The vials are preferentially used on instruments of the following manufactures: **Beckman, CTC, Gilson, Knauer, Shimadzu, Spark, Varian, VWR (Merck®)/Hitachi, etc.**

Standard vials for GC and HPLC.
• Specially suitable for VWR (Merck®)/Hitachi instruments
  (Article   GW 08 0193, GW 08 0799, ME 05 0289, SV 08 0657, SK 08 0287,
  SE 08 0018, SE 08 0076)
• Broad range of Micro-Inserts.
• Screw Neck Vials (thread 8-425) with small opening requires
  Micro-Inserts with a diameter of 5mm.
• Vials and seals also available as 2in1 KIT.

2.1 Screw Neck Vials ND8, small opening, 8-425 thread and Micro-Vials ND8

GW 08 0193	GW 08 0799	GW 08 0194	GW 08 0195	GW 08 1317 GW 08 1318
1.5ml Screw Neck Vial, 8-425 thread, 32 x 11.6mm, clear glass, 1st hydrol. class, small opening **SILANIZED** **GW 08 0193s**	1.5ml Screw Neck Vial, 8-425 thread, 32 x 11.6mm, amber glass, 1st hydrol. class, small opening **SILANIZED** **GW 08 0799s**	1.5ml Screw Neck Vial, 8-425 thread, 32 x 11.6mm, clear glass, 1st hydrol. class, small opening, label + filling lines **SILANIZED** **GW 08 0194s**	1.5ml Screw Neck Vial, 8-425 thread, 32 x 11.6mm, amber glass, 1st hydrol. class, small opening, label + filling lines **SILANIZED** **GW 08 0195s**	1.1ml Microliter Screw Neck Vial, 32 x 11.6mm, clear glass, 1.hydrol. class (amber glass)
R. vol. < 110 µl	R. vol. < 110 µl	R. vol. < 110 µl	R. vol. < 110 µl	R. vol. < 15 µl
100 pcs. per PP-Box				

Vial Racks see page 46.

2.1 Screw Neck Vials ND8 (cont.)

GW 08 0356	GW 08 0859 GW 08 0860
1.1ml Micro-Vial, 8-425 thread, 32 x 11.6mm, clear glass, 1st hydrol. class, conical, small opening	1.1ml Microliter Screw Neck Vial, 32 x 11.6mm, clear glass, 1.hydrol. class, with rounded glass base, 1. hydrol. class **(amber glass)**
R. vol. < 3 µl	R. vol. < 15 µl
100 pcs. per PP-Box	

2.2 Micro-Inserts for Vials with small opening

ME 05 0289	ME 05 0357	ME 05 0358	ME 05 0290
0.15ml Micro-Insert, 31 x 5mm, clear glass, 1st hydrol. class, 15mm top **SILANIZED** **ME 05 0289s**	0.2ml Micro-Insert, 31 x 5mm, clear glass, 1st hydrol. class, 9mm top **SILANIZED** **ME 05 0357s**	0.2ml Micro-Insert, 31 x 5mm, clear glass, 1st hydrol. class, flat bottom **SILANIZED** **ME 05 0358s**	0.15ml Micro-Insert, 29 x 5mm, clear glass, 1st hydrol. class, with assembled plastic spring **SILANIZED** **ME 05 0290s**
R. vol. < 1 µl	R. vol. < 2 µl	R. vol. < 8 µl	R. vol. < 1 µl
10 x 100 pcs. per PP-Box			

R. vol. = Residual Volume (µl)

2. Screw Thread Vials and Closures ND8

2.3 PP Screw Seals ND8

- Ready to use combination seals; no time consuming and "tricky" assembly.
- Available with black or white screw caps with 8-425 thread.
- Available as closed top screw seals or with centre hole.
- Now available either with Natural Rubber or RedRubber as cost-effective seals.

2.3.1 Natural Rubber/TEF and RedRubber/PTFE Seals

- Natural rubber temperature resistant from -40°C to 120°C
- RedRubber/PTFE from -40°C bis 160°C
- Natural rubber is more difficult to penetrate than RedRubber and has a higher particle formation
- RedRubber and butyl show less fragmentation than natural rubber
- Natural rubber is ideal for multiple injections due to its good resealing properties, but not as clean as RedRubber or Butyl

Art. No.	SV 08 0657	SV 08 0658	SV 08 0766	SV 08 0763	SV 08 0916
Cap:	Polypropylene Screw Cap black, 5.5mm centre hole, 8-425 thread				
Septa:	Natural Rubber red-orange/TEF transparent	RedRubber/ PTFE transparent	RedRubber/ PTFE beige	Butyl cream /PTFE grey	Silicone white/ Aluminum foil silver
Durometer:	60° shore A	45° shore A	45° shore A	55° shore A	50° shore A
Thickness:	1,3mm	1,0mm	1,0mm	1,3mm	1,3mm
100 pcs. per PE-Bag					

2.3.2 Silicone/PTFE Seals

- Temperature resistant from -60°C to 200°C
- Preferably for single injections only
- Different hardnesses to suit the respective needle types
- Cleaner than natural rubber, RedRubber or butyl
- Silicone septa coated on both sides for low particle formation during penetration

Art. No.	SV 08 0158	SV 08 0759	SV 08 0761	SV 08 0293	SV 08 0495	SV 08 0439
Cap:	Polypropylene Screw Cap black, 5.5mm centre hole, 8-425 thread					
Septa:	Silicone white/ PTFE red	Silicone cream/ PTFE red	Silicone blue transp./PTFE white	PTFE red/Silicone white/PTFE red	Silicone white/ PTFE red, slit	Silicone white/ PTFE blue, slit
Durometer:	45° shore A	55° shore A	45° shore A	45° shore A	45° shore A	45° shore A
Thickness:	1,3mm	1,5mm	1,3mm	1,0mm	1,3mm	1,5mm
100 pcs. per PE-Bag						

2.3.3 Natural Rubber/TEF, RedRubber/PTFE, Butyl/PTFE and Silicone/PTFE Seals, closed top

Art. No.	SV 08 0760	SV 08 0767	SV 08 1001	SV 08 0762
Cap:	Polypropylene Screw Cap black, closed top, 8-425 thread			
Septa:	Natural Rubber red-orange/ TEF transparent	RedRubber/ PTFE beige	Butyl cream /PTFE grey	Silicone whiite/ PTFE red
Durometer:	60° shore A	45° shore A	55° shore A	45° shore A
Thickness:	1,3mm	1,0mm	1,3mm	1,3mm
100 pcs. per PE-Bag				

2. Screw Thread Vials and Closures ND8

2.4 Septa ND8

Art. No.	SE 08 0018	SE 08 0072	SE 08 0765	SE 08 0073	SE 08 0089	SE 08 0074
Septa:	PTFE, Virginal	Natural Rubber red-orange/TEF transparent	RedRubber/ PTFE beige	Butyl cream/ PTFE grey	Viton, Black	Silicone white/ PTFE red
Hardness:	53° shore A	60° shore A	45° shore A	55° shore A	70° shore A	45° shore A
Thickness	0,25mm	1,0mm	1,0mm	1,3mm	1,0mm	1,3mm
1.000 pcs. per PE-Bag						

Art. No.	SE 08 0752	SE 08 0076	SE 08 0915	SE 08 0075	SE 08 0118	SE 08 1204
Septa:	Silicone cream/PTFE red	Silicone white/ PTFE blue, slit; recommd.by VWR Merck®/Hitachi	Silicone white/ Aluminum foil silver	Silicone blue transparent/ PTFE white	PTFE red/Silicone white/PTFE red	Silicone white/PTFE blue, slit
Hardness:	55° shore A	55° shore A	50° shore A	45° shore A	45° shore A	55° shore A
Thickness	1,5mm	0,9mm	1,3mm	1,3mm	1,0mm	1,5mm
1.000 pcs. per PE-Bag						

2.5 PP Screw Caps ND8

Art. No.	SK 08 0287	SK 08 0756	SK 08 0757	SK 08 0758
Cap:	Polypropylene Screw Cap, black, 5.5mm centre hole	Polypropylene Screw Cap, black, closed top	Polypropylene Screw Cap, white, 5,5mm centre hole	Polypropylene Screw Cap, white, closed top
100 pcs. per PE-Bag				

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2. Screw Thread Vials and Closures ND8

2.6 Special 2in1 Kits for Screw Neck Vials ND8

To carry out an analysis, the user always needs two components at the same time:
vial and closure. To fulfill this need in a convenient way Chroma Globe offers 2in1 KITs containing 100 vials and 100 seals in a blue, reclosable PP-box. All advantages of the individual items (CleanPack packaging of the vials, tamper-proof evident packaging of vials and seals, traceability through a batch numbering system, etc.) still remain. Furthermore the customer only has to reorder one article instead of two, which makes life easier.

• Each combination of a screw neck vial ND8 is now available with any 8mm screw seal listed in the catalogue as a practical 2in1 kit!

KP 08 1841	
1.5ml Screw Neck Vial, 8-425 thread, 32 x 11.6mm, clear glass, 1st hydrol. class, small opening	8mm PP Screw Cap, black, centre hole, 8-425 thread; Natural Rubber red-orange/ TEF transparent, 60° shore A, 1.3mm
(GW 08 0193)	(SV 08 0657)
100 Vials and 100 Closures per 2in1 Kit	

KP 08 1145	
1.5ml Screw Neck Vial, 8-425 thread, 32 x 11.6mm, clear glass, 1st hydrol. class, small opening	8mm PP Screw Cap, black, centre hole, 8-425 thread; Silicone white/PTFE red, 45° shore A, 1.3mm
(GW 08 0193)	(SV 08 0158)
100 Vials and 100 Closures per 2in1 Kit	

KP 08 1045	
1.5ml Screw Neck Vial, 8-425 thread, 32 x 11.6mm, clear glass, 1st hydrol. class, small opening	8mm PP Screw Cap, black, centre hole, 8-425 thread; PTFE red/Silicone white/PTFE red, 45° shore A, 1.0mm
(GW 08 0193)	(SV 08 0293)
100 Vials and 100 Closures per 2in1 Kit	

KP 08 1842	
1.5ml Screw Neck Vial, 8-425 thread, 32 x 11.6mm, clear glass, 1st hydrolytic class, small opening, label and filling lines	8mm PP Screw Cap, black, centre hole, 8-425 thread; Silicone white/PTFE red, 45° shore A, 1.3mm
(GW 08 0194)	(SV 08 0158)
100 Vials and 100 Closures per 2in1 Kit	

KP 08 1843	
1.5ml Screw Neck Vial, 8-425 thread, 32 x 11.6mm, clear glass, 1st hydrolytic class, small opening, label and filling lines	8mm PP Screw Cap, black, centre hole, 8-425 thread; Silicone white/PTFE red, 45° shore A, 1.3mm, Slit
(GW 08 0194)	(SV 08 0495)
100 Vials and 100 Closures per 2in1 Kit	

KP 08 1844	
1.5ml Screw Neck Vial, 8-425 thread, 32 x 11.6mm, amber glass, 1st hydrolytic class, small opening, label and filling lines	8mm PP Screw Cap, black, centre hole, 8-425 thread; Silicone white/PTFE red, 45° shore A, 1.3mm
(GW 08 0195)	(SV 08 0158)
100 Vials and 100 Closures per 2in1 Kit	

2.7 Screw Vials ND8, with pre-assembled Screw Cap ND8

• Pre-screwed vials reduce the risk of contamination of the vials in the laboratory.
  Furthermore, special applications (e.g. in the tobacco industry) may require a pre-sealed vial.

3. Short Thread Vials and Closures ND9

The vials can be used on all common autosamplers due to their technical geometry, preferentially they are found on Agilent, HTA, Shimadzu, Thermo Scientific, Varian, Waters®, etc.

The Universal Autosampler Vial

• Universally compatible on almost all autosamplers, thereby rationalization of other 1.5ml vials, as for instance 11mm Crimp Neck Vials, Screw Neck Vials 8-425 and 10-425, is possible.

3.1 Short Thread Vials ND9, wide opening, and Micro-Vials with Short Thread ND9

3.2 Micro-Inserts for Vials ND9

KG 09 0196	KG 09 0197	KG 09 0695	KG 09 0188	ME 06 0218	ME 06 0361	ME 06 0362	ME 06 0232	ME 06 1174
1.5ml Short Thread Vial, 32 x 11.6mm, clear glass, 1st hydrol. class, wide opening **SILANIZED** KG 09 0196s	1,5ml Short Thread Vial, 32 x 11.6mm, clear glass, 1st hydrol. class, wide opening, label + filling lines **SILANIZED** KG 09 0197s	1,5ml Short Thread Vial, 32 x 11.6mm, amber glass, 1st hydrol. class, wide opening, **SILANIZED** KG 09 0695s	1,5ml Short Thread Vial, 32 x 11.6mm, amber glass, 1st hydrol. class, wide opening, label +filling lines **SILANIZED** KG 09 0188s	0.25ml Micro-Insert, 31 x 6mm, clear glass, 1st hydrol. class, 15mm top **SILANIZED** ME 06 0218s	0,3ml Micro-Insert, 31 x 6mm, clear glass, 1st hydrol. class, 12mm top **SILANIZED** ME 06 0361s	0,35ml Micro-Insert, 31 x 6mm, clear glass, 1st hydrol. class, flat bottom **SILANIZED** ME 06 0362s	0,25ml Micro-Insert, 29 x 5.7mm. clear glass, 1st hydrol. class, with assembled plastic spring **SILANIZED** ME 06 0232s	0.25ml PE Micro-Insert, 29 x 6mm, clear, with intregrated plastic spring
R. vol. < 120µl	R. vol. < 120µl	R. vol. < 120µl	R. vol. < 120µl	R. vol. < 4 µl	R. vol. < 4 µl	R. vol. < 8 µl	R. vol. < 4 µl	R. vol. < 4 µl
100 pcs. per PP-Box				10 x 100 pcs. per PP-Box				

3.1 Short Thread Vials ND9, wide opening and Micro-Vials with Short Thread ND9 (Cont.)

BaseBond Vials

KG 09 0682	KG 09 0683	KG 09 1351	KG 09 1352	KG 09 1562	KG 09 1563	KG 09 2050	KG 09 2051
Short Thread Vial with integrated 0.2 ml Micro-Insert, 32 x 11.6mm, clear glass, 1 st hydrol. Class, **with small micro-insert "Base Bond"**	Short Thread Vial with integrated 0.2 ml Micro-Insert, 32 x 11.6mm, amber glass, 1st hydrol. class, **with small micro-insert "Base Bond"**	Short Thread Vial with integrated 0.2ml Micro-Insert, 32 x 11.6mm, clear glass, 1st hydrol. class, **writing patch and filling lines, with small micro-insert "Base Bond"**	Short Thread Vial with integrated 0.2ml Micro-Insert, 32 x 11.6mm, amber glass, 1st hydrol. class, **writing patch and filling lines, with small micro-insert "Base Bond"**	Short Thread Vial with integrated 0.3 ml Micro-Insert, 32 x 11.6mm, clear glass, 1 st hydrol. class, **with wide micro-insert "Base Bond"**	Short Thread Vial with integrated 0.3 ml Micro-Insert, 32 x 11.6mm, amber glass, 1st hydrol. class, **with wide micro-insert "Base Bond"**	Short Thread Vial with integrated 0.3ml Micro-Insert, 32 x 11.6mm, clear glass, 1st hydrol. class, **writing patch and filling lines, with wide micro-insert "Base Bond"**	Short Thread Vial with integrated 0.3ml Micro-Insert, 32 x 11.6mm, amber glass, 1st hydrol. class, **writing patch and filling lines, with wide micro-insert "Base Bond"**
R. vol. < 1 µl	R. vol. < 1 µl	R. vol. < 1 µl	R. vol. < 1 µl	R. vol. < 3 µl	R. vol. < 3 µl	R. vol. < 3 µl	R. vol. < 3 µl
100 pcs. per PP-Box							

R. vol. = Residual Volume (µl)

TopBond   **TopBond**

KG 09 1122	KG 09 0863 / KG 09 0864	KG 09 0365	KG 09 1201 / KG 09 1321	KG 09 0363	KG 09 0364
0,9ml Total Mikroliter Short Thread Vial 32 x 11,6mm, clear glass, 1. hydrol. Class	1,1ml Microliter Short Thread Vial 32 x 11.6mm, clear glass, (amber glass) 1st hydrol. class with rounded glass base	1.1ml Microliter Short Thread Vial , 32 x 11.6mm, clear glass, 1.hydrol. Klasse SILANIZED KG 09 0365s	1.1ml Microliter Short Thread Vial , 32 x 11.6mm, clear glass, (amber glass) 1.hydrol. Klasse SILANIZED KG 09 1201s	Short Thread Vial with integrated 0.2ml Micro-Insert, 32 x 11.6mm, clear glass, 1st hydrol. class, **writing patch and filling lines,** with small micro-insert „TopBond"	Short Thread Vial with integrated 0.2ml Micro-Insert, 32 x 11.6mm, amber glass, 1st hydrol. class, **writing patch and filling lines,** with small micro-insert „TopBond"
R. vol. < 1 µl	R. vol. < 15 µl	R. vol. < 15 µl	R. vol. < 15 µl	R. vol. < 1 µl	R. vol. < 1 µl
100 pcs. per PP-Box					

3.3 Plastic Micro-Vials ND9

KG 09 0446	KG 09 0447	KG 09 0469	KG 09 0471	KG 09 0468	KG 09 0466	KG 09 0470
1.5ml PP Short Thread Vial, transparent, filling lines, 32 x 11.6mm, slightly concave shaped bottom **usable for PFAS analysis**	1,5ml PP Short Thread Vial, amber, filling lines, 32 x 11.6mm, slightly concave shaped bottom **usable for PFAS analysis**	0,3ml PP Short Thread Micro-Vial, transparent, 32 x 11.6mm **usable for PFAS analysis**	0,3ml PP Short Thread Micro-Vial, amber, 32 x 11.6mm **usable for PFAS analysis**	0,7ml PP Short Thread Micro-Vial, transparent, 32 x 11.6mm **usable for PFAS analysis**	TPX Short Thread Vial, clear 32 x 11.6mm, with integrated 0.2ml Glass Micro-Insert, 15mm top	0,3ml TPX Short Thread Micro-Vial, clear, 32 x 11.6mm
R. vol. < 110µl	R. vol. < 110µl	R. vol. < 4 µl	R. vol. < 4 µl	R. vol. < 80µl	R. vol. < 1 µl	R. vol. < 4 µl
100 pieces per PE-Bag						

R. vol. = Residual Volume (µl)

3. Short Thread Vials and Closures ND9

3.4 PP Short Thread Seals ND9

- Screw cap with the design of a crimp cap; therefore suitable for robotic handling.
- Already assembled seal with slit liner available, in order to avoid vacuum within the vial in case of multiple injections.
- Short thread seals also available as closed top version for storage purposes.

Septa Knowledge center:

PTFE virginal septa:

- Very inert and temperature resistant therefore also as coating on most other septa
- No elastomer therefore limited sealing and reclosing characteristics
- Only recommended for non-critical HPLC applications
- Mostly used by Merck/Hitachi and Waters
- Application area: HPLC

Natural Rubber/TEF septa:

- Standard quality for GC and HPLC
- Temperature resistant from -40 °C up to 120 °C
- Ideal for multiple injections due to high resealability
- Not as clean as synthetic rubber
- Punching liners (are punched from sheet/roll material)
- Application area: HPLC and GC

RedRubber/PTFE beige /transparent) septa:

- NEW standard quality for HPLC und GC
- synthetic rubber is cleaner and softer as Natural Rubber
- Relatively cost effective
- Temperature resistant from -40 °C up to 110 °C
- Liners made of roll and plate material
- Application area: HPLC/GC

Silicone/Aluminum septa:

- All chemical and physical properties of Silicon/PTFE, however temperature resistant from -60°C up to 220°C
- Often used on PERKINELMER instruments
- More expensive than PTFE-laminated septa
- Field of usage: Headspace

(PTFE)/Silicone/PTFE septa:

- Silicone is the cleanest synthetic elastomer and is therefore used for critical analysis
- Temperature resistant from -60°C up to 200°C
- As synthetic elastomer resealability properties not as good as with Natural Rubber
- Speciality: both-sided PTFE-lamination on Silicone-Septa for low coring (generation of particles during penetration)
- Application area: GC/HPLC/HEADSPACE

Silicone/PTFE septa with slit:

- Temperature resistance from -60° C to 200° C
- Preferably recommended for single use injections due to less good reclosing properties
- Slit septa in HPLC as penetration aid for blunt needles and to create a valve effect in case of multiple injections
- Application in GC, HPLC and headspace analysis

The right choice of septa depends on the application. Almost all septa are laminated on one side with PTFE, which has a high chemical resistance and forms an inert barrier between sample and carrier material of the septa. The carrier materials have different physical and chemical properties, such as temperature resistance, resealability properties, cleanliness, hardness, thickness, etc.

The individual conditions of the customer's application aim at the specific characteristics of the carrier material, e.g.:

Multiple Injektion?	Temperatur?			Thin, fragile needle?	Blunt, thick needle?	Critical analysis?	Low coring?
↓	↓			↓	↓	↓	↓
good resealability properties necessary	-40°C up to 120°C	-40°C up to 110°C	-60°C up to 200°C	soft and thin septa required	slit/pre-cut liner as penetration aid (HPLC)	very clean liner required	Both sided PTFE laminated liners required
↓	↓	↓	↓	↓	↓	↓	↓
Natural Rubber/TEF	Natural Rubber/ TEF; Butyl/ PTFE	Red Rubber/ PTFE	Silicone /PTFE	Silicone/ PTFE	e.g. SE 08 0076	ZeroPeak and EasyPierce Silicone/PTFE septa	PTFE/Silicone/ PTFE PTFE/Butyl/ PTFE

3. Short Thread Vials and Closures ND9

3.4.1 PP Short Thread Cap ND9, transparent, 6mm centre hole

Art. No.	SV 09 0774	SV 09 0659	SV 09 0775	SV 09 0661	SV 09 0663	SV 09 0662	SV 09 0913
Septa:	PTFE virginal	Natrual rubber red-orange TEF transp.	RedRubber / PTFE beige	Silicone white/ PTFE red	PTFE red/ Silicon white/ PTFE red	Silicone white/ PTFE blue, slit	Silicone white/Aluminum foil silver (recom. for PFAS analysis)
Durometer	53° shore D	60° shore A	45° shore A	55° shore A	45° shore A	55° shore A	55° shore A
Thickness:	0,2mm	1,0mm	1,0mm	1,0mm	1,0mm	1,0mm	1,0mm
100 pcs. per PE-Bag							

3.4.2 PP Short Thread Cap ND9, blue, 6mm centre hole

Art. No.	SV 09 0507	SV 09 0433	SV 09 0776	SV 09 0159	SV 09 0164	SV 09 0187	SV 09 0948
Septa:	PTFE virginal	Natrual rubber red-orange TEF transp.	RedRubber / PTFE beige	Silicone white/ PTFE red	PTFE red/ Silicon white/ PTFE red	Silicone white/ PTFE blue, slit	Silicone white/Aluminum foil silver (recom. for PFAS analysis)
Durometer:	53° shore D	60° shore A	45° shore A	55° shore A	45° shore A	55° shore A	55° shore A
Thickness:	0,2mm	1,0mm	1,0mm	1,0mm	1,0mm	1,0mm	1,0mm
100 pcs. per PE-Bag							

3.4.3 PP Short Thread Cap ND9, red, 6mm centre hole

Art. No.	SV 09 0781	SV 09 0435	SV 09 0777	SV 09 0666	SV 09 0668	SV 09 0667	SV 09 0949
Septa:	PTFE virginal	Natrual rubber red-orange TEF transp.	RedRubber / PTFE beige	Silicone white/ PTFE red	PTFE red/ Silicon white/ PTFE red	Silicone white/ PTFE blue, slit	Silicone white/Aluminum foil silver (recom. for PFAS analysis)
Durometer:	53° shore D	60° shore A	45° shore A	55° shore A	45° shore A	55° shore A	55° shore A
Thickness:	0,2mm	1,0mm	1,0mm	1,0mm	1,0mm	1,0mm	1,0mm
100 pcs. per PE-Bag							

3.4.4 PP Short Thread Cap ND9, black, 6mm centre hole

Art. No.	SV 09 0782	SV 09 0436	SV 09 0778	SV 09 0166	SV 09 0167	SV 09 0163	SV 09 0952
Septa:	PTFE virginal	Natrual rubber red-orange TEF transp.	RedRubber / PTFE beige	Silicone white/ PTFE red	PTFE red/ Silicon white/ PTFE red	Silicone white/ PTFE blue, slit	Silicone white/Aluminum foil silver (recom. for PFAS analysis)
Durometer:	53° shore D	60° shore A	45° shore A	55° shore A	45° shore A	55° shore A	55° shore A
Thickness:	0,2mm	1,0mm	1,0mm	1,0mm	1,0mm	1,0mm	1,0mm
100 pcs. per PE-Bag							

3. Short Thread Vials and Closures ND9

3.4.5 PP Short Thread Cap ND9, green, 6mm centre hole

Art. No.	SV 09 0783	SV 09 0434	SV 09 0779	SV 09 0162	SV 09 0675	SV 09 0674	SV 09 0950
Septa:	PTFE virginal	Natrual rubber red-orange TEF transp.	RedRubber / PTFE beige	Silicone white/ PTFE red	PTFE red/ Silicon white/ PTFE red	Silicone white/ PTFE blue, slit	Silicone white/Aluminum foil silver (recom. for PFAS analysis)
Hardness:	53° shore D	60° shore A	45° shore A	55° shore A	45° shore A	55° shore A	55° shore A
Thickness:	0,2mm	1,0mm	1,0mm	1,0mm	1,0mm	1,0mm	1,0mm
100 pcs. per PE-Bag							

3.4.6 PP Short Thread Cap ND9, yellow, 6mm centre hole

Art. No.	SV 09 0784	SV 09 0432	SV 09 0780	SV 09 0160	SV 09 0678	SV 09 0677	SV 09 0951
Septa:	PTFE virginal	Natrual rubber red-orange TEF transp.	RedRubber / PTFE beige	Silicone white/ PTFE red	PTFE red/ Silicon white/ PTFE red	Silicone white/ PTFE blue, slit	Silicone white/Aluminum foil silver (recom. for PFAS analysis)
Hardness:	53° shore D	60° shore A	45° shore A	55° shore A	45° shore A	55° shore A	55° shore A
Thickness:	0,2mm	1,0mm	1,0mm	1,0mm	1,0mm	1,0mm	1,0mm
100 pcs. per PE-Bag							

3.4.7 PP Short Thread Cap ND9, glitter pink, 6mm centre hole

Art. No.	SV 09 2005	SV 09 2006	SV 09 1801	SV 09 1639	SV 09 1918	SV 09 1824	SV 09 2007
Septa:	PTFE virginal	Natrual rubber red-orange TEF transp.	RedRubber / PTFE beige	Silicone white/ PTFE red	PTFE red/ Silicon white/ PTFE red	Silicone white/ PTFE blue, slit	Silicone white/Aluminum foil silver (recom. for PFAS analysis)
Hardness:	53° shore D	60° shore A	45° shore A	55° shore A	45° shore A	55° shore A	55° shore A
Thickness:	0,2mm	1,0mm	1,0mm	1,0mm	1,0mm	1,0mm	1,0mm
100 pcs. per PE-Bag							

3.4.8 Seals with special slit (Y-SLIT // Y-PRE-CUT)

- With pre-cut septa only the silicone material is slit in Y-shape while the PTFE lamination remains intact. This way concentration changes occurring with completely slit septa can be avoided
- Ideal penetration aid for blunt and thick instrument needles, and prevents the concentration fluctuations that frequently occur with slit or cross slit septa

Art. Nr.	SV 09 1241	SV 09 1240	SV 09 1239	SV 09 1234
Cap:	PP SC, transparent, 6mm hole	PP SC, blue, 6mm hole	PP SC, transparent, 6mm hole	PP SC, blue, 6mm hole
Septa:	Silicone white/PTFE red,55° shore A,1,0mm, Y-slit		Silicone white/PTFE red, 55° shore A,1,0mm, Y-pre-cut	
100 pcs. per PE-Bag				

3. Short Thread Vials and Closures ND9

3.4.9 Seals for high temperature analysis and trace analysis

- 9mm short thread seals with high purity PTFE virginal, or Aluminum septa
- Perfect for GCMS and LCMS
- An O-ring ensures 100% tightness

Art. No.	SV 09 1005	SV 09 1004	SV 09 1007	SV 09 1006
Cap:	PP SC, transparent, 6mm hole	PP SC, blue, 6mm hole	PP SC, transparent, 6mm hole	PP SC, blue, 6mm hole
Septa:	Aluminum Septa (additional sealing by O-ring)	Aluminum Septa (additional sealing by O-ring)	PTFE virginal, 0,25mm (additional sealing by O-ring)	PTFE virginal, 0,25mm (additional sealing by O-ring)
Hardness:			53° shore A	53° shore A
Thickness	0,06mm	0,06mm	0,20mm	0,20mm
100 pcs. per PE-Bag				

3.4.10 UltraBond Seals ND9

(Cap + Liner form an inseparable unit, so that the liner cannot be pushed into the vial even with a blunt needle)

- A special feature of an UltraBond closure system is that the screw cap and septa form an inseparable unit. This is made of a patented manufacturing process in which the molecular structure of the contact surface of the PP screw cap and the septa is modified in such a way that they form a strong bond without the use of adhesives.
- Comparable systems on the market are LECTRABOND Seals from WATERS® and the INTERSEAL closure from Agilent

Art. No.	SV 09 0165	SV 09 1681	SV 09 1817	SV 09 1757	SV 09 0772	SV 09 0773
Cap:	PP SC, blue, 6mm hole	PP SC, blue, 6mm hole	PP SC, blue, 6mm hole	PP SC, blue, 6mm hole	PP SC, blue, 6mm hole	PP SC, blue, 6mm hole
Septa:	Silicone white/PTFE red	Silicone white /PTFE blue, **SLIT**	Silicone beige/ PTFE white	Silicone beige/ PTFE white, **SLIT**	Silicone beige/ PTFE white	Silicone beige/ PTFE white, **SLIT**
Hardness:	45° shore A	45° shore A	45° shore A	45° shore A	45° shore A	45° shore A
Thickness	1,0mm	1,0mm	1,0mm	1,0mm	1,0mm	1,0mm
100 pcs. per PE-Bag						

3.4.11 PP Short Thread Cap ND9, blue, with closed top

Art. No.	SV 09 0786	SV 09 1403	SV 09 0787
Cap:	PP Short Thread Cap, blue, closed top	PP Short Thread Cap, blue, closed top	PP Short Thread Cap, blue, closed top
Septa:	Natural Rubber red-orange/TEF transparent	RedRubber / PTFE beige	Silicone white/PTFE red
Hardness:	60° shore A	45° shore A	55° shore A
Thickness:	1,0mm	1,0mm	1,0mm
100 pcs. per PE-Bag			

3.4.12 Magnetic Short Thread Seals, 6mm centre hole (CTC GC PAL + Thermo Scientific TriPlus)

Art. No.	SV 09 1153	SV 09 1173	SV 09 1124
Cap:	PP SC, blue, with assembled magnetic crimp cap ND11, gold, 6mm hole	PP SC, blue, with assembled magnetic crimp cap ND11, gold, 6mm hole	PP SC, blue, with assembled magnetic crimp cap ND11,gold, 6mm hole
Septa:	Silicone white/PTFE red	Silicone white/PTFE blue, slit	Natural Rubber red-orange/TEF transparent
Hardness:	45° shore A	55° shore A	60° shore A
Thickness:	1,0mm	1,0mm	1,0mm
100 pcs. per PE-Bag			

3. Short Thread Vials and Closures ND9

3.5 Special 2in1 Kits for Short Thread Vials and Closures ND9

To carry out an analysis, the user always needs two components at the same time: vial and closure. To fulfill this need in a convenient way Chroma Globe offers 2in1 KITs containing 100 vials and 100 seals in a blue, reclosable PP-box. All advantages of the individual items (CleanPack packaging of the vials, tamper-proof evident packaging of vials and seals, traceability through a batch numbering system, etc.) still remain. Furthermore the customer only has to reorder one article instead of two, which makes life easier.

3.5.1 Special 2in1 Kits for Agilent LC Autosampler

KP 09 1895		KP 09 1142		KP 09 1378	
1,5ml Short Thread Vial, 32 x 11.6mm, clear glass, 1st hydrol. class, wide opening, label + filling lines (KG 09 0197)	9mm PP Short Thread Cap, blue, with centre hole; RedRubber/PTFE beige, 45° shore A, 1,0mm (SV 09 0776)	1,5ml Short Thread Vial, 32 x 11.6mm, clear glass, 1st hydrol. class, wide opening, label + filling lines (KG 09 0197)	9mm PP Short Thread Cap, blue, centre hole; Silicone white/PTFE red, 55° shore A, 1.0mm (SV 09 0159)	1,5ml Short Thread Vial, 32 x 11.6mm, amber glass, 1st hydrol. class, wide opening, label + filling lines (KG 09 0188)	9mm PP Short Thread Cap, blue, centre hole; Silicone white/PTFE red, 55° shore A, 1.0mm (SV 09 0159)
100 Vials and 100 Closures per 2in1 Kit		100 Vials and 100 Closures per 2in1 Kit		100 Vials and 100 Closures per 2in1 Kit	

3.5.2 Special 2in1 Kits for Merck/Hitachi LC Autosampler

KP 09 1896		KP 09 1142		KP 09 1897	
1,5ml Short Thread Vial, 32 x 11.6mm, clear glass, 1st hydrol. class, wide opening, label + filling lines (KG 09 0197)	9mm PP Short Thread Cap, blue, centre hole; Natural Rubber red-orange/TEF transparent, 60° shore A, 1.0mm (SV 09 0433)	1,5ml Short Thread Vial, 32 x 11.6mm, clear glass, 1st hydrol. Class, wide opening, label + filling lines (KG 09 0197)	9mm PP Short Thread Cap, blue, centre hole; Silicone white/PTFE red, 55° shore A, 1.0mm (SV 09 0159)	1,5ml Short Thread Vial, 32 x 11.6mm, amber glass, 1st hydrol. class, wide opening, label + filling lines (KG 09 0188)	9mm PP Short Thread Cap, blue, centre hole; Silicone white/PTFE blue, 55° shore A, 1.0mm, **Slit** (SV 09 0187)
100 Vials and 100 Closures per 2in1 Kit		100 Vials and 100 Closures per 2in1 Kit		100 Vials and 100 Closures per 2in1 Kit	

3.5.3 Special 2in1 Kits for Shimadzu LC Autosampler

KP 09 1898		KP 09 1899		KP 09 1900	
1,5ml Short Thread Vial, 32 x 11.6mm, clear glass, 1st hydrol. class, wide opening, label + filling lines (KG 09 0197)	9mm PP Short Thread Cap, black, with centre hole; RedRubber / PTFE beige, 45° shore A, 1,0mm (SV 09 0778)	1,5ml Short Thread Vial, 32 x 11.6mm, clear glass, 1st hydrol. class, wide opening, label + filling lines (KG 09 0197)	9mm PP Short Thread Cap, black, centre hole; Silicone white/PTFE red, 55° shore A, 1.0mm (SV 09 0166)	1,5ml Short Thread Vial, 32 x 11.6mm, amber glass, 1st hydrol. class, wide opening, label + filling lines (KG 09 0188)	9mm PP Short Thread Cap, black, centre hole; Silicone white/PTFE red, 55° shore A, 1.0mm (SV 09 0166)
100 Vials and 100 Closures per 2in1 Kit		100 Vials and 100 Closures per 2in1 Kit		100 Vials and 100 Closures per 2in1 Kit	

3. Short Thread Vials and Closures ND9

3.5.4 Special 2in1 Kits for Waters LC Autosampler

KP 09 1901

1,5ml Short Thread Vial, 32 x 11.6mm, clear glass, 1st hydrol. class, wide opening, label + filling lines (KG 09 0197)	9mm *UltraBond* PP Short Thread Cap, blue, centre hole; Silicone beige/PTFE white, 45° shore A, 1.0mm (SV 09 0772)

100 Vials and 100 Closures per 2in1 Kit

KP 09 1902

1,5ml Short Thread Vial, 32 x 11.6mm, clear glass, 1st hydrol. class, wide opening, label + filling lines (KG 09 0197)	9mm *UltraBond* PP Short Thread Cap, blue, centre hole; Silicone beige/PTFE white, 45° shore A, 1.0mm, **slit** (SV 09 0773)

100 Vials and 100 Closures per 2in1 Kit

KP 09 1903

1,5ml Short Thread Vial, 32 x 11.6mm, amber glass, 1st hydrol. class, wide opening, label +filling lines (KG 09 0188)	9mm *UltraBond* PP Short Thread Cap, blue, centre hole; Silicone beige/PTFE white, 45° shore A, 1.0mm, **slit** (SV 09 0773)

100 Vials and 100 Closures per 2in1 Kit

KP 09 1904

Short Thread Vial with integrated 0,2ml Micro-Insert, 32 x 11,6mm, clear glass, 1. hydrol. class, "Base Bonded", with small micro-insert (KG 09 0682)	9mm *UltraBond* PP Short Thread Cap, blue, centre hole; Silicone beige/PTFE white, 45° shore A, 1.0mm (SV 09 0772)

100 Vials and 100 Closures per 2in1 Kit

KP 09 1905

1.1ml Microliter Short Thread Vial ND9, 32 x 11.6mm, clear glass, 1st hydrolytic class, solid cone, with shaped glass bottom (KG 09 0365)	9mm *UltraBond* PP Short Thread Cap, blue, centre hole; Silicone beige/PTFE white, 45° shore A, 1.0mm (SV 09 0772)

100 Vials and 100 Closures per 2in1 Kit

KP 09 1906

0,9ml Total Mikroliter Short Thread Vial 32 x 11,6mm, clear glass, .. 1st hydrolytic class (KG 09 1122)	9mm *UltraBond* PP Short Thread Cap, blue, centre hole; Silicone beige/PTFE white, 45° shore A, 1.0mm, **slit** (SV 09 0773)

100 Vials and 100 Closures per 2in1 Kit

3.6 Short Thread Vials ND9, with pre-assembled Short Threads Caps ND9

Sometimes customers wish to obtain vials which are already crimped or screwed with a seal of their choice. For example the tobacco industry analyses the smoke of a cigarette which is injected into an already crimped vial. Also a lot of EPA Vials are bought with the appropriate closure already screwed on top of the vial. **Chroma Globe can provide any type of pre-sealed vials and closures.**

3. Short Thread Vials and Closures ND9

3.7 PFAS Safe Guard Vials, Closures and 2in1 Kits ND9

PFAS stands for per- and polyfluoroalkyl substances, and are colloquially known as "forever chemicals." They are a group of man-made chemicals that have been widely used in various industrial and consumer products since the 1940's. PFAS are known for their strong chemical bonds, which make them resistant to heat, water, and oil. This property has made them popular for use in a wide range of applications, including firefighting foams, non-stick cookware (such as Teflon), waterproof fabrics, food packaging, and many other household and industrial products.
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PFAS CAN BE FOUND IN:
- **Environmental monitoring**
- **Product testing**
- **Industrial quality assurance**
- **Commercial household cleaning products**
- **Food packaging**

Goals of the EPA are to ensure science-based decision making to identify which PFAS may pose human health and ecological risks and develop tests to measure, remove and destroy them.

3.7.1 PFAS Safe Guard Vials and Closures ND9

3.7.1.1 PFAS Safe Guard PP Vials ND9

KG 09 0446	KG 09 0469	KG 09 0468
1.5ml PP Short Thread Vial, transparent, filling lines, 32 x 11.6mm, slightly concave shaped bottom	0,3ml PP Short Thread Micro-Vial, transparent, 32 x 11.6mm, conical bottom	0,7ml PP Short Thread Micro-Vial, transparent, 32 x 11.6mm, flat bottom
R. vol. < 110µl	R. vol. < 4 µl	R. vol. < 80µl
100 pcs. per PP-Box	100 pcs. per PE Bag	

3.7.1.2 PFAS Safe Guard PP Closures ND9, with Silicone/Polypropylene and Silicone/Polyimide septa

SV 09 2284	SV 09 2285	SV 09 2237	SV 09 2238	SV 09 1943
PP Short Thread Cap ND9, transparent, 6mm centre hole		PP Short Thread Cap ND9, blue, 6mm centre hole		
Silicone white/ Polypropylene transparent	Silicone white/ Polypropylene transparent *SLIT*	Silicone white/ Polypropylene transparent	Silicone white/ Polypropylene transparent *SLIT*	Silicone white/ Polyimide orange, *fluorine-free*
45° shore A	45° shore A	45° shore A	45° shore A	50° shore A
1,0mm	1,0mm	1,0mm	1,0mm	1,0mm
100 pcs. per PE-Bag				

3.7.1.3 PFAS Safe Guard 2in1 Kits – Short Thread vials and Closures

KP 09 2242PFAS	
1.5ml PP Short Thread Vial, transparent, filling lines, 32 x 11.6mm, slightly concave shaped bottom **(KG 09 0446)**	PP Short Thread Cap ND9, blue, 6mm centre hole; Silicone white/ Polypropylene transparent, for PFAS analysis **(SV 09 2237)**
100 Vials and 100 Closures per 2in1 Kit	

KP 09 2243PFAS	
1.5ml PP Short Thread Vial, transparent, filling lines, 32 x 11.6mm, slightly concave shaped bottom **(KG 09 0446)**	PP Short Thread Cap ND9, blue, 6mm centre hole; Silicone white/ Polypropylene transparent, for PFAS analysis, **SLIT** **(SV 09 2238)**
100 Vials and 100 Closures per 2in1 Kit	

KP 09 2265PFAS	
1.5ml PP Short Thread Vial, transparent, filling lines, 32 x 11.6mm, slightly concave shaped bottom **(KG 09 0446)**	PP Short Thread Cap ND9, blue, 6mm centre hole; Silicone white/ Polypropylene transparent, for PFAS analysis **(SV 09 2284)**
100 Vials and 100 Closures per 2in1 Kit	

KP 09 2266PFAS	
1.5ml PP Short Thread Vial, transparent, filling lines, 32 x 11.6mm, slightly concave shaped bottom **(KG 09 0446)**	PP Short Thread Cap ND9, blue, 6mm centre hole; Silicone white/ Polypropylene transparent, for PFAS analysis, **SLIT** **(SV 09 2285)**
100 Vials and 100 Closures per 2in1 Kit	

Further PFAS KIT 2in1 Kits combinations upon request available!

3. Short Thread Vials and Closures ND9

3.8 Certified Vial KITs (Short Thread Vials and Short Thread Seals ND9)

HPLC and GC certified Vial KITs:
Certifications are becoming increasingly important in the day-to-day work of laboratories in order to make analytical processes more reproducible and to eliminate possible sources of error. For Chroma Globe, the highest quality of vials and closures are mandatory and are analytically confirmed by the HPLC and GC certification.

3.8.1 HPLC and GC certified Vial Kits (Short Thread ND9)

- Each batch of HPLC and GC-certified KIT is tested on 15 critical parameters. In a ealistic method, an HPLC/UV and GC/MS-test of vials/closure combination of blanks and contaminations will be carried out.
- The batch-specific test certificate with the HPLC and GC-Chromatograms can be handed out upon request.

KP 09 1499HPLC

1,5ml Short Thread Vial, 32 x 11.6mm, clear glass, 1st hydrol. class, wide opening, label + filling lines	9mm **UltraClean** PP Short Thread Cap, blue, centre hole; Silicone white/PTFE red, 55° shore A, 1.0mm

100 Vials and 100 Closures per Certified Kit

KP 09 1514HPLC

1,5ml Short Thread Vial, 32 x 11.6mm, amber glass, 1st hydrol. class, wide opening, label + filling lines	9mm **UltraClean** PP Short Thread Cap, blue, centre hole; Silicone white/PTFE red, 55° shore A, 1.0mm

100 Vials and 100 Closures per Certified Kit

KP 09 1963HPLC

Short Thread Vial with integrated 0,2ml Micro-Insert, 32 x 11,6mm, clear glass, 1. hydrol. class, "BaseBond", with small micro-insert	9mm **UltraClean** PP Short Thread Cap, blue, centre hole; Silicone white/PTFE red, 55° shore A, 1.0mm

100 Vials and 100 Closures per Certified Kit

KP 09 1964HPLC

Short Thread Vial with integrated 0,2ml Micro-Insert, 32 x 11,6mm, clear glass, 1. hydrol. class, "BaseBond", with wide micro-insert	9mm **UltraClean** PP Short Thread Cap, blue, centre hole; Silicone white/PTFE red, 55° shore A, 1.0mm

100 Vials and 100 Closures per Certified Kit

KP 09 1965HPLC

1.1ml Microliter Short Thread Vial ND9, 32 x 11.6mm, clear glass, 1st hydrolytic class, solid cone, with shaped glass bottom	9mm **UltraClean** PP Short Thread Cap, blue, centre hole; Silicone white/PTFE red, 55° shore A, 1.0mm

100 Vials and 100 Closures per Certified Kit

KP 09 1966HPLC

0,9ml Total Mikroliter Short Thread Vial 32 x 11,6mm, clear glass, 1. hydrol. class	9mm **UltraClean** PP Short Thread Cap, blue, centre hole; Silicone white/PTFE red, 55° shore A, 1.0mm

100 Vials and 100 Closures per Certified Kit

3. Short Thread Vials and Closures ND9

3.8 Certified Vial KITs (Short Thread Vials and Short Thread Seals ND9)

The LC/MS and GC/MS Certified KITs represent our premium range of certified products.
Each lot of the vial/closure combination has been tested by LC/MS and GC/MS on traces
of blank values and contaminations.

3.8.2 LC/MS and GC/MS Certified Vial KITs (Short Thread Vials and Short Thread Seals ND9)

- The glass surface of the vials provides very low adsorption tendencies for all types of polar compounds; in fact a lot lower as for all other vials of 1st hydrolytic class glass (without surface treatment)..
- The closure contains a very soft ultra low bleed (**EASY***PIERCE* High Performance) silicone septum with PTFE layer, optimized for ultra trace analysis.
- The batch-specific test certificate with the MS-Chromatograms can be handed out on request

KP 09 1967LCMS

1,5ml Short Thread Vial, 32 x 11.6mm, clear glass, 1st hydrol. class, wide opening, label + filling lines	9mm *EASYPIERCE* High Performance PP Short Thread Cap, blue, centre hole; Silicone white/PTFE red, 40° shore A, 1.0mm
100 Vials and 100 Closures per Certified Kit	

KP 09 1968LCMS

1,5ml Short Thread Vial, 32 x 11.6mm, amber glass, 1st hydrol. class, wide opening, label + filling lines	9mm *EASYPIERCE* High Performance PP Short Thread Cap, blue, centre hole; Silicone white/PTFE red, 40° shore A, 1.0mm
100 Vials and 100 Closures per Certified Kit	

KP 09 1969LCMS

Short Thread Vial with integrated 0,2ml Micro-Insert, 32 x 11,6mm, clear glass, 1. hydrol. class, "Base Bonded", with small micro-insert	9mm *EASYPIERCE* High Performance PP Short Thread Cap, blue, centre hole; Silicone white/PTFE red, 40° shore A, 1.0mm
100 Vials and 100 Closures per Certified Kit	

KP 09 1970LCMS

Short Thread Vial with integrated 0,3ml Micro-Insert, 32 x 11,6mm, clear glass, 1. hydrol. class, "Base Bonded", with wide micro-insert	9mm *EASYPIERCE* High Performance PP Short Thread Cap, blue, centre hole; Silicone white/PTFE red, 40° shore A, 1.0mm
100 Vials and 100 Closures per Certified Kit	

KP 09 1971LCMS

1.1ml Microliter Short Thread Vial ND9, 32 x 11.6mm, clear glass, 1st hydrolytic class, solid cone, with shaped glass bottom	9mm *EASYPIERCE* High Performance PP Short Thread Cap, blue, centre hole; Silicone white/PTFE red, 40° shore A, 1.0mm
100 Vials and 100 Closures per Certified Kit	

KP 09 1972LCMS

0,9ml Total Mikroliter Short Thread Vial 32 x 11,6mm, clear glass, 1. hydrol. class	9mm *EASYPIERCE* High Performance PP Short Thread Cap, blue, centre hole; Silicone white/PTFE red, 40° shore A, 1.0mm
100 Vials and 100 Closures per Certified Kit	

4. Screw Neck Vials and Closures ND10

The vials are preferentially used on instruments of the following manufacturers: Jasco, PerkinElmer, Shimadzu, Varian, Waters®, etc.

- Wide opening allows easy filling
- Wide range of micro inserts
- Each combination of a 1.5ml threaded vial is available with a suitable screw cap as a 2in1 kit
- Closed top screw seals for storage
- Single septa as replacement available

4.1 Screw Neck Vials ND10, wide opening, 10-425 thread and Mikroliter Vials ND10

GW 10 0451	GW 10 0452	GW 10 1038	GW 10 0453	GW 10 0861 GW 10 0862	GW 10 1319 GW 10 1320
1.5ml Screw Neck Vial, 10-425 Thread, 32 x 11.6mm, clear glass, 1st hydrol. class, wide opening	1,5ml Screw Neck Vial, 10-425 Thread, 32 x 11.6mm, clear glass, 1st hydrol. class, wide opening, label + filling lines	1,5ml Screw Neck Vial, 10-425 Thread, 32 x 11.6mm, amber glass, 1st hydrol. Class, wide opening	1,5ml Screw Neck Vial, 10-425 Thread, 32 x 11.6mm, amber glass, 1st hydrol. class, wide opening, label + filling lines	1,1ml Screw Neck Vial, 10-425 Thread, 32 x 11,6mm, clear glass, (Amber Glass) 1st hydrol. class	1,1ml Screw Neck Vial, 10-425 Thread, 32 x 11,6mm, clear glass, (Amber Glass) 1st hydrol. clas
R. vol. < 120 µl	R. vol. < 120 µl	R. vol. < 120 µl	R. vol. < 120 µl	R. vol. < 15 µl	R. vol. < 15 µl
100 pcs. per PP-Box						

4.2 Micro-Inserts for Vials with wide opening

Special features of our micro insert ME 06 0232 with polymer spring.
- The geometry of the three spreader feet is specially designed so that the feet press against the inner walls of the vial when it is inserted into it, thus ensuring a centric fit and thus reliable sampling.
- The hardness of the polymer spring is specially adapted to ensure that there is sufficient elasticity for easy insertion, but that sufficient counter pressure is generated by the spring mechanism to ensure that the insert always presses against the septa and prevents the sample from leaking.

ME 06 0218	ME 06 0361	ME 06 0362	ME 06 0232	ME 06 1174
0.25ml Micro-Insert, 31 x 6mm, clear glass, 1st hydrol. class, 15mm top **SILANIZED** **ME 06 0218s**	0,3ml Micro-Insert, 31 x 6mm, clear glass, 1st hydrol. class, 12mm top **SILANIZED** **ME 06 0361s**	0,35ml Micro-Insert, 31 x 6mm, clear glass, 1st hydrol. class, flat bottom **SILANIZED** **ME 06 0362s**	0,25ml Micro-Insert, 29 x 5.7mm, clear glass, 1st hydrol. class, with assembled plastic spring **SILANIZED** **ME 06 0232s**	0.25ml PE Micro-Insert, 29 x 6mm, clear, with intregrated plastic spring
R. vol. < 4 µl	R. vol. < 4 µl	R. vol. < 8 µl	R. vol. < 4 µl	R. vol. < 8 µl
10 x 100 pcs. per PP-Box				100 pcs. per PE-Bag

R. vol. = Residual Volume (µl)

4. Screw Neck Vials and Closures ND10

4.3 PP Screw Seals ND10

• Our 10-425 PP Screw Seals can be offered in a variety of septa
• In standard assembled and therefore available from stock, the seals are available as follows
• On request the Seals ND10 can be delivered with further septa materials or with a different cap color

Art. No.	SV 10 0461	SV 10 0462	SV 10 0463	SV 10 0464	SV 10 0502
Cap:	PP Srew Cap, black, 7mm hole				PP SC, black, closed top
Septa:	Natural Rubber red-orange/TEF transparent	Silicone white/ PTFE red	PTFE red/Silicone white/PTFE red	Silicone white/ PTFE blue, *slit*	Natural Rubber red-orange/TEF transparent
Hardness	60° shore A	45° shore A	45° shore A	55° shore A	60° shore A
Thickness:	1,3mm	1,3mm	1,0mm	1,5mm	1,0mm
100 pcs. per PE-Bag					

4.4 Septa 10mm for Screw Caps ND10

• Please note that the diameter of the septa is designed to match our cap design. We cannot guarantee an optimal press-fit of the septa in caps of other manufacturers!
• Further septa made of other materials such as Viton, Butyl/PTFE etc. are available on request!

Art. No.	SE 10 0098	SE 10 0496	SE 10 0497	SE 10 0498	SE 10 0499
Septa:	PTFE virginal	Natural Rubber red-orange/TEF transparent	Silicone white /PTFE red	PTFE red/Silicone white/PTFE red	Silicone white /PTFE blue, slit
Durometer:	53° shore A	60° shore A	45° shore A	45° shore A	55° shore A
Thickness:	0,20mm	1,0mm	1,3mm	1,0mm	1,5mm
1.000 pcs. per PE-Bag					

4.5 PP Screw Caps ND10

• High-quality PP Screw Caps with thread 10-425 are available as standard caps.
• Available with hole and as closed top version, black
• Other cap colors are available on request
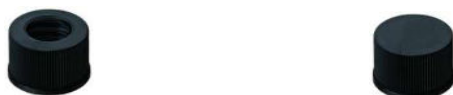
Art. No.	SK 10 0500	SK 10 0501
Cap:	PP Screw Cap, black, 7mm hole	PP Screw Cap, black, closed top
1.000 pcs. per PE-Bag		

Upon request available as 2in1 Kits!

5. Crimp Neck Vials and Closures ND11

The vials are preferentially used on instruments of the following manufacturers: Agilent, Carlo Erba, CTC, DANI, Fisons, Gerstel, Jasco, PerkinElmer, Shimadzu, Spark, Thermo Scientific, Varian, etc.

- Standard vials for GC and HPLC.
- Vials with a barcode label can be obtained as well as pre-crimped vials.
- Wide range of suitable standard crimp Seals, micro inserts and appropriate crimping and decapping tools

5.1 Crimp Neck Vials ND11, wide opening ## 5.2 Micro-Inserts for Vials with wide opening

RR 11 0176	RR 11 0198	RR 11 0895	RR 11 0199	ME 06 0218	ME 06 0361	ME 06 0362	ME 06 0232
1.5ml Crimp Neck Vial, 32 x 11.6mm, clear glass, 1st hydrol. class, wide opening	1,5ml Crimp Neck Vial, 32 x 11.6mm, clear glass, 1st hydrol. class, wide opening, label + filling lines	1.5ml Crimp Neck Vial, 32 x 11.6mm, clear glass, 1st hydrol. class, wide opening	1,5ml Crimp Neck Vial, 32 x 11.6mm, amber glass, 1st hydrol. class, wide opening, label + filling lines	0.25ml Micro-Insert, 31 x 6mm, clear glass, 1st hydrol. class, 15mm top	0,3ml Micro-Insert, 31 x 6mm, clear glass, 1st hydrol. class, 12mm top	0,35ml Micro-Insert, 31 x 6mm, clear glass, 1st hydrol.class, flat bottom	0,25ml Micro-Insert, 29 x 5.7mm, clear glass, 1st hydrol. class, with assembled plastic spring
SILANIZED RR 11 0176s	**SILANIZED RR 11 0198s**	**SILANIZED RR 11 0895s**	**SILANIZED RR 11 0199s**	**SILANIZED ME 06 0218s**	**SILANIZED ME 06 0361s**	**SLANIZED ME 06 0362s**	**SILANIZED ME 06 0232s**
R. vol. < 100 µl	R. vol. < 100 µl	R. vol. < 100 µl	R. vol. < 100 µl	R. vol. < 4 µl	R. vol. < 4 µl	R. vol. < 8 µl	R. vol. < 4 µl

100 pcs. per PP-Box

5.1 Crimp Neck Vials ND11 – BaseBond Micro Vials (Cont.)

BaseBond Vials

RR 11 0680	RR 11 0681	RR 11 2056	RR 11 2057	RR 11 1353	RR 11 1354	RR 11 2048	RR 11 2049
Crimp Neck Vial with integrated 0,2ml Micro-Insert, 32 x 11.6mm, clear glass, 1st hydrol. class, **with small micro-insert "BaseBond"**	Crimp Neck Vial with integrated 0,2ml Micro-Insert, 32 x 11.6mm, amber glass, 1st hydrol. class, **with small micro-insert "BaseBond"**	Crimp Neck Vial with integrated 0,2ml Micro-Insert, 32 x 11.6mm, clear glass, 1st hydrol. class, writing patch, **with small micro-insert "BaseBond"**	Crimp Neck Vial with integrated 0,2ml Micro-Insert, 32 x 11.6mm, amber glass, 1st hydrol. class, writing patch, **with small micro-insert "BaseBond"**	Crimp Neck Vial with integrated 0,3ml Micro-Insert, 32 x 11.6mm, clear glass, 1st hydrol. class, **with wide micro-insert "BaseBond"**	Crimp Neck Vial with integrated 0,3ml Micro-Insert, 32 x 11.6mm, amber glass, 1st hydrol. class, **with wide micro-insert "BaseBond"**	Crimp Neck Vial with integrated 0,3ml Micro-Insert, 32 x 11.6mm, clear glass, 1st hydrol. class, writing patch, **with wide micro-insert "BaseBond"**	Crimp Neck Vial with integrated 0,3ml Micro-Insert, 32 x 11.6mm, amber glass, 1st hydrol. class, writing patch, **with wide micro-insert "BaseBond"**
R. vol. < 1 µl	R. vol. < 1 µl	R. vol. < 1 µl	R. vol. < 1 µl	R. vol. < 3 µl	R. vol. < 3 µl	R. vol. < 3 µl	R. vol. < 3 µl

100 pcs. per PP-Box

5. Crimp Neck Vials and Closures ND11

5.1 Crimp Neck Vials ND11 – Other Micro Vials (Cont.)

TopBond   **TopBond**

RR 11 0294 RR 11 1682	RR 11 1200 RR 11 1316	SR 11 1123 SR 11 1408	RR 11 0366	RR 11 0367	RR 11 0872 RR11 0873	RR 11 0322	RR 11 0323
1.1ml Microliter-Vial, Crimp Neck 32 x 11.6mm, clear glass, (amber glass) 1st hydrol. class **SILANIZED RR 11 0294s**	1.1ml Microliter-Vial, Crimp Neck 32 x 11.6mm, clear glass, (amber glass) 1st hydrol. class **SILANIZED RR 11 1200s**	0,9ml Total Microliter Snap/Crimp Ring Vial 32 x 11.6mm, clear glass, 1st hydrol.class	0,9ml Micro-Vial, 32 x 10mm, clear glass, 1st hydrol. class, conical	1,1ml Micro-Vial, 32 x 11.6mm, clear glass, 1st hydrol. class, conical	1,1ml Microliter Crimp Neck Vial 32 x 11.6mm clear glass, (amber glass) 1st hydrol. Class, **with rounded glass base**	Crimp Neck Vial with integrated 0,2ml Micro-Insert, 32 x 11.6mm, clear glass, 1st hydrol. class, writing patch, **with small micro-insert „TopBond"**	Crimp Neck Vial with integrated 0,2ml Micro-Insert, 32 x 11.6mm, amber glass, 1st hydrol. class, writing patch, **with small micro-insert "TopBond"**
R. vol. < 15 µl	R. vol. < 15 µl	R. vol. < 1 µl	R. vol. < 2 µl	R. vol. < 4 µl	R. vol. < 15 µl	R. vol. < 1 µl	R. vol. < 1 µl
100 pcs. per PP-Box			100 pcs. per PE-Bag			100 pcs. per PP-Box	

5.3 Aluminum Crimp Seals ND11

5.3.1 Natural Rubber/TEF Seals

- Perfect for multiple injections due to its reclosable properties
- Temperature resistant from -40° C to 120° C
- Used in GC and HPLC

Art. No.	BV 11 0216	BV 11 2212	BV 11 2213	BV 11 2201	BV 11 2214
Cap:	Aluminum Crimp Cap, clear lacquered, 5,5mm hole	Aluminum Crimp Cap, green lacquered, 5,5mm hole	Aluminum Crimp Cap, red lacquered, 5,5mm hole	Aluminum Crimp Cap, blue lacquered, 5,5mm hole	Aluminum Crimp Cap, gold lacquered, 5,5mm hole
Septa:	Natural Rubber red-orange/TEF transparent, 60° shore A, 1,0mm				
	100 pcs. per PE-Bag				

5.3.2 Natural Rubber/Butyl/TEF Seals

- Three-layer, so-called sandwich septa made of natural rubber/butyl/TEF combines the excellent physical properties of natural rubber (resealing properties) with the excellent chemical properties of synthetic butyl (purity)
- Ideal for multiple injections, easier to penetrate than natural rubber/TEF seals

Art. No.	BV 11 0336	BV 11 0503	BV 11 0504	BV 11 0506
Cap:	Aluminum Crimp Cap, clear lacquered, 5,5mm hole	Aluminum Crimp Cap, green lacquered, 5,5mm hole	Aluminum Crimp Cap, red lacquered, 5,5mm hole	Aluminum Crimp Cap, gold lacquered, 5,5mm hole
Septa:	Natural Rubber red-orange/Butyl/TEF transparent, 45° shore A, 1,0mm			
	100 pcs. per PE-Bag			

5. Crimp Neck Vials and Closures ND11

5.3.3 RedRubber/PTFE Seals
- New synthetic rubber comparable to silicone in terms of purity
- Temperature resistance from -40° C to 150° C
- Preferably recommended for single use injections due to less good reclosing properties
- Applications in GC and HPLC

Art. No.	BV 11 0789	BV 11 0790	BV 11 0791	BV 11 0792	BV 11 0793
Cap:	Aluminum Crimp Cap, clear lacquered, 5,5mm hole	Aluminum Crimp Cap, green lacquered, 5,5mm hole	Aluminum Crimp Cap, red lacquered, 5,5mm hole	Aluminum Crimp Cap, blue lacquered, 5,5mm hole	Aluminum Crimp Cap, gold lacquered, 5,5mm hole
Septa:	RedRubber/PTFE beige, 45° shore A, 1mm (tested instrument manufacturer quality)				
100 pcs. per PE-Bag					

5.3.4 Silicone white/PTFE red Seals
- Is the purest synthetic elastomer and is therefore used for critical analyses
- Temperature resistance from -60° C to 200° C
- Preferably recommended for single use injections due to less good reclosing properties
- Application in GC, HPLC and headspace analysis

Art. No.	BV 11 0172	BV 11 0794	BV 11 0795	BV 11 0796	BV 11 0797
Cap:	Aluminum Crimp Cap, clear lacquered, 5,5mm hole	Aluminum Crimp Cap, green lacquered, 5,5mm hole	Aluminum Crimp Cap, red lacquered, 5,5mm hole	Aluminum Crimp Cap, blue lacquered, 5,5mm hole	Aluminum Crimp Cap, gold lacquered, 5,5mm hole
Septa:	Silicone white/PTFE red, 45° shore A, 1,3mm				
100 pcs. per PE-Bag					

5.3.5 Other Silicone/PTFE Seals
- The purest synthetic elastomer and therefore used for critical analyses
- Silicone septa coated with PTFE on both sides for low particle formation
- Slit septa in HPLC as penetration aid for blunt needles to create a valve effect in case of multiple injections
- Temperature resistance from -60° C to 200° C
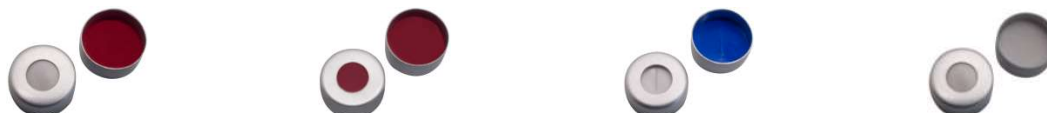
Art. No.	BV 11 0643	BV 11 0138	BV 11 0136	BV 11 1417
Cap:	Aluminum Crimp Cap, clear lacquered, 5,5mm hole			
Septa:	Silicone cream/PTFE red	PTFE red/Silicone white/PTFE red	Silicone white/ PTFE blue, **cross-slit**	*ZeroPEAK* Silicon natur/PTFE beige
Hardness:	55° shore A	45° shore A	55° shore A	38° shore A
Thickness:	1,5mm	1,0mm	1,0mm	1,0mm
100 pcs. per PE-Bag				

5.3.6 Butyl/PTFE Seals

Art. No.	BV 11 0130	BV 11 0382
Cap:	Aluminum Crimp Cap, clear lacquered, 5,5mm hole	
Septa:	Butyl cream/PTFE grey	PTFE grey/Butyl cream/PTFE grey
Hardness:	55° shore A	55° shore A
Thickness:	1,3mm	1,0mm
100 pcs. per PE-Bag		

5. Crimp Neck Vials and Closures ND11

5.3.7 High Temperature Seals

- Total phthalate free closure system (TPF closure); elastomer and halogen free septa
- Viton is resistant to a large number of corrosive organic substances; it has a high thermal and chemical resistance; main field of application in the petrochemical industry

Art. No.	BV 11 0604	BV 11 0875	BV 11 0918	BV 11 0135	BV 11 0134
Cap:	Aluminum Crimp Cap, clear lacquered, 5,5mm hole, with roll grove	Aluminum Crimp Cap, clear lacquered, 5,5mm hole	Aluminum Crimp Cap, clear lacquered, 5,5mm hole	Aluminum Crimp Cap, clear lacquered, 5,5mm hole	Aluminum Crimp Cap, clear lacquered, 5,5mm hole
Septa:	PTFE virginal	PTFE virginal (add. TPF O-ring)	Silicone white/Aluminum foil silver	Viton 1A	Viton 1A
Hardness:	53° shore A	53° shore A	50° shore A	70° shore A	70° shore A
Thickness:	0,25mm	0,25mm	1,3mm	1,0mm	1,5mm
Applicable up to:	−200 °C bis +260 °C		−40 °C bis +220 °C	−40 °C bis +240 °C	
100 pcs. per PE-Bag					

5.3.8 Magnetic Crimp Seals ND11 (for CTC PAL + Thermo Scientific TriPlus Autosampler)

Art. No.	BV 11 0798	BV 11 0715
Cap:	Magnetic Crimp Cap, silver lacquered, 5mm hole	
Septa:	Silicone white/PTFE red	PTFE red/Silicone white/PTFE red
Hardness:	45° shore A	45° shore A
Thickness:	1,3mm	1,0mm
100 pcs. per PE-Bag		

5.3.9 Trace analysis and TPF closure systems

Total Phthalat Free (TPF) Seals with assembled aluminum liner (BV 11 0979)
- Septa material free of any elastomers and halogens; therefore no contamination of the sample by plasticizers, Silicone or Butyl rubbers and PTFE/FEP/ TEF materials
- Recommended for GC/MS and LC/MS applications
- The additional ring which is assembled above the aluminum liner achieves an excellent tightness and inertness of the complete combination seal
- Suitable for storing of standards or reactive substances which would normally corrode the septum material

Application areas:
- Analytic of elastomers und plastomers
- Phthalate analysis
- Analytic of fluorinated, halogenated organic compounds
- VOC (volatile organic compounds) analysis
- Analytic of polymerisation catalysts
- Analytic of silicones und silicates

Art. No.	BV 11 0979	BV 11 0980
Cap:	Aluminum Crimp Cap, clear lacquered, 5,5mm hole, with roll grove	
Septa:	Aluminum Septa (additional sealing by TPF O-ring)	PTFE virginal, 0,25mm (additional sealing by TPF O-ring)
Hardness:		53° shore A
Thickness:	0,1mm	0,25mm
Packed per 100 pieces in plasticizer-free glass vial		

5. Crimp Neck Vials and Closures ND11

5.4 Septa 11mm Aluminum Crimp Seals ND11 (Cont.)

- Please note that the diameter of the septa is designed to match our cap design. We cannot guarantee an optimal press-fit of the septa in caps of other manufacturers.
- Further septa made of other materials are available upon request.

Art. No.	SE 11 0120	SE 11 0693	SE 11 0121	SE 11 0083	SE 11 0091	SE 11 0827
Septa:	Silicone white/PTFE red	Silicone cream/PTFE red	PTFE red/Silicone white/PTFE red	Silicone white/PTFE blue, **cross-slit**	Viton, black	Silicone white/ Aluminum foil, silver
Hardness:	45° shore A	55° shore A	45° shore A	55° shore A	70° shore A	50° shore A
Thickness:	1,3mm	1,5mm	1,0mm	1,5mm	1,0mm	1,3mm
1.000 pcs. per PE-Bag						

Art. No.	SE 11 0099	SE 11 0080	SE 11 0788	SE 11 0081	SE 11 0381
Septa:	PTFE virginal	Natural Rubber red-orange/TEF transparent	RedRubber/ PTFE beige	Butyl cream/ PTFE grey	PTFE grey/Butyl cream/PTFE grey
Hardness:	53° shore A	60° shore A	45° shore A	55° shore A	55° shore A
Thickness:	0,20mm	1,0mm	1,0mm	1,3mm	1,3mm
1.000 pcs. per PE-Bag					

5.5 Aluminum Crimp Caps ND11

- Aluminium crimp caps are available in clear lacquer, green lacquer, red lacquer, blue lacquer and gold lacquer as standard
- Other colours can be supplied on request

Art. No.	BK 11 0123	BK 11 0126	BK 11 0127	BK 11 0125	BK 11 0128
Cap:	11mm Aluminum Crimp Cap, clear lacquered, 5,5mm hole	11mm Aluminum Crimp Cap, green lacquered, 5,5mm hole	11mm Aluminum Crimp Cap, red lacquered, 5,5mm hole	11mm Aluminum Crimp Cap, blue lacquered, 5,5mm hole	11mm Aluminum Crimp Cap, gold lacquered, 5,5mm hole
1.000 pcs. per PE-Bag					

5.6 Special 2in1 Kits Aluminum Crimp Seals ND11

- Each combination of a crimp neck vial ND11 is now available with any 11mm crimp cap listed in the catalogue as a practical 2in1 kit!

100 Vials and 100 Seals per Box

5.7 Crimp Neck Vials ND11 with pre-crimped Aluminum Seals ND11

- Pre-crimped vials reduce the risk of contamination of vials in laboratories. Furthermore special applications could require a pre-crimped vial (e.g. in the tobacco industry).
- Pre-crimped vials are available with any of the crimp/snap neck vials and any seal of your choice.

6. Snap Ring Vials and Closures ND11

The vials are preferentially used on instruments of the following manufacturers: Agilent, CTC, DANI, Dionex, Jasco, Shimadzu, Spark, Thermo Scientific, Varian, VWR (Merck®)/Hitachi, Waters®, etc.

The Universal Autosampler Vial
- Universally usable vials for almost all autosamplers, even for those with robotic handling.
- Vials can also be crimped with a standard 11mm Aluminum Crimp Seal, as the two snapring lips have the same height as a crimp neck

6.1 Snap Ring Vials ND11, wide opening

SR 11 0200	SR 11 0201	SR 11 1037	SR 11 0202
1,5ml Snap Ring Vial,, 32 x 11,6mm, clear glass, 1st hydrol. class, wide opening **SILANIZED SR 11 0200s**	1,5ml Snap Ring Vial,, 32 x 11,6mm, clear glass, 1st hydrol. class, wide Opening, label + filling lines **SILANIZED SR 11 0201s**	1,5ml Snap Ring Vial,, 32 x 11,6mm, amber glass, 1st hydrol. class, wide opening **SILANIZED SR 11 1037s**	1,5ml Snap Ring Vial,, 32 x 11,6mm, amber glass, 1st hydrol. class, wide Opening, label + filling lines **SILANIZED SR 11 0202s**
R. vol. < 100 µl	R. vol. < 100 µl	R. vol. < 100 µl	
100 pcs. per PP-Box			

6.1.3 Micro-Inserts for Vials with wide opening

ME 06 0218	ME 06 0361	ME 06 0362	ME 06 0232
0.25ml Micro-Insert, 31 x 6mm, clear glass, 1st hydrol. class, 15mm top **SILANIZED ME 06 0218s**	0,3ml Micro-Insert, 31 x 6mm, clear glass, 1st hydrol. class, 12mm top **SILANIZED ME 06 0361s**	0,35ml Micro-Insert, 31 x 6mm, clear glass, 1st hydrol. class, flat bottom **SILANIZED ME 06 0362s**	0,25ml Micro-Insert, 29 x 5.7mm, clear glass, 1st hydrol. class, with assembled plastic spring **SILANIZED ME 06 0232s**
R. vol. < 4 µl	R. vol. < 4 µl	R. vol. < 8 µl	R. vol. < 4 µl
10 x 100 pcs. per PP-Box			

6.1.2 Snap Ring Mikroliter Vials ND11

BaseBond Vials

SR 11 0684 SR 11 0685	SR 11 2054 SR 11 2055	SR 11 1560 SR 11 1561	SR 11 2052 SR 11 2053	SR 11 1312 SR 11 1322	SR 11 0857 SR 11 0858	SR 11 1092	SR 11 0474	SR 11 0856
Snap Ring Vial with integrated 0,2ml Micro-Insert, 32 x 11,6mm, clear glass, **(amber glass)** 1.hydrol. class, **with small micro-insert "Base Bond"**	Snap Ring Vial with integrated 0,2ml Micro-Insert, 32 x 11,6mm, clear glass, **(amber glass)** 1.hydrol. class, writing patch and filling lines, **with small micro-insert "Base Bond"**	Snap Ring Vial with integrated 0,3ml Micro-Insert, 32 x 11,6mm, clear glass, **(amber glass)** 1.hydrol. class, **with wide micro-insert "Base Bond"**	Snap Ring Vial with integrated 0,3ml Micro-Insert, 32 x 11,6mm, clear glass, **(amber glass)** 1.hydrol. class, writing patch and filling lines, **with widel micro-insert "Base Bond**	1,1ml Mikroliter Snap Ring Vial 32 x 11.6mm clear glass, **(amber glass)** 1.hydrol. class, **with solid glass bottom**	1,1ml Microliter Snap Ring Vial 32 x 11.6mm clear glass, **(amber glass)** 1.hydrol. class, **with rounded glass bottom**	0,3ml PP Snap Ring Micro-Vial, transparent, 32 x 11.6mm	TPX Snap Ring Vial, clear, 32 x 11.6mm, with integrated 0.2ml Glass Micro-Insert, 15mm top	0,7ml PP Snap Ring Micro-Vial, transparent, 32x11.6mm
R. vol. < 1 µl	R. vol. < 1 µl	R. vol. < 3 µl	R. vol. < 3 µl	R. vol. < 8 µl	R. vol. < 15 µl	R. vol. < 4 µl	R. vol. < 4 µl	R. vol. < 25 µl
100 pcs. per PP-Box						100 per PE-Bag		

6.2 PE Snap Ring Seals ND11

6.2.1 PE Snap Ring Seals ND11, transparent, with 6mm hole

Art. No.	SN 11 0518	SN 11 0800	SN 11 0171	SN 11 0168	SN 11 0170	SN 11 0911	SC 11 1194
Septa:	Natural Rubber red-orange/ TEF transparent	RedRubber/ PTFE beige	RedRubber/ PTFEtransparent	Silicone white/ PTFE red	PTFE red/Silicone white/PTFE red	Silicone white/PTFE blue, **cross-slit**	thinned penetration area, no hole
Hardness:	60° shore A	45° shore A	45° shore A	45° shore A	45° shore A	55° shore A	
Thickness:	1,0mm	1,0mm	1,0mm	1,0mm	1,0mm	1,0mm	
100 pcs. per PE-Bag							

6.2.2 PE Snap Ring Seals ND11, blue, with 6mm hole

Art. No.	SN 11 0519	SN 11 0801	SN 11 0706	SN 11 0520	SN 11 0521	SN 11 0853	SC 11 1169
Septa:	Natural Rubber redorange/ TEF transparent	RedRubber/ PTFE beige	RedRubber/ PTFEtransparent	Silicone white/PTFE red	PTFE red/Silicone white/PTFE red	Silicone white/PTFE blue, **cross-slit**	thinned penetration area, no hole
Hardness:	60° shore A	45° shore A	45° shore A	45° shore A	45° shore A	55° shore A	
Thickness:	1,0mm	1,0mm	1,0mm	1,0mm	1,0mm	1,0mm	
100 pcs. per PE-Bag							

6.2.3 PE Snap Ring Seals ND11, red, with 6mm hole

Art. No.	SN 11 2182	SN 11 2334	SN 11 2157	SN 11 2021	SN 11 2177	SN 11 1647
Septa:	Natural Rubber redorange/ TEF transparent	RedRubber/ PTFE beige	RedRubber/ PTFE transparent	Silicone white/ PTFE red	PTFE red/Silicone white/PTFE red	Silicone white/PTFE blue, **cross-slit**
Hardness:	60° shore A	45° shore A	45° shore A	45° shore A	45° shore A	55° shore A
Thickness:	1,0mm	1,0mm	1,0mm	1,0mm	1,0mm	1,0mm
100 pcs. per PE-Bag						

6.2.4 PE Snap Ring Seals ND11, green, with 6mm hole

Art. No.	SN 11 2336	SN 11 2014	SN 11 1934	SN 11 2073	SN 11 2335	SN 11 1649
Septa:	Natural Rubber redorange/ TEF transparent	RedRubber/ PTFE beige	RedRubber/ PTFE transparent	Silicone white/ PTFE red	PTFE red/Silicone white/PTFE red	Silicone white/PTFE blue, **cross-slit**
Hardness:	60° shore A	45° shore A	45° shore A	45° shore A	45° shore A	55° shore A
Thickness:	1,0mm	1,0mm	1,0mm	1,0mm	1,0mm	1,0mm
100 pcs. per PE-Bag						

6.2.5 PE Snap Ring Seals ND11, yellow, with 6mm hole

Art. No.	SN 11 2013	SN 11 2015	SN 11 2237	SN 11 1650	SN 11 2161	SN 11 1648
Septa:	Natural Rubber redorange/ TEF transparent	RedRubber/ PTFE beige	RedRubber/ PTFE transparent	Silicone white/ PTFE red	PTFE red/Silicone white/PTFE red	Silicone white/PTFE blue, **cross-slit**
Hardness:	60° shore A	45° shore A	45° shore A	45° shore A	45° shore A	55° shore A
Thickness:	1,0mm	1,0mm	1,0mm	1,0mm	1,0mm	1,0mm
100 pcs. per PE-Bag						

6. Snap Ring Vials and Closures ND11

NEW

6.3 PFAS Safe Guard Vials, Closures and 2in1 Kits ND11

PFAS stands for per- and polyfluoroalkyl substances, and are colloquially known as "forever chemicals." They are a group of man-made chemicals that have been widely used in various industrial and consumer products since the 1940's. PFAS are known for their strong chemical bonds, which make them resistant to heat, water, and oil. This property has made them popular for use in a wide range of applications, including firefighting foams, non-stick cookware (such as Teflon), waterproof fabrics, food packaging, and many other household and industrial products.
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PFAS CAN BE FOUND IN:
- **Environmental monitoring**
- **Product testing**
- **Industrial quality assurance**
- **Commercial household cleaning products**
- **Food packaging**

Goals of the EPA are to ensure science-based decision making to identify which PFAS may pose human health and ecological risks and develop tests to measure, remove and destroy them.

6.3.1 PFAS Safe Guard Vials and Closures ND11

6.3.1.1 PFAS Safe Guard PP Vials ND11

SR 11 1092	SR 11 0856
0.3ml PP Snap Ring Micro-Vial, 32 x 11.6mm, transparent	0.7ml PP Snap Ring Micro-Vial, 32 x 11.6mm, transparent
R. vol. < 4 µl	R. vol. < 25 µl
100 pcs. per PE-Bag	

6.3.1.2 PFAS Safe Guard PP Snap Ring Closures ND11
with Silicone/Polypropylene septa

SN 11 2239	SN 11 2240	SN 11 2332	SN 11 2333
PE Snap Ring Cap ND11 blue, 6mm centre hole		PE Snap Ring Cap ND11 blue, 6mm centre hole	
Silicone white/ Polypropylene transparent	Silicone white/ Polypropylene transparent, **SLIT**	Silicone white/ Polypropylene transparent,	Silicone white/ Polypropylene transparent, **CROSS-SLIT**
45° shore A	45° shore A	45° shore A	45° shore A
1,0mm	1,0mm	1,0mm	1,0mm
100 pcs. per PE-Bag			

6.3.1.3 PFAS Safe Guard 2in1 Kits – Snap Ring Vials and Closures

KP 11 2267PFAS	
0.3ml PP Snap Ring Micro-Vial, 32 x 11.6mm, transparent	PFAS Safe Guard PE snap ring cap, blue, with hole, silicon white/transparent polypropylene, for PFAS analysis
(SR 11 1092)	(SN 11 2239)
100 Vials and 100 Closures per 2in1 Kit	

KP 11 2268PFAS	
0.3ml PP Snap Ring Micro-Vial, 32 x 11.6mm, transparent	PFAS Safe Guard PE snap ring cap, blue, with hole, silicon white/transparent polypropylene, for PFAS analysis, **CROSS-SLIT**
(SR 11 1092)	(SN 11 2240)
100 Vials and 100 Closures per 2in1 Kit	

KP 11 2269PFAS	
0.7ml PP Snap Ring Micro-Vial, 32 x 11.6mm, transparent	PFAS Safe Guard PE snap ring cap, blue, with hole, silicon white/transparent polypropylene, for PFAS analysis
(SR 11 0856)	(SN 11 2239)
100 Vials and 100 Closures per 2in1 Kit	

KP 11 2270PFAS	
0.7ml PP Snap Ring Micro-Vial, 32 x 11.6mm, transparent	PFAS Safe Guard PE snap ring cap, blue, with hole, silicon white/transparent polypropylene, for PFAS analysis, **CROSS-SLIT**
(SR 11 0856)	(SN 11 2240)
100 Vials and 100 Closures per 2in1 Kit	

Further PFAS KIT 2in1 Kits combinations upon request available!

7. Screw Neck ND13

The vials are preferentially used on instruments of the following manufacturers: Dionex, Shimadzu, Spark, Varian, VWR (Merck®)/ Hitachi, Waters® (Wisp 48 Position Carousel), etc.

• Wide opening allows easy filling with viscous materials
• With closed screw caps ND13 ideal for storage
• Each vial and cap combination is now available as a practical 2in1 kit!!

7.1 Screw Neck Vials ND13 and appropriate Micro-Inserts

GW 13 0454	GW 13 0456	GW 13 0455	GW 13 0457	GW 13 1283	ME 13 0458	FE 13 0459
4ml Screw Neck Vial, 45 x 14.7mm, clear glass, 1st hydrol. class	4ml Screw Neck Vial, 45 x 14.7mm, clear glass, 1st hydrol. class, label + filling lines	4ml Screw Neck Vial, 45 x 14.7mm, amber glass, 1st hydrol. class	4ml Screw Neck Vial, 45 x 14.7mm, amber glass, 1st hydrol. class, label + filling lines	3,5ml Mikroliter- Screw Neck Vial, 45 x 14.7mm, clear glass, 1st hydrol. class	0,3ml MicroInsert, 40 x 6mm, clear glass, 1st hydrol. class, 15mm top Metal Spring required!	Spring 50 x 7.5mm for Micro-Insert ME 13 0458
R. vol. < 400 µl	R. vol. < 400 µl	R. vol. < 400 µl	R. vol. < 400 µl	R. vol. < 15 µl	R. vol. < 9 µl	
		100 pcs. per PP-Box			10 x100 pieces	10 x100 pieces

7.2 PP Screw Seals ND13, black with hole

Art. No.	SV 13 0476	SV 13 0477	SV 13 0487	SV 13 0806	SV 13 0478	SV 13 0479
Cap:			Polypropylene Screw Cap, black, 8.5mm centre hole			
Septa:	Natural Rubber red orange/TEF transparent	Silicone white/ PTFE red	Butyl red/ PTFE grey	Silicone cream/ PTFE red	PTFE red/ Silicone white/ PTFE red	Silicone white/ PTFE blue, **slit**
Hardness	60° shore A	45° shore A	55° shore A	55° shore A	45° shore A	55° shore A
Thickness:	1,3mm	1,3mm	1,3mm	1,5mm	1,0mm	1,0mm
			100 pcs. per PE-Bag			

7.3 PP Screw Seals ND13, black, closed top

Art. No.	SV 13 0488	SV 13 0489	SV 13 0805
Cap:		Polypropylene Screw Cap, black, closed top	
Septa:	Natural Rubber red-orange/TEF transparent	Butyl red/PTFE grey	Silicone cream/PTFE red
Hardness	60° shore A	55° shore A	55° shore A
Thickness:	1,3mm	1,6mm	1,5mm
		100 pcs. per PE-Bag	

7. Screw Neck ND13

7.4 Septa 12mm

• Further septa made of other materials and/or available in other thicknesses!

Art. No.	SE 12 0100	SE 12 0481	SE 12 0482	SE 12 0485	SE 12 0486	SE 12 0460
Septa	PTFE virginal (only unassembled)	Natural Rubber red-orange/TEF transparent	Butyl cream/PTFE grey	Silicone white/PTFE red	PTFE red/Silicone white/PTFE red	Silicone white/PTFE blue, **slit**
Hardness	53° shore A	60° shore A	55° shore A	45° shore A	45° shore A	55° shore A
Thickness	0,25mm	1,0mm	1,3mm	1,3mm	1,0mm	1,0mm
1.000 pcs. per PE-Beutel						

7.5 PP Screw Caps ND13

Art. No.	SK 13 0483	SK 13 0484	SK 13 0803	SK 13 0804
Cap	13mm Polypropylene Screw Cap , black, 8.5mm centre hole	13mm Polypropylene Screw Cap , black, closed top	13mm Polypropylene Screw Cap , white, 8.5mm centre hole	13mm Polypropylene Screw Cap , white, closed top
1.000 pcs. per PE-Bag				

7.6 Special 2in1 Kits Screw Neck ND13

• Each combination of a screw thread vial ND13 is now available with any ND13 screw cap listed in the catalogue as a practical 2in1 kit!

100 Vials and 100 Seals per Box

7.7 Screw Thread Vials ND13, with pre-assembled screw cap ND13

• Pre-screwed vials reduce the risk of contamination of the vials in the laboratory. Furthermore, special applications (e.g. in the tobacco industry) may require a pre-sealed vial.
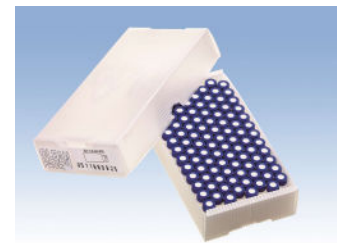
8. Screw Neck ND15

• Screw Neck Vials for storage purposes made out of 1st hydrol. class glass.
• For sample volumes from 800 µl to 12000 µl
• Wide opening for safe filling
• Seals available with many different septa materials

8.1 Screw Neck Vials ND15

GW 15 0636	GW 15 0831	GW 15 0637	GW 15 0876
8ml Screw Neck Vial, 15-425, 61 x 16.6mm, clear glass, 1st hydrol. class	8ml Screw Neck Vial, 15-425, 61 x 16.6mm, amber glass, 1st hydrol. class	12ml Screw Neck Vial, 15-425, 66 x 18.5mm, clear glass, 1st hydrol. class	12ml Screw Neck Vial, 15-425, 66 x 18.5mm, amber glass, 1st hydrol. class
R. vol. 800 µl	R. vol. 800 µl	R. vol. 800 µl	R. vol. 800 µl
100 pcs. per Box			

8.2 PP Screw Seals ND15, black, closed top

• On the sample side, the aluminium foil with its outstanding chemical properties protects the sample, the soft inner core of PE foam provides the elasticity in the cap
• Our PP Screw Cap can be combined with any of the septa listed below

Art. No.	SV 15 0594	SV 15 0638	SV 15 0884	SV 15 0878	SV 15 1327
Cap:	PP Screw Cap, black, closed top				
Septa:	Natural Rubber redorange/TEF transparent	Butyl red/ PTFE grey	Viton 1A, black	Silicone white/Aluminum foil silver	Butyl dark grey
Hardness	60° shore A	55° shore A	70° shore A	50° shore A	48° shore A
Thickness:	1,3mm	1,6mm	1,0mm	1,3mm	2mm
100 pcs. per PE-Bag					

8.3 Septa 14mm and PP Screw Seals ND15

Art. No.	SE 14 0883	SE 14 0882	SE 14 0881	SE 14 0879	SE 14 1326	SK 15 0747	SK 15 0746
Septa / Caps	PTFE virginal, both sides plain	Viton 1A, black	Butyl red/ PTFE grey	Silicone white/ Aluminum foil silver	Butyl dark grey	PP Screw Cap 15-425, black, with 9mm hole	PP Screw Cap 15-425, black, closed top
Hardness	53° shore D	70° shore A	55° shore A	50° shore A	48° shore A		
Thicknes:	0,25mm	1,0mm	1,6mm	1,3mm	2mm		
1.000 pcs. per PE-Bag							

9. Shell Vials 1ml, 2ml and 4ml and appropriate Micro-Inserts

- A convenient to use and inexpensive bottle/cap combination.
- Star-shaped diaphragm allows easy penetration of the PE stopper.
- Recommended for use in HPLC.
- Shell Vials with the corresponding stoppers can also be supplied as a 2in1 KIT

9.1 Shell Vials 1ml and appropriate Micro-Insert

FK 08 0562	FK 08 0563	FK 08 0564	ME 05 0540
1ml Shell Vial, 35 x 7.8mm, clear glass; 6mm PE Plug, transparent	1ml Shell Vial, 40 x 8.2mm, clear glass; 8mm PE Plug, transparent (without insertion barrier)	1ml Shell Vial, 40 x 8.2mm, amber glass; 8mm PE Plug, transparent (without insertion barrier)	0.1ml Micro-Insert, 34 x 5mm, clear glass, 1st hydrolytic class, 13mm top
100 pcs. per PP-Box			10 x100 pieces per PP-Box

9.2 Shell Vials 2ml and appropriate Micro-Insert

FK 11 0567	FK 11 0568	ME 06 0218	ME 06 0361	ME 06 0362
2ml Shell Vial, 31.5 x 11.6mm, clear glass; 12mm PE Plug, transparent	2ml Shell Vial, 31.5 x 11.6mm, amber glass; 12mm PE Plug, transparent	0.25ml Micro-Insert, 31 x 6mm, clear glass, 1st hydrol. class, 15mm top	0,3ml Micro-Insert, 31 x 6mm, clear glass, 1st hydrol. class, 12mm top	0,35ml Micro-Insert, 31 x 6mm, clear glass, 1st hydrol. class, flat bottom
100 pcs. per PP-Box		10 x100 pieces per PP-Box		

9.3 Shell Vials 4ml and appropriate Micro-Insert

FK 15 0569	FK 15 0570	ME 06 0541
4ml Shell Vial, 44.6 x 14.65mm, clear glass; 15mm PE Plug, transparent	4ml Shell Vial, 44.6 x 14.65mm, amber glass; 15mm PE Plug, transparent	0,3ml Micro-Insert, 43,45 x 6mm, 1st hydrol. class, 13mm top
100 pcs. per PP-Box		10 x100 pcs. per PP-Box

10. Snap Cap Vials ND18, ND22 and ND28

• Easy to handle and inexpensive storage vials with push-on Snap Caps

• Caps and Vials separately obtainable.

• Quickly and easily to reopen and reseal.

• No liners are required in the cap.

• For storage of powders and solids.

10.1 Snap Cap Vials ND18 + ND22

SF 18 0189	SF 18 0190	SF 22 0191	SF 22 0192
5ml Snap Cap Vial ND18, 40 x 20mm, clear glass, 3. hydrol. class	10ml Snap Cap Vial ND18, 50 x 22mm, clear glass, 3. hydrol. class	15ml Snap Cap Vial ND22, 48 x 26mm, clear glass, 3. hydrol. class	25ml Snap Cap Vial ND22, 65 x 26mm, clear glass, 3. hydrol. class
Volume of capacity 9,1ml	Volume of capacity 14ml	Volume of capacity 19ml	Volume of capacity 25ml
Residual volume 0,3ml	Residual volume 0,5ml	Residual volume 0,6ml	Residual volume 0,6ml
for SD 18 0067	for SD 18 0067	for SD 22 0068	for SD 22 0068
100 pcs. per PP-Box			

10.2 Appropriate PE Snap Caps ND18 + ND22, transparent, closed top

•   Snap Caps are available in many other sizes
•   For larger purchase quantities, our snap Caps can also be obtained in other colors

Art. No.	SD 18 0067	SD 22 0068
Description	18mm PE Snap Cap, 19.8 x 5.2mm, transparent, closed top, for vials ND18	22mm PE Snap Cap, 23.5 x 5.5mm, transparent, closed top, for vials ND22
	100 pcs. per PE-Bag	

Snap Cap Kits on page 39!

10. Snap Cap Vials ND18, ND22 and ND28

• Cost-effective storage containers with snap-on lids in a practical 2in1 kit

• Quick and easy to open and close

• The cap does not require a sealing disc

• Amber glass bottles available as 5ml, 10ml and 20ml kits
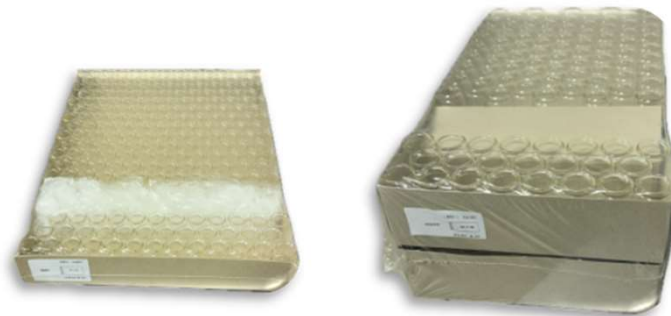
10.3 2in1Kits (snap cap vial including snap cap)

Clear glass

Art. No.	KP 18 1273	KP 18 1947	KP 22 1442	KP 22 1522	KP 22 1432	KP 22 1431	KP 28 1523
	3ml	**5ml**	**10ml**	**15ml**	**20ml**	**20ml**	**25ml**
KIT descrip.:	2in1 Kit: 3ml Snap Cap Vial, 30x19mm, clear glass, 3. hydrol. class, inclusive Snap Cap ND18	2in1 Kit: 3ml Snap Cap Vial, 40x19mm, clear glass, 3. hydrol. class, inclusive Snap Cap ND18	2in1 Kit: 10ml Snap Cap Vial, 45x22mm, clear glass, 3. hydrol. class, inclusive Snap Cap ND22	2in1 Kit: 15ml Snap Cap Vial, 52x24mm, clear glass, 3. hydrol. class, inclusive Snap Cap ND22	2in1 Kit: 20ml Snap Cap Vial, 55x27mm, clear glass, 3. hydrol. class, inclusive Snap Cap ND22	2in1 Kit: 20ml Snap Cap Vial, 70x25mm, clear glass, 3. hydrol. class, inclusive Snap Cap ND22	2in1 Kit: 25ml Snap Cap Vial, 50x30mm, clear glass, 3. hydrol. class, inclusive Snap Cap ND28
	200 pcs. per cardboard box	200 pcs. per cardboard box	200 pcs. per cardboard box	200 pcs. per cardboard box	200 pcs. per cardboard box	200 pcs. per cardboard box	250 pcs. per cardboard box

Clear glass   **Amber glass**

Art. No.	KP 22 1397	KP 28 1398	KP 28 1367	KP 28 1377	KP 18 1573	KP 22 1574	KP 22 1861
	30ml	**40ml**	**50ml**	**100ml**	**5ml**	**10ml**	**20ml**
KIT descrip.:	2in1 Kit: 30ml Snap Cap Vial, 75x28mm, clear glass, 3. hydrol.class; inclusive Snap Cap ND22	2in1 Kit: 40ml Snap Cap Vial, 80x30mm, clear glass, 3. hydrol. class, inclusive Snap Cap ND28	2in1 Kit: 40ml Snap Cap Vial, 80x30mm, clear glass, 3. hydrol. class, inclusive Snap Cap ND28	2in1 Kit: 100ml Snap Cap Vial, 145x34mm, clear glass, 3. hydrol. class, inclusive Snap Cap ND28	2in1 Kit: 5ml Snap Cap Vial, 40x19mm, **amber glass**, 3. hydrol. Klasse; inclusive Snap Cap ND18	2in1 Kit: 10ml Snap Cap Vial, 45x22mm, **amber glass**, 3. hydrol. Klasse; inclusive Snap Cap ND22	2in1 Kit: 20ml Snap Cap Vial, 55x27mm, **amber glass**, 3. hydrol. Klasse; inclusive Snap Cap ND22
	200 pcs. per cardboard box	200 pcs. per cardboard box	200 pcs. per cardboard box	200 pcs. per cardboard box	200 pcs. per cardboard box	200 pcs. per cardboard box	200 pcs. per cardboard box

11. Headspace Precision Thread Vials and Closures ND180

- The times when precision thread vials were mainly used on instruments with magnetic transport mechanism are over. In order to exclude difficulties and risks of a crimping process, instrument manufacturers are striving to make the closing process of the sample bottle and the associated tightness safer and more reproducible.

- PerkinElmer has now added precision thread vials to its product range for all TurboMatrix 16, 40 and 110 autosamplers built after 01.09.2006.

- This means that almost all current headspace autosamplers (Agilent, CTC, Gerstel, PerkinElmer, Shimadzu, Varian) now offer the possibility of using these vials, which can be used universally for headspace + SPME. Another advantage is the thinner septa compared to the crimp caps, which are easier and more gentle on the needle to penetrate.

11.1 Headspace Precision Thread Vials ND18

HS 18 1743	HS 18 0233	HS 18 0348
7,5ml Precision Thread Vial ND18, 37 x 22mm, clear glass, 1st hydrol. class, rounded bottom	10ml Precision Thread Vial ND18, 46 x 22.5mm, clear glass, 1st hydrol. class, rounded bottom	10ml Precision Thread Vial ND18, 46 x 22.5mm, amber glass, 1st hydrol. class, rounded bottom
R. vol. 800 µl	R. vol. 800 µl	R. vol. 800 µl

100 pcs. per PP-Box

HS 18 0234	HS 18 0349	HS 18 1183	HS 18 1657
20ml Precision Thread Vial ND18, 75,5 x 22,5mm, clear glass, 1st hydrol. class, rounded bottom	20ml Precision Thread Vial ND18, 75,5 x 22,5mm, clear glass, 1st hydrol. class, rounded bottom	20ml Precision Thread Vial ND18, 75,5 x 22,5mm, clear glass, 1st hydrol. class, label + filling lines rounded bottom	20ml Precision Thread Vial ND 18, 75,5 x 22,5mm, clear glass, 1st hydrol. class, + filling lines rounded bottom
R. vol. 800 µl	R. vol. 800 µl	R. vol. 800 µl	R. vol. 800 µl

100 pcs. per PP-Box

11. Headspace Precision Thread Vials and Closures ND18

11.2 Magnetic Universal Screw Seals ND18 for Precision Thread Vials

Art. No.	SV 18 0960	SV 18 0575	SV 18 0576	SV 18 0177	SV 18 0854	SV 18 2046
Cap:	Magnetic Screw Cap silver, 8mm centre hole					
Septa:	Butyl red/ PTFE grey	Silicone blue transparent/ PTFE white	Silicone white/ PTFE red	Silicone white/ PTFE blue	Silicone white/ Aluminum foil silver	Silicone white/PTFE blue, 55° shore A, **with thinned penetration area for SPME application**
Hardness	55° shore A	45° shore A	45° shore A	55° shore A	50° shore A	55° shore A
Thickness:	1,6mm	1,3mm	1,3mm	1,5mm	1,3mm	2,0mm/1,5mm
	100 pcs. per PE-Bag					

11.2 Magnetic Universal Screw Seals ND18

NEW! AIR Closure

Art. No.	SV 18 2366	SV 18 0920	SV 18 1462
Cap:	Magnetic Screw Cap silver, 8mm centre hole		
Septa:	Silicone blue transparent/ PTFE white	HighTEMP Septa (HTS), Silicone dark-red/PTFE	PTFE virginal/ Ring/ PTFE virginal (**AIR-Closure**)
Hardness	45° shore A	45° shore A	53° shore D
Thickness:	3mm	3,0mm	2,5mm
	100 pcs. per PE-Bag		

11.3 Magnetic Universal Screw Seals ND18, closed top

Art. No.	SV 18 0809	SV 18 0808
Cap:	Magnetic Screw Cap silver, **closed top**	
Septa:	Butyl red/ PTFE grey	Silicone white/ PTFE red
Hardness	55° shore A	45° shore A
Thickness:	1,6mm	1,3mm
	100 pcs. per PE-Bag	

11.4 Septa 17,5mm for Magnetic Universal Screw Seals ND18

Art. No.	SE 17 1280	SE 17 0708	SE 17 0707	SE 17 0591	SE 17 0855	SE 17 0919	SE 17 0584
Septa:	Moulded septa, silicone blue/ PTFE transp., 40°shore A, 3.0mm	Silicone white/ PTFE red	Silicone blue transparent/ PTFE white	Silicone white/ PTFE blue	Silicone white/ Aluminum foil silver	High Temperature Septa (HTS), Silicone dark-red/PTFE	Butyl red/ PTFE grey
Hardness		45° shore A	45° shore A	55° shore A	50° shore A	45° shore A	55° shore A
Thickness:		1,3mm	1,3mm	1,5mm	1,3mm	3,0mm	1,6mm
	1.000 pcs. per PE-Bag						

12. Headspace-Vials and Closures ND20 + ND18

Headspace Vials might differ in:

• Volume (5ml, 10ml, 20ml)

• Rounded or flat bottom

• Bevelled top or flat DIN Crimp Neck/Screw Neck

• Length of the Neck (instrument specific)

• Clear/Amber Glass

• Upon request with a barcode label

12.1 General overview Headspace Vials ND18 + ND20

Recommended for: Agilent, Carlo Erba, Dani, Fisons and others

Art. No.:	HS 20 0235	HS 20 0236	HS 20 1680	HS 20 1672	HS 20 1913	HS 20 1914
Descr.:	10ml Headspace Vial, 46 x 22.5mm, clear glass, 1st hydrol. class	20ml Headspace Vial, 75.5 x 22.5mm, clear glass, 1st hydrol. class	10ml Headspace Vial, 46 x 22.5mm, clear glass, 1st hydrol. class	20ml Headspace Vial, 75.5 x 22.5mm, clear glass, 1st hydrol. class	10ml Headspace Vial, 46 x 22.5mm, clear glass, 1st hydrolytic class	20ml Headspace Vial, 75.5 x 22.5mm, clear glass, 1st hydrol. class
Features:	**DIN Crimp Neck, flat bottom**	**DIN Crimp Neck, flat bottom**	**Bevelled HS-Crimp Neck, flat bottom**	**Bevelled HS-Crimp Neck, flat bottom**	**Bevelled HS-Crimp Neck, rounded bottom**	**Bevelled HS-Crimp Neck, rounded bottom**
Fill Cap.:	11,7ml	21,2ml	11,7ml	21,2ml	11,7ml	21,2ml
Res. Vol.:	800µl	800µl	800µl	800µl	800µl	800µl
Useable on:	**Agilent, Carlo Erba, Dani, Fisons**	**Agilent, Carlo Erba, Dani, Fisons**	**Agilent, Carlo Erba, Dani, Fisons**	**Agilent, Carlo Erba, Dani, Fisons**	**Agilent, Carlo Erba, Dani, Fisons (Chromacol 10-CV)**	**Agilent, Carlo Erba, Dani, Fisons (Chromacol 20-CV)**
			100 pcs. per PP-Box			

Recommended for: CTC PAL (Varian, Gerstel, Atas, Shimadzu, TriPlus HS) and others

Art. No.:	HS 20 0302	HS 20 0350	HS 20 0237	HS 20 0351	HS 20 0353	HS 20 0732
Descr.:	10ml Headspace Vial, 46 x 22.5mm, clear glass, 1st hydrol. class	10ml Headspace Vial, 46 x 22.5mm, Amber glass, 1st hydrol. class	20ml Headspace Vial, 75.5 x 22.5mm, clear glass, 1st hydrol. class	20ml Headspace Vial, 75.5 x 22.5mm, amber glass, 1st hydrol. class	20ml SPME Vial, 75.5 x 22.5mm, clear glass, 1st hydrol. class	20ml SPME Vial, 75.5 x 22.5mm, amber glass, 1st hydrol. class
Features:	DIN Crimp Neck, rounded bottom	DIN Crimp Neck, rounded bottom	DIN Crimp Neck, rounded bottom	DIN Crimp Neck, rounded bottom	Special Crimp Neck, rounded bottom	Special Crimp Neck, rounded bottom
Fill Cap.:	12,3ml	12,3ml	20,9ml	20,9ml	21,2ml	21,2ml
Res. Vol.:	800µl	800µl	800µl	800µl	800µl	800µl
Useable on:	CTC PAL (Varian, Gerstel, Atas, Shimadzu, TriPlus HS)	CTC PAL (Varian, Gerstel, Atas, Shimadzu, TriPlus HS)	CTC PAL (Varian, Gerstel, Atas, Shimadzu, TriPlus HS)	CTC PAL (Varian, Gerstel, Atas, Shimadzu, TriPlus HS)	SPME Vial for CTC PAL	SPME Vial for CTC PAL

12. Headspace-Vials and Closures ND20 + ND18

12.1 General overview Headspace Vials ND18 + ND20

Recommended for: PerkinElmer, Tekmar and others

Art. No.:	HS 20 0238	HS 20 1435	HS 20 0239	HS 20 0352	HS 20 0207	HS 18 0931
Descr.:	5ml Headspace Vial, 38.2 x 22mm, clear glass, 1st hydrol. class	5ml Headspace Vial, **DIN Crimp Neck** 38.2 x 22mm, clear glass, 1st hydrol. class	20ml Headspace Vial, 75.5 x 23mm, clear glass, 1st hydrol. class,	20ml Headspace Vial, 75.5 x 23mm, amberglass, 1st hydrol. class, label + filling lines	20ml Headspace Vial, 75.5 x 23mm, clear glass, 1st hydrol. class, label + filling lines	20ml Headspace Vial, 75.5 x 23mm, clear glass, 1st hydrol. class, with screw thread ND18
Features:	HS-Crimp Neck, rounded bottom	DIN Crimp Neck, rounded bottom	HS-Crimp Neck, rounded bottom	HS-Crimp Neck, rounded bottom	HS-Crimp Neck, rounded bottom	Screw Neck ND18, rounded bottom
Fill Cap.:	9,4ml	22ml	22ml	22ml	22ml	21,2ml
Res. Vol.:	800µl	800µl	800µl	800µl	800µl	800µl
Useable on:	**PerkinElmer**	**PerkinElmer, Tekmar**	**PerkinElmer, Tekmar**	**PerkinElmer, Tekmar**	**PerkinElmer, Tekmar**	**PerkinElmer**
	100 pcs. per PP-Box					

Recommended for: Varian and others   **Recommended for: Metrohm**

Art. No.:	HS 20 0354	HS 20 0355	HS 20 0996
Descr.:	5ml Crimp Neck Vial, 38 x 20mm, clear glass, 1st hydrol. class	10ml Crimp Neck Vial, 54.5 x 20mm, clear glass, 1st hydrol. class	5ml Headspace Vial, 38,2 x 21,7mm, clear glass, 1st hydrol. class
Features:	DIN Crimp Neck, flat bottom	DIN Crimp Neck, flat bottom	HS-Crimp Neck, flat bottom
Fill Cap.:	8ml	12,2ml	9,4ml
Res. Vol.:	800µl	800µl	800µl
Useable on:	**Varian**	**Varian**	**Metrohm**
	100 pcs. per PP-Box		

Crimpers and decapper you will find on pages 64-68.

Storage boxes for HS Vials on page 51.

12. Headspace-Vials and Closures ND20 + ND18

12.2 Screw Neck ND18

- For headspace analysis or as sample storage vials
- PP Screw Seals ND18
- With our variety of septa we will find a customized solution for you

Art. No.:	HS 18 0931	HS 18 1744
	18 09 0864	no LPP Article
Description:	20ml Headspace-Vial (GL18) 75.5 x 23mm, clear glass, 1st hydrol. class	7ml Screw Neck Vial (GL18) 37 x 22mm, clear glass, 1st hydrol. class
Filling Capacity:	21,2ml	8ml
Residual Volume:	800µl	800 µl
100 pcs. per PP-Box		

Compatibility Overview for HS 18 0931		
PerkinElmer	HS40/ HS100/ HS101TurboMatrix HS16/ HS40/ HS40XL/ S40Trap/HS110/ HS110Trap	x
Spark	Alias	x
Teledyne Tekmar	7000/ 7000HT/7050/ HT3	x
Thermo Scientific	Trace 1300 Series	x

12.2.1 PP Screw Seals ND18

- For headspace analysis or as sample storage vials
- With our variety of septa we will find a customized solution for you

Art. No.	SV 18 1076	SV 18 1107	SV 18 1177	SV 18 0898	SV 18 1036	SV 18 1345
Useable for:	Headspace				Storage	
Cap:	PP SC, black, 12mm hole, GL 18				PP SC, black, closed top, GL 18	
Septa:	Butyl red/ PTFE grey	Silicone transparent blue/PTFE white, 1.3mm	Silicone white/ PTFE blue	Silicone white/ Aluminum foil, silver	Butyl red/ PTFE grey	Butyl dark grey
Hardness:	55° shore A	45° shore A	55° shore A	50° shore A	55° shore A	48° shore A
Thickness:	1,6mm	1.3mm	1,5mm	1,3mm	1,6mm	3mm
100 pcs. per PE-Bag						

12.2.2 Septa 16mm and Screw Seals ND18

Art. No.	SE 16 0894	SE 16 0892	SE 16 1003	SE 16 0851	SE 16 1295	SK 18 0888	SK 18 0889
Septa/ cap	Natural Ruber red orange/ TEF transp.	Viton, black	Butyl red/ PTFE grey	Silicone white/ Aluminum foil silver	Butyl dark grey	PP Screw Cap ND18, black, with hole	PP Screw Cap ND18, black, closed top
Hardness:	60° shore A	70° shore A	55° shore A	50° shore A	48° shore A		
Thickness:	1,3mm	1,0mm	1,6mm	1,3mm	3mm		
1.000 pcs. Per PE-Bag						1.000 pcs. per PE-Bag	

- Further septa available in other materials and thicknesses
- PP Screw Cap ND18 also available in white!

12. Headspace-Vials and Closures ND20 + ND18

Overview of available cap types ND20

- Wide range of vials and seals required to cope with the large number of devices available on the market

- Besides the vial length and the tube diameter, the neck length also plays a major role when selecting a suitable ND20 headspace vial, since these are designed depending on the instrument

- For the selection of a suitable closure, the type of cap is very important in addition to the special requirements for the sealing disc (purity, hardness, thickness, etc.). The transport mechanism from the sampler to the analyser must be considered here in the first instance and thus ensures an initial pre-selection.

- Different characteristics compared
- Various colour coatings for easy sample differentiation
- Tamper-evident perforated caps to prevent manipulation and/or contamination of the septum during transport of the samples

Aluminum crimp cap	Headspace-cap	Centre tear off cap	Flip-off Cap	Complete tear-off cap	Magnetic crimp cap	Magnetic crimp cap	Magnetic Bi-Metal Cap
10mm hole	8mm hole	8mm hole	8mm hole		5mm hole	8mm hole	8mm hole
	Pressure release cap; comparable with patented PerkinElmer Seal	Tamper evident crimp cap: Centre-Tear-Off part		Tamper evident crimp cap	CE HS500/ HS800/ CTC500/ Fisons HS500/ HS800	CTC Combi PAL	CTC Combi PAL

Basically each of the above mentioned Cap can be combined with a septa of your choice! The cap selection in the following chapter only represents our standard range.

12. Headspace-Vials and Closures ND20 + ND18

12.3.1 Butyl Seals (moulded septa)

Art. No.	BV 20 0648	BV 20 0647	BV 20 0810	BV 20 0811	BV 20 0852	BV 20 0813	BV 20 1987	BV 20 1988
Cap:	Alu Crimp Cap, clear lacquered, 10mm hole	Headspace-Cap, Clear lacquered, 8mm hole	Centre tear-off cap, clear lacquered	Complete tear-off cap, clear lacquered	Magnetic Crimp Cap, silver, 5mm hole	Magnetic Crimp Cap, silver, 8mm hole	Magnetic Bimetal Cap, blue, 8mm hole	Magnetic Bimetal Cap, red, 8mm hole
Septa:	**Moulded septa Butyl, grey, 55° shore A, 3,0mm**							
	100 pcs. per PE-Bag							

12.3.2 Butyl/PTFE Seals (punched septa)

Art. No.	BV 20 2154	BV 20 2320	BV 20 2321	BV 20 2322	BV 20 2323	BV 20 2324	BV 20 2325	BV 20 2326
Cap:	Alu Crimp Cap, clear lacquered, 10mm hole	Headspace-Cap, Clear lacquered, 8mm hole	Centre tear-off cap, clear lacquered	Complete tear-off cap, clear lacquered	Magnetic Crimp Cap, silver, 5mm hole	Magnetic Crimp Cap, silver, 8mm hole	Magnetic Bimetal Cap, blue, 8mm hole	Magnetic Bimetal Cap, red, 8mm hole
Septa:	**punched septa Buty greyl/PTFE grey, 50° shore A, 3,0mm**							
	100 pcs. per PE-Bag							

12.3.3 Butyl/PTFE Seals (moulded septa)

Art. No.	BV 20 0157	BV 20 0248	BV 20 0814	BV 20 0572	BV 20 0392	BV 20 0654	BV 20 0223	BV 20 1989
Cap:	Alu Crimp Cap, clear lacquered, 10mm hole	Headspace-Cap, Clear lacquered, 8mm hole	Centre tear-off cap, clear lacquered	Complete tear-off cap, clear lacquered	Magnetic Crimp Cap, silver, 5mm hole	Magnetic Crimp Cap, silver, 8mm hole	Magnetic Bimetal Cap, blue, 8mm hole	Magnetic Bimetal Cap, red, 8mm hole
Septa:	**Moulded septa Butyl/PTFE grey, 50° shore A, 3,0mm**							
	100 pcs. per PE-Bag							

12.3.4 Pharma-Fix Seals (Butyl/PTFE, moulded septa)

Art. No.	BV 20 0145	BV 20 0249	BV 20 0573	BV 20 0144	BV 20 0300	BV 20 0686	BV 20 0222	BV 20 1990
Cap:	Alu Crimp Cap, clear lacquered, 10mm hole	Headspace-Cap, Clear lacquered, 8mm hole	Centre tear-off cap, clear lacquered	Complete tear-off cap, clear lacquered	Magnetic Crimp Cap, silver, 5mm hole	Magnetic Crimp Cap, silver, 8mm hole	Magnetic Bimetal Cap, blue, 8mm hole	Magnetic Bimetal Cap, red, 8mm hole
Septa:	**Pharma-Fix-Septa, Butyl/PTFE, 50° shore A, 3,0mm**							
	100 pcs. per PE-Bag							

12. Headspace-Vials and Closures ND20 + ND18

12.3.5 Silicone blue transparent/PTFE white and transparent PTFE Seals

Art. No.	BV 20 0133	BV 20 0244	BV 20 0574	BV 20 0113	BV 20 0395	BV 20 0712	BV 20 1923	BV 20 1751
Cap:	Alu Crimp Cap, clear lacq., 10mm hole	Headspace-Cap, clear lacquered, 8mm hole	Centre tear-off cap, clear lacquered	Complete tear-off cap, clear lacquered	Magnetic Crimp Cap, silver, 5mm hole	Magnetic Crimp Cap, silver, 8mm hole	Magnetic Bimetal Cap, blue, 8mm hole	Magnetic Bimetal Cap, red, 8mm hole
Septa:	Silicone blue transparent/PTFE white, 45° shore A, 3,0mm						Silicone blue transparent/ PTFE transparent, 45° shore A, 3,0mm	
	100 pcs. per PE-Bag							

12.3.6 Silicone white/PTFE beige

Art. No.	BV 20 0640	BV 20 0641	BV 20 0926	BV 20 0927	BV 20 0928	BV 20 0645	BV 20 0642	BV 20 1670
Cap:	Alu Crimp Cap, clear lacq., 10mm hole	Headspace-Cap, clear lacquered, 8mm hole	Centre tear-off cap, clear lacquered	Complete tear-off cap, clear lacquered	Magnetic Crimp Cap, silver, 5mm hole	Magnetic Crimp Cap, silver, 8mm hole	Magnetic Bimetal Cap, blue, 8mm hole	Magnetic Bimetal Cap, red, 8mm hole
Septa:	Silicone white/PTFE beige, 45° shore A, 3,0mm							
	100 pcs. per PE-Bag							

12.3.7 Silicone white/PTFE white Seals (HT-Quality)

Art. No.	BV 20 0907	BV 20 0908	BV 20 1991	BV 20 1992	BV 20 1993	BV 20 0909	BV 20 0910	BV 20 1994
Cap:	Alu Crimp Cap, clear lacq., 10mm hole	Headspace-Cap, clear lacquered, 8mm hole	Centre tear-off cap, clear lacquered	Complete tear-off cap, clear lacquered	Magnetic Crimp Cap, silver, 5mm hole	Magnetic Crimp Cap, silver, 8mm hole	Magnetic Bimetal Cap, blue, 8mm hole	Magnetic Bimetal Cap, red, 8mm hole
Septa:	Silicone white/PTFE white, 45° shore A, 3,2mm (HT-Quality)							
	100 pcs. per PE-Bag							

12.3.8 Silicone white/PTFE beige Seals (ZeroPeak Quality)
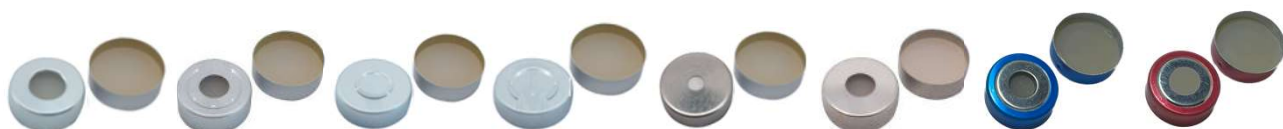
Art. No.	BV 20 0815	BV 20 0719	BV 20 1995	BV 20 1996	BV 20 1997	BV 20 0838	BV 20 1502	BV 20 1959
Cap:	Alu Crimp Cap, clear lacq., 10mm hole	Headspace-Cap, clear lacquered, 8mm hole	Centre tear-off cap, clear lacquered	Complete tear-off cap, clear lacquered	Magnetic Crimp Cap, silver, 5mm hole	Magnetic Crimp Cap, silver, 8mm hole	Magnetic Bimetal Cap, blue, 8mm hole	Magnetic Bimetal Cap, red, 8mm hole
Septa:	ZeroPeak Septa Silikon natural/PTFE beige, 38° shore A, 3,0mm (improved HT-Quality)							
	100 pcs. per PE-Bag							

12. Headspace-Vials and Closures ND20 + ND18

12.3.9 Silicone White/Aluminum foil, silver

- Completely with aluminium foil laminated silicone sept
- Often used on instruments of PERKINELMER
- The same chemical and physical properties like PTFE laminated septa
- Temperature resistant from -60°C to 220°

Art. No.	BV 20 0525	BV 20 0527	BV 20 0830	BV 20 0526	BV 20 0731	BV 20 0839	BV 20 0823	BV 20 1998
Cap:	Alu Crimp Cap, clear lacq., 10mm hole	Headspace-Cap, clear lacquered, 8mm hole	Centre tear-off cap, clear lacquered	Complete tear-off cap, clear lacquered	Magnetic Crimp Cap, silver, 5mm hole	Magnetic Crimp Cap, silver, 8mm hole	Magnetic Bimetal Cap, blue, 8mm hole	Magnetic Bimetal Cap, red, 8mm hole
Septa:	Silicone white/Aluminium foil, silver, 50° shore A, 3,0mm							
	100 pcs. per PE-Bag							

12.3.10 HTS Silicone dark-red/PTFE Seal

- New closure system with our HTS-Septa dark red/PTFE for high temperature areas in headspace analysis
- Temperature resistant from -60°C to 300°

Art. No.	BV 20 0923	SE 20 0917
Cap:	Magnetic Crimp Cap, silver, 5mm hole	
Septa:	High temperature septa (HTS), silicone dark-red/PTFE, 45° shore A, 3.0mm	
	100 pcs. per PE-Bag	1.000 pcs. per PE-Bag

12.3.11 Magnetic Seals for SPME Vials HS 20 0353 and HS 20 0732

- To facilitate penetration in the sensitive SPME phase, it is necessary to use thinner septa than the 3.0mm thick septa normally used in headspace
- In addition, our Article BV 20 0699 is based on a thinned teflon barrier, as the PTFE lamination is the most difficult part of the septa to penetrate.
- The ultra-thin full-surface aluminium foil of our article BV 20 0930 offers ideal protection, even against highly aggressive filling materials; combined with the only 1.3mm thin, high-purity white silicone, the Septa is very gentle to the needle
- Viton - see article BV 20 0816 - with its outstanding chemical and physical properties does not require any barrier, as it has a very good resistance to acids, oils and petrol. Temperature resistant from -40°C to 240°C, for a short time Viton even withstands temperature loads of 300°C!

Art. No.	BV 20 0699	BV 20 0816	BV 20 0930
Cap:	Magnetic Crimp Cap, silver, 8mm hole		
Septa:	Silicone white/ PTFE blue	Viton 1A, black	Silicone white/Aluminum foil silver
Hardness:	55° shore A	70° shore A	50° shore A
Thickness:	1,5mm	1,0mm	1,3mm
	100 pcs. per PE-Bag		

Art. No.	HS 20 0353	HS 20 0732
Description:	20ml SPME Vial, 75.5 x 22.5mm, clear glass, 1st hydr.class	20ml SPME Vial, 75.5 x 22.5mm, amber glass, 1st hydr.class
Features:	rounded bottom, special crimp neck	
	SPME Vial for CTC PAL	
	100 pcs. per PP-Box	

12. Headspace-Vials and Closures ND20 + ND18

12.4 Septa +Stopper ND20

Art. No.	SE 20 0646	SE 20 0156	SE 20 0143	SE 20 0087	SE 20 1214	SE 20 0700	SE 20 0524
Septa:	moulded septa Butyl, grey	moulded septa Butyl/PTFE, grey	Pharma-Fix moulded septa, (Butyl/PTFE)	Silicone blue transp./PTFE white	Pharma-Fix-septa, Silicone blue/PTFE transparent	Silicone white/PTFE blue	Silicone white/Aluminum foil silver
Hardness:	55° shore A	50° shore A	50° shore A	45° shore A	45° shore A	55° shore A	50° shore A
Thickness:	3,0mm	3,0mm	3,0mm	3,0mm	3,0mm	1,5mm	3,0mm
1.000 pcs. per PE-Bag							

Art. No.	SE 20 0837	SE 20 0639	SE 20 0906	SE 20 0724	SE 20 0917	SE 20 0608	SE 20 0445
Septa:	Silicon blue transparent/ PTFE transparent	Silicone white/ PTFE beige (HT Quality)	Silicon white/ PTFE white (HT Quality)	ZeroPEAK Silicon natural/ PTFE beige (improved HT Quality)	HTS Septa, Silicone dark-red/PTFE	20mm UltraClean Silicone stopper, transparent	20mm Butyl stopper, grey, Brombutyl
Hardness:	45° shore A	45° shore A	45° shore A	38° shore A	45° shore A	37° shore A	45° shore A
Thickness:	3,0mm	3,0mm	3,2mm	3,0mm	3,0mm		
1.000 pcs. pro PE-Bag					100 pcs. per PE-Bag		

12.5 Transport or intermediate seal for HS-edge/ rolled edge ND20 (Wash vial cap ND20)

- 20mm seal often used for washing vials for instruments
- Inexpensive and practical intermediate seal when taking samples outside on site
- Cap height of 8.4mm suitable for HS bottles with bevelled HS crimp neck
- Cap height of 9.1mm for headspace vials with DIN crimp neck.

Art. No.	SN 20 0903	SN 20 0933	SN 20 0934	SN 20 0935	SN 20 0936	SN 20 0937	SN 20 0938
Cap:		20mm PE-Cap, transparent, cap height 8,4mm, 4,3mm hole **for vials with bevelled crimp neck**			20mm PE-Cap, transparent, cap height 9,1mm, 4,3mm hole **for vials with DIN crimp neck**		PE-Cap, transparent, cap height 9,1mm, 6mm hole
Septa:	Natural Rubber red-orange/TEF transparent	Butyl cream/ PTFE grrey	Silicone transparent blue/PTFE white	Natural Rubber red-orange/TEF transparent	Butyl cream/ PTFE grrey	Silicone transparent blue/PTFE white	Silicone transparent blue/PTFE white cross-slit
Hardness:	60° shore A	55° shore A	45° shore A	60° shore A	55° shore A	45° shore A	45° shore A
Thickness:	1,3mm	1,3mm	1,3mm	1,3mm	1,3mm	1,3mm	1,3mm
100 pcs. per PE-Bag							

12.5.1 Septa 19,5mm for Washer Bottle Caps

Art. No.	SE 19 0902	SE 19 0939	SE 19 0940	SE 19 0941
Septa:	Natural Rubber red-orange/ TEF transparent	Butyl cream/ PTFE grrey	Silicone transparent blue/ PTFE white	Silicone transparent blue/ PTFE white cross-slit
Hardness:	60° shore A	55° shore A	45° shore A	45° shore A
Thickness:	1,3mm	1,3mm	1,3mm	1,3mm
1.000 pcs per PE-Bag				

13. Screw Neck Vials and Closures ND24 (EPA)

The vials are preferentially used on instruments of the following manufacturers: Agilent, Dionex, Shimadzu, Tekmar, Thermo Scientific, Varian

- Broad range of EPA Vials in clear and amber glass manufactured out of Schott Fiolax tubings
- Packed in a certified class 100,000 clean room
- Volumes of 20ml, 30ml, 40ml and 60ml available.
- Optional: All types of EPA Vials can be delivered against a small surcharge with a certificate of cleanliness that might especially be needed for TOC analysis.
- New: EPA vials can also be pre-sealed with a screw cap of your choice

13.1 Screw Neck Vials ND24 (EPA)

DAkkS
Deutsche
Akkreditierungsstelle
D-PL-14415-01-00

Art. No.:	GW 24 0240	GW 24 0344	GW 24 0241	GW 24 0345	GW 24 0242	GW 24 0346	GW 24 0243	GW 24 0347
Descr.:	20ml EPA Screw Neck Vial, 57 x 27.5mm, clear glass, 1st hydrol. class	20ml EPA Screw Neck Vial, 57 x 27.5mm, amber glass, 1st hydrol. Class	30ml EPA Screw Neck Vial, 72,5 x 27,5mm, clear glass, 1st hydrol. class	30ml EPA Screw Neck Vial, 72,5 x 27,5mm, amber glass, 1st hydrol. class	40ml EPA Screw Neck Vial, 95 x 27,5mm, clear glass, 1st hydrol. Class	40ml EPA Screw Neck Vial, 95 x 27,5mm, amber glass, 1st hydrol. class	60ml EPA Screw Neck Vial, 140 x 27,5mm, clear glass, 1st hydrol. class	60ml EPA Screw Neck Vial, 140 x 27,5mm, amber glass, 1st hydrol. class
Filling Capacity:	23,3	23,3	31,1	31,1	42,9	42,9	64,4	64,4
Residual Volume:	0,5	0,5	0,7	0,7	0,7	0,7	0,7	0,7
100 pcs. per PP-Box								

13. Screw Neck Vials and Closures ND24 (EPA)

13.2 PP Screw Seals ND24

- Ready to use combination seals; no time consuming and "tricky" assembly.
- Available as closed top screw seals or with centre hole in white 24-400 caps.
- Broad variety of different septa materials for almost all applications.
- Also UltraBond Seals ND24 are offered, i.e. that the cap and the Silicone/PTFE liner of these seals form an inseparable unit avoiding the problem of liners falling out of the cap. This 100% firm fit of the liner is achieved by a patented process that requires no adhesives, but instead changes the molecular structure of both components to achieve the fixation.
- We optionally supply our EPA screw caps with a TOC cleanliness certificate.

13.2.1 PP Screw Seals ND24, with hole

Art. No.	SV 24 0552	SV 24 1720	SV 24 0175 ZeroPeak Septa	SV 24 0904	SV 24 0956	SV 24 0174 UltraBond
Cap:	PP Screw Cap, white, 15mm hole					
Septa:	Butyl red/ PTFE grey	Silicone white/ PTFE beige (EPA Quality)	ZeroPeak Septa Siliconenature/ PTFE transparent, (EPA Quality)	Silicone white/ aluminium foil silver	Silicone nature /PTFE beige, cross-slit	Silicone nature /PTFE beige (EPA Quality)
Hardness	55° shore A	45° shore A	38° shore A	50° shore A	45° shore A	45° shore A
Thickness:	2,5mm	3,2mm	3,0mm	3,0mm	3,2mm	3,2mm
	100 pcs. per PE-Bag					

13.2.2 PP Screw Seals ND24, closed top

Art. No.	SV 24 0553	SV 24 1721	SV 24 0291 ZeroPeak Septa	SV 24 0905	SV 24 1323	SV 24 0292 UltraBond
Cap:	PP Schraubkappe, white, closed top					
Septa:	Butyl red/ PTFE grey	Silicone white/ PTFE beige (EPA Quality)	ZeroPeak Septa Siliconenature/ PTFE transparent, (EPA Quality)	Silicone white/ aluminium foil silver	Butyl dark grey	Silicone nature /PTFE beige (EPA Quality)
Hardness	55° shore A	45° shore A	38° shore A	50° shore A	48° shore A	45° shore A
Thickness:	2,5mm	3,2mm	3,0mm	3,0mm	3,0mm	3,2mm
	100 pcs. per PE-Bag					

13.3 Septa 22mm

Art. No.	SE 22 0480	SE 22 1719	SE 22 0217	SE 22 0714	SE 22 0817
Septa:	Butyl red/ PTFE grey	Silicone white/ PTFE beige (EPA Quality)	ZeroPeak Septa Silicone nature/ PTFE transparent, (EPA Quality)	Silikon white/ PTFE blue cross-slit (only unassembled)	Silikon white/ aluminum silver
Hardness	55° shore A	45° shore A	38° shore A	55° shore A	50° shore A
Thickness:	2,4mm	3,2mm	3,0mm	1,5mm	3,0mm
	1.000 pcs. per PE-Bag				

13.4 PP Screw Cap ND24

Art. No.	SK 24 0247	SK 24 0246
Cap:	PP Screw Cap 24mm, white, 15mm hole, thread 24-400	PP Screw Cap 24mm, white, closed top, thread 24-400
	1.000 pcs. per PE-Bag	

14. Vial Racks and Storage Boxes

- Easy handling and transportation of sample vials
- Filling visible because of transparent acrylic material.
- Stable standing position because of solid construction
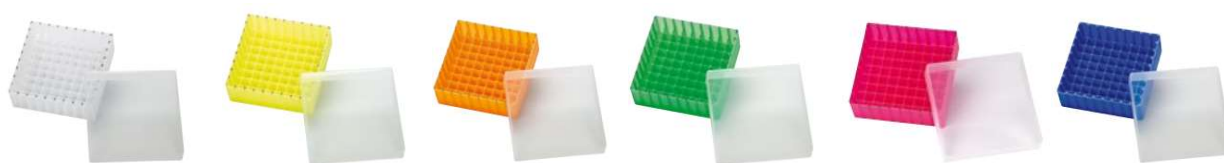- Stack stability because of silicone base.

14.1 Vial Racks

Art. No.	VR 12 1675	VR 15 1676
Description:	PP Vial-Rack, (200 x 105 x 17mm), for 1.5ml vials, 50 cavities,blue, stackable	PP Vial-Rack, (230 x 117 x 28mm),for 4ml vials, 50 cavities, blue, stackable
	1 pc. per PE-Bag	

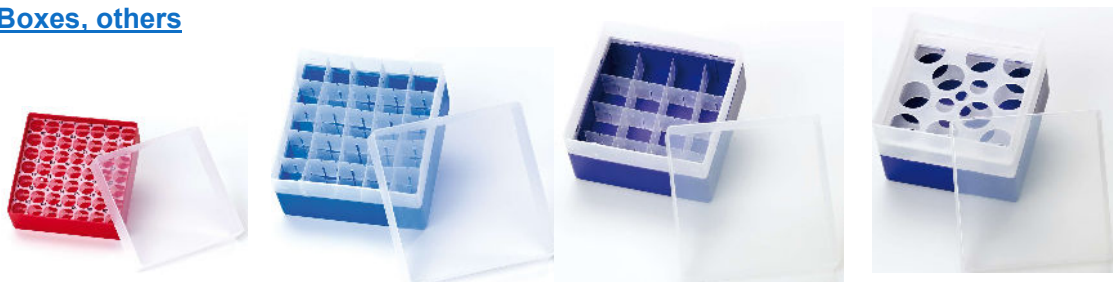## 14.2 PP Storage Boxes for 1.5ml Sample Vials (81 cavities)

Art. No.	VR 12 1730	VR 12 1728	VR 12 1726	VR 12 1729	VR 12 1727	VR 12 1725
Description:	PP Storage Box for 1,5ml (1,8ml, 2ml) vials or 2ml shell vials, with cover (130 x 130 x 45mm), 81 cavities with alphanumeric coding of all 4 margins as well as the cavities at the bottom					
	1 pc. per PE-Bag					

14.3 PP Storage Boxes for 1.5ml Sample Vials (100 cavities)
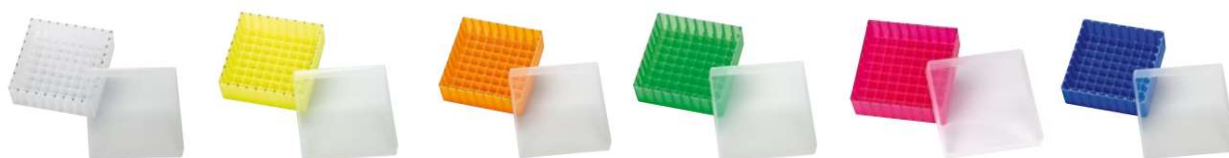
Art. No.	VR 12 1736	VR 12 1734	VR 12 1732	VR 12 1735	VR 12 1733	VR 12 1731
Description:	PP Storage Box for 1,5ml (1,8ml, 2ml) vials or 2ml shell vials, with cover (136 x 136 x 45mm), 100 cavities					
	1 pc. per PE-Bag					

14.4 PP Storage Boxes, others

Art. No.	VR 15 1858	VR 20 1887	VR 24 1999	VR 24 2000
Description:	PP Storage Box for 4ml vials or 4ml shell vials, red, with cover (130 x 130 x 52mm), 49 cavities with alphanumeric coding at the cavities	PP Storage Box for 5ml, 10ml and 20ml Headspace-Vials, blue, with cover (130 x 130 x 102mm), 25 cavities	PP Storage Box for 20ml EPA-Vials, violet, with cover (130 x 130 x 80mm), 16 cavities	PP Storage Box for 30ml and 40ml EPA-Vials, violet, with cover (130 x 130 x 105mm), 10 cavities
	1 pc. per PE-Bag			

15. HPLC Certified Plastic Disposable Syringes, non-sterile with Luer-Lock und Luer Slip

HPLC certified, non sterile disposable syringes made of solvent robust polypropylene for all syringe filter applications.

• Syringes manufactured according to ISO 13485 (Medical devices)
• Luer Lock manufactured according to ISO 594-2/DIN EN 1707
• Two-part, all-plastic construction made of a chemically resistant, inert polypropylene.
• No rubber plunger seals or silicone lubricants that may cause sample contamination.
• Free of latex, free of plasticizers, free of PVC.
• Safe functional back-stop feature.
• Easy to read permanent graduations.
• All Luer Lock syringes have centered tips.
• Available with Luer Lock and Luer Slip connections.

15.1 HPLC certified Plastic Disposable Syringes, non-sterile, with Luer-Lock

Art. No.	ES 02 1218	ES 05 1219	ES 10 1220	ES 20 1221
Description:	2ml Disposable Syringes, non-sterile Luer-Lock	5ml Disposable Syringes, non-sterile Luer-Lock	10ml Disposable Syringes, non-sterile Luer-Lock	20ml Disposable Syringes, non-sterile Luer-Lock
100 pcs. per PE-Bag				

15.2 HPLC certified Plastic Disposable Syringes, non-sterile, with Luer-Slip

Art. No.	ES 01 1545	ES 02 1222	ES 05 1223	ES 10 1224	ES 20 1225
Description:	1ml Disposable Syringes, non-sterile, Luer-Sip	2ml Disposable Syringes, non-sterile, Luer-Sip	5ml Disposable Syringes, non-sterile, Luer-Sip	10ml Disposable Syringes, non-sterile, Luer-Sip	20ml Disposable Syringes, non-sterile, Luer-Sip
100 pcs. per PE-Bag					

16. HPLC Syringe filters and Filter Vials

- Ultrasonic welded HPLC syringe filters with high-quality polypropylenhousings for sample
- volumes from 1.0ml to 100ml. An improved welding technique ensures a significantly
- increased pressure resistance of the PP housings of up to 7 bar
- For direct identification our filters are labelled with the respective membrane type and pore size
- The Luer-Lock inlet (female) ensures easy and safe installation of the filter on the syringe
- CHROMA syringe filters are available in diameters of 15mm, 25mm and 30mm
- Pore sizes 0.2µm or 0.45µm
- On request with prefilter and/or as sterile version

Membrane Select-Guide

Liquid solutions			Organic liquid		Gaseous
Mechanically demanding alkaline samples	Biological samples, high predein absorption	Biological samples, low predeinabsorption	Organic solvent	Partially organic solvent	Even strongly oxidising gases
↓	↓	↓	↓	↓	↓
Nylon	**CA Nylon**	**PES, RC, CA**	**Nylon, PTFE**	**RC, CA, PTFE**	**PTFE**

Which pore size for which application?

HPLC	Sterile filtration
↓	↓
0,45µm	**0,2µm**

16.1 15mm HPLC Syringe Filter

- 15mm syringe filter for small sample volumes
- Dead volume < 0,25ml
- Operating pressure: 7 bar
- Effective filter area: 1,77cm2
- For direct identification our filters are labelled with the respective membranee type and pore size
- The Luer-Lock inlet (female) ensures easy and safe installation of the filter on the syringe

16.1.1 15mm HPLC Syringe filters - 0,20µm

Art. No.	FI 17 0973	FI 17 0967	FI 17 0969	FI 17 0971	FI 17 0975	FI 17 0961
Description:	15mm HPLC Syringe Filter	15mm HPLC Syringe Filter	15mm HPLC Syringe Filter	15mm HPLC Syringe Filter	15mm HPLC Syringe Filter	15mm HPLC Syringe Filter
Membrane:	PTFE	Cellulose Acetat (CA)	Nylon	PES	PVDF	Regenerated Cellulose (RC)
Pore Size:	0,20µm	0,20µm	0,20µm	0,20µm	0,20µm	0,20µm
100 pcs. per PE-Bag						

16.1.2 15mm HPLC Spritzenfilter - 0,45µm

Art. No.	FI 17 0974	FI 17 0968	FI 17 0970	FI 17 0972	FI 17 0976	FI 17 0962
Description:	15mm HPLC Syringe Filter	15mm HPLC Syringe Filter	15mm HPLC Syringe Filter	15mm HPLC Syringe Filter	15mm HPLC Syringe Filter	15mm HPLC Syringe Filter
Membrane:	PTFE	Cellulose Acetat (CA)	Nylon	PES	PVDF	Regenerated Cellulose (RC)
Pore Size:	0,45µm	0,45µm	0,45µm	0,45µm	0,45µm	0,45µm
100 pcs. per PE-Bag						

16. HPLC Syringe filters and Filter Vials

16.2 25mm HPLC Syringe Filter

- 25mm Syringe filter for sample volumes up to 100ml
- Dead volume < 0,65ml
- Operating pressure: max. 7 bar
- Effective filter area: 490mm²
- For direct identification our filters are labelled with the respective membranee type and pore size
- The Luer-Lock inlet (female) ensures easy and safe installation of the filter on the syringe

16.2.1 25mm HPLC Syringe Filter - 0,20µm

Art. No.	FI 25 0417	FI 25 0942	FI 25 0421	FI 25 0963	FI 25 0965	FI 25 0419
Description:	25mm HPLC Syringe Filter	25mm HPLC Syringe Filter	25mm HPLC Syringe Filter	25mm HPLC Syringe Filter	25mm HPLC Syringe Filter	25mm HPLC Syringe Filter
Membrane:	PTFE	Cellulose Acetat (CA)	Nylon	PES	PVDF	Regenerated Cellulose (RC)
Pore Size:	**0,20µm**	**0,20µm**	**0,20µm**	**0,20µm**	**0,20µm**	**0,20µm**
100 pcs. per PE-Bag						

16.2.2 25mm HPLC Syringe Filter - 0,45µm

Art. No.	FI 25 0418	FI 25 0720	FI 25 0383	FI 25 0964	FI 25 0966	FI 25 0420
Description:	25mm HPLC Syringe Filter	25mm HPLC Syringe Filter	25mm HPLC Syringe Filter	25mm HPLC Syringe Filter	25mm HPLC Syringe Filter	25mm HPLC Syringe Filter
Membrane:	PTFE	Cellulose Acetat (CA)	Nylon	PES	PVDF	Regenerated Cellulose (RC)
Pore Size:	**0,45µm**	**0,45µm**	**0,45µm**	**0,45µm**	**0,45µm**	**0,45µm**
100 pcs. per PE-Bag						

16.3 30mm HPLC Syringe Filter

- 30mm Syringe filter for sample volume > 100ml, or fast filtration
- Dead volume < 175µl
- Operating pressure: max. 7 bar
- Effective filter area: 707mm2
- For direct identification our filters are labelled with the respective membranee type and pore size
- The Luer-Lock inlet (female) ensures easy and safe installation of the filter on the syringe

16.3.1 30mm HPLC Syringe Filter - 0,20µm

Art. No.	FI 30 1094	FI 30 1096	FI 30 1098	FI 30 1099	FI 30 1101
Description:	30mm HPLC Syringe Filter	30mm HPLC Syringe Filter	30mm HPLC Syringe Filter	30mm HPLC Syringe Filter	30mm HPLC Syringe Filter
Membrane:	PTFE	Cellulose Acetat (CA)	Nylon	PES	PVDF
Pore Size:	**0,20µm**	**0,20µm**	**0,20µm**	**0,20µm**	**0,20µm**
100 pcs. per PE-Bag					

16.3.2 30mm HPLC Syringe Filter - 0,45µm

Art. No.	FI 30 1095	FI 30 1097	FI 30 1000	FI 30 1100	FI 30 1102
Description:	30mm HPLC Syringe Filter	30mm HPLC Syringe Filter	30mm HPLC Syringe Filter	30mm HPLC Syringe Filter	30mm HPLC Syringe Filter
Membrane:	PTFE	Cellulose Acetat (CA)	Nylon	PES	PVDF
Pore Size:	**0,45µm**	**0,45µm**	**0,45µm**	**0,45µm**	**0,45µm**
100 pcs. per PE-Bag					

16. HPLC Syringe filters and Filter Vials

16.4 PP Filter Vials

Basic product information & short specs

The Chroma Globe Filter Vial is a simple to use sample preparation system that provides a fast, effective and easy to use process by integrating a self-sampling system, a membrane and a snap-ring-cap with slit and non-slit septa. The sample is placed in the outer vial and dispensed by pressing the inner insert to push it through the membrane. The sample is then filtered and the Filter Vial is ready to be inserted into the autosampler for further processing.

USP's Filter Vial features:

• The filter system consists of an internal insert with a membrane chamber and an external vial. In standard the filter system includes snap-ring Caps with a silicon/PTFE septa with slit. Upon request a non-slit septa is available.
• UltraClean Silicon/PTFE liners ensure analytic pure and reproducible analysis results
• The prepared sample is ready for the analysis process.
• Increase sample integrity with all-in vial and filter
• Reduce waste by replacing the syringe, syringe filter, glass vial and cap
• Compatible with almost all autosamplers

Press and proceed!

Art. No.	FV 11 2142	FV 11 2144	FV 11 2146	FV 11 2148	FV 11 2150
Description:	Filter Vial				
Membrane:	RC (Regenerated Cellulose)	PVDF (Polyvinylidene Fluoride)	NY (Nylon)	PTFE (Polytetrafluoroethylene)	PES (Polyethersulfone)
Pore Size:	0,20µm	0,20µm	0,20µm	0,20µm	0,20µm
Cap:	11mm PE snap ring cap, with hole; silicon white/PTFE red, 45° shore A, 1,0mm, cross-slit				
Cap Colour:	GREY	YELLOW	LIGH-BLUE	PINK	LIGHT-GREEN
	100 pcs. per blue 2in1 Kit box				

Art. No.	FV 11 2143	FV 11 2145	FV 11 2147	FV 11 2149	FV 11 2151
Description:	Filter Vial				
Membrane:	RC (Regenerated Cellulose)	PVDF (Polyvinylidene Fluoride)	NY (Nylon)	PTFE (Polytetrafluoroethylene)	PES (Polyethersulfone)
Pore Size:	0,45µm	0,45µm	0,45µm	0,45µm	0,45µm
Cap:	11mm PE snap ring cap, with hole; silicon white/PTFE red, 45° shore A, 1,0mm, cross-slit				
Cap Colour:	BLACK	ORANGE	DARK-BLUE	RED	DARK-GREEN
	100 pcs. per blue 2in1 Kit box				

Analytical Specification

Membrane Type	Characteristics	Compounds Class
RC (Regenerated Cellulose)	Hydrophilic • Very low protein binding • Resistant to a wide range of solvents.	Aqueous and organic solutions
PVDF (Polyvinylidene Fluoride)	Hydrophilic • Very low protein binding. • High flow rates for faster sample preparation	Alcohols, Biomolecules
NY (Nylon)	Hydrophilic • Low protein binding • Superior performance	Bases, HPLC solvents, alcohols, aromatic hydrocarbons
PTFE (Polytetrafluoroethylene)	Hydrophobic • Chemically and biologically inert • Superior chemical resistance.	Organic solvents, acids, alcohols, bases, aromatics
PES (Polyethersulfone)	Hydrophilic • Designed to remove particulates • Low protein and drug binding	Filtration of buffers and culture media

17. GC Injection Port Septa

- Long-life, universal GC septums: for a minimum of 450 injections
- Suitable for temperatures of up to 400 °C
- With "Center Guide" for better needle guidance
- Low bleeding (outgassing of siloxanes)
- Excellent dissolving properties from theinjection port
- Standard packaging of 25 pieces in resealable screw neck vial, on request also available in bulk packaging of 1,000 pieces

17.1 GC Injection Port Septa

Art. No.	GC 07 0186	GC 09 0182	GC 10 0183	GC 11 0184	GC 17 0185
Description:	Shimadzu Stopfen, rot	9,5mm High Performance GC Septa, red	10mm High Performance GC Septa, red	11mm High Performance GC Septa, red	17mm High Performance GC Septa, red
Usable for:	Shimadzu, all models	Agilent (HP), 5700/5880 Series Varian, Injector Type: Packed Columns Varian (CP), alle Modelle Tracor, 550,560 Gow-Mac, Alle Modelle Finnigan, 9001, QCQ, GCQ, Trace2000 Antek Unicam, 4600	Agilent (HP), 5890/6890 Series, 5700/ 5880 Series Varian, Injector Type: Packed Columns Injector Type: Split/ Splitless	Agilent (HP), 5890/6850/6890 Series, 5700/5880 Series,5880A Series Varian, 3300, 3400, 3500, 3600, 3700, Vista (Split/Splitless) Gow-Mac, 6890 Series PerkinElmer, Sigma Series, 900, 990 8000 Series Autosys (XL)	Thermo Scientific Quest, Trace Fisons/ Carlo Erba 8000 Series Finnigan, GCQ w/Trace
25 pcs. per Screw Neck Vial					

17.2 GC Injection Port Septa

Art. No.	GC 07 1784	GC 09 0178	GC 10 0179	GC 11 0180	GC 17 0181
Description:	Shimadzu Stopfen, transparent	9,5mm High Performance GC Septa, transparent	10mm High Performance GC Septa, transparent	11mm High Performance GC Septa, transparent	17mm High Performance GC Septa, transparent
Usable for:	Shimadzu, alle Modelle	Agilent (HP), 5700/5880 Series Varian, Injector Type: Packed Columns Varian (CP), alle Modelle Tracor, 550,560 Gow-Mac, Alle Modelle Finnigan, 9001, QCQ, GCQ, Trace2000 Antek Unicam, 4600	Agilent (HP), 5890/6890 Series, 5700/ 5880 Series Varian, Injector Type: Packed Columns Injector Type: Split/ Splitless	Agilent (HP), 5890/6850/6890 Series, 5700/5880 Series,5880A Series Varian, 3300, 3400, 3500, 3600, 3700, Vista (Split/Splitless) Gow-Mac, 6890 Series PerkinElmer, Sigma Series, 900, 990 8000 Series Autosys (XL)	Thermo Scientific Quest, Trace Fisons/ Carlo Erba 8000 Series Finnigan, GCQ w/Trace
25 pcs. per amber sSrew Neck Vial					

18. Injection Vials ND13

- High-quality injection bottles according to DIN/ISO made of tubular glass
- Production exclusively from glass of the 1st hydrolytic class
- Available in clear glass and amber glass
- Cleanroom-packed in a class 100,000 cleanroom, the "CleanPack" seal of quality guarantees this high quality standard

18.1 Injection Vials ND13

Art. No.	RR 13 0304	RR 13 0396
Description:	2ml Injection Vial, 1. hydrol. class,clear glass, according to DIN/ISO	2ml Injection Vial, 1. hydrol. class, amber glass, according to DIN/ISO
Dimension:	35 x 16mm	35 x 16mm
Content:	2ml	2ml
352 pcs. per PP-Box		

18.2 Injection Stoppers ND13

Art. No.	SE 13 0305	SE 13 0670	SE 13 2296
Description:	13mm Injection Stopper, Brombutyl, grey	13mm Freeze Drying Stopper, Brombutyl, grey	13mm RTS Freeze Drying Stopper, Brombutyl, grey
Hardness:	45° shore A		
Pack:	1.000 pcs. per PE-Bag	3.000 pcs. per PE-Bag	3.000 pcs. per PE-Bag

RTS = Ready to sterilisation

18.3 Crimp Caps ND13

Art. No.	BK 13 0628	BK 13 0303	FO 13 0865
Description:	13mm Aluminium crimp cap, clear lacquered, complete tear-off	13mm Aluminium crimp cap, clear lacquered, centre tear-off	13mm Flip-Top/ Flip-Off Cap, red, centre tear-off
1.000 pcs.per PE-Bag			

18.4 Crimp Seals ND13

Art. No.	BV 13 1527	BV 13 1876
Descrip.:	13mm Aluminium Crimp Cap, clear lacquered, centre hole; Butyl red/PTFE grey, 55° shore A, 1.6mm	13mmAluminium Crimp cap, silver lacquered, centre tear-off, Butyl red/PTFE grey, 55° shore A, 1.6mm
100 pcs. per PE-Bag		

19. Injection Vials ND20

- High-quality injection bottles according to DIN/ISO made of tubular glass
- Production exclusively from glass of the 1st hydrolytic class
- Available in clear glass and amber glass
- Cleanroom-packed in a class 100,000 cleanroom, the CleanPack" seal of quality
- guarantees this high quality standard

19.1 Injection Vial ND20, clear glass (tubular glass)

Art. No.	RR 20 0400	RR 20 0316	RR 20 0492	RR 20 0549
Description:	6ml Injection Vial, 1. hydrol. class, clear glass, according to DIN/ISO	10ml Injection Vial, 1. hydrol. class, clear glass, according to DIN/ISO	20ml Injection Vial, 1. hydrol. class, clear glass, according to DIN/ISO	30ml Injection Vial, 1. hydrol. class, clear glass, according to DIN/ISO
Dimension:	40 x 22mm	45 x 24mm	55 x 30mm	75 x 30mm
Content:	6ml	10ml	20ml	30ml
Pack	186 pcs. per PP-Box	154 pcs. per PP-Box	91 pcs. per PP-Box	upon request

19.2 Injection Vial ND20, amber glass (tubular glass)

Art. No.	RR 20 0399	RR 20 0251	RR 20 0548	RR 20 0550
Description:	6ml Injection Vial, 1. hydrol. class, amber glass, according to DIN/ISO	10ml Injection Vial, 1. hydrol. class, amber glass, according to DIN/ISO	20ml Injection Vial, 1. hydrol. class, amber glass, according to DIN/ISO	30ml Injection Vial, 1. hydrol. class, amber glass, according to DIN/ISO
Dimension:	40 x 22mm	45 x 24mm	55 x 30mm	75 x 30mm
Content:	6ml	10ml	20ml	30ml
Pack	186 pcs. per PP-Box	154 pcs. per PP-Box	91 pcs. per PP-Box	upon request

19. Injection Vials ND20 made of molded glass (cont.)

- High quality injection vials made of smelting glass according to DIN/ISO
- According to Article 3.2.1 of the European Pharmacopoeia PH, corresponds to glass type I. Eur.
- Dust and germfree packaging
- Clear glass and amber glass vials available
- Filling volume from 20ml - 100ml

19.3 Injection Vial ND20, clear glass (molded glass)

Art. No.	RR 20 0405	RR 20 0409	RR 20 0385	RR 20 0390
Description:	20ml Injection Vial, 1. hydrol. class, clear glass, according to DIN/ISO	30ml Injection Vial, 1. hydrol. class, clear glass, according to DIN/ISO	50ml Injection Vial, 1. hydrol. class, clear glass, according to DIN/ISO	100ml Injection Vial, 1.hydrol. class, clear glass, according to DIN/ISO
Dimension:	58 x 32mm	62 x 36mm	73 x 42,5mm	94,5 x 51,6mm
Content:	20ml	30ml	50ml	100ml
Pack	252 pcs.per PE-foil	90 pcs.per PE-foil	90 pcs.per PE-foil	88 pcs.per PE-foil

19.4 Injection Vial ND20, amber glass (molded glass)

Art. No.	RR 20 0406	RR 20 0410	RR 20 0411	RR 20 0412
Description:	20ml Injection Vial, 1. hydrol. class, amber glass, according to DIN/ISO	30ml Injection Vial, 1. hydrol. class, amber glass, according to DIN/ISO	50ml Injection Vial, 1. hydrol. class, amber glass, according to DIN/ISO	100ml Injection Vial, 1. hydrol. class, amber glass, according to DIN/ISO
Dimension:	58 x 32mm	62 x 36mm	73 x 42,5mm	94,5 x 51,6mm
Content:	20ml	30ml	50ml	100ml
Pack	252 pcs.per PE-foil	90 pcs.per PE-foil	90 pcs.per PE-foil	88 pcs.per PE-foil

19. Injection Vials ND20

19.5 Injection Stoppers ND20

Art. No.	SE 20 0250	SE 20 2297	SE 20 2298	SE 20 0445
Description:	20mm Injection stopper, Brombutyl, red-brown, 48° Shore A	20mm RTS Injection stopper, Chlorbutyl, grey, 48° Shore A	20mm RTS Injection stopper, Brombutyl, red-brown, 48° shore A	20mm Injection stopper, Brombutyl, grey, 45° shore A
Pack	2.000 pcs. per PE-Bag	2.000 pcs. per PE-Bag	2.500 pcs. per PE-Bag	2.000 pcs. per PE-Bag

Art. No.	SE 20 1509	SE 20 2369	SE 20 0107	SE 20 0608	SE 20 0143
Description:	20mm Freeze Drying Plug, Bromobutyl light grey	20mm RTS Freeze Drying Plug, Chlorbutyl, grey	20mm Injection stopper, Butyl/PTFE, grey, 47° shore A	20mm UltraClean Silicone Stopper, transparent, 37° shore A	20mm Pharma-Fix Septa, Butyl/PTFE, 50° shore A, 3,0mm
Pack	1.700 pcs. per PE-Bag	3.400 pcs. per PE-Bag	5.000 pcs. per PE-Bag	1.000 pcs. per PE-Bag	1.000 pcs. per PE-Bag

RTS = Ready to sterilisation

19.6 Aluminum Crimp Cap ND20

19.6.1 Flip-Off - Centre Tear-Off Crimp Caps ND20 (tamper-evident crimp caps)

Art. No.	FO 20 0281	FO 20 0551	FO 20 0280	FO 20 0577	FO 20 0295
Descr.	20mm flip-off cap, centre tear-off, transparent	20mm flip-off cap, centre tear-off, white	20mm flip-off cap, centre tear-off, yellow	20mm flip-off cap, centre tear-off, orange	20mm flip-off cap, centre tear-off, Red
	1.000 pcs. per PE-Bag				

Art. No.	FO 20 0597	FO 20 0596	FO 20 0282	FO 20 0422	FO 20 0598
Descr.	20mm flip-off cap, centre tear-off. lavendel	20mm flip-off cap, centre tear-off, violet	20mm flip-off cap, centre tear-off, dark-blue	20mm flip-off cap, centre tear-off, blue	20mm flip-off cap, centre tear-off, Turquoise
	1.000 pcs. per PE-Bag				

Art. No.	FO 20 0600	FO 20 0309	FO 20 0599	FO 20 0595	FO 20 1044
Descr.	20mm flip-off cap, centre tear-off, dark-green	20mm flip-off cap, centre tear-off, green	20mm flip-off cap, centre tear-off , yellow-green	20mm flip-off cap, centre tear-off, black	20mm flip-off cap, centre tear-off, Grey
	1.000 pcs. per PE-Bag				

19. Injection Vials ND20

19.7.1 Centre Tear-Off Crimp Caps ND20 (tamper-evident crimp caps)

Art. No.	BK 20 0275	BK 20 0276	BK 20 0277	BK 20 0278	BK 20 0279
Description:	20mm Aluminum Crimp Cap, clear lacquered, centre-tear-off	20mm Aluminum Crimp Cap, blue lacquered, centre-tear-off	20mm Aluminum Crimp Cap, gold lacquered, centre-tear-off	20mm Aluminum Crimp Cap, green lacquered, centre-tear-off	20mm Aluminum Crimp Cap, red lacquered, centre-tear-off
1.000 pcs. per PE-Bag					

19.7.2 Complete Tear-Off Crimp Caps ND20 (tamper-evident crimp caps)

Art. No.	BK 20 0019	BK 20 0109	BK 20 0110	BK 20 0111	BK 20 0112
Description:	20mm Aluminum Crimp Cap, clear lacquered, complete tear-off	20mm Aluminum Crimp Cap, green lacquered, complete tear-off	20mm Aluminum Crimp Cap, red lacquered, complete tear-off	20mm Aluminum Crimp Cap, blue lacquered, complete tear-off	20mm Aluminum Crimp Cap, gold lacquered, complete tear-off
1.000 pcs. per PE-Bag					

19.7.3 Flip Tear-Up Caps ND20

Art. No.	FT 20 1060	FT 20 0378	FT 20 0423
Description:	20mm Flip Tear Up Cap, complete tear-off white	20mm Flip Tear Up Cap, complete tear-off red	20mm Flip Tear Up Cap, complete tear-off blue
1.000 pcs. per PE-Bag			

20 Infusion Vial ND32

- High-quality infusion vials according to DIN/ISO made of tubular glass
- Dust and germ-free packaging
- Clear glass and amber glass vials available
- Filling volumes from 70ml - 1000ml

20.1 Infusion Vial ND32, clear glass (tubular glass)

Art. No.	RR 32 0626	RR 32 0414	RR 32 0713	RR 32 1048
Description:	100ml Infusion Vial, 1. hydrol. class, clear glass, according to DIN/ISO	250ml Infusion Vial, 1. hydrol. class, clear glass, according to DIN/ISO	500ml Infusion Vial, 2. hydrol. class, clear glass, according to DIN/ISO	1000ml Infusion Vial, 2. hydrol. class, clear glass, according to DIN/ISO
Dimension:	104 x 49mm	136 x 66mm	177 x 78mm	230 x 95mm
Content:	100ml	250ml	500ml	1000ml
Pack	99 pcs. per tray	35 pcs. per tray	35 pcs. per tray	1 pcs. per box

20.2 Infusion Vial ND32, amber glass (tubular glass)

Art. No.	RR 32 1178	RR 32 1443	RR 32 1161
Description:	100ml Infusion Vial, 1. hydrol. class, amber glass, according to DIN/ISO	250ml Infusion Vial, 1. hydrol. class, amber glass, according to DIN/ISO	500ml Infusion Vial, 2. hydrol. class, amber glass, according to DIN/ISO
Dimension:	104 x 49mm	136 x 66mm	177 x 78mm
Content:	100ml	250ml	500ml
Pack	99 pcs. per tray	35 pcs. per tray	35 pcs. per tray

20. Infusion Vials ND32 (Cont.)

20.3 Infusion Stoppers ND32

Art. No.	SE 32 0694	SE 32 1059
Description:	32mm Infusion stopper, Brombutyl, grey	32mm Infusion stopper, Bromobutyl, red-brown,
500 pcs. per PE-Bag		

20.4 Crimp Caps ND32

Art. No.	BK 32 1091	FO 32 1275	FO 32 1282
Description:	32mm aluminum crimp cap, clear lacquered, centre tear-off with flap	32mm Flip-Off cap, red, centre tear-off	32mm Flip-Off cap, green, centre tear-off
1.000 pieces per PE-Bag			

22. Crimping Tools

- Easy and convenient handling
- Chemically resistant surface finish especially designed for the application in labs
- Hardened crimping jaws made of a special alloy that guarantees long life
- Adjustable in crimping pressure limitation by a screw in the handle
- Additionally all Chroma Globe Crimping Tools are adjustable in crimping height
  by screwing up or down the pressure block in the crimping head with a hexagon key.
- The crimper sizes depend on the inner diameter of the respective crimp caps

22.1 Crimper

22.1.1 Crimper for Aluminum Crimp Caps

- Crimper for aluminium crimp caps are designed for a variety of cap types. Following are the most common types of caps:
  - Standard aluminium crimp caps with hole
  - Headspace crimp caps with pressure release system
  - Centre tear-off caps
  - Complete tear-off cap

Art. No.	CR 07 0020	CR 08 0001	CR 11 0003	CR 13 0005
Description:	Crimper for 7.5mm Aluminum Crimp Cap	Crimper for 8mm Aluminum Crimp Cap	Crimper for 11mm Aluminum Crimp Cap	Crimper for 13mm Aluminum Crimp Cap
1 piece per Box				

Art. No.	CR 20 0007	CR 28 0009	CR 30 0056	CR 32 0010
Description:	Crimper for 20mm Aluminum Crimp Cap	Crimper for 28mm Aluminum Crimp Cap	Crimper for 30mm Aluminum Crimp Cap	Crimper for 32mm Aluminum Crimp Cap
1 piece per Box				

22.1.2 Crimper for Flip-Off Crimp Caps

- Flip-off Crimper are suitable for our tamper-evident flip-off caps with tear-off plastic centre part (see caps in chapter 16.6.1 on page 47)
- **Caution:** Meanwhile there are a number of crimped caps on the market that come very close to our flip-off caps in terms of their centre tear-off function and appearance. Please note that even the smallest deviations in cap geometry have an effect on the sealing properties of our Crimper. Therefore please pay attention to the "Flip-off" writing on the crimping caps

Art. No.	CR 11 0021	CR 13 0013	CR 16 0062	CR 20 0015
Description:	Crimper for 11mm Flip-off Cap	Crimper for 13mm Flip-off Cap	Crimper for 16.5mm Flip-off Cap	Crimper for 20mm Flip-off Cap
1 piece per Box				

Art. No.	CR 28 0025	CR 30 0026	CR 32 0444
Description:	Crimper for 28mm Flip-off Cap	Crimper for 30mm Flip-off Cap	Crimper for 32mm Flip-off Cap
1 piece per Box			

22. Crimping Tools (Cont.)

22.1.3 Crimper for Combination Caps

Art. No.	CR 13 0545
Description:	Crimper for 13mm combination caps
	1 piece per Box

22.1.4 Crimper for Flip-Tear-Up Crimp Caps

- Flip Tear Up Crimper are suitable for our tamper-evident Flip Tear Up Cap, which can be completely torn open on the side using a plastic tear-off part and predetermined breaking lines (complete tear-off function)
- Decapping tools are therefore not required

Art. No.	CR 13 0014	CR 20 0016	Cap Type (exemplary)
Description:	Crimpe for 13mm Flip Tear Up Cap	Crimper for 20mm Flip Tear Up Cap	
	1 piece per Box		

22.1.5 Crimper for Flip-Top with flush sides Crimp Caps

Art. No.	CR 20 0064	Cap Type (exemplary)
Description:	Crimper for 20mm Flip top with flush sides crimp caps	
	1 piece per Box	

22.1.6 Crimper for 3 pc Tear-Off Crimp Caps

Art. No.	CR 28 0053	Cap Type (exemplary)
Description:	Crimper for 28m "3 pc Tear off" Crimp Caps	
	1 piece per Box	

22.1.7 Crimper for Pump-Spray Crimp Caps (atomizers)

Art. No.	CR 15 0022	CR 16 0023	CR 20 0024	Cap Type (exemplary)
Description:	Crimper for 15,5mm "spray pump" Seals	Crimper for 16,5mm "spray pump" Seals	Crimper for 20mm "spray pump" Seals	
	1 piece per Box			

22. Crimping Tools (Cont.)

22.2 Crimper for clean room applications

- The crimping/decapping mechanism is corrosion and heat resistant, making applications possible directly in the clean room
- Even multiple applications do not cause damage to the tool
- Available in sizes from 7,5mm - 32mm
- Crimpers and Decappers are available
- Can optionally be equipped with special handles for better grip (also autoclavable; temperature resistance up to 150° C)
- Adjustable in the flare pressure limitation by means of adjusting screw in the handle
- Additionally all CHROMA Crimpers are height adjustable in the crimp head

22.2.1 Crimper for Aluminium Crimp Caps

Crimper for aluminium crimp caps are designed for a variety of cap types. Following are the most common types of caps:

- Standard aluminium crimp caps with hole
- Headspace crimp caps with pressure release system
- Centre tear-off caps
- Complete tear-off cap

Art. No.	CR 08 0253	CR 11 0220	CR 13 0221	CR 20 0219
Description:	Crimper for 8mm Aluminum Crimp Cap	Crimper for 11mm Aluminum Crimp Cap	Crimper for 13mm Aluminum Crimp Cap	Crimper for 20mm Aluminum Crimp Cap
sterilisable for clean room applications (please consider technical Data information below!)				
1 piece per Box				

Art. No.	CR 28 0267	CR 30 0271	CR 32 0274
Description:	Crimper for 28mm Aluminum Crimp Cap	Crimper for 30mm Aluminum Crimp Cap	Crimper for 32mm Aluminum Crimp Cap
sterilisable for clean room applications (please consider technical Data information below!)			
1 piece per Box			

22.2.2 Crimper for Flip-Off Crimp Caps

- Flip-off Crimper are suitable for our tamper-evident flip-off caps with tear-off plastic centre part (see caps in chapter 16.6.1 on page 48)
- Caution: Meanwhile, there are a number of crimp caps on the market that come very close to our flip-off caps in terms of their centre tear-off function and appearance. Please note that even the smallest deviations in cap geometry have an effect on the sealing properties of our flanging pliers. Therefore please pay attention to the "Flip-off" writing on the crimping caps.

Art. No.	CR 13 0257	CR 20 0263	CR 28 0269	CR 30 0273	CR 32 0444
Description:	Crimper for 13mm Flip-Off Cap	Crimper for 20mm Flip-Off Cap	Crimper for 28mm Flip-Off Cap	Crimper for 30mm Flip-Off Cap	Crimper for 32mm Flip-Off Cap
sterilisable for clean room applications (please consider technical Data information below!)					
1 piece per Box					

Technical data (clean room crimping tools):

Our cleanroom crimping tools ensure sample integrity in a cleanroom environment. The crimp/decapper mechanism is corrosion and heat resistant. The processes listed below, as well as various other low temperature applications, are safe for your new tool. Even repeated sterilisation for cleanroom applications will not damage the cleanroom crimp tool.

Crimping tool:	Temperature:	Pressure:	Time period:
not wrapped	121°C 132°C	1,05 bar ≙ 105 kPa 2,07 bar ≙ 207 kPa	15 min 3 min
slightly wrapped	132°C	2,07 bar ≙ 207 kPa	8 min
strongly wrapped	132°C	2,07 bar ≙ 207 kPa	10 min

22. Crimping Tools (Cont.)

22.2 Crimper for clean room applications (cont.)

22.2.3 Crimper for „Flip-Tear-Up" Crimp Caps

- Flip Tear Up crimper are suitable for our tamper-evident Flip Tear Up Cap, which can be torn open completely by means of a plastic tear-off piece and predetermined breaking lines on the side (complete tear-off function)
- Decapper are therefore not required

Art. No.	CR 13 0258	CR 20 0265	Cap Type (exemplary)
Description:	Crimper for 13mm Flip Tear Up Cap, height adjustable	Crimper for 20mm Flip Tear Up Cap, height adjustable	
	sterilisable for clean room applications		
	1 piece per Box		

22.2.4 Crimper for Flip-Top with flush sides Crimp Caps

Art. No.	CR 20 0264	Cap Type (exemplary)
Description:	Crimper for 20mm Flip-off with flush sides, eight adjustable	
	sterilisable for clean room applications	
	1 piece per Box	

22.2.5 Crimper for 3 pc Tear-Off Crimp Caps

Art. No.	CR 28 0270	Cap Type (exemplary)
Description:	Crimper for 28mm „3 pc tear off" Caps, height adjustable	
	sterilisable for clean room applications	
	1 piece per Box	

22.2.6 Crimper for Pump-Spray Crimp Caps (atomizer))

Art. No.	CR 15 0259	CR 16 0260	CR 18 0493	CR 20 0266	Cap Type (exemplary)
Description:	Crimper for 15,5mm "Pump Spray closures, height adjustable	Crimper for 16,5mm "Pump Spray closures, height adjustable	Crimper for 18mm "Pump Spray closures, height adjustable	Crimper for 20mm "Pump Spray closures, height adjustable	
	sterilisable for clean room applications				
	1 piece per Box				

22. Crimping Tools (Cont.)

22.3 Manual Decapping Tools

- Easy and convenient handling
- Chemical resistant powder coating
- High quality construction for durability and long life
- Adjustable in the crimping pressure limitation by means of adjusting screw in the handle

22.3.1 Decapper for Aluminum Crimp Caps

Art. No.	DC 08 0002	DC 11 0004	DC 13 0006	DC 20 0008
Description:	8mm Decapper	11mm Decapper	13mm Decapper	20mm Decapper
	1 piece per Box			

Art. No.	DC 28 0011	DC 30 0027	DC 32 0012
Description:	28mm Decapper	30mm Decapper	32mm Decapper
	1 piece per Box		

22.3.2 Cleanroom Deacappers for Aluminium Crimp Caps

Art. No.	DC 08 0254	DC 11 0255	DC 13 0256	DC 20 0262
Description:	8mm Decapper, sterilisable for clean room applications	11mm Decapper, sterilisable for clean room applications	13mm Decapper, sterilisable for clean room applications	20mm Decapper, sterilisable for clean room applications
	sterilisable for clean room applications			
	1 piece per Box			

Art. No.	DC 28 0268	DC 30 0272	DC 32 0231
Description:	28mm Decapper, sterilisable for clean room applications	30mm Decapper, sterilisable for clean room applications	32mm Decapper, sterilisable for clean room applications
	sterilisable for clean room applications		
	1 piece per Box		

22.3.3 Opening Pliers

- Simple and convenient handling
- Inexpensive alternative for deacappers
- Made of stainless steel, therefore also sterilisable and autoclavable

Art. No.	ÖS 08 0150	ÖS 11 0151	ÖS 13 0152	ÖS 20 0070	ÖS 30 0153
Description:	8mm opening pliers, sterilisable for clean room applications	11mm opening pliers, sterilisable for clean room applications	13mm opening pliers, sterilisable for clean room applications	20mm opening pliers, sterilisable for clean room applications	30mm opening pliers, sterilisable for clean room applications
	sterilisable for clean room applications				
	1 piece per Bag				

22. Crimping Tools (Cont.)

22.4 Manual Table Crimper

- Manually operated crimping and decapping tool
- **User-friendly handling**, the bottle is crimped or de-crimped by operating the hand lever handle
- **Exchangeable crimping and decapping heads** are available in almost 100 sizes (see chapter crimping and decapping heads on page 48f.)
- **No tools necessary** for changing the crimping heads
- Ideal use in combination with our CHROMA POWER CRIMPER, as the crimping and decapping heads fit on both machines
- Adjustable, constant and **reproducible crimping pressure**

22.4.1 Overview of our 6 available models

- Ideal use in combination with the CHROMA TABLE CRIMPER as the crimping and decapper heads fit on both units

Steel Version   **Granite Version**   **Stainless Steel Version**

Art. No.	TC 00 0312	TC 00 0212	TC 00 0310	TC 00 0531	TC 00 0311	TC 00 0213
Description:	Manual Table Crimper with large work space	Manual Table Crimper with small work space	Manual Table Crimper with large work space	Manual Table Crimper with small work space	Manual Table Crimper with large work space	Manual Table Crimper with small work space
Work space:	Steel 25,45 x 30,5cm	Steel 20,3 x 25,4cm	Granite 25,45 x 30,5cm	Granite 20,3 x 25,4cm	Stainless Steel 25,45 x 30,5cm	Stainless Steel 20,3 x 25,4cm
Height:	45,72cm	35,56cm	48,90cm	38,75cm	45,72cm	35,56cm
Weight:	9,5 kg	7,4 kg	10,9 kg	8,4 kg	9,5 kg	7,4 kg
1 piece per Box						

22.5 Pneumatic Crimping Tool

22.5.1 Pneumatic Hand-held Crimping Tool

- Crimping and decapping tool, operated by compressed air (6.2bar = 90psi minimum net pressure)
- **Easy handling;** just by pushing the button the vial is crimped or decapped
- **Exchangeable crimping and decapping heads** are available in almost 100 sizes (see chapter 18.5.1.1 crimping and decapping heads on page 58f.)
- No tools necessary for **changing the crimping heads**
- Ideal use in combination with our CHROMA POWER CRIMPER, as the crimping and decapping heads fit on both machines
- Adjustable, constant and **reproducible crimping pressure**

Art. No.	PC 00 0066	PC 00 0578	PC 00 0592
Description:	Pneumatic Basic Crimping Tool, including pressure regulator, safety valve and Nylon (PA) twisted hose (Basic version)	Hanging device with balancer For pneumatic crimping tool (Optional)	Stand, foot pedal and compressed air hose for pneumatic crimping tool (Optional)
1 piece per Box			

22. Crimping Tools (Cont.)

22.5.2 Crimping Heads for Pneumatic Crimping Tool and Table Crimper

- Exchangeable crimping and decapping heads for CHROMA table crimper and/or CHROMA POWER CRIMPER

- With about 100 different sizes we cover almost every need (separate sale)

- No tools are required to change to another size or device.

22.5.2.1. Crimping Heads for Aluminum Crimp Caps

Art. No.	CR 07 0028	CR 08 0029	CR 11 0030	CR 13 0031	CR 20 0032	CR 28 0044	CR 30 0033	CR 32 0034
Descr:	C-Head for 7.5mm Alu Crimp Caps	C-Head for 8mm Alu Crimp Caps	C-Head for 7.5mm Alu Crimp Caps	C-Head for 13mm Alu Crimp Caps	C-Head for 20mm Alu Crimp Caps	C-Head for 20mm Alu Crimp Caps	C-Head for 20mm Alu Crimp Caps	C-Head for 32mm Alu Crimp Caps
	1 piece per Box							

22.5.2.2. Crimping Heads for Flip-off Crimp Caps

Art. No.	CR 13 0036	CR 16 0063	CR 20 0037	CR 28 0038	CR 30 0057	CR 32 0039
Descr:	C-Head for 13mm Flip-off Crimp Cap	C-Head for 13mm Flip-off Crimp Cap	C-Head for 20mm Flip-off Crimp Cap	C-Head for 28mm Flip-off Crimp Cap	C-Head for 30mm Flip-off Crimp Cap	C-Head for 32mm Flip-off Crimp Cap
	1 piece per Box					

22.5.2.3 Other Crimping Heads

Art. No.	CR 13 0048	CR 20 0049	CR 32 0059	CR 28 0061	CR 28 0054
Descr:	C-Head for 13mm FLIP TEAR UP Crimp Cap	C-Head for 13mm FLIP TEAR UP Crimp Cap	C-Head for 32mm FLIP TEAR UP Crimp Cap	C-Head for 28mm Short Tear off Crimp Cap	C-Head for 28mm 3pc Tear Off Crimp Cap
	1 piece per Box				

Art. No.	CR 15 0050	CR 16 0051	CR 20 0052	CR 20 0065
Descr:	C-Head for 15,5mm PUMP SPRAY Crimp Cap	C-Head for 16,5mm PUMP SPRAY Crimp Cap	C-Head for 20mm PUMP SPRAY Crimp Cap	C-Head for 20mm Flip top with flush sides Crimp Cap
	1 piece per Box			

22.5.2.4 Decapping Heads

Art. No.	DC 08 0040	DC 11 0041	DC 13 0042	DC 20 0043	DC 28 0045	DC 30 0046	DC 32 0047
Descr:	D-Head for 8mm Alu Crimp Caps	D-Head for 11mm Alu Crimp Caps	D-Head for 13mm Alu Crimp Caps	D-Head for 20mm Alu Crimp Caps	D-Head for 28mm Alu Crimp Caps	D-Head for 30mm Alu Crimp Caps	D-Head for 32mm Alu Crimp Caps
	1 piece per Box						

22. Crimping Tools (Cont.)

22.6 Vertical Pneumatic Crimping Tool

- Crimping and decapping tool operated by compressed air
- **User-friendly handling**, the vial is crimped or decapped by pressing the release button
- **Exchangeable crimping and decapping heads** (sold separately) for the following sizes and cap types
- **No tools are required** to change to another size or type of cap
- **Space-saving installation** by using a suspension device; spring balancer compensates the weight and guarantees smooth and precise closing or opening
- Adjustable, constant and **reproducible crimping pressure**

Art. No.	VC 00 0368	VC 00 1064	VC 00 0729
Description:	Vertical pneumatic crimping machine; (2 pistons) includes the basic unit and a pressure reducer, a safety valve and a suitable compressed air hose	Vertical pneumatic crimping machine; (3 pistons) includes the basic unit and a pressure reducer, a safety valve and a suitable compressed air hose	Hanging device with spring balancer for vertical pneumatic crimping tool
	1 piece per Box		

22.6.1 Crimping Heads for Vertical Pneumatic Crimping Tool

- Crimping heads are available for Standard Aluminum Crimp Cap and Flip-Off Crimp Cap in sizes 8mm - 20mm
- Sorted by size below

Art. No.	CV 08 0369	CV 11 0371	CV 13 0373	CV 13 0374	CV 20 0376	CV 20 0377
Description:	C-Head for 8mm Alu Crimp Caps	C-Head for 11mm Alu Crimp Caps	C-Head for 13mm Alu Crimp Caps	C-Head for 13mm Flip-off Crimp Cap	C-Head for 20mm Alu Crimp Caps	C-Head for 20mm Flip-off Crimp Cap
	1 piece per Box					

22.6.2 Decapping Heads for Vertical Pneumatic Crimping Tool

- Decapping heads for Aluminum Crimp Cap are available in the sizes 8mm - 20mm
- Sorted by size below

Art. No.	DV 08 0370	DV 11 0372	DV 13 0375	DV 20 0391
Description:	D-Head for 8mm Alu Crimp Caps	D-Head for 11mm Alu Crimp Caps	D-Head for 13mm Alu Crimp Caps	D-Head for 20mm Alu Crimp Caps
	1 piece per Box			

23 Screw Neck Vials and Seals for Storage Purposes

- Screw Neck Vials for storage purposes made out of 1st hydrol. class glass.
- Vials with different volumes are available.
- Clear and amber Vials.
- Seals with different septa materials.

23.1 Screw Neck Vials for Storage Purposes

Art. No.	GW 08 0193	GW 08 0799	GW 13 0454	GW 13 0455	GW 15 0636 GW 15 0831	GW 15 0637 GW 15 0876
Thread:	8-425	8-425	13-425	13-425	15-425	15-425
Description:	1.5ml Screw Neck Vial, 32 x 11.6mm, clear glass, 1st hydrol. class, small openingen	1.5ml Screw Neck Vial, 32 x 11.6mm, amber glass, 1st hydrol. class, small openingen	4ml Screw Neck Vial, 45 x 14.7mm, clear glass, 1st hydrol. Class	4ml Screw Neck Vial, 45 x 14.7mm, Amber glass, 1st hydrol. Class	8ml Screw Neck Vial, 61 x 16.6mm, clear glass, (amber glass) 1. hydrol. class	12ml Screw Neck Vial, 66 x18.5mm, clear glass, (amber glass), 1. hydrol. class
Filling volume (ml)	1,9	1,9	5	5	8,9	12
Residual volume (µl)	<110	<110	<400	<400	800	800
100 pieces per Box						

Art. No.	GW 18 1078	GW 20 1012 GW 20 2209	GW 24 0240 GW 24 0344	GW 24 0241 GW 24 0345	GW 24 0242 GW 24 0346	GW 24 0243 GW 24 0347
Thread:	18-400	20-400	24-400	24-400	24-400	24-400
Description:	16ml Screw Neck Vial, 71 x 20.6mm, clear glass, 1st hydrol. Class	20ml Screw Neck Vial, 86 x 22.5mm, clear glass, (amber glass) 1st hydrol. Class	20ml EPA Screw Neck Vial, 57 x 27.5mm, clear glass, (amber glass) 1. hydrol. class	30ml EPA Screw Neck Vial, 72.5 x 27.5mm, clear glass, (amber glass) 1. hydrol. class	40ml EPA Screw Neck Vial, 95 x 27.5mm, clear glass, (amber glass) 1. hydrol. class	60ml EPA Screw Neck Vial, 140x27.5mm, clear glass, (amber glass) 1. hydrol. class
Filling volume (ml)	17,4	24,5	23,3	31,1	42,9	64,4
Residual volume (µl)	0,8	0,8	0,5	0,7	0,7	0,7
100 pieces per Box						

23 Screw Neck Vials and Seals for Storage Purposes

23.1 PP Screw Seals for Storage Vials

- Seals available with numerous septa materials
- Cost-effective seal variations with maximum tightness

23.1.2 PP Screw Seals for ND8, ND13, ND15 , ND18, ND20 and ND24

Art. No.	SV 08 0760	SV 08 0767	SV 08 1001	SV 08 0762
	Thread 8-425			
Cap:	Polypropylen Screw Cap, black, closed top			
Septa	Natural Rubber red orange/ TEF transparent	RedRubber/ PTFE beige	Butyl cream/ PTFE grey	Silicone white/ PTFE red
Hardness:	60° shore A	45° shore A	55° shore A	45° shore A
Thickness:	1,3mm	1,0mm	1,3mm	1,3mm
	100 pcs. per PE-Bag			

Art. No.	SV 13 0488	SV 13 0489	SV 13 0805	SV 13 1329
	Thread 13-425			
Cap:	Polypropylen Screw Cap, black, closed top			
Septa	Natural Rubber red orange/ TEF transparent	Butyl cream/ PTFE grey	Silicone white/ PTFE red	Butyl dark-grey
Hardness:	60° shore A	55° shore A	55° shore A	48° shore A
Thickness:	1,3mm	1,3mm	1,5mm	2mm
	100 pcs. per PE-Bag			

Art. No.	SV 15 0594	SV 15 0638	SV 15 0884	SV 15 0878	SV 15 1327
	Thread 15-425				
Cap:	Polypropylen Screw Cap, black, closed top				
Septa	Natural Rubber red orange/ TEF transparent	Butyl red/ PTFE grey	Viton 1A, black	Silicone white/ Aluminum foil silver	Butyl dark-grey
Hardness:	60° shore A	55° shore A	70° shore A	50° shore A	48° shore A
Thickness:	1,3mm	1,6mm	1,0mm	1,3mm	2mm
	100 pcs. per PE-Bag				

23 Screw Neck Vials and Seals for Storage Purposes

23.1.2 PP Screw Seals for Storage Vials (Cont.)

Art. No.	SV 18 1300	SV 18 1303	SV 18 1304
Thread 18-400			
Cap:	Polypropylen Screw Cap, black, closed top		
Septa	Butyl red/PTFE grey	Silicone white/PTFE red	Butyl dark-grey
Hardness:	55° shore A	55° shore A	48° shore A
Thickness:	1,6mm	1,5mm	3mm
	100 pcs. per PE-Bag		

Art. No.	SV 20 1017	SV 20 1021	SV 20 1330
Thread 20-400			
Cap:	Polypropylen Screw Cap, white, closed top		
Septa	Natural Rubber red-orange/ TEF transparent	Butyl cream/ PTFE grey	Silicone white/ PTFE red
Hardness:	60° shore A	55° shore A	45° shore A
Thickness:	1,3mm	1,3mm	1,3mm
	100 pcs. per PE-Bag		

Art. No.	SV 24 0553	SV 24 0905	SV 24 1323	SV 24 0291
Thread 24-400				
Cap:	Polypropylen Screw Cap, white, closed top			
Septa	Butyl red/PTFE grey	Silicone white/ Aluminum foil silver	Butyl dark-grey	Silicon nature/ PTFE beige (EPA Qualität)
Hardness:	55° shore A	50° shore A	48° shore A	45° shore A
Thickness:	2,4mm	3,0mm	3mm	3,2mm
	100 pcs. per PE-Bag			

24. Washer Bottles

As the sensitivity of the analytical instruments increases, the cleaning and rinsing process of the syringe, which takes the sample from the autosampler vial and then injects it, becomes more and more important. To prevent carry-over from one sample to another, the syringe must be rinsed after each injection. The bottles in which the solvent for rinsing is provided are the so-called wash bottles.

24.1 Washer Bottles
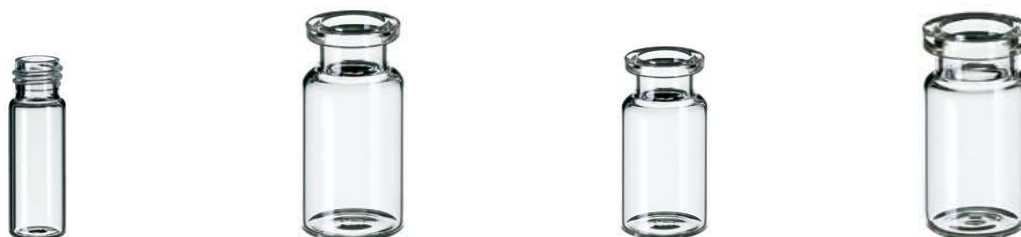
Art. No.	GW 13 0454	HS 20 0235	HS 20 0354	HS 20 0302
Description:	4ml Screw Neck Vial, 45 x 14.7mm, clear glass, 1st hydrol. class	10ml Headspace-Vial, 46 x 22.5mm, clear glass, 1st hydrol. class, flat bottom	5ml Crimp Neck Vial, 38 x 20mm, clear glass, 1st hydrol. class, flat bottom	10ml Crimp Neck Vial, 46 x 22.5mm, clear glass, 1st hydrol. class, rounded bottom
Washer Bottle for:	**Agilent: 7673, 7683 PerkinElmer: Waste + Wash Vial**	**Thermo Finnigan: AS2000, AS300, A200S**	**Varian: 8400, 8410**	**Varian: CTC PAL Shimadzu: AOC-5000**
	100 pcs. per PP-Box			

24.2 Washer Bottles Seals

• On request numerous septa variants are available!
• Below are the most common wash bottle seals

Art. No.	SV 13 0477	SK 13 0483 SE 12 0100	SN 20 0903	SN 20 0938	SN 20 0937
Cap:	13mm Polypropylen Screw Cap black, 8,5mm hole	13mm Polypropylen Screw Cap black, 8,5mm hole (SK 13 0483)	20mm PE Cap, transparent, 4,3mm hole, cap height 8,4mm	20mm PE Cap, transparent, 6mm hole, cap height 9,1mm	20mm PE Cap, transparent, 4,3mm hole, cap height 9,1mm
Septa:	Silicone white/ PTFE red	12mm Septa, PTFE virginal, 53° shore D,0,25mm (SE 12 0100)	Natural Rubber Red-orange/ TEF transparent	Silicone blue transp./ PTFE white, cross-slit	Silicone blue transp./ PTFE white
Hardness:	55° shore A	53° shore D	60° shore A	45° shore A	45° shore A
Thickness:	1,3mm	0,25mm	1,3mm	1,3mm	1,3mm
Washer Seal for:			**Varian: 8400, 8410;**	**Varian: CTC**	**Varian: CTC, 8400, 8410 Thermo Finnigan: A200S Shimadzu: AOC-5000**
	100 pcs. per PE-Bag				

25. Septa for Schott Screw Caps GL14 – GL45

- Washed replacement septa for thread screw cap GL14-GL45
- Especially for Schott ScrewCap made of Silicone white/ PTFE beige in 3,2mm thickness or of Butyl red/ PTFE grey with 2,5mm thickness

25.1 Septa for Schott Screw Caps Silicone white/PTFE beige

Art. No.	SE 12 0986	SE 16 0849	SE 23 0987	SE 30 0988	SE 43 0738
Thread	GL14	GL18	GL25	GL32	GL45
Septa:	12,5mm Septa, Silicon nature/PTFE beige	16,7mm Septa, Silicon nature/PTFE beige	23,4mm Septa, Silicon nature/PTFE beige	30,3mm Septa, Silicon nature/PTFE beige	43,2mm Septa, Silicon nature/PTFE beige
Hardness:	45° shore A	45° shore A	45° shore A	45° shore A	55° shore A
Thickness:	3,2mm	3,2mm	3,2mm	3,2mm	3,2mm
	1.000 pieces per PE-Bag				500 pieces per PE-Bag

25.2 Septa for Schott screw Caps Butyl rot/PTFE grau
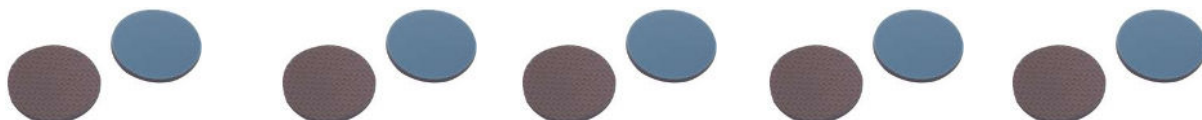
Art. No.	SE 12 0989	SE 16 0990	SE 23 0991	SE 30 0992	SE 43 0993
Thread	GL14	GL18	GL25	GL32	GL45
Septa:	12,9mm Septa, Butyl red/PTFE grey	16,7mm Septa, Butyl red/PTFE grey	23,4mm Septa, Butyl red/PTFE grey	30,3mm Septa, Butyl red/PTFE grey	43,2mm Septa, Butyl red/PTFE grey
Hardness:	55° shore A	55° shore A	55° shore A	55° shore A	55° shore A
Thickness:	1,6mm	1,6mm	2,5mm	2,5mm	2,5mm
	1.000 pieces per PE-Bag				500 pieces per PE-Bag

26. Special Products

- Special products can be carried out in every area of our delivery programme
- Special products are not necessarily stock items and may therefore require certain minimum purchase quantities

26.1 Special Vials

Art. No.	RR 11 0472	KG 09 1237	RR 11 2034	FB 22 1315	GW 40 1040
Description:	2.5ml Crimp Neck Vial, 41 x 11.6mm, clear glass, 1st hydrol. class, wide opening	2.5ml Short Thread Vial, 41 x 11.6mm, clear glass, 1st hydrol. class, wide opening	4ml Crimp Neck Vial, 45 x 14,7mm, clear glass, 1st hydrolytic class, wide opening	13ml Shell Vial, 48 x 22mm, clear glass, 1st hydrol. class, Special bottom for NIR measurements	100ml Cylindrical glass,, 93,5 x 49mm, clear glass, 3st hydrol. class, Thread DIN40
Size:	41,1 x 11,6mm	41,1 x 11,6mm	45 x 14,7	48 x 22mm,	93,5 x 49mm
Volume:	2,7	2,7	4,1	13	115,5
	100 pcs. per Box				63 pcs. per tray

26.2 Culture Tubes

- **NEW:** Culture tubes and matching GL18 PP Screw Seals with inexpensive autoclavable sealing septa made of butyl or butyl/PTFE
- Optionally available as practical 2in1 kits (100 vials and 100 seals per carton)

Art. No.	GW 18 1338
Description:	12ml Culture Tubes GL18, 100 x 16mm, clear glass, 3st hydrol. class
Size:	100 x 16mm,
Volume:	800µl
	100 pcs. per Box

Art. No.	SV 18 1296	SV 18 1339
Cap:	PP Screw Cap, black, closed top for Culture Tubes (GL18)	PP Screw Cap, black, closed top for Culture Tubes (GL18)
Septa:	Butyl dark-grey	Butyl red/PTFE grey
Hardness:	48° shore A	55° shore A
Thickness:	3,0mm	2,4mm
	100 pcs. per PE-Bag	

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