

ZeroSept® Caps

High-purity, high-quality caps
with pure, blank septa



ZerO Sept®

ZeroSept® closures are innovative, high-purity and high-quality closures for trace analysis applications developed by LABC-Labortechnik. The predicate „ZeroSept®“ is only given to absolutely pure septa, i.e. as blank as possible. The aim is a chromatogram free of interference peaks, as if the needle had never punctured the septum.

LABC laboratory technology currently awards the „ZeroSept®“ label to these septa varieties:

1. ZeroSept® ALUmono-O - with O-ring (fluoroplastic) + pure, thin aluminium foil
2. ZeroSept® PTFEmono - with pure, thin PTFE only
3. ZeroSept® PTFEmono -O with O-ring (fluoroplastic) + pure, thin PTFE foil
4. ZeroSept® SILP - with a highly pure silicone mixture (silicone natural/PTFE colourless) - low in alkanes
5. ZeroSept® AIR-PTFE - the high-purity „PTFEvirginal/AIR/PTFEvirginal“ septum also for multiple injections

All LABC-Labortechnik ZeroSept® septums are available mounted in caps and fit on the well-known bottles.

Here is an overview of the ZeroSept® closures available in the standard (topseller) version:

Septa	Short Thread Cap ND9	Short thread, magnetic ND9	Alu crimp cap ND11	Snap cap ND11
ALUmono-O			120-0401951	
PTFEmono	120-0590990	120-0891967		
PTFEmono -O			120-0587259	
SILP	120-0590990		120-0890090	
AIR-PTFE			120-0916608	

*Multiple injections possible!

Septum	HS Magnetic fine thread ND18	HS-Alu cap magnetic ND20	HS-Alu cap ND20	EPA screw cap ND24
ALUmono-O				
PTFEmono	120-0890878			
PTFEmono -O				
SILP				120-0891097
*AIR-PTFE	120-0916660	120-0916714	120-0916677	

*Multiple injections possible!

ZeroSept® ALUmono-O

ZeroSept® ALUmono-O are closures consisting of a pure aluminium septum. The septum is held in place by an O-ring in the cap. This prevents the septum from falling out of the cap and ensures greater tightness. ZeroSept® ALUmono-O are available in the following versions. Special sizes not listed are available upon request.

11mm ZeroSept® ALUmono-O cap:

ND11 Aluminum crimp cap, lacquered, with hole and groove (roller burnishing)*, fluoroplastic O-ring** and aluminum foil as phthalate-free septum

*Prevents the septum from falling out of the N11 cap during transport!

**Optimum tightness without resetting the locking pliers!



Article No.	Thickness [mm]	HoleØ [mm]	Colour (cap)
120-0401951	1,1	5,5	Colourless
Pack= 100 pcs. in screwed glass with orange lid with PTFE seal			

ZeroSept® PTFEmono

ZeroSept® PTFEmono are closures consisting of a pure PTFE septum. The thin PTFE foil is inserted into the closure in a single layer. It is not an O-ring, so it is less tight than mono-O versions. ZeroSept® PTFEmono are available in the following versions. Special sizes not listed are available upon request.

9mm ZeroSept® PTFEmono PP threaded cap:

PP screw cap with pure PTFE foil

- moderate sealing and re-sealing properties
- only recommended for non-critical HPLC applications
- Frequently used at Merck/Hitachi and Waters

Article No.	Thickness [mm]	HoleØ [mm]	Colour (cap)	Picture
120-0590853	0,25	6	blue	1
120-0591065	0,25	6	yellow	2
120-0591089	0,25	6	green	3
120-0591096	0,25	6	red	4
120-0591072	0,25	6	black	5
120-0590990	0,25	6	colourless	6
Pack = 100 pcs. in screwed glass with orange lid with PTFE seal				



9mm LABC-ZeroSEPT® PTFEmono- PP cap, magnetic:

PP screw cap with pure PTFE foil

- sealing and re-sealing properties
- only recommended for non-critical HPLC applications
- for CTC autosamplers
- in the design of an aluminium flared cap; therefore also suitable for automatic gripper arms



Article No.	Thickness [mm]	HoleØ [mm]	Colour (cap)
120-0891967	0,25	6	gold
Pack = 100 pcs. in screwed glass with orange lid with PTFE seal			

ZeroSept® SILP

ZeroSept® SILP are high purity silicone closures. Our silicone is a new and particularly clean mixture and ensures clean measurements without contamination. The silicone septums are laminated with a PTFE barrier foil for the sample. With 38° Shore, the septum is also very soft. ZeroSept® SILP are available in the following variants. Special sizes not listed are available upon request.

8mm ZeroSept® SILP closure:

ND8 PP Threaded cap (thread 8-425) with silicone natural /PTFE colourless (ultra pure)

- Very soft
- Ideal for inorganic analytics
- low in alkane
- tempered and washed



Article No.	Thickness [mm]	HoleØ [mm]	Colour (cap)	Picture
120-0891059	1,2	5,5	black	1
	1,2	5,5	white	2
Pack = 100 pcs. in screwed glass with orange lid with PTFE seal				

9mm ZeroSept® SILP closure:

ND9 PP short thread cap with silicone natural /PTFE colourless (high purity)

- Very soft
- Ideal for inorganic analytics
- low in alkane
- tempered and washed

Article No.	Thickness [mm]	HoleØ [mm]	Colour (cap)	Picture
120-0891028	1,2	6	blue	1
120-0916257	1,2	6	yellow	2
120-0891035	1,2	6	green	3
120-0916226	1,2	6	red	4
120-0916233	1,2	6	black	5
120-0890106	1,2	6	colourless	6
Pack = 100 pcs. in screwed glass with orange lid with PTFE seal				



9mm LABC-ZeroSept® SILP magnetic closure:

ND9 PP short thread cap, magnetic, with silicone natural /PTFE colourless (ultrapure)

- very soft
- ideal for inorganic analytics
- low in alkane
- tempered and washed
- for CTC autosamplers

Article No.	Thickness [mm]	HoleØ [mm]	Colour (cap)
120-0891080	1,2	6	gold
Pack = 100 pcs. in screwed glass with orange lid with PTFE seal			



11mm ZeroSept® SILP closure:

ND11 Aluminium flared cap, lacquered, with silicone natural /PTFE colourless (high purity)

- very soft
- ideal for inorganic analytics
- low in alkane
- tempered and washed
- for CTC autosamplers

Article No.	Thickness [mm]	HoleØ [mm]	Colour (cap)	Picture
120-0916141	1,2	5,5	blue	1
120-0890090	1,2	5,5	colourless	2
120-0916158	1,2	5,5	gold	3
120-0916127	1,2	5,5	green	4
120-0916134	1,2	5,5	red	5
Pack = 100 pcs. in screwed glass with orange lid with PTFE seal				

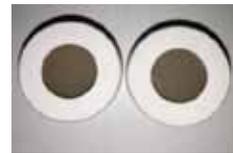


24mm ZeroSept® SILP closure:

ND24 PP screw cap with silicone natural /PTFE colourless (high purity)

- very soft
- ideal for inorganic analytics
- low in alkane
- tempered and washed

Article No.	Thickness [mm]	HoleØ [mm]	Colour (cap)
120-0891097	1,2	12,5	white
Pack = 100 pcs. in screwed glass with orange lid with PTFE seal			



Packaging:

All ZeroSept® closures are supplied in one jar. The glass is closed with a PTFE laminated lid. In addition, clean aluminium foil is packed between the lid and the closures so that the septa arrives at the customer without environmental influences and free of plasticizers, for example, from the packaging.

100 closures are filled into each jar.



ZeroSept®AIR

Vial closures with ZeroSept®AIR-Septum „PTFEvirginal/AIR/PTFEvirginal“.

The new septum seal with an air cushion instead of an elastomer for standard vial closures. Due to its innovative design, the ZeroSept®AIR-Septum PTFEvirginal/AIR/PTFEvirginal has a high tightness, even with multiple injections!

The double PTFE film without an elastomer component makes the septum highly pure and very interesting for trace analysis, among others. In combination with our standard vials, it fits into all common GC/ HPLC systems and with the magnetic version can also be used in your autosamplers.

Leak test of ZeroSept®AIR (PTFE/AIR/PTFE) sealed headspace vials filled with acetone.

Implementation: 20 ml headspace vials, each filled with 15ml acetone and closed with fine-thread screw caps equipped with 4 different septa materials. The closed vials were pierced with an injection needle (AD0.47 mm) and stored at 23°C. The gross weight (double determination) was measured as a function of time.

	1A	1B	2A	2B	3A	3B	4A	4B
Time [h]	PTFE/AIR/PTFE		Sil/PTFE		Butyl / PTFE		assembled septum	
0	29,27	29,03	28,82	28,85	29,08	29,09	29,12	29,15
1,5	29,26	29,03	28,82	28,85	29,08	29,09	29,12	29,15
24	29,20	29,00	28,82	28,84	29,08	29,09	29,11	29,15
78,5	29,11	28,94	28,80	28,82	29,08	29,08	29,08	29,11
102,5	29,06	28,91	28,80	28,82	29,08	29,08	29,07	29,10
145,5	28,99	28,87	28,79	28,81	29,08	29,08	29,05	29,08



11 mm ZeroSept®AIR-PTFE closure:

Aluminium flared cap, lacquered, with roller burnishing* and PTFEvirginal/AIR/PTFEvirginal-Septum

*Prevents the septum from falling out of the N11 cap during transport!

-very good sealing properties Phthalate-free closure system elastomer-, silicon- and halogen-free

-Consists completely of pure PTFE foil only

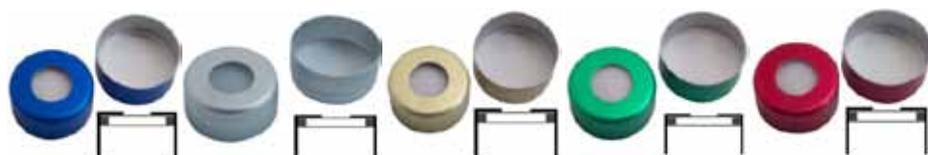
-No punching out of elastomer septum particles through syringe cannula possible

-liquid-liquid extractions

-Suitable for trace analysis and multiple injections

Article No.	Thickness [mm]	HoleØ [mm]	Colour (cap)	Picture
120-0916639	1,2	5,5	blue	1
120-0916608	1,2	5,5	colourless	2
120-0916653	1,2	5,5	gold	3
120-0916615	1,2	5,5	green	4
120-0916622	1,2	5,5	red	5

Pack = 100 pcs. in screwed glass with orange lid with PTFE seal



18 mm ZeroSept®AIR-PTFE closure:

Magnetic fine-thread screw cap made of steel and PTFEvirginal/AIR/PTFEvirginal-Septum

-very good sealing properties Phthalate-free closure system elastomer-, silicon- and halogen-free

-Consists completely of pure PTFE foil only

-No punching out of elastomer septum particles through syringe cannula possible

-liquid-liquid extractions

-Suitable for trace analysis and multiple injections

Article No.	Thickness [mm]	HoleØ [mm]	Colour (cap)
120-0916660	2,5	8	silver

Pack = 100 pcs. in screwed glass with orange lid with PTFE seal



20mm ZeroSept®AIR-PTFE closure:

Aluminium flared cap + magnetic stainless steel ring and PTFEpure/AIR/PTFEpure-Septum

-very good sealing properties

Phthalate-free closure system

elastomer-, silicon- and halogen-free

-Consists completely of pure PTFE foil only

-No punching out of elastomer septum particles through syringe cannula possible

-liquid-liquid extractions

-Suitable for trace analysis and multiple injections



Article No.	Thickness [mm]	HoleØ [mm]	Colour (cap)
120-0916714	2,8	8	blue
Pack = 100 pcs. in screwed glass with orange lid with PTFE seal			

Steel flared Cap, magnetic, lacquered and PTFEvirginal/AIR/PTFEvirginal-Septum
-very good sealing properties Phthalate-free closure system elastomer-, silicon- and halogen-free

-Consists completely of pure PTFE foil only

-No punching out of elastomer septum particles through syringe cannula possible

-liquid-liquid extractions

-Suitable for trace analysis and multiple injections

Article No.	Thickness [mm]	HoleØ [mm]	Colour/Cap	
120-0916691	2,5	6	Steel silver magnetic	1
120-0916707	2,5	8	Steel silver magnetic	2
Pack = 100 pcs. in screwed glass with orange lid with PTFE seal				



Aluminium flared cap, varnished and PTFEpure/AIR/PTFEpure-Septum

-very good sealing properties Phthalate-free closure system elastomer-, silicon- and halogen-free

- Consists completely of pure PTFE foil only
- No punching out of elastomer septum particles through syringe cannula possible
- liquid-liquid extractions
- Suitable for trace analysis and multiple injections

Article No.	Thickness [mm]	HoleØ [mm]	Farbe/Kappe
120-0916677	2,5	10	colourless
120-0916738	2,5	10	complete Tear-Off
120-0916721	2,5	10	center Tear-Off
120-0916684	2,5	10	pressure release cap
Pack = 100 pcs. in screwed glass with orange lid with PTFE seal			



Vials and other septa

The matching vials for all septa can be found in our catalogue „150 Caps and Vials“ or on the Internet at www.LABC.de.

LABC-Labortechnik offers a wide range of bottles for GC and HPLC applications. In addition, we also produce custom-made bottles.

For orders and further information please contact us:

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