

General Information – Vials / Caps**Glass Vials and Micro-inserts**

According to the high requirements of chemical analyses, especially with regard to reproducibility combined with high detection sensitivity, the container material for the respective samples is of decisive importance. Therefore sample vials for usage in chromatography are generally made of 1st hydrolytic class glass.

Borosilicate glasses like Duran®, Pyrex®, Fiolax® and others belong to this group of glass which is also often called neutral glass. It shows a very good chemical resistance against acidic and neutral solutions. The relatively low alkali content also permits good values with regard to chemical resistance against alkaline solutions.

Except for the snap cap vials for storage of powdery samples, all of our vials and micro-inserts are produced from 1st hydrolytic class glass and thus are in accordance with Eu.Ph. VI Ed., U.S.P. XXXI Ed., DAB-10, Ph. Jap. 13.

The dimensions indicated in our catalog for the vial diameter and for the vial height are exact data. Please consider that some other suppliers in the market often use rounded data (e.g. 12 x 32 mm instead of 11.6 x 32), however, their actual real dimensions are the same due to the requirements of the instrument.

Our data with regard to volume aren't calculatory determined data, but defined realistically usable filling volumes. Due to safety reasons these always have been set up at the lower end. There might be deviations to other suppliers here as well, as they either indicate the calculatory volume (e.g. 2 mL instead of 1.5 mL) or a defined realistic filling volume more at the upper end (e.g. 1.8 mL instead of 1.5 mL).

Septa guide

	Temperature resistance from / to	Analytical purity	Fragmentation due to hardness and molecular structure (coring)	Hardness (needle penetration)	Resealability (in case of multiple injections)
PTFE virginal	-200 °C / +260 °C	Very high		Very hard (but very thin material)	No resealability
Natural rubber / PTFE	-40 °C / +120 °C	Low	High, big particles	Very hard	High
Red Rubber / TEF (FEP)	-40 °C / +110 °C	Medium	Medium	Medium hard	Medium
Butyl	-40 °C / +120 °C	Medium	Medium	Medium hard	Medium
Butyl / PTFE	-40 °C / +120 °C	Medium	Medium	Medium hard	Medium
Silicone / PTFE	-60 °C / +200 °C	High	Low to medium	Soft	Low to medium
PTFE / Silicone / PTFE	-60 °C / +200 °C	High	Very low	Soft	Very low

Autosampler compatibility chart

The autosampler compatibility chart generally shows the most typical vials and closures for usage on instruments of a certain manufacturer. Besides these there also may be further products in our catalog which may technically and functionally be suitable, but which aren't necessarily actively promoted by that instrument manufacturer in his range of autosampler consumables. We will gladly provide you with appropriate recommendations.

Compatibility charts have been set up for the following instrument manufacturers:

Agilent, CTC, Dionex, PerkinElmer, Shimadzu, Thermo Scientific, Varian, (VWR (Merck® / Hitachi), Waters®). Each table has been divided by applications (GC / HPLC / Headspace), if applicable for that instrument manufacturer.

We generally recommend to ask in advance for cost-free samples for testing purposes, as even technically comparable products may differ in their optical appearance from those of the instrument company.

We kindly ask for your understanding that we do not take over any guarantee for the correctness nor for the completeness of the data indicated here.

LLG Vials: Autosampler Compatibility List

Agilent

Main chapter		Most popular LLG products for use on Agilent instruments (comparable product nos. of Agilent in brackets)
GC:		
N 8 Crimp (microsampling)	Vials: Closures:	4.001 554 (5180-0841/500), 6.235 606 (5180-0844/500) 9.003 444 (5180-0842/500)
N 9 Screw (standard samples)	Vials: Inserts: Closures:	9.003 448 (5182-0714/100; 5183-2067/1000), 4.008 247 , 4.008 249 (5183-2030) 7.401 744 (5183-2085/100), 6.093 247 (5181-1270/100), 4.008 196 (5181-3377/500) 4.008 228 (5182-0717/100; 5185-5820/500), 9.003 451 (5182-0720/100; 5185-5863/500), 4.008 218 (5182-0723/100; 5185-5862/500), 4.008 216 (5182-0717/100; 5185-5820/500), 4.008 214 (5185-5823)
N 11 Crimp (standard samples)	Vials: Inserts: Closures:	7.086 520 (5181-3375/100; 5183-4491/1000), 4.001 565 (5182-3454) 7.401 744 (5183-2085/100), 6.093 247 (5181-1270/100), 4.008 196 (5181-3377) 7.060 469 , 4.008 239 , 4.008 243 (all please see 5181-1210/100, 5183-4498/1000, 5061-3370/500), 9.003 446 (5182-0552/100, 5183-4500/1000), 7.050 759 (5181-1211/100, 5183-4499/1000), 4.001 564 (5188-5386/100) (for GC PAL)
HPLC:		
N 9 Screw (standard samples)	Vials/Inserts/ Closures:	As indicated under GC, but additionally the following closures with slit septum: 4.001 521 (5183-2076/100; 5185-5865/500), 4.008 215 (5185-5824)
N 11 Crimp (standard samples)	Vials/Inserts/ Closures:	As indicated under GC, but additionally the following closures with slit septum: 4.001 555
N 11 Snap (standard samples)	Vials: Inserts: Closures:	6.073 833 (5182-0544/100; 5183-4504/1000), 7.401 744 (5183-2085/100), 6.093 247 (5181-1270/100), 4.008 196 (5181-3377/500) 4.008 257 (5182-3458/100), 4.008 258 (5182-0541/100; 5185-5916/500), 4.008 256 (5183-4511/100), 4.008 259 (5182-0566/100)
Headspace:		
N 18 Screw (Combi PAL + G 1888A)	Vials: Closures:	9.003 466 (5188-5392), 4.008 270 (5188-2753) 4.008 268 (5188-2759)
N 20 Crimp	Vials: Closures:	7.050 285 (5182-0838), 9.003 452 (5182-0837), 9.003 453 (5183-4474) 9.003 430 (5183-4479), 9.003 447 (5183-4477), 4.001 553

LLG Vials: Autosampler Compatibility List

CTC

Main chapter	Most popular LLG products for use on CTC instruments	
GC:		
N 8 Crimp (microsampling)	Vials:	4.001 554, 6.235 606, 4.001 515, 6.902 044, 4.008 202, 4.008 203
	Closures:	9.003 444, 4.008 198
N 9 Screw (standard samples)	Vials:	9.003 448, 4.008 247, 4.008 249
	Inserts:	7.401 744, 6.093 247, 4.008 196
	Closures:	9.003 451, 4.008 218, 4.008 214, 4.008 215
N 11 Crimp (standard samples)	Vials:	7.086 520, 4.001 565
	Inserts:	7.401 744, 6.093 247, 4.008 196
	Closures:	4.001 564 (for GC PAL), 9.003 446, 7.050 759
HPLC:		
N 9 Screw (standard samples)	Vials/Inserts/ Closures:	As indicated under GC, but additionally the following closures with slit septum: 4.001 521, 4.008 215
N 11 Crimp (standard samples)	Vials:	7.086 520, 4.001 565
	Inserts:	7.401 744, 6.093 247, 4.008 196
	Closures:	9.003 446, 7.050 759
N 11 Snap (standard samples)	Vials:	7.051 4044
	Inserts:	7.401 744, 6.093 247, 4.008 196
	Closures:	4.008 258, 4.008 260, 4.008 259
Headspace:		
N 18 Screw (Combi PAL)	Vials:	9.003 466, 4.008 270
	Closures:	4.008 268, 6.241 111
N 20 Crimp	Vials:	7.850 009, 9.003 453
	Closures:	7.850 010, 6.234 541

Dionex

Main chapter	Most popular LLG products for use on Dionex instruments	
HPLC:		
N 8 Crimp (microsampling)	Vials:	4.008 206, 6.235 606, 4.001 554
	Closures:	4.008 200, 9.003 444
N 8 Screw (standard samples)	Vials:	9.003 481, 9.003 480, 4.001 563
	Closures:	9.003 484, 6.232 178
N 9 Screw (standard samples)	Vials:	9.003 448, 4.008 247, 4.008 249
	Inserts:	7.401 744, 6.093 247, 4.008 196
	Closures:	9.003 451, 4.001 521, 4.008 214, 4.008 215
N 11 Crimp (standard samples)	Vials:	7.086 520, 4.001 565
	Closures:	9.003 446, 4.001 555, 7.060 469
N 11 Snap (standard samples)	Vials:	7.051 4044
	Closures:	4.008 258, 4.008 260

LLG Vials: Autosampler Compatibility List

PerkinElmer

Main chapter	Most popular LLG products for use on PerkinElmer instruments (comparable product nos. of PerkinElmer in brackets)	
GC:		
N 8 Crimp (microsampling)	Vials:	9.003 427 (N9301069/200), 6.235 606 (N9302136/500)
	Closures:	9.003 443 (03300806/1000), 4.001 558 (N9302140/1000), 4.008 200 (03300806/1000)
N 9 Screw (standard samples)	Vials:	9.003 448 (N9306201), 4.008 247 (N9306220)
	Inserts:	6.093 247 (N9300703/100; N9302681/1000 + N9302682 [†]), 4.008 196 (N9300704)
	Closures:	4.008 228 (N9306200), 9.003 451 / 4.008 214 (N9306202/100)
N 10 Screw (standard samples)	Vials:	6.242 103
	Inserts:	6.093 247 (N9300703/100; N9302681/1000 + N9302682 [†]), 4.008 196 (N9300704)
	Closures:	4.008 234 / 4.008 235 (N9306205/100)
N 11 Crimp (standard samples)	Vials:*	7.085 511 (N9301385), 7.089 998 (N9302680)
(* small opening vials / inserts;	Inserts:*	4.001 556 (N9300705), 4.008 194 (N9300706)
** wide opening vials / inserts)	Vials:**	7.086 520 (N9306231), 4.001 565
	Inserts:**	6.093 247 (N9300703/100; N9302681/1000 + N9302682 [†]), 4.008 196 (N9300704)
	Closures:	7.060 469 / 4.008 243 (N9306230, N9306015), 4.001 522 (N9302684), 7.300 348 (N9302685), 6.900 233 (N9302686), 9.003 446 (N9306228), 7.050 759 (N9306229/100)
HPLC:		
N 8 Crimp (microsampling)	Vials:	6.235 606 (N9302136/500)
	Closures:	9.003 443 / 4.008 200 (03300806/1000)
N 9 Screw (standard samples)	Vials/Inserts/ Closures:	As indicated under GC, but additionally the following closures with slit septum: 4.001 521 / 4.008 215 (N9306203)
N 10 Screw (standard samples)	Vials/Inserts/ Closures:	As indicated under GC, but additionally the following closures with slit septum: 4.008 237 (N9306052)
N 11 Crimp (standard samples)	Vials/Inserts/ Closures:	As indicated under GC, but additionally the following closures with slit septum: 4.001 555
N 11 Snap (standard samples)	Vials:	6.073 833 (N9303418)
	Inserts:	6.093 247 (N9300703/100; N9302681/1000 + N9302682 [†]), 4.008 196 (N9300704)
	Closures:	4.008 256 (N9303416), 6.073 555 (N9303417), 4.001 544 (N9303419)
Headspace:		
N 18 Screw (CTC Combi PAL + TurboMatrix™ HS 16 + 40)	Vials:	9.003 466 (N6356479/100), 4.008 270 (N9306075/100; N9306078/1000; N9306241/1000 [‡] ; N9306240/100 [‡])
	Closures:	4.008 268 (N6356476; N9306077 [‡] ; N6356474 [‡]), 6.241 111 (N63566475; N9306077 [‡] ; N6356474 [‡])
N 20 Crimp (CTC Combi PAL)	Vials:	7.850 009 (N6356478), 9.003 453 (N6356471)
	Closures:	7.850 010 (N6356559; N6356558 [‡]), 6.234 541 (N6356566; N6356565), 6.902 419 (N6356562), 6.229 635 / 4.001 548^{‡‡} (N6356560)
N 20 Crimp (TurboMatrix™ HS 16, 40 + 110) *** not suitable for TurboMatrix™ 110	Vials:	7.052 186^{***} (N9302134/125; B104235/100), 7.060 463 (N9306079/100; B0104236/1000), 4.008 281 (N9303349/100; N9303348/1000)
	Closures:	4.001 557 / 9.003 455 / 4.008 276^{‡‡} : (N9306264/1000 [‡] ; N9306266/100 [‡] ; N9306267/1000 [‡] ; B0104239/100 [‡] ; B0104240/1000 [‡] ; B4000025/1000, montiert [‡]), 9.003 456 / 7.050 286 (B0104241/100 [‡] ; B0104242/1000 [‡] ; B4000022/1000 pre-ass. [‡]), 7.060 477 (B0110728/1000), 7.060 433 (B0038137/100)

[†] Alternative PerkinElmer product with different design, may be replaced by given LLG reference; ^{‡‡} alternative LLG product

LLG Vials: Autosampler Compatibility List

Shimadzu

Main chapter	Most popular LLG products for use on Shimadzu instruments (comparable product nos. of Shimadzu Europe in brackets)	
GC:		
N 8 Crimp (microsampling)	Vials:	4.001 554, 6.235 606, 4.001 515, 6.902 044, 4.008 202, 4.008 203
	Closures:	9.003 444, 4.008 198
N 9 Screw (standard samples)	Vials:	9.003 448, 4.008 247, 4.008 249
	Inserts:	7.401 744 (980-04987), 6.093 247 (980-01707), 4.008 196
	Closures:	9.003 451, 4.008 218, 4.008 214
N 10 Screw (standard samples)	Vials:	6.242 103
	Inserts:	7.401 744 (980-04987), 6.093 247 (980-01707), 4.008 196
	Closures:	4.008 234, 4.008 235, 4.008 236
N 11 Crimp (standard samples)	Vials:	7.086 520 (980-01705), 4.001 565
	Inserts:	7.401 744 (980-04987), 6.093 247 (980-01707), 4.008 196
	Closures:	4.001 564 (for AOC5000, 0980-01706), 9.003 446, 7.050 759
N 13 Screw (large sample volumes)	Vials:	9.003 482, 7.058 142
	Inserts:	7.055 486 + spring 4.001 567
	Closures:	7.510 053
HPLC:		
N 8 Crimp (microsampling)	Vials:	4.001 554, 6.235 606
	Closures:	4.008 200, 9.003 444, 4.008 198
N 9 Screw (standard samples)	Vials:	9.003 448, 4.008 247, 4.008 249
	Inserts:	7.401 744 (980-04987), 6.093 247 (980-01707), 4.008 196
	Closures:	9.003 451, 4.008 222, 4.008 224, 4.008 225, 4.008 214, 4.001 521, 4.008 223, 4.008 226, 4.008 215, 4.008 221
N 10 Screw (standard samples)	Vials:	6.242 103
	Inserts:	7.401 744 (980-04987), 6.093 247 (980-01707), 4.008 196
	Closures:	4.008 234, 4.008 235, 4.008 237
N 11 Crimp (standard samples)	Vials:	7.086 520 (980-01705), 4.001 565, 4.001 516
	Inserts:	7.401 744 (980-04987), 6.093 247 (980-01707), 4.008 196
	Closures:	4.008 243, 9.003 446, 4.001 555
N 11 Snap (standard samples)	Vials:	6.073 833, 6.224 358
	Inserts:	7.401 744 (980-04987), 6.093 247 (980-01707), 4.008 196
	Closures:	4.008 256, 4.008 260, 4.001 544, 4.008 258
N 8 + N11 Shell Vials (standard samples)	Vials + Plugs:	7.300 174 + 7.300 175, 4.008 205 + 7.300 175, 4.008 248 + 4.008 265
Headspace:		
N 18 Screw (AOC 5000)	Vials:	9.003 466 (980-00247), 4.008 270 (961-00915)
	Closures:	4.008 268 (961-00914), 6.241 111 (980-01708)
N 20 Crimp (AOC 5000)	Vials:	7.850 009 (980-00664), 9.003 453 (980-00111)
	Closures:	7.850 010 (961-01256), 6.234 541 (980-03372), 6.229 635 / 4.001 548 [‡] (980-00112)
N 20 Crimp (HT200H)	Vials:	7.050 285, 9.003 453 (980-00111)
	Closures:	9.003 447, 4.001 553

‡ Alternative LLG product

LLG Vials: Autosampler Compatibility List

Thermo Scientific

Main chapter	Most popular LLG products for use on Thermo Scientific instruments (comparable product nos. of Thermo Scientific in brackets)	
GC:		
N 8 Crimp (microsampling)	Vials:	9.003 427 (60180-707/1000), 4.001 554 , 6.235 606 , 4.008 206 (60180-501/125), 4.001 515 , 6.902 044 , 4.008 202 , 4.008 203
	Closures:	9.003 443 (60180-708/1000 [‡]), 4.008 200 , 9.003 444 (60180-525/100; 60180-709/1000), 4.008 198
N 8 Screw (standard samples)	Vials:	9.003 481 , 9.003 480 , 4.001 563
	Inserts:	7.401 066 (60180-265), 9.003 435 , 4.001 556 (60180-721/1000), 4.008 194 (60180-722/1000)
	Closures:	4.008 209 , 9.003 484 (60180-719/1000), 4.008 207
N 9 Screw (standard samples)	Vials:	9.003 448 , 4.008 247 , 4.008 249
	Inserts:	7.401 744 , 6.093 247 (60180-734/1000), 4.001 547 (60180-266), 4.008 196 (60180-735/1000)
	Closures:	4.008 228 , 9.003 451 , 4.008 218 , 4.008 214
N 11 Crimp (standard samples)	Vials:	7.086 520 , 4.001 565 , 4.001 516
	Inserts:	7.401 744 , 6.093 247 (60180-734/1000), 4.001 547 (60180-266), 4.008 196 (60180-735/1000)
	Closures:	4.001 564 (GC PAL), 4.008 239 / 7.060 469 / 4.008 243 (60180-705/1000 [‡]), 9.003 446 (60180-526/100; 60180-706/1000), 7.050 759
HPLC:		
N 8 Crimp (microsampling)	Vials:	4.001 554 , 6.235 606 , 4.008 206 (60180-501/125), 4.001 515 , 6.902 044 , 4.008 202 , 4.008 203
	Closures:	9.003 443 (60180-708/1000 [‡]), 4.008 200 , 9.003 444 (60180-525/100; 60180-709/1000), 4.008 198
N 8 Screw (standard samples)	Vials/Inserts/ Closures:	As indicated under GC
N 9 Screw (standard samples)	Vials/Inserts/ Closures:	As indicated under GC
N 11 Crimp (standard samples)	Vials/Inserts/ Closures:	As indicated under GC, however, not seal 4.001 564
N 11 Snap (standard samples)	Vials:	6.073 833 , 6.224 358
	Inserts:	7.401 744 , 6.093 247 (60180-734/1000), 4.001 547 (60180-266), 4.008 196 (60180-735/1000)
	Closures:	4.008 256 , 4.008 260 , 4.001 544 , 4.008 258 (60180-713/1000), 4.008 261 , 4.008 257 (60180-712/1000 [‡])
Headspace:		
N 18 Screw (Combi PAL)	Vials:	9.003 466 , 4.008 270
	Closures:	4.008 268 , 6.241 111
N 20 Crimp (Combi PAL)	Vials:	7.850 009 (60180-504/125), 9.003 453 (60180-506/125)
	Closures:	7.850 010 , 6.234 541 (60180-520)
N 20 Crimp (HS850/HS200)	Vials:	7.850 009 (60180-504/125), 9.003 453 (60180-506/125)
	Closures:	4.001 553 (60180-511), 9.003 454 / 4.001 549 (60180-513/100; 60180-746/1000)

[‡] Alternative Thermo Scientific product with different design, may be replaced by given LLG reference.

LLG Vials: Autosampler Compatibility List

Varian

Main chapter	Most popular LLG products for use on Varian instruments (comparable product nos. of Varian in brackets)	
GC:		
N 8 Crimp (microsampling)	Vials:	4.001 554 (R005403CVG, CP958690), 6.235 606 (R05402CTVG, CP959485), 4.008 206 , 4.001 515 , 6.902 044 , 4.008 202 (CP10370), 4.008 203
	Closures:	9.003 444 (CP959183), 4.008 198
N 8 Screw (standard samples)	Vials:	9.003 481 (392611639/100; 392620550/1000; CP10271), 9.003 480 (392611640/100; 392620552/1000), 4.001 563
	Inserts:	7.401 066 (392611593/100; 392620546/1000; R005402MTV; CP10381), 4.001 556 (392611591/100; 392620548/1000)
	Closures:	4.008 209 (392611645/100, 392620559/1000), 9.003 484 (392611641/100; 392620558/1000; 392612023/100; 392620557/1000; 99778800/144; CP959894), 4.008 207 (392611644)
N 9 Screw (standard samples)	Vials:	9.003 448 (392611653/100; 392620500/1000; CP10290), 4.008 247 (392611654/100; 392620502/1000), 4.008 249 (CP959946)
	Inserts:	7.401 744 (392611596/100; 392620536/1000; CP10580), 6.093 247 (392611594/100; 392620538/1000), 4.001 547 (CP957233), 4.008 196 (912322)
	Closures:	4.008 228 (CP914610), 9.003 451 (CP958914), 4.008 222 (392611659/100; 392620506/1000; 392620504/100; 392620505/1000), 4.008 218 (392611658), 4.008 214
N 11 Crimp (standard samples)	Vials:	7.086 520 (392611634/100; 392620517/1000; CP10525), 4.001 565
	Inserts:	7.401 744 (392611596/100; 392620536/1000; CP10580), 6.093 247 (392611594/100; 392620538/1000), 4.001 547 (CP957233), 4.008 196 (912322)
	Closures:	4.001 564 (for GC PAL, MLA110040M), 7.060 469 (392611632/100; 392620524/1000; CP10210), 9.003 446 (392611631/100; 392620523/1000; 392620521/100; 392620522/1000; CP959268), 7.050 759

LLG Vials: Autosampler Compatibility List

Varian

Main chapter	Most popular LLG products for use on Varian instruments (comparable product nos. of Varian in brackets)	
HPLC:		
N 8 Crimp (microsampling)	Vials/Closures:	As indicated under GC, but additionally closures 9.003 443, 4.008 200
N 8 Screw (standard samples)	Vials/Inserts/ Closures:	As indicated under GC, but additionally closure 6.232 178
N 9 Screw (standard samples)	Vials/Inserts/ Closures:	As indicated under GC, but additionally closure 4.008 223 (392611660)
N 10 Screw (standard samples)	Vials:	6.242 103 (190010201)
	Inserts:	7.401 744 (392611596/100; 392620536/1000; CP10580), 6.093 247 (392611594/100; 392620538/1000), 4.001 547 (CP957233), 4.008 196 (912322)
	Closures:	4.008 234 / 4.008 235 (392611650), 4.008 236 (392611652), 6.242 104 (392611651)
N 11 Crimp (standard samples)	Vials/Inserts/ Closures:	As indicated under GC, however, not seal 4.001 564
N 11 Snap (standard samples)	Vials:	6.073 833 (CP10390), 6.224 358 (392611666)
	Inserts:	7.401 744 (392611596/100; 392620536/1000; CP10580), 6.093 247 (392611594/100; 392620538/1000), 4.001 547 (CP957233), 4.008 196 (912322)
	Closures:	4.008 256, 4.008 260 (392611874; CP10130), 4.001 544, 4.008 258 (392611871 [‡] ; 392611875 [‡] ; CP10131 [‡]), 4.008 261, 4.008 257 (392611873; CP10132) 6.073 555 (392611872)
Headspace:		
N 18 Screw (Combi PAL)	Vials:	9.003 466 (392620102), 4.008 270 (392620202; CP910346)
	Closures:	4.008 268 (392620304; CP910347), 6.241 111 (392620302), 4.008 294 (392620306 [‡])
N 20 Crimp (Combi PAL)	Vials:	7.850 009 (392612020; RK60827510/125; MLA201000; CP738200), 9.003 453 (MLA202100; CP910124; 392612021)
	Closures:	7.850 010 (MLA200051ML; CP738201), 6.234 541 (392612017)
N 20 Crimp (CP-9020/9025, CP-9060, Genesis)	Vials:	7.850 009 (392612020; RK60827510/125; MLA201000; CP738200), 7.050 285 (392611677; CP10090), 9.003 452 (392611675; CP10070)
	Closures:	4.001 553 (392611858; CP10475), 9.003 430 (392611859; CP10213), 9.003 454 / 4.001 549

[‡] Alternative Varian product with different design, may be replaced by given LLG reference.

LLG Vials: Autosampler Compatibility List

VWR (Merck® / Hitachi)

Main chapter	Most popular LLG products for use on VWR instruments (comparable product nos. of VWR Europe in brackets)	
HPLC:		
N 8 Crimp (microsampling)	Vials:	6.235 606 (548-0078), 4.001 554 (548-0080)
	Closures:	9.003 444 (548-0040), 4.008 198 (548-0038)
N 8 Screw (standard samples)	Vials:	9.003 481 (548-0018), 9.003 480 (548-0448), 4.001 563 (548-0419)
	Inserts:	7.401 066 (548-0020), 9.003 435 (548-0308), 4.001 556 (548-0083), 4.008 194 (548-0780)
	Closures:	4.008 209 (548-3322), 9.003 484 (548-0024), 6.232 178 (548-0834)
N 9 Screw (standard samples)	Vials:	9.003 448 (548-0028), 4.008 247
	Inserts:	7.401 744 (548-0006), 4.001 547 (548-0310), 6.093 247 (548-0002)
	Closures:	9.003 451 (548-0085), 4.001 521 (548-0088), 4.008 214 (548-0372), 4.008 215 (548-0373), 4.008 221 (548-0089)
N 11 Snap (standard samples)	Vials:	6.073 833 (548-0011)
	Inserts:	7.401 744 (548-0006), 4.001 547 (548-0310), 6.093 247 (548-0002)
	Closures:	4.008 257 (548-3360/548-0897), 4.008 258 (548-0432/548-3208), 4.008 260 (548-0435/548-3210)
N 13 Screw (large sample volumes)	Vials:	9.003 482 (548-0051), 7.058 142 (548-0052)
	Inserts:	7.055 486 (548-0093) + spring 4.001 567 (548-0094)
	Closures:	7.510 053 (548-0054), 7.071 151 (548-0096) + 7.058 143 (548-0111)

Waters®

Main chapter	Most popular LLG products for use on Waters® instruments (comparable product nos. of Waters® in brackets)	
HPLC:		
N 9 Screw (standard samples)	Vials:	9.003 448 , 4.008 247 , 4.008 249 (186002802), 4.008 250 (186002804), 4.008 252 (186002803)
	Inserts:	6.093 247 (WAT094170)
	Closures:	4.008 214 (186000274), 4.008 215 (186000305)
N 10 Screw (standard samples)	Vials:	6.242 103 (WAT063300)
	Inserts:	6.093 247 (WAT094170)
	Closures:	4.008 234 (WAT058874), 4.008 235 , 4.008 237
N 11 Snap (standard samples)	Vials:	6.073 833
	Inserts:	6.093 247 (WAT094170)
	Closures:	4.008 258 (186000303), 4.008 260 (186000304)
N 8 Shell Vials (standard samples)	Vials + Plugs:	7.300 174 + 7.300 175 (WAT025054C/250), 4.008 205 + 7.300 175 (WAT025053C/250)
	N 13 Screw (large sample volumes)	Vials:
	Inserts:	7.055 486 (WAT072704/100; WAT015199/144) + spring 4.001 567 (WAT072708)
	Closures:	7.510 053 (186000841/100; 186000965/1000), 7.071 151 (WAT072711/144) + 7.058 143 (WAT072714/144; WAT073005/1440)

Vials/Ampoules, Septa

LLG Crimp neck vials N 8

Capacity	ml								
o.d. x Height	mm	5,5 x 31,5	5,5 x 31,5	8,2 x 30	7 x 40	7 x 40	7 x 40	7 x 40	8,2 x 40
Colour		clear	clear	clear	clear	amber	clear	amber	clear
Form		conical	round bottom	flat bottom	conical	conical	flat bottom	flat bottom	flat bottom
PK		100	100	100	100	100	100	100	100
Cat. No.		6.235 606	4.001 554	9.003 427	4.001 515	6.902 044	4.008 202	4.008 203	4.008 206

1


1 LLG Crimping tools N 8

Description	PK	Cat. No.
Manual crimper for 8 mm aluminium caps	1	9.003 470
Manual decapper for 8 mm aluminium caps	1	9.003 511

LLG Crimp closures N 8, ready assembled, Aluminium and plain caps N 8

Caps	Septa	Hardness	Thickness	PK	Cat. No.
		53° shore D	mm 0.25	100	4.001 558
		45° shore A	1.00	100	9.003 443
		40° shore A	1.00	100	4.008 200
		40° shore A	1.00	100	9.003 444
		40° shore A	1.00	100	4.008 198
				100	4.001 552
	Aluminium, silver, center hole (no liner)			100	4.001 552

LLG Screw neck vials N 8, small opening

Capacity	ml			
o.d. x Height	mm	11.6 x 32	11.6 x 32	11.6 x 32
Colour		clear	amber	clear
Form		flat bottom	flat bottom	conical
PK		100	100	100
Cat. No.		9.003 481	9.003 480	4.001 563

Inserts for LLG Screw neck vials N 8, small opening

Capacity ml	o.d. x Height mm	Colour	Form	PK	Cat. No.
0.10	5 x 31	clear	conical, 15mm tip*	100	7.401 066
0.15	5 x 31	clear	conical, 9mm tip*	100	9.003 435
0.10	5 x 29	clear	with plastic spring	100	4.001 556
0.25	5 x 31	clear	flat bottom	100	4.008 194

* Optionally you may use metal springs **7.086 408** in combination with these products to push them up in the vial

1 Container for LLG - Crimp neck vials N 8

81- position container, blue, coded, with transparent lid (suitable for freezers).

1



Dimensions (L x W x H) mm	PK	Cat. No.
130 x 130 x 45	1	6.225 649

LLG Screw closures N 8, PP, assembled, and plain screw caps N 8

Caps	Septa	Hardness	Thickness mm	PK	Cat. No.
	Red Rubber / FEP colourless	40° shore A	1.00	100	4.008 209
	Red Rubber / FEP colourless	40° shore A	1.00	100	4.008 210
	Silicone white / PTFE red	40° shore A	1.30	100	9.003 484
	Silicone white / PTFE red	40° shore A	1.30	100	4.008 208
	Silicone white / PTFE blue, slit	40° shore A	1.00	100	6.232 178
	PTFE red / Silicone white / PTFE red	40° shore A	1.00	100	4.008 207
	no liner	-	-	100	7.060 421
	no liner	-	-	100	7.075 960

LLG N 8 septa for screw caps N 8

Septa	Hardness	Thickness mm	PK	Cat. No.
	53° shore D	0.25	100	7.085 238
	40° shore A	1.00	100	4.008 197
	40° shore A	1.30	100	7.060 419
	40° shore A	1.00	100	7.085 892

Vials/Ampoules, Septa

LLG Screw neck vials and inserts N 9, wide opening

o.d. x Height	mm	11,6 x 32	11,6 x 32	6 x 31	6 x 31	5,7 x 29	6 x 31
Capacity	ml	1.50	1.50	0.20	0.25	0.10	0.30
Colour		clear	amber	clear	clear	clear	clear
Form		flat bottom	flat bottom	conical 15mm tip	conical 12mm tip	with plastic spring	flat bottom
PK		100	100	100	100	100	100
Cat. No.		9.003 448	4.008 247	7.401 744	4.001 547	6.093 247	4.008 196

LLG Screw neck vials N 9, wide opening, for small sample volumes

Capacity	ml	1.10	0.20	0.20	0.30
o.d. x Height	mm	11.6 x 32	11.6 x 32	11.6 x 32	11.6 x 32
Colour		clear	clear	amber	transparent
Form		flat bottom, 15µl funnel in solid glass bottom	flat bottom with integrated 0.2mL insert	flat bottom with integrated 0.2mL insert	PP, with inner cone
PK		100	100	100	100
Cat. No.		4.008 249	4.008 250	4.008 252	4.008 262

1







































1 Container for LLG Screw neck vials N 9

81- position container, blue, coded, with transparent lid (suitable for freezers).




Dimensions (W x D x H)	PK	Cat. No.
mm		
130 x 130 x 45	1	6.225 649






LLG Screw closures N 9, PP, assembled

Caps		Septa	Hardness	Thickness	PK	Cat. No.
				mm		
		transparent, centre hole	PTFE virginal, white	53° shore D	0.25	100 4.008 220
		blue, centre hole	PTFE virginal, white	53° shore D	0.25	100 4.008 221
		blue closed	PTFE virginal, white	53° shore D	0.25	100 7.930 366
		transparent, centre hole	Red Rubber / FEP colourless	40° shore A	1.00	100 4.008 229
		blue, centre hole	Red Rubber / FEP colourless	40° shore A	1.00	100 4.008 228
		blue closed	Red Rubber / FEP colourless	40° shore A	1.00	100 4.008 230
		transparent, centre hole	Silicone white / PTFE red	40° shore A	1.00	100 7.076 778
		blue, centre hole	Silicone white / PTFE red	40° shore A	1.00	100 9.003 451
		black, centre hole	Silicone white / PTFE red	40° shore A	1.00	100 4.008 225
		red, centre hole	Silicone white / PTFE red	40° shore A	1.00	100 4.008 222
		green, centre hole	Silicone white / PTFE red	40° shore A	1.00	100 4.008 224
		blue closed	Silicone white / PTFE red	40° shore A	1.00	100 4.008 227
		transparent, centre hole	Silicone white / PTFE blue, slit	40° shore A	1.00	100 7.200 809
		blue, centre hole	Silicone white / PTFE blue, slit	40° shore A	1.00	100 4.001 521
		black, center hole	Silicone white / PTFE blue, slit	40° shore A	1.00	100 4.008 226
		red, centre hole	Silicone white / PTFE blue, slit	40° shore A	1.00	100 4.008 223
		transparent, centre hole	PTFE red / Silicone white / PTFE red	40° shore A	1.00	100 6.225 427
		blue, centre hole	PTFE red / Silicone white / PTFE red	40° shore A	1.00	100 4.008 218

LLG Septa N9 for screw caps N 9






Septa	Hardness	Thickness	PK	Cat. No.
		mm		
	PTFE virginal, white	53° shore D	0.25	100 4.008 211
	Red Rubber / FEP colourless	40° shore A	1.00	100 4.008 213
	Silicone white / PTFE red	40° shore A	1.00	100 4.008 212

Bonded LLG screw closures N 9, PP

Caps	Septa	Hardness	Thickness	PK	Cat. No.
			mm		
 N 9 PP bonded screw cap*, blue, center hole	Red Rubber / TEF colourless	65° shore A	1.00	100	4.008 216
 N 9 PP bonded screw cap*, blue, center hole	Silicone beige / PTFE white	45° shore A	1.30	100	4.008 214
 N 9 PP bonded screw cap*, blue, center hole	Silicone beige / PTFE white, slit	45° shore A	1.30	100	4.008 215

*septa firmly connected with the cap; cannot be separated

LLG Screw neck vials and inserts N 10, wide opening

Capacity	ml				
o.d. x Height	mm				
Colour					
Form					
	1.50	11,6 x 32	clear	flat bottom	
	0.20	6 x 31	clear	conical, 15mm tip	
	0.25	6 x 31	clear	conical, 12mm tip	
	0.10	5,7 x 29	clear	with plastic spring	
	0.30	6 x 31	clear	flat bottom	
PK		100	100	100	100
Cat. No.		6.242 103	7.401 744	4.001 547	6.093 247
					4.008 196







1


1 Container for LLG Screw neck vials N 10

81- position container, blue, coded, with transparent lid (suitable for freezers).



Dimensions (L x W x H)	PK	Cat. No.
mm		
130 x 130 x 45	1	6.225 649

LLG Screw closures N 10, PP and plain screw caps N 10, PP









Caps	Septa	Hardness	Thickness	PK	Cat. No.
			mm		
 bonded* screw cap, black, center hole	Red Rubber / TEF colourless	65° shore A	1.00	100	6.242 104
 bonded* screw cap, black, center hole	Silicone white / PTFE beige	45° shore A	1.50	100	4.008 234
 bonded* screw cap, black, center hole	Silicone white / PTFE red	45° shore A	1.50	100	4.008 235
 bonded* screw cap, black, center hole	Silicone white / PTFE blue, slit	45° shore A	1.50	100	4.008 237
 screw cap, black, center hole (ready assembled)	PTFE red / Silicone white / PTFE red	45° shore A	1.00	100	4.008 236
 screw cap, black, center hole (no liner)				100	4.008 231

*septa firmly connected with the cap; cannot be separated







LLG Crimp neck vials N 11, flat bottom

				
Capacity	ml	1.50	1.50	1.50
o.d. x Height	mm	11.6 x 32	11.6 x 32	11.6 x 32
Colour		clear	amber	clear
Form		small opening	small opening	wide opening
PK		100	100	100
Cat. No.		7.085 511	7.089 998	7.086 520

Inserts for LLG Crimp neck vials N 11

									
Capacity	ml	0.10	0.15	0.10	0.25	0.20	0.25	0.10	0.30
o.d. x Height	mm	5 x 31	5 x 31	5 x 29	5 x 31	6 x 31	6 x 31	5,7 x 29	6 x 31
Colour		clear	clear	clear	clear	clear	clear	clear	clear
Form		for small opening, conical, 15mm tip	for small opening, conical, 9mm tip	for small opening, with plastic spring	for small opening, flat bottom	for wide opening, conical, 15mm tip	for wide opening, conical, 12mm tip	for wide opening, with plastic spring	for wide opening, flat bottom
PK		100	100	100	100	100	100	100	100
Cat. No.		7.401 066	9.003 435	4.001 556	4.008 194	7.401 744	4.001 547	6.093 247	4.008 196

LLG Crimp neck vials N 11 for small sample volumes

							
Capacity	ml	1.10	1.10	1.10	1.10	0.20	0.20
o.d. x Height	mm	11,6 x 32	11,6 x 32	11,6 x 32	11,6 x 32	11,6 x 32	11,6 x 32
Colour		clear	clear	clear	amber	clear	amber
Form		flat bottom, 15 µl funnel in solid glass bottom	conical	conical with a round pedestal glass plate	conical with a round pedestal glass plate	flat bottom, with integrated 0.2 mL insert	flat bottom, with integrated 0.2 mL insert
PK		100	100	100	100	100	100
Cat. No.		4.001 565	4.001 516	4.008 253	4.008 254	6.233 918	4.008 251

1 LLG Crimping tools N 11



Description	PK	Cat. No.
Manual crimper, height adjustable, for 11 mm aluminium crimp caps	1	9.003 471
Manual decapper for 11 mm aluminium crimp caps	1	9.003 367
Pneumatic crimping tool for 11 mm aluminium crimp caps (complete with hand switch)	1	7.095 791
Pneumatic crimping tool for 11 mm aluminium crimp caps (complete with foot switch)	1	6.802 617
Crimping head <i>without</i> pneumatic basic tool for 11 mm aluminium crimp caps	1	4.003 923
Decapping head <i>without</i> pneumatic basic tool for 11 mm aluminium crimp caps	1	4.003 929
Pneumatic basic tool with hand switch	1	4.003 925
Pneumatic basic tool with foot switch	1	4.003 926

Vials/Ampoules, Septa

1

1 Containers for LLG Crimp neck vials N 11

Blue 81 position container, coded, with transparent lid (suitable for freezers).

Dimensions (L x W x H)	PK	Cat. No.
mm 130 x 130 x 45	1	6.225 649








LLG Crimp closures N 11, Aluminium, assembled and plain crimp caps N 11

Caps	Septa	Hardness	Thickness	PK	Cat. No.
	PTFE virginal, white	53° shore D	mm 0.25	100	4.001 559
	Natural rubber / Butyl red-orange / TEF colourless	45° shore A	1.30	100	9.003 441
	Natural rubber red-orange / TEF colourless (corresponds to Agilent quality)	60° shore A	1.00	100	4.008 239
	Red Rubber / FEP colourless	40° shore A	1.00	100	4.008 243
	Natural rubber / Butyl red-orange / TEF colourless	45° shore A	1.00	100	7.060 469
	Natural rubber / Butyl red-orange / TEF colourless	45° shore A	1.00	100	4.001 522
	Natural rubber / Butyl red-orange / TEF colourless	45° shore A	1.00	100	6.900 233
	Silicone white / PTFE red	40° shore A	1.30	100	9.003 446
	Silicone white / PTFE blue, cross-slit	40° shore A	1.50	100	4.001 555
	PTFE red / Silicone white / PTFE red	40° shore A	1.00	100	7.050 759
	Silicone white / PTFE red	55° shore A	1.00	100	4.001 564
	magnetic , gold, centre hole			100	7.510 176
	aluminium, silver, centre hole				









LLG Septa N 11 for crimp caps N 11

Septa	Hardness	Thickness	PK	Cat. No.
	53° shore D	mm 0.25	100	4.001 535
	40° shore A	1.00	100	4.008 238
	40° shore A	1.30	100	7.054 037
	40° shore A	1.00	100	6.801 244




LLG Snap ring vials and inserts N 11, wide opening

Capacity	ml							
o.d. x Height	mm	1.50 11,6 x 32	0.20 6 x 31	0.25 6 x 31	0.10 5,7 x 29	0.30 6 x 31	0.20 11,6 x 32	0.30 11,6 x 32
Colour		clear	clear	clear	clear	clear	clear	PP, transparent
Form		flat bottom	conical, 15mm tip	conical, 12mm tip	with plastic spring	flat bottom	flat bottom, integrated 0.2mL insert	with inner cone
PK		100	100	100	100	100	100	100
Cat. No.		6.073 833	7.401 744	4.001 547	6.093 247	4.008 196	4.008 255	6.224 358

LLG Snap ring closures N 11, PE, assembled

Caps	Septa	Hardness	Thickness	PK	Cat. No.
			mm		
 snap ring cap, transparent, centre hole	Red Rubber / TEF colourless	65° shore A	1.00	100	4.008 261
 snap ring cap, blue, centre hole	Red Rubber / TEF colourless	65° shore A	1.00	100	4.008 257
 snap ring cap, transparent, centre hole	Silicone white / PTFE red	55° shore A	1.00	100	4.001 544
 snap ring cap, blue, centre hole	Silicone white / PTFE red	55° shore A	1.00	100	4.008 258
 snap ring cap, transparent, centre hole	Silicone white / PTFE blue, cross-slit	55° shore A	1.00	100	4.008 256
 snap ring cap, blue, centre hole	Silicone white / PTFE blue, cross-slit	55° shore A	1.00	100	6.242 212
 snap ring cap, transparent, centre hole	PTFE red / Silicone white / PTFE red	45° shore A	1.00	100	6.073 555
 snap ring cap, blue, centre hole	PTFE red / Silicone white / PTFE red	45° shore A	1.00	100	4.008 259

LLG Crimp neck vials N 13

Capacity	ml			
o.d. x Height	mm	1.00 11 x 40	2.00 13,75 x 35	2.00 11 x 43
Colour		clear	clear	clear
Form		conical	flat bottom	flat bottom
PK		100	100	100
Cat. No.		4.001 530	9.003 422	7.080 866

14. Chromatography

Vials/Ampoules, Septa

1



1 LLG Crimping tools N 13

Description	PK	Cat. No.
Manual crimper, height adjustable, for 13 mm aluminium crimp caps	1	9.003 473
Manual crimper, height adjustable, for 13 mm flip top/flip off caps	1	4.008 266
Manual decapper for 13 mm aluminium crimp caps	1	9.003 368

LLG Crimp closures N 13, Aluminium, assembled and plain crimp caps N 13

Caps	Septa	Hardness	Thickness	PK	Cat. No.
			mm		
	aluminium crimp cap, silver, centre hole	Butyl dark grey / PTFE grey (only centrally laminated, typically called Pharma-Fix)	50° shore A	2.00	100 7.060 475
	aluminium centre tear off cap, gold	Butyl dark grey / PTFE grey (only centrally laminated, typically called Pharma-Fix)	50° shore A	2.00	100 9.003 442
	aluminium crimp cap, silver, centre hole (no liner)	-	-	-	100 6.801 727
	aluminium centre tear off cap, coppery (no liner)	-	-	-	100 6.210 199
	- (stopper only)	Bromobutyl stopper, grey	45° shore A	-	100 6.210 200

LLG Crimp neck vials N 13

Capacity	ml		Capacity	ml		Capacity	ml		Capacity	ml	
o.d. x Height	mm	4.00 14.75 x 45	4.00 14.75 x 45	4.00 14.75 x 45	0.30 6 x 40	0.30 6 x 40	0.30 6 x 40	0.30 6 x 40	0.30 6 x 40	0.30 6 x 40	0.30 6 x 40
Colour	mm	clear	amber	clear	clear	clear	clear	clear	clear	clear	clear
Form		flat bottom	flat bottom	flat bottom	conical, metal	conical, metal	conical, metal	conical, metal	conical, metal	conical, metal	conical, metal
					sprint necessary	sprint necessary	sprint necessary	sprint necessary	sprint necessary	sprint necessary	sprint necessary
PK		100	100	100	100	100	100	100	100	100	100
Cat. No.		9.003 482	7.058 142	7.055 486	4.001 567	4.001 567	4.001 567	4.001 567	4.001 567	4.001 567	4.001 567

2













2 Containers for LLG Crimp and screw neck vials N 13




49 position container blue, with transparent lid (suitable for freezers).

Dimensions (L x W x H)	PK	Cat. No.
mm		
130 x 130 x 50	1	4.001 527

LLG Screw closures N 13, PP, assembled and plain screw caps N 13

Caps		Septa	Hardness	Thickness	PK	Cat. No.	
		mm					
		black, centre hole	Red Rubber / FEP colourless	40° shore A	1.50	100	6.242 468
		black, closed top	Red Rubber / FEP colourless	40° shore A	1.50	100	4.008 267
		black, centre hole	Silicone white / PTFE red	40° shore A	1.30	100	7.510 053
		black, closed top	Silicone white / PTFE red	40° shore A	1.30	100	6.242 267
		black, centre hole				100	7.071 151
		black, closed top				100	7.060 437



LLG Septa N 13 for screw caps N 13

Septa	Hardness	Thickness	PK	Cat. No.	
		mm			
	PTFE virginal, white	53° shore D	0.25	100	7.058 143
	Red Rubber / FEP colourless	40° shore A	1.50	100	4.008 264
	Silicone white / PTFE red	40° shore A	1.30	100	4.008 263



LLG Micro reaction vials complete with screw caps and septa

Capacity	ml	o.d. x Height	mm	Colour	Form	PK	Cat. No.
		0.25	14 x 33	clear	with inner conical funnel in solid, flat glass bottom	1	9.003 461
		0.75	14 x 46	clear	with inner conical funnel in solid, flat glass bottom	1	9.003 462
		3.00	20 x 46	clear	with inner conical funnel in solid, flat glass bottom	1	9.003 463
		4.50	20 x 60	clear	with inner conical funnel in solid, flat glass bottom	1	9.003 464

LLG Replacement screw caps with septa for micro reaction vials

Description	Hardness	Thickness	PK	Cat. No.	
		mm			
	N 13 PP screw cap with silicone white / PTFE red septum, (assembled)	40° shore A	1.30	100	7.510 053
	N 20 phenolic screw cap with butyl red / PTFE grey septum, (unassembled)	55° shore A	1.30	48	4.001 519

LLG Replacement septa for micro reaction vials

Description	Hardness	Thickness	PK	Cat. No.	
		mm			
	N 12 Silicone white / PTFE red	40° shore A	1.30	100	4.008 263
	N 18 Butyl red / PTFE grey	55° shore A	1.30	48	6.225 736



14. Chromatography

Vials/Ampoules, Septa

LLG Shell vials (fire-polished neck) N 8/N 12

Capacity	ml			
o.d. x Height	mm	1.00	1.00	2.00
Colour		8.2 x 40	8.2 x 40	11.6 x 31,5
Form		clear	amber	clear
		N 8, flat bottom	N 8, flat bottom	N 12, flat bottom
PK		100	100	100
Cat. No.		7.300 174	4.008 205	4.008 248

LLG Plugs, PE



For	PK	Cat. No.
 N 8	100	7.300 175
 N 12	100	4.008 265

LLG Snap cap vials N 18 and N 22

For storage of powdery samples.

Capacity	ml			
o.d. x Height	mm	5.00	10.00	15.00
Colour		20 x 40	22 x 50	26 x 48
Form		clear	clear	clear
		N 18, flat bottom	N 18, flat bottom	N 22, flat bottom
PK		100	100	100
Cat. No.		7.051 404	6.803 717	4.008 282
				7.090 616







LLG Snap caps, PE

For	PK	Cat. No.
 N 18	100	6.051 403
 N 22	100	7.090 617









LLG Screw neck Headspace vials N 18

Capacity	o.d. x Height	Colour	Form	PK	Cat. No.
ml	mm				
10.00	22,5 x 46	clear	rounded bottom	100	9.003 466
20.00	22,5 x 75,5	clear	rounded bottom	100	4.008 270

LLG Magnetic screw closures N 18, ready assembled

Caps	Septa	Hardness	Thickness	PK	Cat. No.		
		silver, center hole	Silicone blue transparent/ PTFE white	45° shore A	1.50	100	6.241 111
		silver, center hole	Silicone white / PTFE blue	55° shore A	1.50	100	4.008 268
		silver, center hole	Red Rubber / TEF colourless	65° shore A	1.50	100	4.008 269

LLG Crimp neck vials N 20: 5 - 10 mL








									
Capacity	ml	5.00	5.00	6.00	5.00	10.00	10.00	10.00	
o.d. x Height	mm	20,5 x 38	20,5 x 38	22 x 38,25	21,7 x 38,25	20,5 x 54,5	20,5 x 54,5	22,5 x 46	
Colour		clear	amber	clear	clear	clear	amber	clear	
Form		flat bottom flat DIN crimp neck	flat bottom flat DIN crimp neck	rounded bottom bevelled HS crimp neck	flat bottom bevelled HS crimp neck	flat bottom flat DIN crimp neck	flat bottom flat DIN crimp neck	rounded bottom bevelled HS crimp neck CTC, Varian	
For		Varian	Varian	PerkinElmer	Metrohm	Varian	Varian	DANI, Agilent	
PK		100	100	100	100	100	100	100	
Cat. No.		9.003 425	7.060 457	7.052 186	4.008 285	9.003 426	7.080 947	7.050 285	7.850 009

1 LLG Crimping tools N 20



Description	PK	Cat. No.
Manual crimper, height adjustable, for 20mm aluminium crimp caps	1	9.003 475
Manual crimper, height adjustable, for 20mm flip top/flip off caps	1	4.008 278
Manual decapper for 20mm aluminium crimp caps	1	9.003 369
Pneumatic crimping tool for 20mm aluminium crimp caps (complete with hand switch)	1	4.003 922
Pneumatic crimping tool for 20mm aluminium crimp caps (complete with foot switch)	1	7.300 513
Crimping head <i>without</i> pneumatic basic tool for 20mm aluminium crimp caps	1	4.003 924
Decapping head <i>without</i> pneumatic basic tool for 20mm aluminium crimp caps	1	4.003 927
Pneumatic basic tool with hand switch	1	4.003 925
Pneumatic basic tool with foot switch	1	4.003 926

LLG Crimp neck vials N 20: 20 and 50 mL

								
Capacity	ml	20.00	20.00	20.00	20.00	20.00	50.00	
o.d. x Height	mm	23.25 x 75.5	23.25 x 75.5	23 x 75.5	23 x 75.5	22.5 x 75.5	31 x 101	
Colour		clear	amber	clear	clear, with label	clear	clear	
Form		flat bottom flat DIN crimp neck	flat bottom flat DIN crimp neck	rounded bottom bevelled HS crimp neck	rounded bottom bevelled HS crimp neck	flat bottom flat DIN crimp neck	rounded bottom flat DIN crimp neck	
For				PerkinElmer	PerkinElmer	DANI, Agilent	CTC, Varian	
PK		100	100	100	100	100	100	
Cat. No.		7.401 840	7.080 450	7.060 463	4.008 281	9.003 452	9.003 453	7.060 459

Vials/Ampoules, Septa

1

1 Containers for LLG screw neck vials N 18 and crimp neck vials N 20

25 position container blue for 10mL + 20mL screw neck vials N 18 and crimp neck vials N 20, with transparent lid (suitable for freezers).

Dimensions (L x W x H) mm	PK	Cat. No.
130 x 130 x 80	1	4.001 528

LLG Crimp closures N 20, Aluminium, ready assembled

Caps	Septa	Hardness	Thickness	PK	Cat. No.
		mm			
	silver, center hole	Butyl red / PTFE grey	50° shore A	3.00	100 9.003 454
	silver, center hole	Butyl light grey / PTFE dark grey	50° shore A	3.00	100 4.001 549
	silver, center hole	Butyl dark grey / PTFE grey (only centrally laminated, typically called Pharma-Fix)	50° shore A	3.00	100 9.003 430
	gold, center hole	Butyl dark grey / PTFE grey (only centrally laminated, typically called Pharma-Fix)	50° shore A	3.00	100 4.008 275
	silver, center hole	Butyl stopper, grey unassembled (separate parts)	37° shore A		100 7.060 477
	silver, center hole	Silicone blue / PTFE colourless	40° shore A	3.00	100 4.001 553
	silver, center hole	Silicone beige / PTFE grey	40° shore A	3.00	100 9.003 447




LLG Pressure release caps N 20, Aluminium, assembled

Caps	Septa	Hardness	Thickness	PK	Cat. No.
		mm			
	silver, centre hole	Butyl red / PTFE grey	50° shore A	3.00	100 9.003 455
	silver, centre hole	Butyl light grey / PTFE dark grey	50° shore A	3.00	100 4.001 557
	silver, centre hole	Butyl dark grey / PTFE grey (only centrally laminated, typically called Pharma-Fix)	50° shore A	3.00	100 4.008 276
	silver, centre hole	Silicone blue / PTFE colourless	40° shore A	3.00	100 7.050 286
	silver, centre hole	Silicone beige / PTFE grey	40° shore A	3.00	100 9.003 456
	silver, centre hole (no liner)				100 4.008 271





LLG Center tear off caps N 20, Aluminium, ready assembled

Caps	Septa	Hardness	Thickness	PK	Cat. No.
		mm			
	gold	Butyl dark grey / PTFE grey (only centrally laminated, typically called Pharma-Fix)	50° shore A	3.00	100 9.003 445
	silver	Butyl stopper, grey unassembled (separate parts)	37° shore A		100 7.087 863






LLG Complete tear off caps N 20, Aluminium, assembled

Caps	Septa	Hardness	Thickness	PK	Cat. No.
			mm		
 silver	Butyl dark grey / PTFE grey (only centrally laminated, typically called Pharma-Fix)	50° shore A	3.00	100	7.060 471
 silver	Butyl stopper, grey unassembled (separate parts)	37° shore A		100	7.060 479
 silver (no liner)				100	7.056 751







LLG Bi-metal crimp caps N 20, assembled

Caps	Septa	Hardness	Thickness	PK	Cat. No.
			mm		
 blue/silver, centre hole	Butyl light grey / PTFE dark grey	50° shore A	3.00	100	9.003 457
 blue/silver, centre hole	Silicone blue / PTFE colourless	40° shore A	3.00	100	6.234 541
 blue/silver, centre hole	Silicone beige / PTFE grey	40° shore A	3.00	100	9.003 458
 blue/silver, centre hole (no liner)				100	4.008 272



LLG Magnetic crimp caps N 20

Caps	Septa	Hardness	Thickness	PK	Cat. No.
			mm		
 silver, center hole 8 mm	Butyl red / PTFE grey	50° shore A	3.00	100	4.001 548
 silver, center hole 8 mm	Butyl light grey / PTFE dark grey	50° shore A	3.00	100	6.229 635
 silver, center hole 8 mm	Butyl dark grey / PTFE grey (only centrally laminated, typically called Pharma-Fix)	50° shore A	3.00	100	6.902 419
 silver, center hole 8 mm	Silicone blue / PTFE colourless	40° shore A	3.00	100	7.850 010
 silver, center hole 8 mm (no liner)				100	7.625 012

LLG Septa N 20 for crimp caps N 20

Septa	Hardness	Thickness	PK	Cat. No.
		mm		
 Butyl red / PTFE grey	50° shore A	3.00	100	7.060 427
 Butyl light grey / PTFE dark grey	50° shore A	3.00	100	4.008 273
 Butyl dark grey / PTFE grey (only centrally laminated, typically called Pharma-Fix)	50° shore A	3.00	100	7.071 063
 Silicone blue / PTFE colourless	40° shore A	3.00	100	4.008 274
 Silicone beige / PTFE grey	40° shore A	3.00	100	7.050 202
 Silicone white / Aluminium foil silver	50° shore A	3.00	100	4.001 550





LLG Stoppers N 20

Description	Hardness	PK	Cat. No.
 butyl grey	37° shore A	100	7.060 433
 bromobutyl red	45° shore A	100	6.900 963

14. Chromatography

Vials/Ampoules, Septa

LLG Caps N 20, PE and suitable single septa N 19, transparent

Caps	Septa	Hardness	Thickness	PK	Cat. No.
			mm		
 height 8.4mm, for bevelled top crimp neck N 20, centre hole 4.3mm (no liner)				100	6.227 768
 height 9.1mm, for flat DIN crimp neck N 20, centre hole 4.3mm (no liner)				100	7.052 184
	Butyl beige / PTFE grey	55° shore A	1.30	100	7.060 425
	Natural rubber red-orange/ TEF colourless	45° shore A	1.30	100	7.051 039

1 LLG Vial and cap N 20 for doping control

100 mL crimp neck vial, 51.6 x 94.5mm, clear, flat bottom, flat DIN crimp neck

Description	Caps	PK	Cat. No.
Vials only		88	7.060 465
Caps only	N 20 aluminium safety cap; silver, closed/central PTFE lamination grey, 50° shore A, 3 mm (typically called Pharma-Fix)	100	4.001 551
Pack of presealed vials	7.060 465 crimped with N 20 flip tear up cap blue; Butyl red, 3 mm	88	4.001 570



LLG Screw neck vials N 24 (EPA)

Capacity	ml				
o.d. x Height	mm	20.00 27.5 x 57	20.00 27.5 x 57	40.00 27.5 x 95	40.00 27.5 x 95
Colour		clear	amber	clear	amber
Form		flat bottom	flat bottom	flat bottom	flat bottom
PK		100	100	100	100
Cat. No.		4.008 204	4.008 298	4.008 297	4.008 299

Bonded LLG Screw closures N 24, PP, plain screw caps N 24 and single septa N 22

Caps		Septa	Hardness	Thickness	PK	Cat. No.
					mm	
		Silicone white / PTFE beige	45° shore A	3.20	100	4.008 293
		Silicone white / PTFE beige	45° shore A	3.20	100	4.008 292
		Red Rubber / TEF colourless	65° shore A	2.50	100	4.008 294
		no liner			100	4.008 295
		no liner			100	4.008 296
		Silicone natural / PTFE beige	45° shore A	3.20	100	4.008 291

*septa firmly connected with the cap; cannot be separated

1 Three-layer septa for GC inlet

Low density silicone was sandwiched between two high density silicone layers. Working temperature max. 200°C.

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Hamilton

1

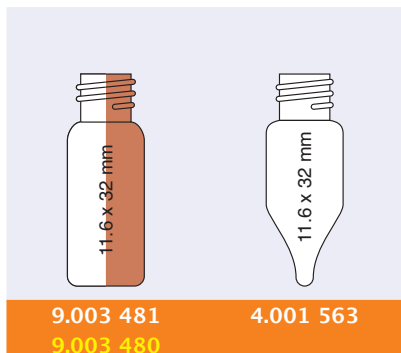


Dia. mm	PK	Cat. No.
6.35	12	9.221 801
8.00	12	9.221 802
9.00	12	9.221 803
9.50	12	9.221 804
10.00	12	9.221 805
12.70	12	9.221 806
11.00	12	9.221 807
13.00	12	9.221 809
16.00	12	9.221 808

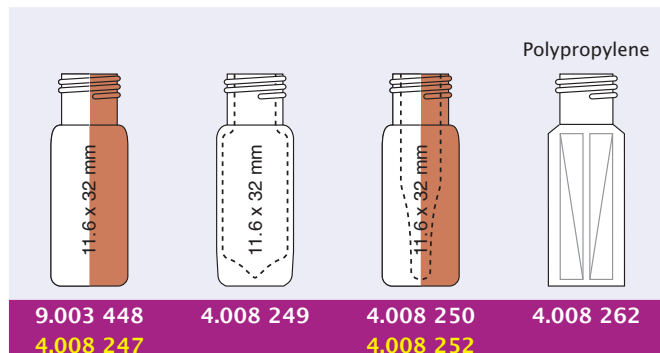


LLG Vial types

Screw neck vials N 8

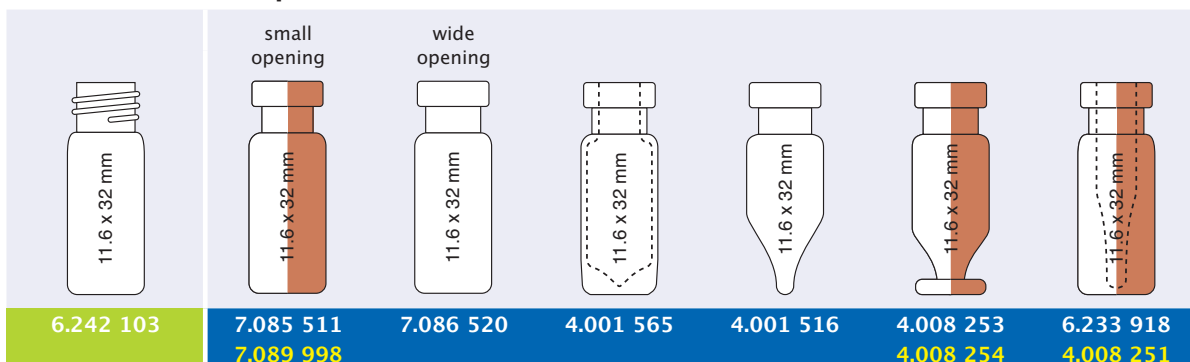


Screw neck vials N 9



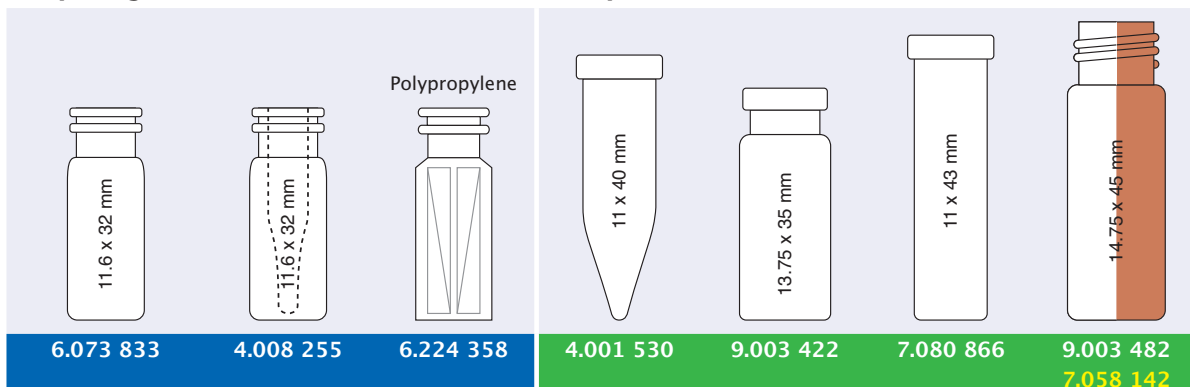
Vial N 10

Crimp neck vials N 11



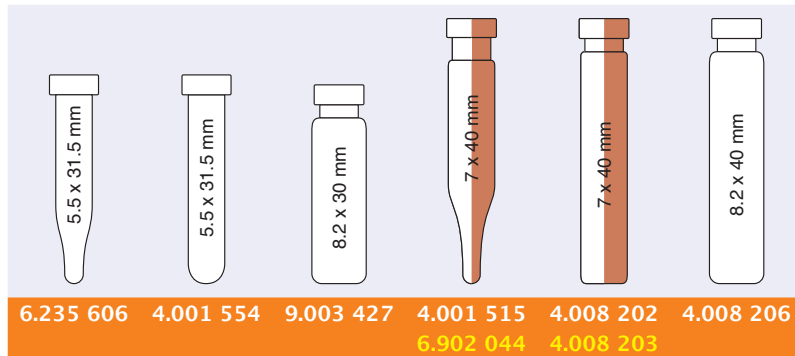
Snap ring vials N 11

Crimp and screw neck vials N 13

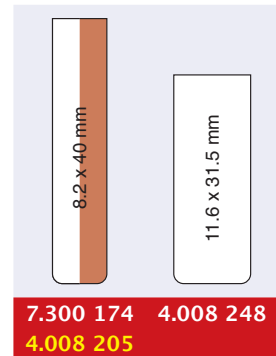


LLG Vial types

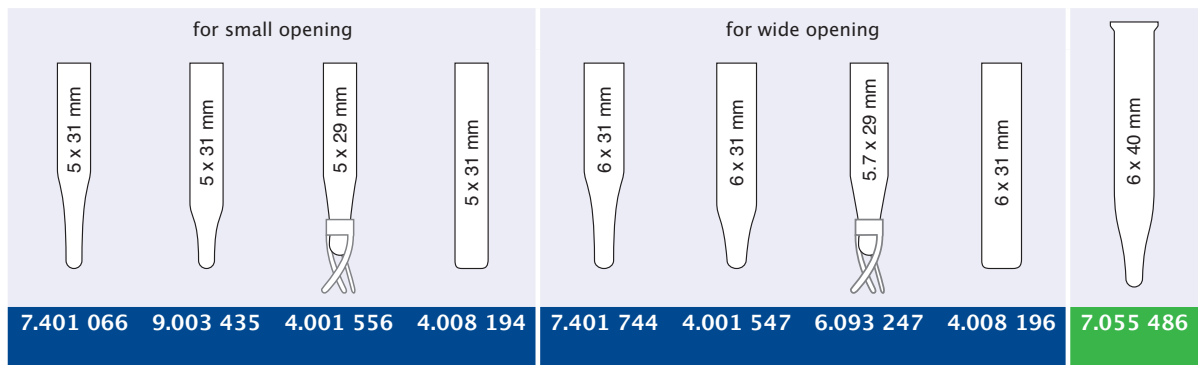
Crimp neck vials N 8



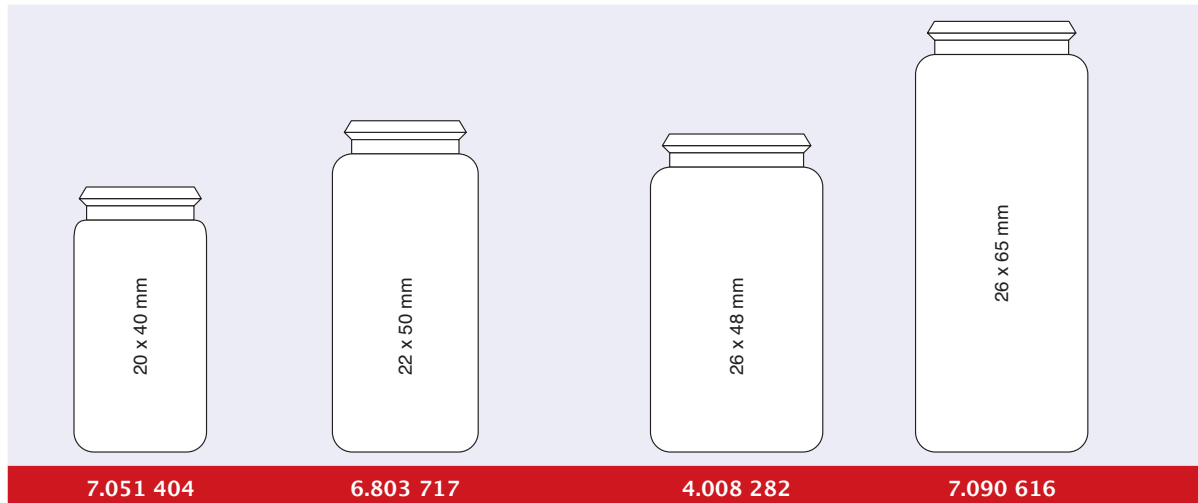
Shell vials



Inserts for vials N 8, N 9, N 10, N 11, and N 13

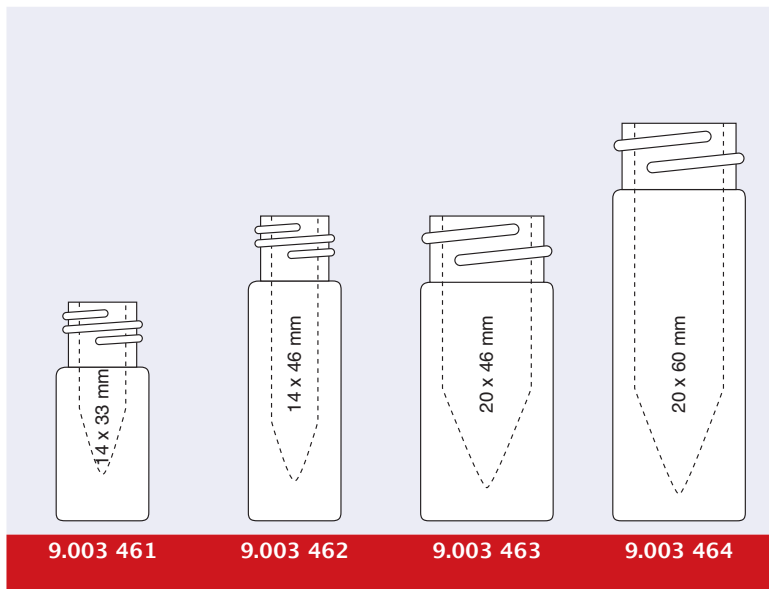


Snap cap vials N 18 and N 22

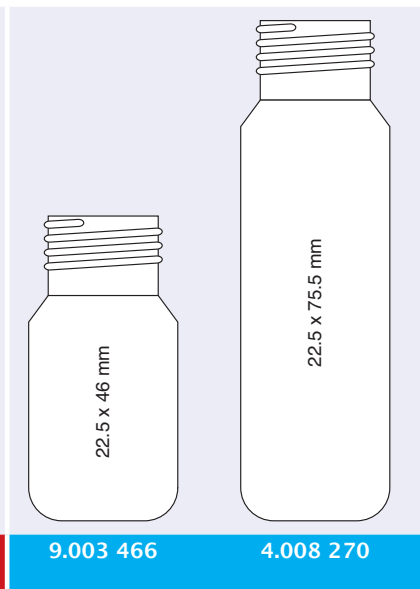


LLG Vial types

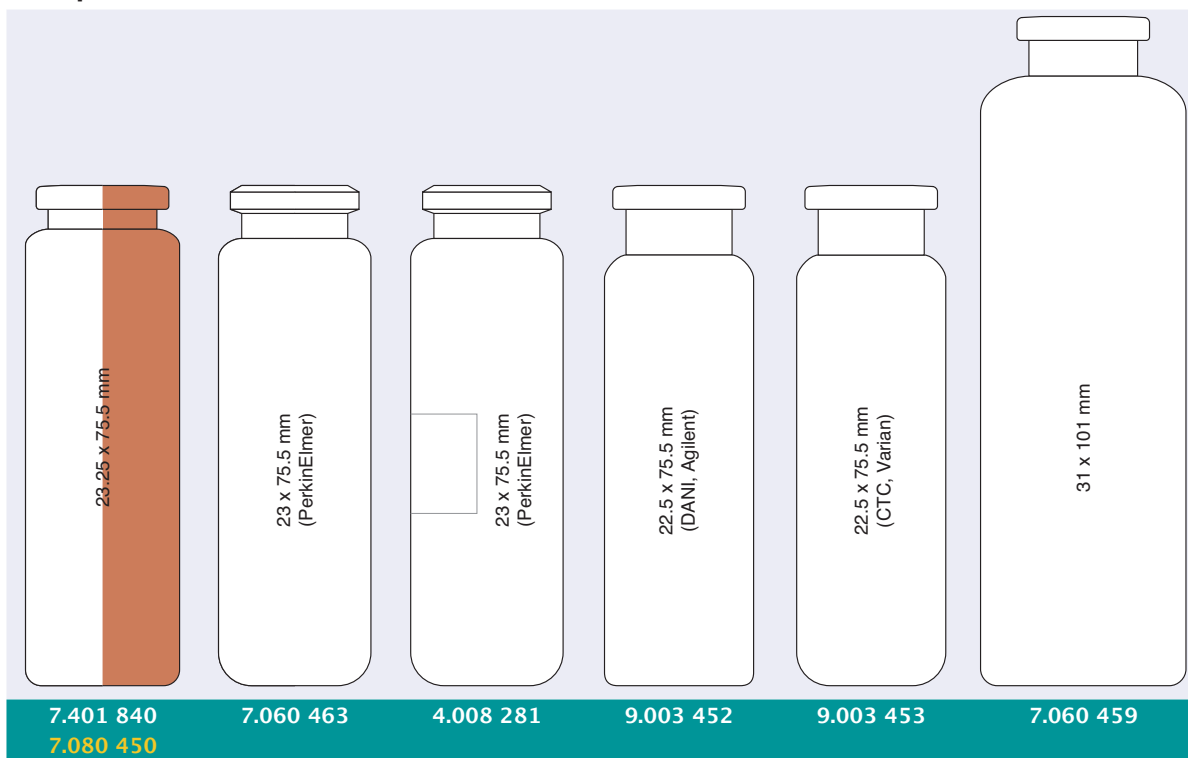
Micro reaction vials N 13 and N 20



Screw neck vials N 18

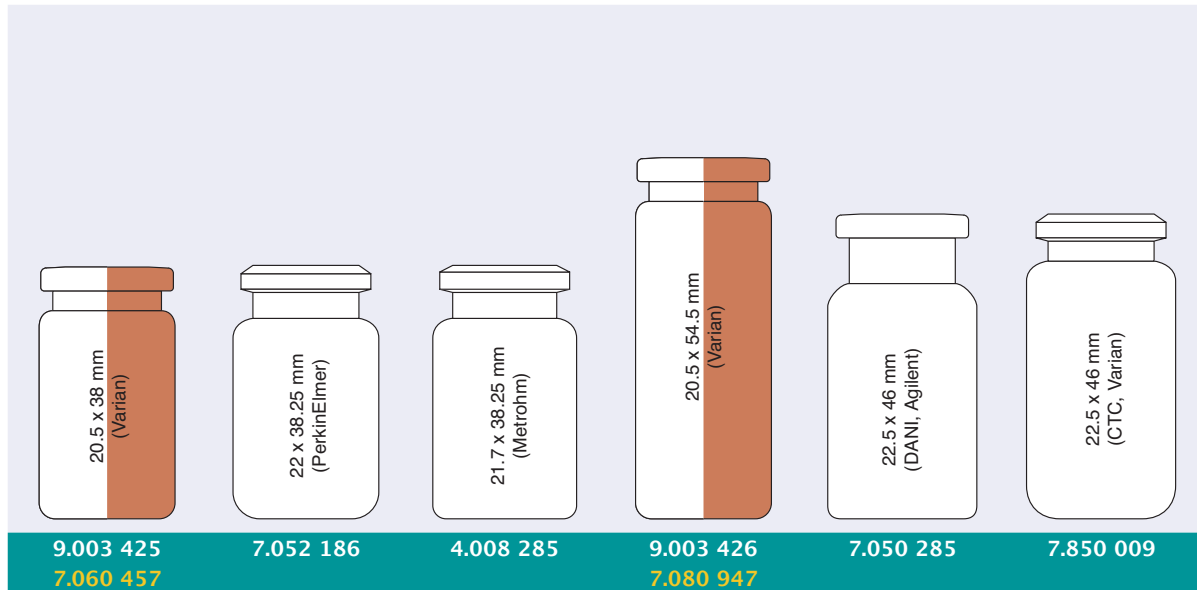


Crimp neck vials N 20: 20 and 50 mL

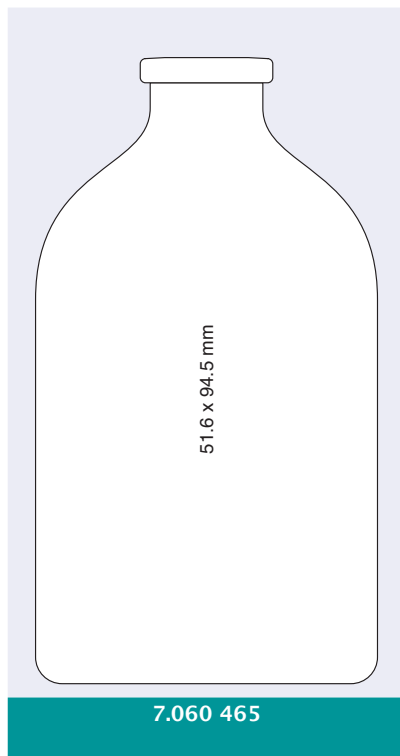


LLG Vial types

Crimp neck vials N 20: 5–10 mL



Vials N 20: 100 mL



Screw neck vials N 24

