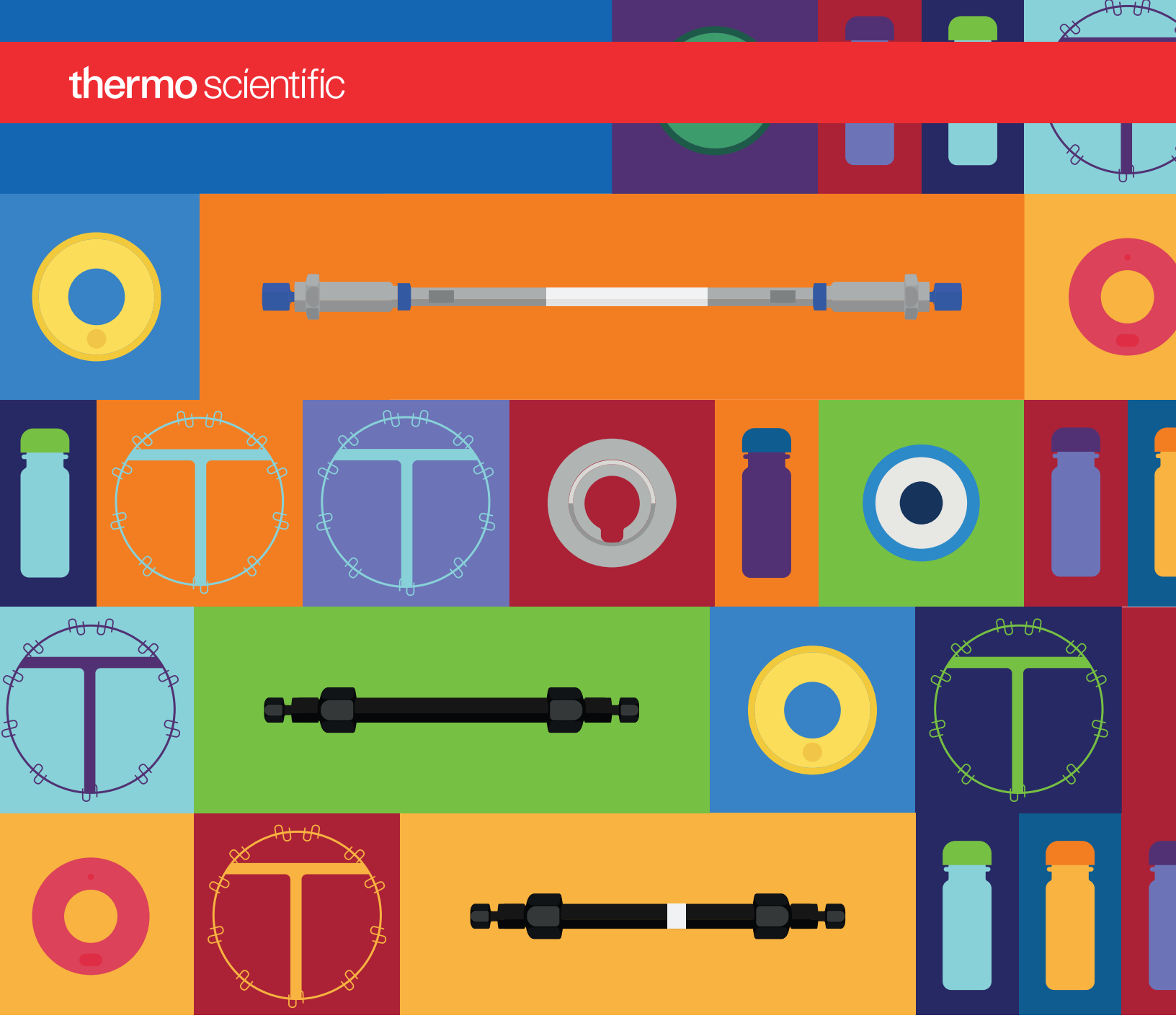
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Connected chromatography solutions

2019/2021 Chromatography Consumables Catalog

ThermoFisher SCIENTIFIC

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The collective power of chromatography

Expect reproducible results with sample prep, columns and vials

Maximizing your chromatography productivity and achieving reproducible results requires optimizing the whole workflow from sample to knowledge. By choosing the right tools, from your sample preparation (manual or automated) to the highest selectivity column chemistry and cleanest vials, you maintain sample integrity and achieve the highest instrument efficiency and reduce the need for costly reanalysis. With the largest portfolio of sample handling; vials, plates and closures, column chemistries in a broad range of dimensions and sample preparation, we remain a steadfast and committed partner in your endeavor to improve the world around us.

GC IC LC

C CDS SP

UNITY LAB SERVICES

Find out more at **thermofisher.com/chromatographyconsumables**

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AD72973-EN 0419S

2019/2021 Chromatography Consumables Catalog

This PDF catalogue is designed to familiarise you with our comprehensive portfolio of Chromatography consumables, columns and accessories, designed to deliver connected chromatography solutions across Biopharma/Pharma, Food & Beverage, Environmental and Clinical workflows. We have included key workflows in the next few pages to help with your product selection.

How to use this PDF catalog

You can use the 'ctrl F' function to search for products, applications, brands or part numbers, or you can navigate by section using the contents page to guide you.

More information

For more information on Chromatography consumables, to access application notes, educational resources, selection guides and product literature, please visit **thermofisher.com/chromatographyconsumables**

Or, for more information on our Instrumentation and key applications, please visit **thermofisher.com/chromatography**

AppsLab

Gain access to our applications expertise on cloud-based Thermo Scientific™ AppsLab library of analytical applications for a comprehensive fully searchable method repository.

Visit **appslab.thermofisher.com**

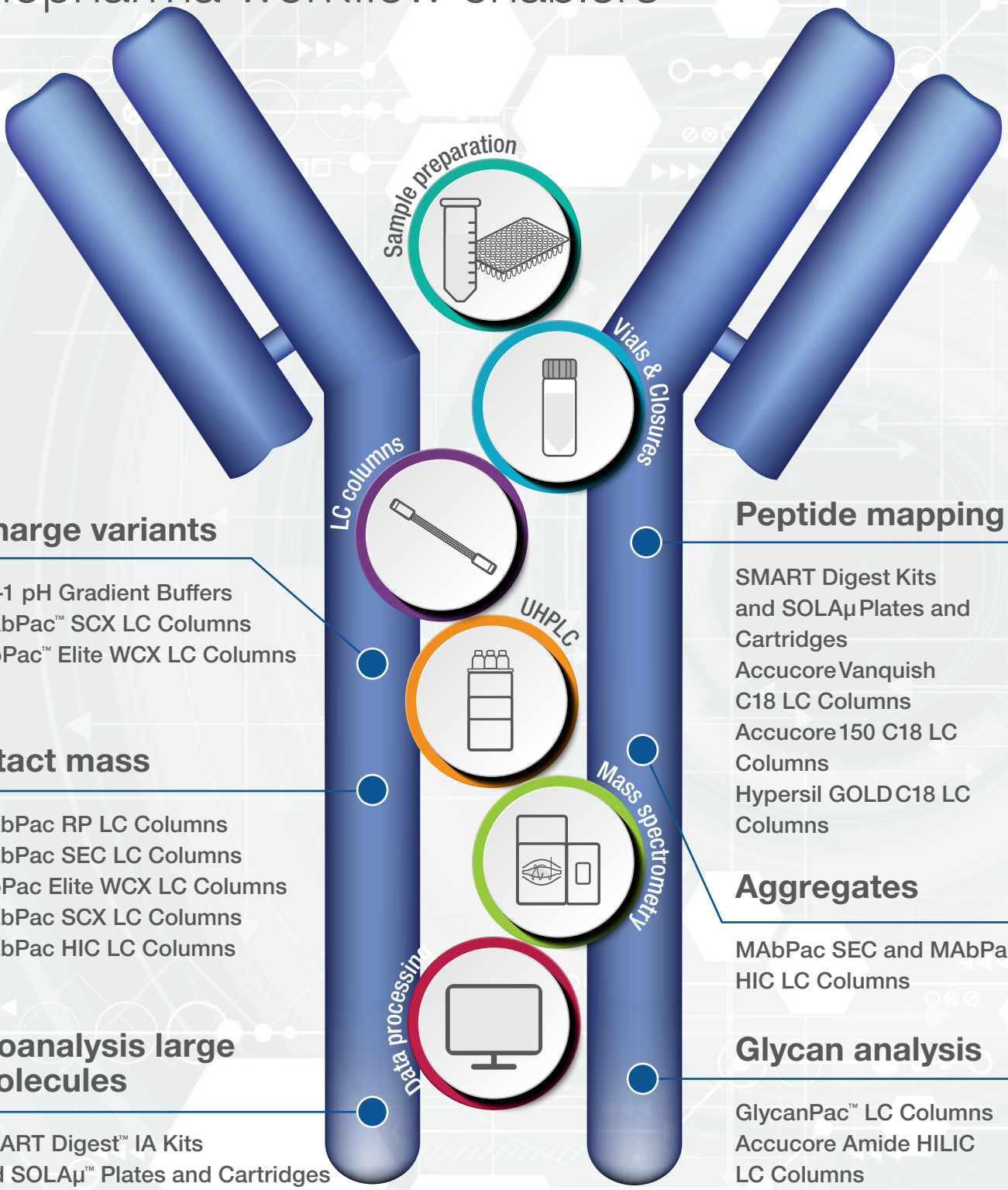
A collaboration built for Biopharma

The National Institute for Bioprocessing Research and Training (NIBRT) and Thermo Fisher Scientific are developing workflows using Thermo Fisher Scientific technology including the latest biomolecule columns.

For more information on collaboration built for BioPharma visit **thermofisher.com/NIBRT**

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Thermo Scientific™ Biopharma workflow enablers



Charge variants

CX-1 pH Gradient Buffers
MAbPac™ SCX LC Columns
ProPac™ Elite WCX LC Columns

Intact mass

MAbPac RP LC Columns
MAbPac SEC LC Columns
ProPac Elite WCX LC Columns
MAbPac SCX LC Columns
MAbPac HIC LC Columns

Bioanalysis large molecules

SMART Digest™ IA Kits
and SOLAμ™ Plates and Cartridges
Accucore™ Vanquish™ C18 LC Columns
Acclaim™ LC Columns
Hypersil GOLD™ C18 LC Columns

Peptide mapping

SMART Digest Kits
and SOLAμ Plates and Cartridges
Accucore Vanquish C18 LC Columns
Accucore 150 C18 LC Columns
Hypersil GOLD C18 LC Columns

Aggregates

MAbPac SEC and MAbPac HIC LC Columns

Glycan analysis

GlycanPac™ LC Columns
Accucore Amide HILIC LC Columns

Find out more about consumables for your Biopharma workflow here

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Thermo Scientific™ Pharmaceutical workflow enablers

Small molecules

Discovery DMPK

HyperSep™ SPE Cartridges and Plates
WebSeal™ Well Plates and Mats
Accucore™ RP-MS LC Columns
Accucore Biphenyl LC Columns
Acclaim™ VANQUISH™ C18 UHPLC Columns
Titan3™ Syringe Filters

Development DMPK / Pre Clinical

SOLA™/SOLAμ™ SPE Plates and Cartridges
WebSeal Well Plates and Mats
HyperSep SPE Cartridges and Plates
Accucore C18 LC Columns
Accucore Biphenyl LC Columns
Hypersil GOLD™ VANQUISH™ C18 UHPLC Columns

Clinical

SOLA/SOLAμ SPE Plates and Cartridges
WebSeal Well Plates and Mats
Hypersil GOLD VANQUISH C18 UHPLC Columns
Accucore C18 LC Columns
Accucore Biphenyl LC Columns

QA/QC

Titan3 Syringe Filters
Hypersil GOLD C18 UHPLC Columns
Accucore RP-MS LC Columns
Accucore Biphenyl LC Columns
TraceGOLD™ GC Columns



Large molecules

Discovery DMPK

SMART Digest™ Kits
WebSeal Well Plates and Mats
MAbPac™ LC Columns
ProPac™ Elite WCX LC Column
GlycanPac™ LC Columns
Acclaim 120 C18 Columns
CX-1 pH Gradient Buffers

Development DMPK / Pre Clinical

SMART Digest & SMART Digest ImmunoAffinity Kit
SOLA/SOLAμ SPE Plates and Cartridges
WebSeal Well Plates and Mats
Acclaim 120 C18 Columns

Clinical

SOLA/SOLAμ SPE Plates and Cartridges
WebSeal Well Plates and Mats
Acclaim 120 C18 Columns

QA/QC

Titan3 Syringe Filters
SMART Digest Kits
ProPac LC Columns
MAbPac LC Columns
CX-1 pH Gradient Buffers
Acclaim 120 C18 Columns

Find out more about consumables for your Pharmaceutical workflow here

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Thermo Scientific™ Food and Beverage workflow enablers



Pesticides

HyperSep™ SPE Cartridges
QuEChERS
TraceGOLD™ GC Columns
GC Consumables
and Accessories
Accucore™ aQ LC Columns
Acclaim™ Carbamate
LC Columns
Acclaim Trinity Q1 LC Columns

Mycotoxins

HyperSep Retain Cartridges
Accucore aQ LC Columns
Hypersil GOLD™ LC Columns

Contaminants by GC-MS

HyperSep SPE Cartridges
TraceGOLD GC Columns
GC Consumables and
Accessories

Veterinary drug residues

QuEChERS
Target2™ PTFE Syringe
Filters
Accucore VDX LC Columns

Food quality/ Food labelling / Food fraud

HyperSep Retain Cartridges
HyperSep SPE Cartridges
Acclaim LC Columns
Accucore LC Columns
HyperREX™ LC Columns
GC Columns and
Consumables

Find out more about consumables for your Food & Beverage workflow here

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Thermo Scientific™ Environmental workflow enablers



Persistent Organic Pollutants (POP)

HyperSep™ Cartridges
TraceGOLD™ GC Columns
LinerGOLD™ GC Liners
BTO Septa
GC Consumables and Accessories

Semi-Volatile Organic Compounds (SVOC)

HyperSep Cartridges
SPME Arrow
TraceGOLD TG-XLBMS, TG-5SilMS, TG-PAH, TG-XLBMS, TG-OCP, TG-OPP TR-Pesticide, and TR-8270 GC Columns
LinerGOLD Liners
BTO Septa
GC Consumables and Accessories

Volatile Organic Compounds (VOC)

SPME Arrow
TraceGOLD TG-VMS, TG-VRX, TG-624, TG-624SilMS, TG-VVOC B, TRACE™ TR-V1, TR-524, and TracePLOT GC Columns
LinerGOLD Liners
BTO Septa
GC Consumables and Accessories

Microcystins

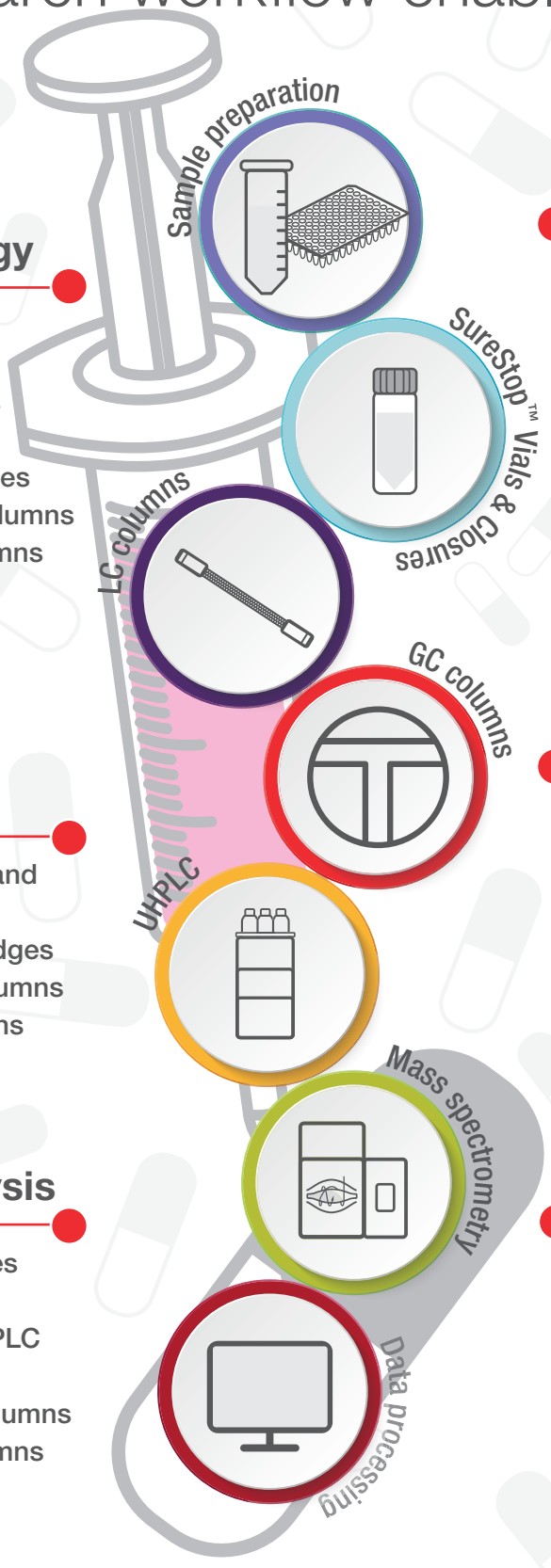
HyperSep Cartridges
Hypersil GOLD™ aQ LC Columns
Accucore™ C18 LC Columns

Find out more about consumables for your Environmental workflow here

ThermoFisher SCIENTIFIC

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Thermo Scientific™ Clinical research workflow enablers



Forensic toxicology

SOLA™/SOLAμ™ SPE Plates and Cartridges
HyperSep™ SPE Cartridges and Plates
HyperSep™ Retain Cartridges
Accucore™ Biphenyl LC Columns
Accucore RP-MS LC Columns
TraceGOLD™ GC Columns and Guard Columns

Drugs of abuse research

SOLA/SOLAμ SPE Plates and Cartridges
HyperSep Verify CX Cartridges
Accucore Biphenyl LC Columns
Hypersil GOLD™ LC Columns
TraceGOLD GC Columns

Supplement analysis

HyperSep Retain Cartridges and Plates
Hypercarb™ HPLC and UHPLC Columns
Hypersil GOLD PFP LC Columns
Accucore aQ C18 LC Columns

Amino acids, acylcarnitines, and succinylacetone research

Hypersil GOLD C18 LC Columns
Accucore aQ C18 LC Columns
Acclaim™ HILIC LC Columns
Titan3™ Syringe Filters
HyperSep SLE Plates and Cartridges
TraceGOLD GC Columns

Translational proteomics

SMART Digest™ Kits
SOLAμ SPE Plates and Cartridges
EASY-Spray™ LC Columns
PepMap™ RSLC Columns
WebSeal™ Well Plates and Mats

Drug monitoring research

SOLA/SOLAμ SPE Plates and Cartridges
WebSeal Well Plates and Mats
Acclaim 120 C18 Columns

Find out more about consumables for your Clinical workflow here

ThermoFisher SCIENTIFIC

Sample handling products

Our portfolio includes almost 1k Thermo Scientific vials and closures products designed for any instrument and any application. The following pages have been arranged by product line and vial size, allowing you to quickly find the most appropriate products for your lab.

For more information, visit **thermofisher.com/vials**

Featured products



SureStop 9mm vials
Removing any subjectivity around achieving the optimal compression when sealing a vial. Analytical results are improved as a result of the elimination of evaporation differences between samples.

Page 2-004



Chromacol Gold Grade vials
Choose from a large selection of Thermo Scientific™ Chromacol™ vials and closures to match your application and autosampler requirements. Including Thermo Scientific™ Chromacol™ GOLD Vials which provide highest levels of inertness to avoid adhesion at low concentrations for critical analytes.

Page 2-006

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National vials and closures	2-013
MS certified vials	2-014
National vial reference chart	2-059
Chromacol vials and closures	2-060
Electronic crimping and decrimping tools	2-091
Well plates for chromatography	2-093



WebSeal well plates
A comprehensive range of well plate solutions for high-density sample handling in chromatography.

Page 2-093

Vials and closures

Our portfolio contains the most comprehensive selection of vials and closures from microsampling to headspace to match all of your application and autosampler requirements. The portfolio focuses on improved sample security and integrity with the Thermo Scientific™ AVCS™ 9mm closures and the Thermo Scientific™ SureStop™ 9mm screw top vial range. Our portfolio of vials and closures assure you of uninterrupted productivity on every separation and analysis.

AVCS closures and SureStop vials

AVCS Closures together with SureStop vials significantly reduce the error rate of analysis that results from evaporation of the solvent in vials which are not sealed correctly.

thermofisher.com/surestop

National vials and closures

Choose from a large selection of Thermo Scientific™ National™ vials and closures to match your application and autosampler requirements.

thermofisher.com/national

MS certified vials

The first and only pre-cleaned, low particle, low background chromatography vial.

thermofisher.com/msvials

Chromacol vials and closures

Choose from a large selection of Thermo Scientific Chromacol vials and closures including GOLD Vials which provide highest levels of inertness to avoid adhesion at low concentrations and for critical analytes.

thermofisher.com/inertvals

Crimping and decrimping tools

Speed up your workflow with our tools for opening, closing and disposing of vials.

For more information, visit **thermofisher.com/vials**

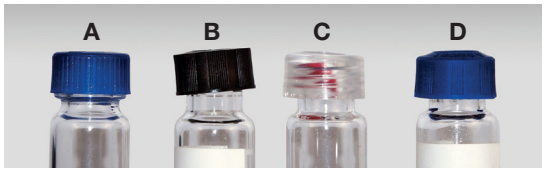
AVCS closures and SureStop vials

Thermo Scientific™ AVCS Closures and SureStop™ Vials – The next generation of sample handling.

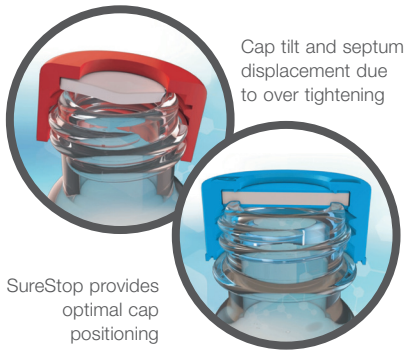
Top reasons why chemists should consider Advanced Vial Closure System (AVCS) Closures and SureStop Vials

Features of 9mm wide opening, integral membrane and solid top closures:

1. AVCS closures along with SureStop vials significantly reduce the error rate of analysis that results from evaporation of the solvent in improperly sealed vials.
2. Re-analysis costs are reduced, sample data integrity increases, and sample throughput increases.
3. No need to use bulky crimpers – AVCS closures with SureStop vials seal as well as crimp top vials.
4. The leveling feature of AVCS designed vials gives more autosampler compatibility with less autosampler interruptions, due to mishandled vials.
5. AVCS design allows for consistent sealing, eliminating user-to-user variance.
6. SureStop design provides a positive feedback closure that creates more consistent data, which for a researcher is almost as important as the actual result.



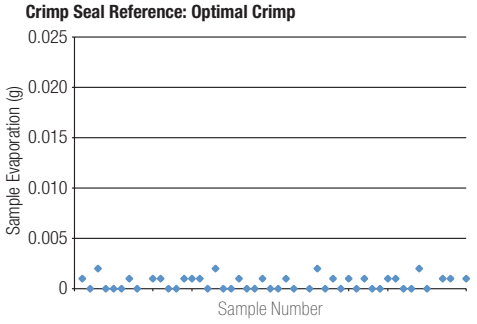
Examples of vial and closure misalignment/deformation. (A) SureStop vial self-aligning cap; (B) generic vial, cap tilt; (C) generic vial, septum dislodged; and (D) generic vial, deformed top.

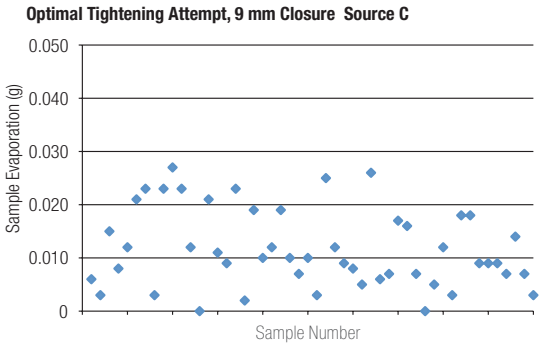


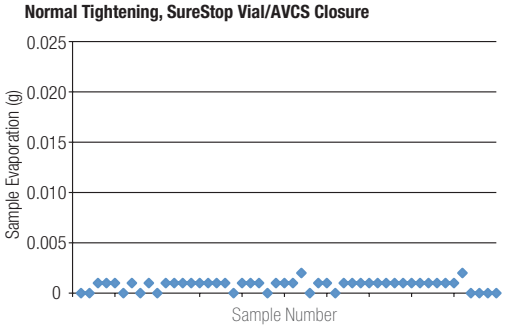
A study of the effects of the typical operator response to evaporative sample loss and septum dislodging during the use of 9 mm screw thread and 11 mm crimp vials and closures were conducted. Sample losses were measured for both overtightened vials and for vials perceived to be optimally tightened and these were compared to losses from new vials designed to provide a definite sealing point.

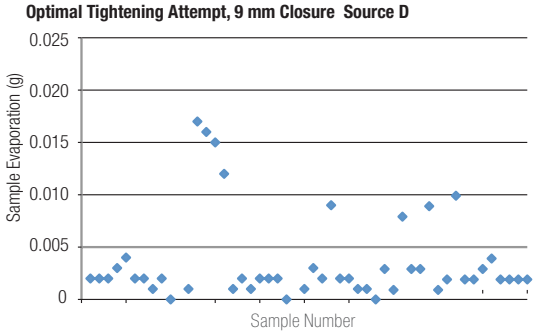
Test conditions

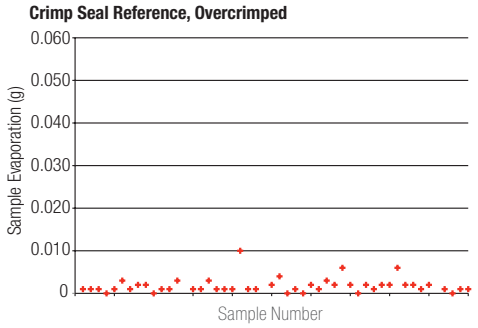
- 1.3 mL of pure methanol was added to each vial (always 50 in total)
- All vials were incubated at a temperature of 40 °C for 72 hours
- After 72 hours the final weight was taken and subtracted from the initial 40 °C temperature weight to yield the sample loss in grams

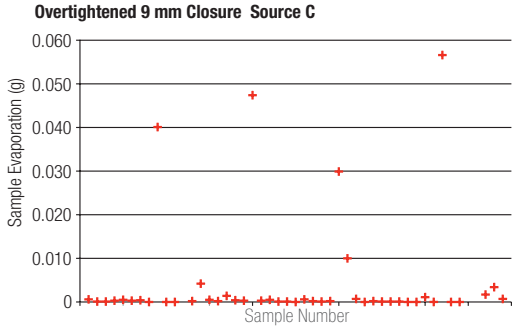


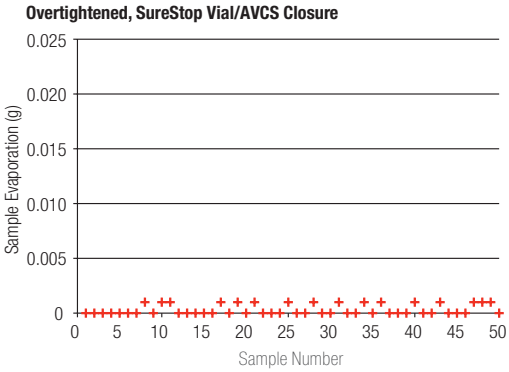


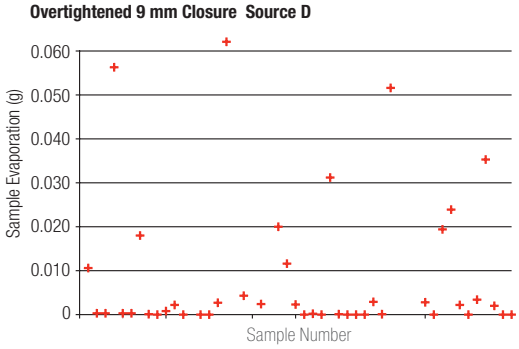












Are you currently using crimp caps?

Changing to AVCS closures and SureStop vials will provide the following benefits:

- The hassle of crimping is removed; crimping and de-capping tools are not required.
  Screw thread closures are easier to attach and remove reducing time required for sample prep. Additionally, there can be repetitive stress issues related to high volume crimping that will be alleviated with screw thread vials.
- AVCS closures and SureStop vials offer identical performance to crimp caps (based on solvent loss studies), which make SureStop products a viable alternative for GC use.
- AVCS and SureStop provides a “like crimped” product tightness and reliable quantification even for low boiling compounds; you remove user-to-user vial/closure sealing variably that results from user subjectivity of when they “think” the vial is properly sealed.

Are you currently using snap caps?

Changing to AVCS closures and SureStop vials will provide the following benefits:

- Positive feedback makes AVCS and SureStop as convenient to use as snap cap.
- Provides a fast closing alternative for volatile solvents/compounds of interest.
- Eliminates variable evaporation rates that can be caused by environmental conditions.

Are you currently using expensive bonded caps?

Changing to AVCS closures and SureStop vials will provide following benefits:

- Septum push through is eliminated with the AVCS screw-top closure and SureStop vial design. (See illustration below).
- Greater septa choice (bonded caps very limited in septa offering).
- AVCS closures and SureStop vials seal more securely than bonded caps
- AVCS closures and SureStop vials are considerably less expensive than bonded caps and vials.



Non-AVCS push through examples

AVCS no push through

For more information, visit **thermofisher.com/surestop**

Chromacol GOLD vials

	Volume	Description	Cat. No	Pack of
8 mm Crimp-Top Clear GOLD Grade Vials (to be used with 8mm Crimp Closures)	0.1 mL	SCI-VI™ Crimp Top Inert Vial, Round Bottom	01-CVG	500
	0.2 mL	SCI-VI™ Crimp Top Inert Vial, Tapered	02-CTVG	500
	0.3 mL	SCI-VI™ Crimp Top Inert Vial, Round Bottom	03-CVG	500
8-425 Screw Thread Clear GOLD Grade Vials, 12 × 32 mm (to be used with 8-425 Screw Thread Closures)	2 mL	Screw Thread Inert Vial, Standard Opening	2-SVG	500
	1.1 mL	Screw Thread Inert Vial, Conical	1.1-STVG	500
9 mm Screw Thread Clear GOLD Grade Vials, 12 × 32 mm (to be used with 9 mm Screw Thread Closures)	2 mL	Screw Tread SureStop Inert Vial, with Patch and Wide Opening	2-SVWGK	100
	0.2mL	Screw Tread Inert Vial, with Patch and Fused Insert	02-FISVG	500
11 mm Crimp Top Clear GOLD Grade Vials, 12 × 32 mm (to be used with 11 mm Crimp Closures)	2 mL	Crimp Top Inert Vial, Wide Opening	2-CVG	500
	1.1 mL	Crimp Top Inert Vial, Conical	1.1-CTVG	500
	0.2 mL	Crimp Top Inert Vial, with Patch and Fused Insert	02-FIVG	500
Micro Insert GOLD Grade for Wide Opening Vials	0.2mL	Conical Inert Glass Insert for Wide Opening Vials	02-MTVWG	1000

For more information, visit **thermofisher.com/inertvials**

Premium vials and closures

8mm Screw vials and closures

8-425 thread finish, standard opening, 2mL, 12x32mm

- Superior quality 1st hydrolytic class glass (Type 1) in clear and amber, meets all requirements of Pharm. US, EU, JPN
- Open top caps are designed to be used with any of our 8mm septa
- Polypropylene caps are chemically inert and suitable for most chromatography applications
- Flanged caps are particularly suitable for many Japanese autosamplers
- Pre-assembled caps and septa are convenient and minimize contamination from handling



8mm, 2mL, 12x32mm standard opening screw thread vials and inserts

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume (mL)	Usable Volume (mL)	Residual (µL)	Cat. No.	Pack of
8-425 Screw Thread Vial	Clear	Yes	12x32	Flat Bottom	2.0	1.5	<170	60180-508	100
	Amber	Yes	12x32	Flat Bottom	2.0	1.5	<170	60180-560	100

8-425 screw thread caps and septa

Description	Cap Color	Cap Material	Septum	Hardness °shore	Thickness (mm)	Cat. No.	Pack of
5mm Open Top Screw Cap, 8-425 thread, 5mm hole	Black	Polypropylene	–	–	–	60180-514	100
5mm Open Top Screw Cap, flanged, 8-425 thread, 5mm hole	Pink	Polypropylene	–	–	–	60180-660	100
Septum for 8-425 Screw Caps	–	–	Blue Silicone/PTFE	30	1.1	60180-515	500
	–	–	White Silicone/Red PTFE	50	1.5	60180-562	100
5mm Open Top Screw Cap with flange, 8-425 thread, 5mm hole	Pink	Polypropylene	Red PTFE/White Silicone	45	1.3	60180-661	100
	Pink	Polypropylene	Blue PTFE/White Silicone, Pre-slit	55	0.9	60180-662	100
5mm Open Top Screw Cap, 8-425 thread, 5mm hole	Pink	Polypropylene	Ivory PTFE/Red Rubber	45	1.0	60180-665	100
	Pink	Polypropylene	Red PTFE/White Silicone/ Red PTFE	45	1.0	60180-666	100
	Pink	Polypropylene	Red PTFE/White Silicone	45	1.3	60180-667	100

For more information, visit **thermofisher.com/vials**

8mm standard opening screw thread vial convenience kits

- Includes 100 vials and 100 caps with pre-assembled septa
- Caps feature pre-inserted septa for added convenience during sample preparation

8mm standard opening screw thread vial convenience kits

Kit Type	Glass	Patched	Cap Color	Septum	Vial Cat. No.	Cap/Septum Cat. No.	Cat. No.	Pack of
Convenience Kit, Standard Opening Screw Vial	Clear	Yes	Black	Blue Silicone/PTFE	60180-508	60180-514/60180-515	60180-596	1000
	Clear	Yes	Black	Red PTFE/White Silicone	60180-508	60180-514/60180-562	60180-600	100

9mm wide opening screw thread vials and closures

- Superior quality 1st hydrolytic class glass (Type 1) in clear and amber, meets all requirements of Pharm. US, EU, JPN
- Microsampling and High Recovery Vials allow maximum sample extraction without need for separate inserts
- Easy-on, easy-off convenience with just one turn
- Caps with bonded septa resist dislodging during injection when using large diameter blunt needles
- Closures have the profile of a crimp or snap closure for compatibility with robotic autosamplers



*This vial fits Thermo Scientific AS 3000 and TriPlus only

9mm wide opening screw thread vials

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume (mL)	Usable Volume (mL)	Residual (µL)	Cat. No.	Pack of
9mm Screw Thread Thermo Scientific™ Micro+ Vial 300µL, Fused Insert	Clear	Yes	12x32	Insert Vial	0.3	250µL	<3	60180-507	100
9mm Screw Thread Vial	Clear	Yes	12x32	Flat Bottom	2.0	1.5	<170	60180-509	100
	Clear	No	12x32	Flat Bottom	2.0	1.5	<170	60180-723	1000
	Amber	Yes	12x32	Flat Bottom	2.0	1.5	<170	60180-561	100
	Amber	Yes	12x32	Flat Bottom	2.0	1.5	<170	60180-724	1000
	Clear	No	15x46	Flat Bottom	4.0	3.5	<500	60180-510	125



9mm short screw thread vial closures

Description	Cap Color	Cap Material	Septum	Hardness shore	Thickness (mm)	Cat. No.	Pack of
9mm Open Top Short Screw Cap, 6mm hole	Blue	Polypropylene	Clear PTFE/Blue Silicone	30	1.0	60180-516	100
	Blue	Polypropylene	Red PTFE/White Silicone	55	1.0	60180-729	1000
	Blue	Polypropylene	Ivory PTFE/Red Rubber	45	1.0	60180-728	1000
	Pink	Polypropylene	Red PTFE/White Silicone	55	1.0	60180-671	100
	Pink	Polypropylene	Ivory PTFE/Red Rubber	45	1.0	60180-669	100
	Pink	Polypropylene	Red PTFE/White Silicone/Red PTFE	45	1.0	60180-670	100
	Pink	Polypropylene	Blue PTFE/White Silicone, Pre-slit	55	1.0	60180-672	100

9mm convenience kits

- Includes 100 vials and 100 caps with pre-assembled septa
- Caps feature pre-inserted septa for added convenience during sample preparation

9mm wide opening screw thread vials convenience kits

Kit Type	Glass	Patched	Cap Color	Septum	Vial Cat. No.	Cap Cat. No.	Cat. No.	Pack of
Convenience Kit, Wide Open Short Screw Vial	Clear	Yes	Blue	Blue Silicone/PTFE	60180-509	60180-516	60180-599	100
	Amber	No	Pink	Red PTFE/White Silicone	60180-724	60180-671	60180-698	100



Items not shown to scale

For more information, visit **thermofisher.com/vials**

11mm wide opening crimp top vials, 2mL, 12x32mm and closures

- Superior quality 1st hydrolytic class glass (Type 1) in clear and amber meets all requirements of Pharm. US, EU, JPN
- Aluminum crimp seals with prefitted septa for all 11mm crimp top and snap cap vials
- Pre-assembled caps and septa are convenient and minimize contamination from handling
- Aluminum seals must be applied with a crimping tool



11mm wide opening crimp top vials, 2ml, 12x32mm

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume (mL)	Usable Volume (mL)	Residual (µL)	Cat. No.	Pack of
11mm Crimp Top Vial, Wide Opening	Clear	Yes	12x32	Flat Bottom	2.0	1.5	<170	60180-502	100

11mm crimp top vial closures

Description	Cap Color	Cap Material	Septum	Hardness shore	Thickness (mm)	Cat. No.	Pack of
11mm Crimp Cap, 6mm center hole	Blue	Aluminum	Blue Silicone/Red PTFE	20	1.4	60180-526	100

11mm crimp top convenience kits

- Includes 100 vials and 100 caps with pre-assembled septa
- Caps feature pre-assembled septa for added convenience during sample preparation

11mm crimp top convenience kits

Kit Type	Glass	Patched	Cap Color	Septum	Vial Cat. No.	Cap Cat. No.	Cat. No.	Pack of
Convenience Kit, Wide Opening Crimp Top Vial	Clear	Yes	Blue	Blue Silicone/Red PTFE	60180-502	60180-526	60180-597	100

11mm crimping tool

Description	Use	Cat. No.	Pack of
Manual Crimper	Attaches 11mm aluminum crimp seals	60180-543	1

11mm snap cap vials, wide opening, 2ml, 12x32mm and closures

- Superior quality 1st hydrolytic class glass (Type 1) in clear and amber, meets all requirements of Pharm. US, EU, JPN
- Crimp/Snap vials can be used with snap caps or aluminum crimp seal closures
- Snap Caps eliminate the need for crimping or decrimping tools
- Polyethylene caps are chemically inert and suitable for most chromatography applications



11mm snap cap vials, wide opening, 2ml, 12x32mm

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume (mL)	Usable Volume (mL)	Residual (µL)	Cat. No.	Pack of
11mm Crimp/Snap Vial	Clear	No	12x32	Flat Bottom	2.0	1.5	<170	60180-710	1000

11mm snap cap vial closures

Description	Cap Color	Cap Material	Septum	Hardness shore	Thickness (mm)	Cat. No.	Pack of
11mm Snap Cap, 6mm hole	Pink	Polyethylene	Clear PTFE/Synthetic Red Rubber	60	1.0	60180-676	100
	Pink	Polyethylene	Red PTFE/White Silicone	45	1.3	60180-677	100
	Pink	Polyethylene	Red PTFE/White Silicone, Star-slit	45	1.3	60180-678	100

For more information, visit **thermofisher.com/vials**

20mm headspace crimp top vials and closures

- Superior quality 1st hydrolytic class glass (Type 1) in clear and amber, meets all requirements of Pharm. US, EU, JPN



Applications:

Recommended for operation of Thermo Scientific™ TriPlus™ HS Autosampler

Clear glass vials with 20mm crimp seal finish are designed to fit most headspace autosamplers

Images shown are 70% to scale

20mm crimp top headspace vials

Description	Glass	Patched	Dimension (mm)	Finish	Profile	Total Volume (mL)	Usable Volume (mL)	Cat. No.	Pack of
20mm Headspace Crimp Vial	Clear	Yes	22.5x46	Beveled Edge	Round Bottom	12	10	60180-504	125
	Clear	Yes	22.5x75	Beveled Edge	Round Bottom	21	20	60180-506	125
	Clear	No	22.5x75	Beveled Edge	Round Bottom	21	20	60180-741	1000



Images shown are 70% to scale

20mm crimp top vial closures

Description	Cap Color	Cap Material	Septum	Hardness shore	Thickness (mm)	Cat. No.	Pack of
20mm Crimp Cap, 8mm hole	Silver	Aluminum	20mm Gray Chlorobutyl/Gray PTFE	52	3.0	60180-513	100
20mm Crimp Cap, 9.5mm hole	Silver	Aluminum	Natural PTFE/Blue Silicone	45	3.2	60180-511	100
20mm Composite Magnetic Crimp Cap, 8mm hole	Blue	Alu/Tinplate	Natural PTFE/Blue Silicone	45	3.2	60180-520	100

20mm crimping and decrimping tools

Description	Use	Cat. No.	Pack of
Manual Crimper	Attaches 20mm crimp seals	60180-544	1
Manual Decrimper	Removes 20mm crimp seals without vial damage	60180-557	1

National vials and closures

More laboratory professionals look to Thermo Scientific National products to meet their critical sampling needs than any other company

- Comprehensive instrument compatibility, “correct fit”
- The industry´s widest selection of vials and closures for every application, from economical to high end products
- Innovative products for challenging applications
- Quality products in glass (1st hydrolytic class glass (Type 1) in clear and amber, meets all requirements of Pharm. US, EU, JPN)
- Certified and Mass Spec Certified Vial Kits
- The leading manufacturer of vials and closures in North America since 1986
- In-house product development team
- Leading company in convenience and assembled kits

For more information, visit **thermofisher.com/national**



MS certified vials

The first and only pre-cleaned, low particle, low background chromatography vial

When your instrumentation, sample handling and methodology is pushing the limits, a chromatography vial that can keep up is essential

- The only chromatography vials pre-cleaned to provide unmatched consistency
- The first low particle, low background chromatography vials
- Pre-cleaned vial packaging protects the product integrity
- Tested and certified for up to 15 critical physical characteristics affecting vial performance
- Positive ESI LC-MS and GC-MS chromatograms included in each pack

Low particle background

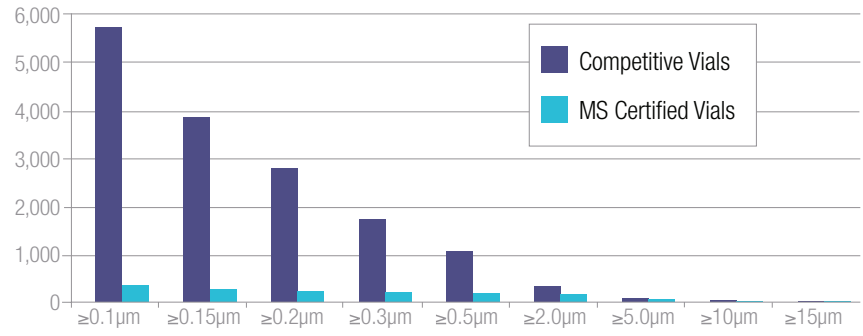
The presence of inorganic sub-micron particles in all glass vials as a byproduct of the manufacturing process is a little known phenomenon that has not been extensively studied. Gas chromatographers depend on injection port liners to act as traps for particulates while the HPLC chromatographer takes extensive steps to eliminate them during sample preparation. This has been an effective strategy for routine analytical methods, but the need to work with even lower concentrations of analytes creates the possibility of interactions with compounds of interest.

Thermo Scientific MS Certified Vials undergo a proprietary cleaning process that greatly reduces the background particulates along with their potential effect on high sensitivity chromatography. The table gives a comparison of the particle distribution obtained from an analysis of standard vials versus the Thermo Scientific MS Certified Vials. All MS Certified Vials are processed and tested for background particulates. A typical vial that has not been processed can exhibit particle counts exceeding 5000 particles per mL with the highest counts occurring in the range below 0.5µm. This has traditionally been of little concern when GC inlet liners or HPLC guard columns are used. GC techniques employing on-column injection create the need for a sample vial with minimal background particulates to prevent an accumulation of foreign material at the head of the column that might adversely affect a separation. Similarly newer techniques employing finely packed HPLC columns, capillary columns and direct connection of the analytical column to the sample valve also require the elimination of as much particulate matter as possible from the sample stream.

The table below shows the results obtained from particulate analysis of a typical unprocessed vial compared to the Thermo Scientific MS Certified Vials. The processed vial shows a significant reduction in total particle counts.

VIAL	≥0.1µm	≥0.15µm	≥0.2µm	≥0.2µm	≥0.5µm	≥2.0µm	≥5.0µm	≥10µm	≥15µm
Competitive Vials	5,677	3,809	2,755	1,709	1,051	307	76	4	0
Thermo Scientific Vials	356	264	218	192	176	160	45	8	3

Typical Cumulative Particle Counts



For more information, visit **thermofisher.com/msvials**

MS certified vials kits

Unassembled and assembled vial kits

Kit Type	Glass	Patched	Cap Color	Septum	Cat. No.	Pack of
Convenience Kit, 9mm SureStop Screw Vial, 2mL with AVCS Closure	Clear	Yes	Blue	Blue Silicone/PTFE	MSCERT5000-34W	100
	Amber	Yes	Blue	Blue Silicone/PTFE	MSCERT5000-35W	100
	Clear	Yes	Blue	Blue Silicone/PTFE, Pre-slit	MSCERT5000-40W	100
	Amber	Yes	Blue	Blue Silicone/PTFE, Pre-slit	MSCERT5000-41W	100
Convenience Kit, 9mm 200µL Fused Insert Screw Vial	Clear	Yes	Blue	Bonded Clear PTFE/Clear Silicone	MSCERT5000-30LVW	100
Convenience Kit, 9mm 350µL Fused Insert Screw Vial	Clear	Yes	Blue	Bonded Clear PTFE/Clear Silicone	MSCERT5000-31LVW	100
Convenience Kit, 9mm Wide Opening 1.5mL Total Recovery Screw Vial with 10µL Reservoir	Clear	No	Blue	Bonded Clear PTFE/Clear Silicone	MSCERT5000-33TR	100
Convenience Kit, 9mm Wide Opening Screw Vial, 2mL	Clear	Yes	Blue	Bonded Clear PTFE/Clear Silicone	MSCERT5000-341W	100
	Amber	Yes	Blue	Bonded Clear PTFE/Clear Silicone	MSCERT5000-351W	100
Convenience Kit, 9mm 200µL Fused Insert Screw Vial	Clear	Yes	Gray	Bonded Clear PTFE/Clear Silicone, Pre-slit	MSCERT5000-36LVW	100
Convenience Kit, 9mm 350µL Fused Insert Screw Vial	Clear	Yes	Gray	Bonded Clear PTFE/Clear Silicone, Pre-slit	MSCERT5000-37LVW	100
Convenience Kit, 9mm Wide Opening 1.7mL High Recovery Screw Vial with 30µL Reservoir	Clear	No	Gray	Bonded Clear PTFE/Clear Silicone, Pre-slit	MSCERT5000-38	100
Convenience Kit, 9mm Wide Opening 1.5mL Total Recovery Screw Vial with 10µL Reservoir	Clear	No	Gray	Bonded Clear PTFE/Clear Silicone, Pre-slit	MSCERT5000-39TR	100
Convenience Kit, 9mm Wide Opening Screw Vial, 2mL	Clear	Yes	Gray	Bonded Clear PTFE/Clear Silicone, Pre-slit	MSCERT5000-401W	100
	Amber	Yes	Gray	Bonded Clear PTFE/Clear Silicone, Pre-slit	MSCERT5000-411W	100
Convenience Kit, 9mm Wide Opening Screw Vial, 2mL, silanized	Clear	Yes	Blue	Bonded Clear PTFE/Clear Silicone	MSCERT5000-S34W	100
	Amber	Yes	Blue	Bonded Clear PTFE/Clear Silicone	MSCERT5000-S35W	100
	Clear	Yes	Gray	Bonded Clear PTFE/Clear Silicone, Pre-slit	MSCERT5000-S40W	100
	Amber	Yes	Gray	Bonded Clear PTFE/Clear Silicone, Pre-slit	MSCERT5000-S41W	100
Assembled Kit, 9mm Wide Opening Screw Vial, 2mL	Clear	Yes	Blue	Bonded Clear PTFE/Clear Silicone	MSCERT5000-134W	100
	Amber	Yes	Blue	Bonded Clear PTFE/Clear Silicone	MSCERT5000-135W	100
Assembled Kit, 13-425 Screw Vial, 4mL	Clear	Yes	Black	Bonded Clear PTFE/Clear Silicone	MSCERT4015-135W	100



National certified vials and closures convenience kits

- National Certified Vial Kits are fully lot-tested including HPLC and GC analysis for 15 critical parameters
- Certificate of Conformance included in every pack
- Superior quality 1st hydrolytic class glass (Type 1) in clear and amber
- Fixed insert or conical base vials for limited volume sampling

Unassembled kits

- Includes 100 vials and 100 caps with pre-assembled septa
- Reusable two compartment trays protect vials and closures while keeping matching supplies together
- Clear trays make it easy to keep track of available supplies without opening containers

Assembled kits

- Include 100 vials with pre-attached caps and septa
- Packaged in convenient vial trays with clear covers



National certified vials and closures convenience kits

Kit Type	Glass	Patched	Cap Color	Septum	Vial Cat. No.	Cap Cat. No.	Cat. No.	Pack of
Convenience Kit, Certified 9mm, Wide Opening SureStop Vial, 2mL	Clear	Yes	Blue	Red PTFE/White Silicone	C5000-1W	C5000-54B	CERT5000-578W	100
	Amber	Yes	Blue	Red PTFE/White Silicone	C5000-2W	C5000-54B	CERT5000-575W	100
	Clear	Yes	Blue	Blue PTFE/White Silicone, Pre-slit	C5000-1W	C5000-55B	CERT5000-593W	100
	Clear	Yes	Blue	Ivory PTFE/Red Rubber	C4000-1W	C5000-51B	CERT5000-80W	100
	Amber	Yes	Blue	Ivory PTFE/Red Rubber	C4000-2W	C5000-51B	CERT5000-82W	100
	Clear	Yes	Blue	Red PTFE/White Silicone	C4000-1W	C5000-54B	CERT5000-92W	100
Convenience Kit, Certified 9mm Wide Opening High Recovery Screw Vial, 1.7mL	Clear	No	Black	Bonded Red PTFE/ White Silicone	C4000-9	C5000-64B	CERT5000-992	100
Convenience Kit, Certified 9mm Wide Opening Screw Vial, 2mL	Clear	Yes	Black	Bonded Red PTFE/ White Silicone	C4000-1W	C5000-64B	CERT5000-78W	100
	Amber	Yes	Black		C4000-2W	C5000-64B	CERT5000-75W	100
Convenience Kit, Certified 9mm Screw Vial, 350µL Fused Insert	Clear	Yes	Black	Bonded Red PTFE/ White Silicone	C4000-LV1W	C5000-64B	CERT5000-69LV	100
	Amber	Yes	Black		C4000-LV2W	C5000-64B	CERT5000-72LV	100
Convenience Kit, Certified 10-425 Screw Vial, 2mL	Clear	Yes	Black	Bonded Red PTFE/ White Silicone	C4015-11W	C4010-68A	CERT4010-91	100
Assembled Kit, Certified 9mm Wide Opening Screw Vial, 2mL	Clear	Yes	Gray	Bonded Red PTFE/ White Silicone, Pre-slit	C4000-1W	C5000-75C	CERT5000-193W	100

For more information, visit **thermofisher.com/national**

National 8mm crimp top vials

- Superior quality type 1 borosilicate clear and amber glass
- Low volume sample vials for 6mm, 7mm and 8mm autosampler trays
- 8mm crimp top seal minimizes exposure between sample solvent and septum
- A support sleeve may be required for some autosamplers



National 8mm crimp top vials

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume (µL)	Usable Volume (µL)	Residual (µL)	Cat. No.	Pack of
8mm Crimp Top Vial	Clear	No	6x32	Round Base	325	250	<6	C4008-632R	100
	Clear	No	6x32	Conical Base	250	200	<2	C4008-632C	100
	Amber	No	7x40	Conical Base	575	450	<2	C4008-740	100
	Clear	No	7x40	Flat Base	775	650	<70	C4008-741	100
	Clear	No	8x30	Flat Base	800	800	<80	C4008-1	200

For more information, visit **thermofisher.com/national**

National 8mm crimp top closures

- Aluminum crimp seals with prefitted septa
- Provide a secure leak-resistant seal
- Pre-assembled caps and septa are convenient and minimize contamination from handling



National 8mm crimp top closures

Description	Cap Color	Cap Material	Septum	Hardness shore	Thickness (mm)	Cat. No.	Pack of
8mm Crimp Cap, 4mm center hole	Silver	Aluminum	Clear PTFE/Red Rubber	45	1.0	C4008-1A	200
	Silver	Aluminum	Red PTFE/White Silicone/ Red PTFE	45	1.0	C4008-2A	200
	Silver	Aluminum	Red PTFE/White Silicone	45	1.3	C4008-4A	200

National 8mm crimping and decrimping tools

- Crimping tools provide a reproducible, secure vial closure
- Easy and convenient handling
- High quality construction for durability and long life
- Painted, plated and coated for maximum corrosion resistance
- Textured handle surface provides an assured grip



Items not shown to scale

National 8mm crimping and decrimping tools

Description	Use	Cat. No.	Pack of
Manual Crimper	Attaches 8mm aluminum crimp seals	C4008-100	1
Manual Decrimper	Removes 8mm aluminum crimp seals without vial damage	C4008-102	1

National standard opening screw thread vials

2mL, 12x32mm, 8mm standard opening screw thread vials and inserts

- 8-425 screw thread finish
- I.D. vials feature a write-on patch with graduation for convenient sample identification
- Superior quality 1st hydrolytic class glass (Type 1) in clear and amber
- Microsampling and High Recovery Vials allow maximum sample extraction without need for separate inserts
- Available silanized (deactivated) for optimal recovery of critical polar, labile or OH-interacting compounds
- Polyspring inserts are self-aligning and provide a cushion against needle contact
- Precision point insert minimizes residual sample loss
- Pulled point inserts are an economical choice for noncritical applications



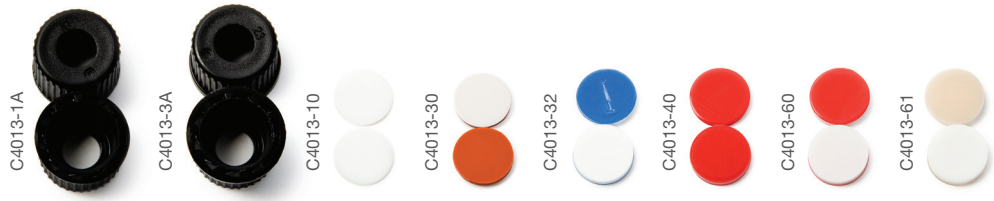
National standard opening screw thread vials and inserts

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume	Usable Volume	Residual (µL)	Cat. No.	Pack of
8-425 Screw Thread Vial	Clear	No	12x32	Flat Bottom	2.0mL	1.5mL	<170	C4013-1	100
	Clear	No	12x32	Flat Bottom	2.0mL	1.5mL	<170	C4013-1500	1000
	Clear	Yes	12x32	Flat Bottom	2.0mL	1.5mL	<170	C4013-1W	100
	Amber	No	12x32	Flat Bottom	2.0mL	1.5mL	<170	C4013-2	100
	Amber	Yes	12x32	Flat Bottom	2.0mL	1.5mL	<170	C4013-2W	100
8-425 Screw Thread Vial, silanized	Clear	No	12x32	Flat Bottom	2.0mL	1.5mL	<170	C4013-S1	100
8-425 Screw Thread 250µL Conical MicroVial	Polypropylene	No	12x32	Conical	475µL	250µL	<4	C4013-11	100
8-425 Screw Thread 600µL Tapered MicroVial	Polypropylene	No	12x32	High Recovery	850µL	675µL	<8	C4013-13	1000
200µL MicroSert Insert	Clear	–	5x31	Flat Bottom	250µL	200µL	<12	C4012-465	500
150µL Polyspring Insert	Clear	–	5x29	Pulled point	200µL	175µL	<1	C4012-530	100
150µL Insert	Clear	–	5x29	Pulled point	200µL	175µL	<1	C4012-529	100
125µL Polyspring Insert	Polypropylene	–	5x29	Precision point	175µL	125µL	<2	C4012-530P	100
150µL Polyspring Insert, silanized	Clear	–	5x29	Pulled point	200µL	175µL	<1	C4012-S530	100

For more information, visit **thermofisher.com/national**

National screw thread caps and septa

- Open top caps are designed to be used with any of our 8mm septa
- Phenolic caps are suitable for autoclaving and low temperature applications
- Polypropylene caps are chemically inert and suitable for most chromatography applications
- Flanged caps are preferred for Shimadzu, Hitachi and Tosoh autosamplers
- Pre-assembled caps and septa are convenient and minimize contamination from handling
- Closures are shipped in sealed polybags to prevent contamination during transport





National 8-425 screw thread caps and septa1

Description	Cap Color	Cap Material	Septum	Hardness shore	Thickness (mm)	Cat. No.	Pack of
8mm Open Top Cap 5mm hole	Black	Polypropylene	–	–	–	C4013-1A	100
8mm Open Top Cap with flange, 5.5mm hole	Black	Polypropylene	–	–	–	C4013-3A	100
	White	Polypropylene	–	–	–	C4013-98W*	100
Septum for 8-425 Screw Caps	–	–	White Virgin PTFE, 0.01" Septum	53	0.25	C4013-10	1000
	–	–	Ivory PTFE/Red Rubber Septum	45	1.00	C4013-30	100
	–	–	Blue PTFE/White Silicone, Pre-slit Septum	55	0.90	C4013-32	100
	–	–	Red PTFE/White Silicone/ Red PTFE Septum	45	1.00	C4013-40	100
	–	–	Red PTFE/White Silicone Septum	45	1.30	C4013-60	100
	–	–	Tan PTFE/White Silicone Septum	45	1.50	C4013-61	1000
8mm Open Top Cap, 5.5mm hole	Black	Polypropylene	Ivory PTFE/Red Rubber	45	1.00	C4013-30A	100
	Black	Polypropylene	Red PTFE/White Silicone/ Red PTFE	45	1.00	C4013-40A	100
	Black	Polypropylene	Red PTFE/White Silicone	45	1.30	C4013-60A	100
8mm Open Top Cap with flange, 5.5mm hole	Black	Polypropylene	Red PTFE/White Silicone	45	1.30	C4013-63A	100
	White	Polypropylene	Red PTFE/White Silicone	45	1.30	C4013-63W	100
	Yellow	Polypropylene	Red PTFE/White Silicone	50	1.30	C4013-63Y	100
	Black	Polypropylene	Blue PTFE/White Silicone, Pre-slit	55	0.90	C4013-64A	100
	White	Polypropylene	Blue PTFE/White Silicone, Pre-slit	55	0.90	C4013-64W	100
8mm Open Top Cap, 5.5mm hole	Black	Phenol	Red PTFE/White Silicone	45	1.30	C4013-74A	100
8mm Open Top Cap with flange, 5.5mm hole	Black	Polypropylene	Red PTFE/White Silicone, Pre-slit	55	1.00	C4013-77A	100
8mm Open Top Cap, 5.5mm hole	Black	Polypropylene	Bonded Red PTFE/White Silicone, Pre-slit	45	1.30	C4013-69A	100

National standard opening screw thread vial convenience kits

- Save time during sample preparation
- Reduce the risk of contamination

Unassembled kits

- Includes 100 vials and 100 caps with pre-assembled septa
- Reusable two compartment trays protect vials and closure while keeping matching supplies together
- Clear trays make it easy to keep track of available supplies without opening containers

Assembled kits

- Include 100 vials with pre-attached caps and septa
- Packaged in convenient vial trays with clear covers or in economical polybags



Convenience Kit



Assembled Kit



Assembled Kit, in Polybag

Items not shown to scale

National standard opening screw thread vial convenience kits

Kit Type	Glass	Patched	Cap Color	Septum	Vial Cat. No.	Cap/Septum Cat. No.	Cat. No.	Pack of
Convenience Kit	Clear	No	Black, flanged	Red PTFE/White Silicone	C4013-1	C4013-63A	C4013-14	100
	Clear	No	Black	Red PTFE/White Silicone	C4013-1	C4013-60A	C4013-15	100
	Amber	No	Black	Red PTFE/White Silicone	C4013-2	C4013-60A	C4013-17	100
	Clear	Yes	Black, flanged	Red PTFE/White Silicone, Pre-slit	C4013-1W	C4013-77A	C4013-95W	100
Assembled Kit	Clear	No	Black	White Virgin PTFE, 0.01"	C4013-1	C4013-1A/ C4013-10	C4013-10A	100
	Clear	No	Black	Red PTFE/White Silicone	C4013-1	C4013-60A	C4013-15A	100
	Amber	No	Black	Red PTFE/White Silicone	C4013-2	C4013-60A	C4013-17A	100
	Clear	No	Black, flanged	Blue PTFE/White Silicone, Pre-slit	C4013-1	C4013-3A/ C4013-32	C4013-32A	100
	Clear	No	Black, flanged	Red PTFE/White Silicone	C4013-1	C4013-63A	C4013-57	100
	Clear	No	White, flanged	Red PTFE/White Silicone	C4013-1	C4013-63W	C4013-58	100
	Clear	No	Black, phenolic	Red PTFE/White Silicone	C4013-1	C4013-74A	C4013-492A	100
	Amber	No	Black, phenolic	Red PTFE/White Silicone	C4013-2	C4013-74A	C4013-494A	100
Assembled Kit, in Polybag	Clear	No	Black	White Virgin PTFE, 0.01"	C4013-1	C4013-1A/ C4013-10	C4013-010A	100

For more information, visit **thermofisher.com/national**

National Target DP 9mm wide opening screw thread vials

2mL, 12x32mm, 9mm wide opening short screw thread vials and inserts

- C5000 SureStop 9mm vials as part of the Advanced Vial Closure System (AVCS) offer the sealing and performance characteristics of a crimp top vial and remove any subjectivity achieving optimal seal compression closing a vial by incorporating a definite stop point into the design of the vial finish. They should be used with AVCS C5000 closures in order to get the best possible performance.
- Some vials feature an I.D. write-on patch with graduation for convenient sample identification
- Wide neck opening design, allows easy filling, requires Micro-Inserts with a diameter of 6mm
- Superior quality 1st hydrolytic class glass (Type 1) in clear and amber
- Microsampling and High Recovery Vials allow maximum sample extraction without need for separate inserts
- Available silanized (deactivated) for optimal recovery of critical polar compounds
- Polyspring inserts are self-aligning and provide a cushion against needle contact
- Precision point insert minimizes residual sample loss



National 9mm wide opening screw thread vials and inserts

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume	Usable Volume	Residual (µL)	Cat. No.	Pack of
9mm SureStop Vial (AVCS)	Clear	No	12x32	Flat Bottom	2.0mL	1.5mL	<170	C5000-1	100
	Clear	Yes	12x32	Flat Bottom	2.0mL	1.5mL	<170	C5000-1W	100
	Amber	No	12x32	Flat Bottom	2.0mL	1.5mL	<170	C5000-2	100
	Amber	Yes	12x32	Flat Bottom	2.0mL	1.5mL	<170	C5000-2W	100
9mm Target DP Vial	Clear	No	12x32	Flat Bottom	2.0mL	1.5mL	<170	C4000-1	100
	Clear	Yes	12x32	Flat Bottom	2.0mL	1.5mL	<170	C4000-1W	100
	Amber	Yes	12x32	Flat Bottom	2.0mL	1.5mL	<170	C4000-2W	100
	Clear PP	Graduated	12x32	Flat Bottom	2.0mL	1.5mL	<170	C4000-14	100
9mm Target DP ColorBand Vial	Clear	Blue**	12x32	Flat Bottom	2.0mL	1.5mL	<170	C4000-1B	100
	Clear	Green**	12x32	Flat Bottom	2.0mL	1.5mL	<170	C4000-1G	100
	Clear	Red**	12x32	Flat Bottom	2.0mL	1.5mL	<170	C4000-1R	100
	Clear	Yellow**	12x32	Flat Bottom	2.0mL	1.5mL	<170	C4000-1Y	100



National Target DP 9mm wide opening screw thread vials and inserts (continued)

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume	Usable Volume	Residual (µL)	Cat. No.	Pack of
9mm Target DP Vial, High Recovery with 30µL Reservoir	Clear	No	12x32	Tapered Base	1.7mL	1.3mL	<4	C4000-9	100
	Amber	No	12x32	Tapered Base	1.7mL	1.3mL	<4	C4000-9A	100
9mm Target DP Vial, Total Recovery with 10µL Reservoir	Clear	No	12x32	Deep Well Base	1.5mL	1.2mL	<1	C4000-9TR	100
9mm Target DP MacroVial 350µL, Fused Insert	Clear	No	12x32	Insert Vial	475µL	350µL	<2	C4000-LV1	100
	Clear	Yes	12x32	Insert Vial	475µL	350µL	<2	C4000-LV1W	100
	Amber	No	12x32	Insert Vial	475µL	350µL	<2	C4000-LV2	100
	Amber	Yes	12x32	Insert Vial	475µL	350µL	<2	C4000-LV2W	100
9mm Target DP MacroVial 200µL, Fused Insert	Clear	Yes	12x32	Insert Vial	375µL	240µL	<1	C4000-LV3W	100
9mm Target DP Micro-V Tapered MicroVial with 150µL reservoir	Clear	No	12x32	Tapered Base	1.4mL	1.0mL	<4	C4000-V1	100
	Amber	No	12x32	Tapered Base	1.4mL	1.0mL	<4	C4000-V2	100
9mm Target DP Vial, silanized	Clear	No	12x32	Flat Bottom	2.0mL	1.5mL	<170	C4000-S1	100
	Clear	Yes	12x32	Flat Bottom	2.0mL	1.5mL	<170	C4000-S1W	100
	Amber	Yes	12x32	Flat Bottom	2.0mL	1.5mL	<170	C4000-S2W	100
9mm Target DP Vial, High Recovery, silanized*, with 30µL Reservoir	Clear	No	12x32	Tapered Base	1.7mL	1.3mL	<4	C4000-S9	100
9mm Target DP 300µL Vial	Polypropylene	No	12x32	Conical	400µL	300µL	<2	C4000-11	100
350µL Insert	Clear	–	6x31	Pulled Point	400µL	350µL	<4	C4010-627L	100
300µL Insert	Clear	–	6x29	Conical	375µL	300µL	<1	C4010-629	100
350µL Insert	Clear	–	6x31	Precision Point	400µL	350µL	<2	C4010-629L	100
300µL Insert, Graduation Marks	Polypropylene	–	6x30	Conical	325µL	250µL	<2	C4010-629P	100
300µL Polyspring Insert	Clear	–	6x29	Conical	375µL	300µL	<1	C4010-630	100
	Polypropylene	–	6x30	Conical	325µL	250µL	<2	C4010-630P	100
400µL MicroSert Insert	Clear	–	6x31	Flat Bottom	500µL	400µL	<25	C4011-631	100
300µL Insert, silanized*	Clear	–	6x29	Conical	375µL	300µL	<1	C4010-S629	100
300µL Polyspring Insert, silanized*	Clear	–	6x29	Conical	375µL	300µL	<1	C4010-S630	100
400µL MicroSert Insert, silanized	Clear	–	6x31	Flat Bottom	500µL	400µL	<25	C4011-S631	500
300µL Polyspring Insert, Kimshield	Clear	–	6x29	Conical	375µL	300µL	<1	C4010-K630	100

**Target DP ColorBand vials are designed to provide full sample color coding for autosamplers with optical vial detection. Use the optimum cap for your instrument without sacrificing your color coding scheme.

National 9mm screw caps and septa

C5000 closures featuring AVCS technology (Advanced Vial Closure System)

- Elimination of septum “push-through”
- Increased sealing capability
- Improved autosampler compatibility
- Flexibility to select the best septum for your instrument and applications
- Cost efficient alternative to caps with bonded septa
- Optimized ergonomics, fine texturing and evenly spaced ribbing for superior handling

Further features are:

- Fully compatible with all National Target DP vials
- Easy-on, easy-off convenience with just one turn
- Pre-assembled caps and septa are convenient and minimize contamination from handling
- Polypropylene caps are chemically inert and suitable for most chromatography applications
- Closures have the profile of a crimp or snap closure for compatibility with robotic autosamplers
- Closures are shipped in sealed polybags to prevent contamination during transport



National 9mm screw thread caps and septa

Description	Cap Color	Cap Material	Septum	Hardness shore	Thickness (mm)	Cat. No.	Pack of
9mm Open Top Screw Cap, 6mm hole	Blue	Polypropylene	–	N/A	N/A	C5000-98B	100
Septum for 9mm Screw Thread Cap	–	–	Ivory PTFE/Red Rubber	35	1.0	C4000-30	100
	–	–	Red PTFE/White Silicone/Red PTFE	45	1.0	C4000-40	100
	–	–	Blue PTFE/White Silicone, Pre-slit	55	1.0	C4000-55	100
	–	–	Red PTFE/White Silicone	50	1.0	C4000-60	100
9mm Open Top Cap, 6mm hole	Blue	Polypropylene	Soft septum, PTFE/Blue Silicone	30	1.0	C5000-44B	100
	Blue	Polypropylene	Soft septum, PTFE/Blue Silicone, Pre-slit	30	1.0	C5000-45B	100
	Black	Polypropylene	Ivory PTFE/Red Rubber	45	1.0	C5000-51A	100
	Blue	Polypropylene	Ivory PTFE/Red Rubber	45	1.0	C5000-51B	100
	Green	Polypropylene	Ivory PTFE/Red Rubber	45	1.0	C5000-51G	100
	Red	Polypropylene	Ivory PTFE/Red Rubber	45	1.0	C5000-51R	100
	Yellow	Polypropylene	Ivory PTFE/Red Rubber	45	1.0	C5000-51Y	100
	Pink	Polypropylene	Ivory PTFE/Red Rubber	45	1.0	C5000-51P	100



National 9mm screw thread caps and septa (continued)

Description	Cap Color	Cap Material	Septum	Hardness shore	Thickness (mm)	Cat. No.	Pack of
9mm Open Top Cap, 6mm hole	Black	Polypropylene	Red PTFE/White Silicone/Red PTFE	50	1.0	C5000-53A	100
	Blue	Polypropylene	Red PTFE/White Silicone/Red PTFE	50	1.0	C5000-53B	100
	Green	Polypropylene	Red PTFE/White Silicone/Red PTFE	50	1.0	C5000-53G	100
	Red	Polypropylene	Red PTFE/White Silicone/Red PTFE	50	1.0	C5000-53R	100
	Yellow	Polypropylene	Red PTFE/White Silicone/Red PTFE	50	1.0	C5000-53Y	100
	Black	Polypropylene	Red PTFE/White Silicone	55	1.0	C5000-54A	100
	Blue	Polypropylene	Red PTFE/White Silicone	55	1.0	C5000-54B	100
	Green	Polypropylene	Red PTFE/White Silicone	55	1.0	C5000-54G	100
	Red	Polypropylene	Red PTFE/White Silicone	55	1.0	C5000-54R	100
	Yellow	Polypropylene	Red PTFE/White Silicone	55	1.0	C5000-54Y	100
	Pink	Polypropylene	Red PTFE/White Silicone	55	1.0	C5000-54P	100
	Black	Polypropylene	Blue PTFE/White Silicone, Pre-slit	55	1.0	C5000-55A	100
	Blue	Polypropylene	Blue PTFE/White Silicone, Pre-slit	55	1.0	C5000-55B	100
	Green	Polypropylene	Blue PTFE/White Silicone, Pre-slit	55	1.0	C5000-55G	100
	Red	Polypropylene	Blue PTFE/White Silicone, Pre-slit	55	1.0	C5000-55R	100
	Yellow	Polypropylene	Blue PTFE/White Silicone, Pre-slit	55	1.0	C5000-55Y	100
	Pink	Polypropylene	Blue PTFE/White Silicone, Pre-slit	55	1.0	C5000-55P	100
	Blue	Polypropylene	Ivory PTFE/Red Rubber, Pre-slit	45	1.0	C5000-57B	100
	Green	Polypropylene	Ivory PTFE/Red Rubber, Pre-slit	45	1.0	C5000-57G	100
9mm Cap with Integral PP Membrane	Clear	Polypropylene	Polypropylene	N/A	N/A	C5000-50	100
	Blue	Polypropylene	Polypropylene	N/A	N/A	C5000-50B	100
9mm Solid Top Cap	Blue	Polypropylene	Ivory PTFE/Red Rubber	45	1.0	C5000-99B	100
9mm Open Top Cap, 6mm hole	Black	Polypropylene	Bonded Red PTFE/White Silicone	45	1.0	C5000-64B	100
	Gray	Polypropylene	Bonded Red PTFE/White Silicone, Pre-slit	45	1.0	C5000-75C	100
	Blue	Polypropylene	Bonded Natural PTFE/Clear Silicone	45	1.3	C5000-62B	100
Magnetic 9mm Open Top Cap, 6mm hole	Blue	Polypropylene	Soft septum, PTFE/Blue Silicone	30	1.0	C5000-46M	100
9mm Open Top Cap, 6mm hole	Blue	Polypropylene	Solid Aluminum Disk with Silicone sealing ring		0.06	C5000-56AL	100

For more information, visit **thermofisher.com/national**

National 9mm screw thread vials convenience kits

- Save time during sample preparation
- Reduce the risk of contamination

Unassembled kits

- Includes 100 vials and 100 caps with pre-assembled septa
- Reusable two compartment trays protect vials and closure while keeping matching supplies together
- Clear trays make it easy to keep track of available supplies without opening containers

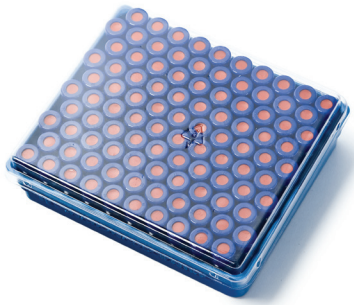
Assembled kits

- Include 100 vials with pre-attached caps and septa
- Packaged in convenient vial trays with clear covers

Convenience Kit



Assembled Kit



Items not shown to scale

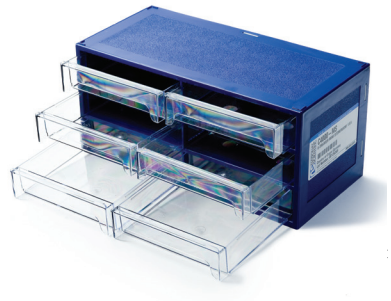
National 9mm wide opening screw thread vials convenience kits

Kit Type	Glass	Patched	Cap Color	Septum	Vial Cat. No.	Cap Cat. No.	Cat . No.	Pack of
SureStop Convenience Kit	Clear	No	Blue	Ivory PTFE/Red Rubber	C5000-1	C5000-51B	C5000-580	100
	Clear	Yes	Blue	Ivory PTFE/Red Rubber	C5000-1W	C5000-51B	C5000-580W	100
	Clear	No	Blue	Red PTFE/White Silicone	C5000-1	C5000-54B	C5000-592	100
	Clear	Yes	Blue	Red PTFE/White Silicone	C5000-1W	C5000-54B	C5000-592W	100
	Clear	Yes	Blue	Red PTFE/White Silicone/Red PTFE	C5000-1W	C5000-53B	C5000-586W	100
	Clear	Yes	Blue	Blue PTFE/White Silicone, Pre-slit	C5000-1W	C5000-55B	C5000-595W	100
AVCS Convenience Kit	Clear	No	Blue	Ivory PTFE/Red Rubber	C4000-1	C5000-51B	C5000-80	100
	Clear	Yes	Blue	Ivory PTFE/Red Rubber	C4000-1W	C5000-51B	C5000-80W	100
	Amber	Yes	Pink	Ivory PTFE/Red Rubber	C4000-2W	C5000-51P	C5000-82P	100
	Amber	Yes	Blue	Ivory PTFE/Red Rubber	C4000-2W	C5000-51B	C5000-82W	100
	Clear	Yes	Blue	Ivory PTFE/Red Rubber, Pre-slit	C4000-1W	C5000-57B	C5000-83W	100
	Clear	No	Blue	Red PTFE/White Silicone/Red PTFE	C4000-1	C5000-53B	C5000-86	100
	Clear	Yes	Blue	Red PTFE/White Silicone/Red PTFE	C4000-1W	C5000-53B	C5000-86W	100
	Amber	Yes	Blue	Red PTFE/White Silicone/Red PTFE	C4000-2W	C5000-53B	C5000-88W	100
	Polypropylene	No	Blue	Red PTFE/White Silicone	C4000-11	C5000-54B	C5000-87	100
	Clear	Yes	Black	Red PTFE/White Silicone	C4000-1W	C5000-54A	C5000-91W	100
	Clear	No	Blue	Red PTFE/White Silicone	C4000-1	C5000-54B	C5000-92	100
	Clear	No	Pink	Red PTFE/White Silicone	C4000-1	C5000-54P	C5000-92P	100
	Clear	Yes	Blue	Red PTFE/White Silicone	C4000-1W	C5000-54B	C5000-92W	100
	Amber	Yes	Blue	Red PTFE/White Silicone	C4000-2W	C5000-54B	C5000-94W	100
	Clear	No	Blue	Blue PTFE/White Silicone, Pre-slit	C4000-1	C5000-55B	C5000-95	100
	Clear	Yes	Blue	Blue PTFE/White Silicone, Pre-slit	C4000-1W	C5000-55B	C5000-95W	100
	Clear	No	Blue	Blue PTFE/White Silicone, Pre-slit	C4000-LV1	C5000-55B	C5000-LV95	100
	Polypropylene	No	Blue	Blue PTFE/White Silicone, Pre-slit	C4000-11	C5000-55B	C5000-97	100
Convenience Kit	Clear	Yes	Black	Bonded Red PTFE/White Silicone	C4000-1W	C5000-64B	C5000-78W	100
	Clear	Yes	Gray	Bonded Red PTFE/White Silicone, Pre-slit	C4000-1W	C5000-75C	C5000-93W	100

National 9mm wide opening screw thread vials convenience kits (continued)

Kit Type	Glass	Patched	Cap Color	Septum	Vial Cat. No.	Cap Cat. No.	Cat. No.	Pack of
Assembled AVCS Kit	Clear	No	Blue	Ivory PTFE/Red Rubber	C4000-1	C5000-51B	C5000-180	100
	Clear	Yes	Blue	Ivory PTFE/Red Rubber	C4000-1W	C5000-51B	C5000-180W	100
	Amber	Yes	Blue	Ivory PTFE/Red Rubber	C4000-2W	C5000-51B	C5000-182W	100
	Clear	Yes	Blue	Ivory PTFE/Red Rubber, Pre-slit	C4000-1W	C5000-57B	C5000-183W	100
	Amber	Yes	Blue	Ivory PTFE/Red Rubber, Pre-slit	C4000-2W	C5000-57B	C5000-184W	100
	Clear	No	Blue	Red PTFE/White Silicone/ Red PTFE	C4000-1	C5000-53B	C5000-186	100
	Clear	Yes	Blue	Red PTFE/White Silicone/ Red PTFE	C4000-1W	C5000-53B	C5000-186W	100
	Clear	Yes	Red	Red PTFE/White Silicone/ Red PTFE	C4000-1W	C5000-53R	C5000-186WR	100
	Amber	Yes	Blue	Red PTFE/White Silicone/ Red PTFE	C4000-2W	C5000-53B	C5000-188W	100
	Clear	No	Blue	Red PTFE/White Silicone	C4000-1	C5000-54B	C5000-192	100
	Clear	Yes	Blue	Red PTFE/White Silicone	C4000-1W	C5000-54B	C5000-192W	100
	Amber	Yes	Blue	Red PTFE/White Silicone	C4000-2W	C5000-54B	C5000-194W	100
	Clear	Yes	Blue	Blue PTFE/White Silicone, Pre-slit	C4000-1W	C5000-55B	C5000-195W	100
	Amber	Yes	Blue	Blue PTFE/White Silicone, Pre-slit	C4000-2W	C5000-55B	C5000-196W	100

C4000-MS



shown to scale

National 9mm wide opening screw thread vial storerooms

- Storerooms organize supplies and save valuable bench space

National 9mm wide opening screw thread vial storerooms

Description	Glass	Patched	Cap Color	Septum	Vial Cat. No.	Cap/ Septum Cat. No.	Cat. No.	Pack of
6 Drawer Mini-Storeroom – Cabinet Only	–	–	–	–	–	–	C4000-MS	1

For more information, visit **thermofisher.com/national**

National 10mm wide opening screw thread vials

2mL, 12x32mm 10mm wide opening screw thread vials and inserts

- 10-425 thread finish
- I.D. vials feature a write-on patch with graduation for convenient sample identification
- Wide neck opening design, allows easy filling, requires Micro-Inserts with a diameter of 6mm
- Superior quality 1st hydrolytic class glass (Type 1) in clear and amber
- Microsampling and High Recovery Vials allow maximum sample extraction without need for separate inserts
- Optional silanized (deactivated) glass provides optimal recovery of critical polar, labile or OH-interacting compounds
- Polyspring inserts are self-aligning and provide a cushion against needle contact
- Precision point insert minimizes residual sample loss



National 10mm wide opening screw thread vials and inserts

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume	Usable Volume	Residual (µL)	Cat. No.	Pack of
10-425 Screw Thread Vial	Clear	No	12x32	Flat Bottom	2.0mL	1.5mL	<170	C4010-1	100
	Clear	Yes	12x32	Flat Bottom	2.0mL	1.5mL	<170	C4010-1W	100
	Amber	No	12x32	Flat Bottom	2.0mL	1.5mL	<170	C4010-2	100
	Amber	Yes	12x32	Flat Bottom	2.0mL	1.5mL	<170	C4010-2W	100
10-425 Screw Thread MacroVial 350µL, Fused Insert	Clear	No	12x32	Insert Vial	450µL	350µL	<2	C4010-LV1	100
	Amber	No	12x32	Insert Vial	450µL	350µL	<2	C4010-LV2	100
10-425 Screw Thread Vial, Silanized	Clear	Yes	12x32	Flat Bottom	2.0mL	1.5mL	<170	C4010-S1W	100
	Amber	Yes	12x32	Flat Bottom	2.0mL	1.5mL	<170	C4010-S2W	100
10-425 Screw Thread Vial	Polypropylene	No	12x32	Conical	600µL	400µL	<6	C4010-11	100
	Polypropylene	No	12x32	Reservoir Base	750µL	550µL	<70	C4010-14	100



National 10mm wide opening screw thread vials and inserts (continued)

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume	Usable Volume	Residual (µL)	Cat. No.	Pack of
350µL Insert	Clear	–	6x31	Pulled Point	400µL	350µL	<4	C4010-627L	100
300µL Insert	Clear	–	6x29	Conical	375µL	300µL	<1	C4010-629	100
350µL Insert	Clear	–	6x31	Precision Point	400µL	350µL	<2	C4010-629L	100
300µL Insert, Graduation Marks	Polypropylene	–	6x30	Conical	325µL	250µL	<2	C4010-629P	100
300µL Polyspring Insert	Clear	–	6x29	Conical	375µL	300µL	<1	C4010-630	100
	Polypropylene	–	6x30	Conical	325µL	250µL	<2	C4010-630P	100
400µL MicroSert Insert	Clear	–	6x31	Flat Bottom	500µL	450µL	<25	C4011-631	500
300µL Insert, silanized	Clear	–	6x29	Conical	375µL	300µL	<1	C4010-S629	100
300µL Polyspring Insert, silanized	Clear	–	6x29	Conical	375µL	300µL	<1	C4010-S630	100

For more information, visit **thermofisher.com/national**

National 10-425 wide opening screw caps and septa

- Open top caps are designed to be used with any of our 10mm septa
- Polypropylene caps are chemically inert and suitable for most chromatography applications
- Pre-assembled caps and septa are convenient and minimize contamination from handling
- Closures are shipped in sealed polybags to prevent contamination during transport



National 10-425 wide opening screw caps and septa

Description	Cap Color	Cap Material	Septum	Hardness shore	Thickness (mm)	Cat. No.	Pack of
10mm Open Top Cap, 8.5mm hole	Light Blue	Polypropylene	–	–	–	C4010-1A	100
10mm Open Top Cap, 8.5mm hole	–	–	Red PTFE/White Silicone, Soft Septum	50	1.3	C4010-35	100
	–	–	Red PTFE/White Silicone/Red PTFE Septum	45	1.3	C4010-40	100
	–	–	Blue PTFE/White Silicone, Pre-slit Septum	55	1.5	C4010-55	100
	–	–	Red PTFE/White Silicone Septum	45	1.3	C4010-60	100
10mm Open Top Cap, 8.5mm hole	Light Blue	Polypropylene	Ivory PTFE/Red Rubber	45	1.0	C4010-30A	100
	Black	Polypropylene	Red PTFE/White Silicone, Soft	45	1.3	C4010-35BLK	100
	White	Polypropylene	Red PTFE/White Silicone, Soft	45	1.3	C4010-35W	100
	Light Blue	Polypropylene	Red PTFE/White Silicone/Red PTFE	45	1.0	C4010-40A	100
	Light Blue	Polypropylene	Blue PTFE/White Silicone, Pre-slit	55	1.5	C4010-55A	100
	Black	Polypropylene	Blue PTFE/White Silicone, Pre-slit	55	1.5	C4010-55BLK	100
	Light Blue	Polypropylene	Red PTFE/White Silicone	50	1.3	C4010-60A	100
	Red	Polypropylene	Red PTFE/White Silicone	50	1.3	C4010-60AR	1000
	White	Polypropylene	Red PTFE/White Silicone	50	1.3	C4010-60AW	1000
	Black	Polypropylene	Red PTFE/White SiliconeS	50	1.5	C4010-60BLK	100
	Light Blue	Polypropylene	Red PTFE/White Silicone, Star-slit	50	1.5	C4010-65A	100
10mm Solid Top Cap	White	Polyurethane	PTFE/PE Foam Liner	–	1.3	C4010-99	100

National 10mm wide opening screw thread vials convenience kits

- Save time during sample preparation
- Reduce the risk of contamination

Unassembled kits

- Includes 100 vials and 100 caps with pre-assembled septa
- Reusable two compartment trays protect vials and closure while keeping matching supplies together
- Clear trays make it easy to keep track of available supplies without opening containers

Assembled kits

- Include 100 vials with pre-attached caps and septa
- Packaged in convenient vial trays with clear covers or in economical polybags


Convenience Kit


Assembled Kit


Assembled Kit, in Polybag

National 10mm wide opening screw thread vials convenience kits

Items not shown to scale

Description	Glass	Patched	Cap Color	Septum	Vial Cat. No.	Cap Cat. No.	Cat. No.	Pack of
Convenience Kit	Clear	No	Light Blue	Red PTFE/White Silicone	C4010-1	C4010-60A	C4010-88	100
	Amber	Yes	Light Blue	Red PTFE/White Silicone	C4010-2W	C4010-60A	C4010-88AW	100
	Clear	Yes	Light Blue	Red PTFE/White Silicone	C4010-1W	C4010-60A	C4010-88W	100
	Clear	No	White	Red PTFE/White Silicone, Soft	C4010-1	C4010-35W	C4010-95	100
	Clear	Yes	White	Red PTFE/White Silicone, Soft	C4010-1W	C4010-35W	C4010-95W	100
	Clear	Yes	Black	Blue PTFE/White Silicone, Pre-slit	C4010-1W	C4010-55BLK	C4010-97W	100
Assembled Kit	Clear	No	Light Blue	Red PTFE/White Silicone	C4010-1	C4010-60A	C4010-17	100
	Clear	Yes	Light Blue	Red PTFE/White Silicone	C4010-1W	C4010-60A	C4010-17W	100
	Clear	No	White	Red PTFE/White Silicone, Soft	C4010-1	C4010-35W	C4010-57	100
	Amber	Yes	White	Red PTFE/White Silicone, Soft	C4010-2W	C4010-35W	C4010-57AW	100
	Clear	Yes	White	Red PTFE/White Silicone, Soft	C4010-1W	C4010-35W	C4010-57W	100
	Amber	No	Black	Red PTFE/White Silicone, Soft	C4010-2	C4010-35BLK	C4010-67A	100
Assembled Kit, in Polybag	Amber	Yes	Light Blue	Red PTFE/White Silicone	C4010-2W	C4010-60A	C4010-017AW	100

National 11mm crimp top vials

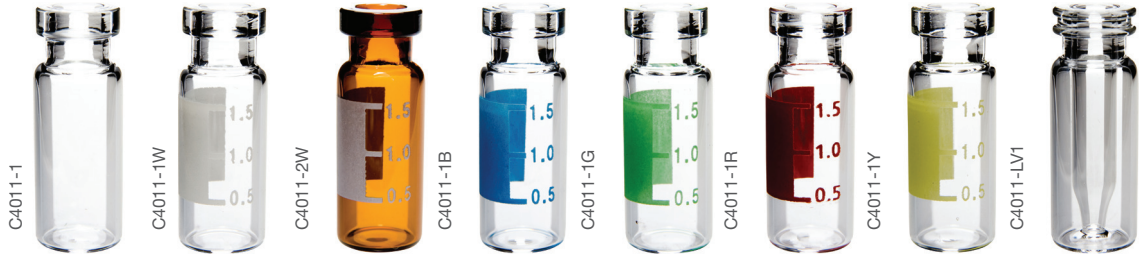
2mL, 12x32, crimp top vials and inserts

- Superior quality 1st hydrolytic class glass (Type 1) in clear and amber
- I.D. vials feature a write-on patch with graduation for convenient sample identification
- Standard opening vials require Micro-Inserts with a diameter of 5mm
- Wide opening vials, allow easy filling, require Micro-Inserts with a diameter of 6mm
- Microsampling and High Recovery Vials allow maximum sample extraction without need for separate inserts
- Optional silanized (deactivated) glass provides optimal recovery of critical polar, labile or OH-interacting compounds*
- Polyspring inserts are self-aligning and provide a cushion against needle contact
- Precision point insert minimizes residual sample loss
- Pulled point inserts are an economical choice for noncritical applications
- Glastic vial features a glass insert pre-inserted inside of a clear TPX vial



National 11mm standard opening crimp top vials and inserts

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume	Usable Volume	Residual (µL)	Cat. No.	Pack of
11mm Standard Opening Crimp Top Vial	Clear	No	12x32	Flat Bottom	2mL	1.5mL	<170	C4012-1	100
	Clear	Yes	12x32	Flat Bottom	2mL	1.5mL	<170	C4012-1W	100
	Amber	No	12x32	Flat Bottom	2mL	1.5mL	<170	C4012-2	100
	Amber	Yes	12x32	Flat Bottom	2mL	1.5mL	<170	C4012-2W	100
200µL MicroSert Insert	Clear	–	5x31	Flat Bottom	250µL	200µL	<12	C4012-465	500
150µL Polyspring Insert	Clear	–	5x29	Pulled point	200µL	175µL	<1	C4012-530	100
150µL Insert	Clear	–	5x29	Pulled point	200µL	175µL	<3	C4012-529	100
200µL Insert	Clear	–	5x31	Pulled point	200µL	170µL	<2	C4012-529L	100
125µL Polyspring Insert	Polypropylene	–	5x29	Precision point	175µL	125µL	<2	C4012-530P	100
150µL Polyspring Insert, silanized	Clear	–	5x29	Pulled point	200µL	175µL	<1	C4012-S530	100



National 11mm wide opening crimp top vials and inserts

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume	Usable Volume	Residual (µL)	Cat. No.	Pack of
11mm Crimp Top Vial, Wide Opening	Clear	No	12x32	Flat Bottom	2mL	1.5mL	<170	C4011-1	100
	Clear	Yes	12x32	Flat Bottom	2mL	1.5mL	<170	C4011-1W	100
	Amber	Yes	12x32	Flat Bottom	2mL	1.5mL	<170	C4011-2W	100
11mm Crimp Top ColorBand Vial, Wide Opening	Clear	Blue*	12x32	Flat Bottom	2mL	1.5mL	<170	C4011-1B	100
	Clear	Green*	12x32	Flat Bottom	2mL	1.5mL	<170	C4011-1G	100
	Clear	Red*	12x32	Flat Bottom	2mL	1.5mL	<170	C4011-1R	100
	Clear	Yellow*	12x32	Flat Bottom	2mL	1.5mL	<170	C4011-1Y	100
11mm Crimp/Snap MacroVial 250µL, Fused Insert	Clear	No	12x32	Fused Conical	500µL	350µL	<2	C4011-LV1	100

* ColorBand vials are designed to provide full sample color coding for autosamplers with optical vial detection. Use the optimum cap for your instrument without sacrificing your color coding scheme.



National 11mm crimp top vials and inserts (continued)

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume	Usable Volume	Residual (µL)	Cat. No.	Pack of
11mm Crimp Top MacroVial 250µL, Fused Insert	Clear	Yes	12x32	Fused Conical	500µL	350µL	<2	C4011-LV1W	100
11mm Crimp/Snap MacroVial 250µL, Fused Insert	Amber	No	12x32	Fused Conical	500µL	350µL	<2	C4011-LV2	100
11mm Crimp Top MacroVial 250µL, Fused Insert	Amber	Yes	12x32	Fused Conical	500µL	350µL	<2	C4011-LV2W	100
11mm Crimp Top Micro-V Microsampling Vial, 15µL Reservoir	Clear	No	12x32	High Recovery	1.5mL	1.1mL	<4	C4011-V1	100
11mm Crimp Top 1.5mL High Recovery MicroVial	Clear	No	12x32	High Recovery	1.7mL	1.3mL	<4	C4011-9	100
11mm Crimp Top, Wide Opening, silanized*	Clear	No	12x32	Flat Bottom	2mL	1.5mL	<170	C4011-S1	100
	Clear	Yes	12x32	Flat Bottom	2mL	1.5mL	<170	C4011-S1W	100
	Amber	Yes	12x32	Flat Bottom	2mL	1.5mL	<170	C4011-S2W	100
11mm Crimp/Snap 250µL MicroVial	Polypropylene	No	12x32	Conical Base	475µL	300µL	<2	C4011-13	100
11mm Crimp/Snap 600µL MicroVial	Polypropylene	No	12x32	Conical Base	600µL	400µL	<4	C4011-16	100
11mm Crimp/Snap 800µL MicroVial	Polypropylene	No	12x32	Conical Base	800µL	600µL	<6	C4011-11	100



National 11mm crimp top vials and inserts (continued)

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume	Usable Volume	Residual (µL)	Cat. No.	Pack of
11mm Crimp/Snap 850µL AP-2000 MaxVial	Polypropylene	No	12x32	High Recovery	825µL	650µL	<8	C4011-15	1000
11mm Crimp/Snap 1mL Vial	Polypropylene	No	12x32	Flat Bottom	1000µL	800µL	<80	C4011-14	100
11mm Crimp/Snap 1mL TPX High Recovery Vial	TPX	No	12x32	High Recovery	1000µL	750µL	<8	C4011-24	100
350µL Insert	Clear	–	6x31	Pulled Point	400µL	350µL	<4	C4010-627L	100
300µL Insert	Clear	–	6x29	Conical	375µL	300µL	<1	C4010-629	100
350µL Insert	Clear	–	6x31	Precision Point	400µL	350µL	<2	C4010-629L	100
300µL Insert, Graduation Marks	Polypropylene	–	6x30	Conical	325µL	250µL	<2	C4010-629P	100
300µL Polyspring Insert	Clear	–	6x29	Conical	375µL	300µL	<1	C4010-630	100
	Polypropylene	–	6x30	Conical	325µL	250µL	<2	C4010-630P	100
400µL MicroSert Insert	Clear	–	6x31	Flat Bottom	500µL	400µL	<25	C4011-631	500
300µL Insert, silanized	Clear	–	6x29	Conical	375µL	300µL	<1	C4010-S629	100
300µL Polyspring Insert, silanized	Clear	–	6x29	Conical	375µL	300µL	<1	C4010-S630	100
400µL MicroSert Insert, silanized	Clear	–	6x31	Flat Bottom	500µL	400µL	<25	C4011-S631	500

National 11mm crimp top closures

- Pre-assembled caps and septa are convenient and minimize contamination from handling
- Aluminum crimp closures provide a secure leak-resistant seal
- Aluminum seals must be applied with a crimping tool
- Closures are shipped in sealed polybags to prevent contamination during transport
- Synthetic PTFE/Red Rubber seal is specially formulated for improved background performance
- First crimp cap with assembled aluminum liner for analysis of elastomers, polymers, phthalates, halogenated compounds and silicones
- First crimp cap with tight PTFE sealing disk due to additional silicone ring



National 11mm crimp top closures

Description	Cap Color	Cap Material	Septum	Hardness °shore	Thickness (mm)	Cat. No.	Pack of
11mm Crimp Cap, 5.5mm hole	Silver	Aluminum	Clear PTFE/Natural Red Rubber	60	1.0	C4011-1AP	100
	Silver	Aluminum	Clear PTFE/Natural Red Rubber	60	1.0	C4011-1A	1000
	Blue	Aluminum	Clear PTFE/Natural Red Rubber	60	1.0	C4011-98B	100
	Green	Aluminum	Clear PTFE/Natural Red Rubber	60	1.0	C4011-98G	100
	Red	Aluminum	Clear PTFE/Natural Red Rubber	60	1.0	C4011-98R	100
	Yellow	Aluminum	Clear PTFE/Natural Red Rubber	60	1.0	C4011-98Y	100
	Silver	Aluminum	Red PTFE/White Silicone/Red PTFE	45	1.0	C4011-2A	100
	Silver	Aluminum	Red PTFE/White Silicone	45	1.3	C4011-4A	100
	Blue	Aluminum	Red PTFE/White Silicone	45	1.3	C4011-4B	100
	Red	Aluminum	Red PTFE/White Silicone	45	1.3	C4011-4R	100
	Silver	Aluminum	Solid PTFE Disk	53	0.25	C4011-6A	1000
	Silver	Aluminum	PTFE/Synthetic Red Rubber	35	1.0	C4011-7A	100
	Blue	Aluminum	PTFE/Synthetic Red Rubber	35	1.0	C4011-7B	1000
	Green	Aluminum	PTFE/Synthetic Red Rubber	35	1.0	C4011-7G	1000
	Red	Aluminum	PTFE/Synthetic Red Rubber	35	1.0	C4011-7R	1000
11mm Crimp Cap, 5.5mm hole, Mixed Color, 200 each	Silver, Blue, Green, Red, Yellow	Aluminum	PTFE/Synthetic Red Rubber	35	1.0	C4011-7K	1000

For more information, visit **thermofisher.com/national**

National 11mm crimping and decrimping tools

- Crimping tools provide a reproducible, secure vial closure
- Manual decrimping tools allow easy removal of aluminum seals without breakage
- Clean room crimpers and decrimpers can be autoclaved

C4012-100



C4012-102



C4012-100SS



Items not shown to scale

National 11mm crimping and decrimping tools

Description	Use	Cat. No.	Pack of
Manual Crimper	Attaches 11mm aluminum crimp seals	C4012-100	1
Manual Decrimper	Removes 11mm aluminum crimp seals	C4012-102	1
Manual stainless steel Cleanroom Crimper	Attaches 11mm crimp seals	C4012-100SS	1
Manual stainless steel Cleanroom Decrimper	Removes 11mm crimp seals without vial damage	C4012-102SS	1

For electronic crimpers and decrimpers look on page 2-091

National 11mm crimp top convenience kits

- Save time during sample preparation
- Reduce the risk of contamination

Unassembled kits

- Includes 100 vials and 100 caps with pre-assembled septa
- Reusable two compartment trays protect vials and closure while keeping matching supplies together
- Clear trays make it easy to keep track of available supplies without opening containers

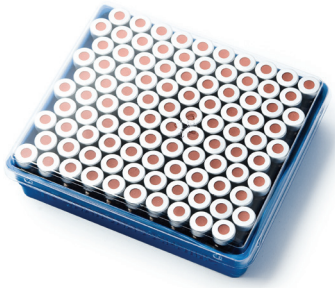
Assembled kits

- Include 100 vials with pre-attached caps and septa
- Packaged in convenient vial trays with clear covers or in economical polybags

Convenience Kit



Assembled Kit



Convenience Kit



Items not shown to scale

National 11mm crimp top convenience kits

Kit Type	Glass	Patched	Cap Color	Septum	Vial Cat. No.	Cap Cat. No.	Cat. No.	Pack of
Convenience Kit, Standard Opening Crimp Top Vial	Clear	No	Silver	Clear PTFE/Red Rubber	C4012-1	C4011-1AHP	C4012-88	500
Convenience Kit, Wide Opening Crimp Top Vial	Clear	No	Silver	Clear PTFE/Red Rubber	C4011-1	C4011-1AP	C4011-87	100
	Clear	Yes	Silver	Clear PTFE/Red Rubber	C4011-1W	C4011-1AP	C4011-87W	100
	Clear	No	Silver	Clear PTFE/Red Rubber	C4011-1	C4011-1AP	C4011-88	500
Kit includes Polyspring Tapered Insert for small sample volumes	Clear	No	Silver	Clear PTFE/Red Rubber	C4011-1/ C4010-630	C4011-1AP	C4011-95	100
Assembled Kit, Wide Opening Crimp Top Vial, Nitrogen purged	Clear	No	Silver	Clear PTFE/Red Rubber	C4011-1	C4011-1AP	C4011-1CV	100
	Amber	Yes	Silver	Clear PTFE/Red Rubber	C4011-2W	C4011-1AP	C4011-2WCV	100

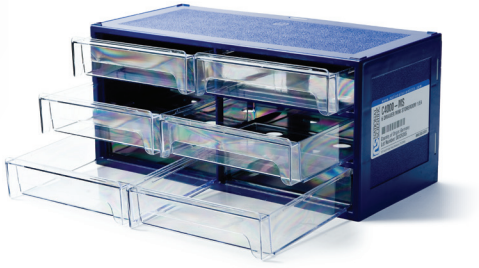
National 11mm crimp top vial storerooms

- Storerooms organize supplies and save valuable bench space
- 6 Drawer Mini-Storeroom holds 500 vials and closures
- 9 Drawer Storeroom holds 2000 vials and closures

C4011-688W



C4000-MS



Items not shown to scale

National 11mm crimp top vial storerooms

Description	Glass	Patched	Cap Color	Septum	Vial Cat. No.	Cap Cat. No.	Cat. No.	Pack of
6 Drawer Mini-Storeroom, 500 pieces Caps and Vials	Clear	Yes	Silver	Clear PTFE/Red Rubber	C4011-1W	C4011-1AP	C4011-688W	1
6 Drawer Mini-Storeroom – Cabinet Only	–	–	–	–	–	–	C4000-MS	1
9 Drawer Storeroom – Cabinet Only	–	–	–	–	–	–	C4075-500	1

National 11mm crimp top vial racks

- Polypropylene vial racks are resistant to most solvents
- Racks feature alphanumeric indexing for easier vial identification
- Racks can be stacked for efficient storage

C4011-25



C4012-25



Items not shown to scale

National 11mm crimp top vial racks

Description	Capacity	Cat. No.	Pack of
PVC storage rack for 12x32mm vials with clear lid	100vials, 10x10	C4011-25A	1
Polypropylene storage rack for 12x32mm vials, no lid, reusable	50 vials, 5x10	C4012-25	1

For more information, visit **thermofisher.com/national**

National 11mm wide opening Snap-It vials

2mL,12x32mm wide opening Thermo Scientific™ Snap-It vials and inserts

- Superior quality 1st hydrolytic class glass (Type 1) in clear and amber
- I.D. vials feature a write-on patch with graduation for convenient sample identification
- Wide neck opening design, allows easy filling, requires Micro-Inserts with a diameter of 6mm
- Microsampling and High Recovery Vials allow maximum sample extraction without need for separate inserts
- Optional silanized (deactivated) glass provides optimal recovery of critical polar, labile or OH-interacting compounds
- Polyspring inserts are self-aligning and provide a cushion against needle contact
- Precision point insert minimizes residual sample loss
- Pulled point inserts are an economical choice for noncritical applications
- Glastic vial features a glass insert pre-inserted inside of a clear TPX vial
- Snap-It vials can be used with snap caps or aluminum crimp seal closures



National 11mm wide opening snap-it vials and inserts

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume	Usable Volume	Residual (µL)	Cat. No.	Pack of
11mm Snap-It Vial	Clear	No	12x32	Flat Bottom	2mL	1.5mL	<170	C4011-5	100
	Clear	Yes	12x32	Flat Bottom	2mL	1.5mL	<170	C4011-5W	100
	Amber	No	12x32	Flat Bottom	2mL	1.5mL	<170	C4011-6	100
	Amber	Yes	12x32	Flat Bottom	2mL	1.5mL	<170	C4011-6W	100
11mm Snap-It MacroVial 250µL, Fused Insert	Clear	No	12x32	Fused Conical	500µL	350µL	<2	C4011-LV1	100
	Amber	No	12x32	Fused Conical	500µL	350µL	<2	C4011-LV2	100
11mm Snap-It High Recovery MicroVial, 1.5mL	Clear	No	12x32	High Recovery	1.7mL	1.3mL	<4	C4011-4	100
11mm Snap-It Vial, silanized	Clear	No	12x32	Flat Bottom	2mL	1.5mL	<170	C4011-S5	100
	Clear	Yes	12x32	Flat Bottom	2mL	1.5mL	<170	C4011-S5W	100
	Amber	Yes	12x32	Flat Bottom	2mL	1.5mL	<170	C4011-S6W	100
	Clear	No	12x32	High Recovery	1.5mL	1.1mL	<4	C4011-S4	100
11mm Snap-It Vial, Total Recovery with 10µL Reservoir	Clear	No	12x32	Deep Well Base	1.5mL	1.2mL	<1	C4011-9TR	100
11mm Snap-It 250µL MicroVial	Polypropylene	No	12x32	Conical Base	475µL	300µL	<2	C4011-13	100



National 11mm wide opening snap-it vials and inserts (continued)

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume	Usable Volume	Residual (µL)	Cat. No.	Pack of
11mm Snap-It 600µL MicroVial	Polypropylene	No	12x32	Conical Base	600µL	400µL	<4	C4011-16	100
11mm Snap-It 800µL MicroVial	Polypropylene	No	12x32	Conical Base	800µL	600µL	<6	C4011-11	100
11mm Snap-It 850µL AP-2000 MaxVial	Polypropylene	No	12x32	High Recovery	825µL	650µL	<8	C4011-15	1000
11mm Snap-It 1mL Vial	Polypropylene	No	12x32	Flat Bottom	1000µL	800µL	<80	C4011-14	100
11mm Snap-It 1mL TPX High Recovery Vial	TPX	No	12x32	High Recovery	1000µL	750µL	<8	C4011-24	100
11mm Snap-It Glastic Glass Insert/TPX Vial	Clear	No	12x32	Insert Vial	475µL	350µL	<4	C4012-15	100



National 11mm wide opening snap-it vials and inserts (continued)

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume	Usable Volume	Residual (µL)	Cat. No.	Pack of
350µL Insert	Clear	–	6x31	Pulled Point	400µL	350µL	<4	C4010-627L	100
300µL Insert	Clear	–	6x29	Conical	375µL	300µL	<1	C4010-629	100
350µL Insert	Clear	–	6x31	Precision Point	400µL	350µL	<2	C4010-629L	100
300µL Insert, Graduation Marks	Polypropylene	–	6x30	Conical	325µL	250µL	<2	C4010-629P	100
300µL Polyspring Insert	Clear	–	6x29	Conical	375µL	300µL	<1	C4010-630	100
400µL MicroSert Insert	Clear	–	6x31	Flat Bottom	500µL	400µL	<25	C4011-631	500
300µL Insert, silanized	Clear	–	6x29	Conical	375µL	300µL	<1	C4010-S629	100
300µL Polyspring Insert, silanized	Clear	–	6x29	Conical	375µL	300µL	<1	C4010-S630	100
400µL MicroSert Insert, silanized	Clear	–	6x31	Flat Bottom	500µL	400µL	<25	C4011-S631	500

For more information, visit **thermofisher.com/national**

National 11mm wide opening Snap-It caps and septa

- Redesign of locking tabs provides easier application and removal of caps
- Enlarged open area allows for needle penetration across the entire vial opening
- Textured outer surface for easier gripping and improved detection by autosamplers with optical vial sensors
- Fully compatible with all Snap-It vials
- Snap-It caps are easy to apply and easy to remove
- Pre-assembled caps and septa are convenient and minimize contamination from handling
- Snap-It caps eliminate the need for crimping or de-capping tools
- Polyethylene caps are chemically inert and suitable for most chromatography applications
- Closures are shipped in sealed polybags to prevent contamination during transport
- Integral Molded Polyethylene cap is an economical choice for routine HPLC applications, but with low sealing property and zero resealing capacity



National 11mm Snap-It caps and septa

Description	Cap Color	Cap Material	Septum	Hardness shore	Thickness (mm)	Cat. No.	Pack of
11mm Snap-It Cap, thinned penetration area	Clear	Polyethylene	Integral Molded In Polyethylene	–	–	C4011-50	100
	Blue	Polyethylene	Integral Molded In Polyethylene	–	–	C4011-50B	100
	Green	Polyethylene	Integral Molded In Polyethylene	–	–	C4011-50G	100
	Red	Polyethylene	Integral Molded In Polyethylene	–	–	C4011-50R	100
11mm Snap-It Cap, 6mm hole	Clear	Polyethylene	Clear PTFE/Synthetic Red Rubber	60	1.0	C4011-51	100
	Blue	Polyethylene	Clear PTFE/Synthetic Red Rubber	60	1.0	C4011-51B	100
	Black	Polyethylene	Clear PTFE/Synthetic Red Rubber	60	1.0	C4011-51BLK	100
	Green	Polyethylene	Clear PTFE/Synthetic Red Rubber	60	1.0	C4011-51G	100
	Red	Polyethylene	Clear PTFE/Synthetic Red Rubber	60	1.0	C4011-51R	100
	Clear	Polyethylene	White Virgin PTFE, 0.01"	53	0.25	C4011-52	100
	Blue	Polyethylene	White Virgin PTFE, 0.01"	53	0.25	C4011-52B	100
	Green	Polyethylene	White Virgin PTFE, 0.01"	53	0.25	C4011-52G	100
	Red	Polyethylene	White Virgin PTFE, 0.01"	53	0.25	C4011-52R	100
	Yellow	Polyethylene	White Virgin PTFE, 0.01"	53	0.25	C4011-52Y	100
	Clear	Polyethylene	Red PTFE/White Silicone/Red PTFE	45	1.0	C4011-53	100
	Blue	Polyethylene	Red PTFE/White Silicone/Red PTFE	45	1.0	C4011-53B	100
	Red	Polyethylene	Red PTFE/White Silicone/Red PTFE	45	1.0	C4011-53R	100
	Yellow	Polyethylene	Red PTFE/White Silicone/Red PTFE	45	1.0	C4011-53Y	100
	Clear	Polyethylene	Red PTFE/White Silicone	50	1.0	C4011-54	100
	Blue	Polyethylene	Red PTFE/White Silicone	50	1.0	C4011-54B	100
	Black	Polyethylene	Red PTFE/White Silicone	50	1.0	C4011-54BLK	100
	Green	Polyethylene	Red PTFE/White Silicone	50	1.0	C4011-54G	100

National 11mm Snap-It caps and septa (continued)

Description	Cap Color	Cap Material	Septum	Hardness shore	Thickness (mm)	Cat. No.	Pack of
11mm Snap-It Cap, 6mm hole	Red	Polyethylene	Red PTFE/White Silicone	50	1.0	C4011-54R	100
	Yellow	Polyethylene	Red PTFE/White Silicone	50	1.0	C4011-54Y	100
	Clear	Polyethylene	Blue PTFE/White Silicone, Pre-slit	55	1.0	C4011-55	100
	Blue	Polyethylene	Blue PTFE/White Silicone, Pre-slit	55	1.0	C4011-55B	100
	Black	Polyethylene	Blue PTFE/White Silicone, Pre-slit	55	1.0	C4011-55BLK	100
	Green	Polyethylene	Blue PTFE/White Silicone, Pre-slit	55	1.0	C4011-55G	100
	Red	Polyethylene	Blue PTFE/White Silicone, Pre-slit	55	1.0	C4011-55R	100
	Yellow	Polyethylene	Blue PTFE/White Silicone, Pre-slit	55	1.0	C4011-55Y	100
	Clear	Polyethylene	Red PTFE/White Silicone, Star-slit	45	1.3	C4011-59	100
	Orange	Polyethylene	Red PTFE/White Silicone, Star-slit	55	1.0	C4011-590OR	1000

National 11mm wide opening Snap-It cap convenience kits

- Save time during sample preparation
- Reduce the risk of contamination

Unassembled kits

- Includes 100 vials and 100 caps with pre-assembled septa
- Reusable two compartment trays protect vials and closure while keeping matching supplies together
- Clear trays make it easy to keep track of available supplies without opening containers



Items not shown to scale

National 11mm wide opening Snap-It cap convenience kits

Kit Type	Glass	Patched	Cap Color	Septum	Vial Cat. No.	Cap Cat. No.	Cat. No.	Pack of
Convenience Kit, Wide Opening Snap Cap Vial	Amber	Yes	Clear	Clear PTFE/Red Rubber	C4011-6W	C4011-51	C4011-72AW	100
	Clear	No	Clear	Red PTFE/White Silicone	C4011-5	C4011-54	C4011-73	100
	Clear	Yes	Clear	Red PTFE/White Silicone	C4011-5W	C4011-54	C4011-73W	100
	Clear	No	Pink	Red PTFE/White Silicone	C4011-5	C4011-54P	C4011-73P	100

For more information, visit **thermofisher.com/national**

National 13mm crimp/snap vials

4mL, 15x45mm crimp/snap cap vials and inserts

- Superior quality 1st hydrolytic class glass (Type 1) in clear feature a 13mm crimp/snap-ring finish – use with 13mm aluminum Seals or Thermo Scientific™ National™ Target™ Kim-Snap™ Closures
- Polyspring inserts are self-aligning and provide a cushion against needle contact



National 13mm crimp/snap cap vials and inserts

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume	Usable Volume	Residual (µL)	Cat. No.	Pack of
13mm Crimp/Snap Vial	Clear	No	15x45	Flat Bottom	4.8mL	4.25mL	<800µL	C4015-4	100
800µL Polyspring Conical Insert	Clear	–	8x38	Pulled Point	950µL	800µL	<9µL	C4015-638	100
350µL Conical Insert	Clear	–	6x40	Pulled Point	375µL	300µL	<8µL	C4015-643	100

National 13mm crimp/snap caps and septa

- Pre-assembled caps and septa are convenient and minimize contamination from handling
- Aluminum crimp closures provide a secure leak-resistant seal
- Aluminum seals must be applied with a crimping tool
- Synthetic PTFE/red rubber seal is specially formulated for improved background performance
- Kim-Snap closures provide a tight seal without the need of a crimper



National 13mm crimp/snap caps and septa

Description	Cap Color	Cap Material	Septum	Hardness °shore	Thickness (mm)	Cat. No.	Pack of
13mm Crimp Cap, 6mm hole	Silver	Aluminum	Clear PTFE/Synthetic Red Rubber	65	1.3	C4015-1AP	144

National 13mm crimp/snap crimping and decrimping tools

- Crimping tools provide a reproducible, secure vial closure
- Manual decrimping tools allow easy removal of aluminum seals without breakage
- Clean room crimpers and decrimpers can be autoclaved



Items not shown to scale

National 13mm crimp/snap crimping and decrimping tools

Description	Use	Cat. No.	Pack of
Manual Crimper	Attaches 13mm aluminum crimp seals	C4013-100	1
Manual Decrimper	Removes 13mm aluminum crimp seals	C4013-102	1
Manual stainless steel Cleanroom Crimper	Attaches 13mm crimp seals	C4013-100SS	1
Manual stainless steel Cleanroom Decrimper	Removes 13mm crimp seals without vial damage	C4013-102SS	1

For electronic crimpers and decrimpers look on page 2-091

For more information, visit **thermofisher.com/national**

National 4ml screw thread vials

4mL, 15x45mm screw thread vials and inserts

- 13-425 thread finish
- I.D. vials feature a write-on patch with graduation for convenient sample identification
- Superior quality 1st hydrolytic class glass (Type 1) in clear and amber
- Microsampling and High Recovery Vials allow maximum sample extraction without need for separate inserts
- Optional silanized (deactivated) glass provides optimal recovery of critical polar, labile or OH-interacting compounds
- Polyspring inserts are self-aligning and provide a cushion against needle contact



National 4ml screw thread vials and inserts

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume	Usable Volume	Residual (µL)	Cat. No.	Pack of
13-425 Screw Thread Vial	Clear	No	15x45	Flat Bottom	4mL	4mL	<800	C4015-1	100
	Clear	Yes	15x45	Flat Bottom	4mL	4mL	<800	C4015-11W	100
	Amber	No	15x45	Flat Bottom	4mL	4mL	<800	C4015-2	100
	Amber	Yes	15x45	Flat Bottom	4mL	4mL	<800	C4015-2W	100
13-425 Screw Thread AP2000 High Recovery Vial	Clear	No	15.25x45	Tapered Base	3.5mL	3.5mL	<15	C4015-9	100
	Polypropylene	No	15x45	Tapered Base	2.5mL	2mL	<15	C4015-14	100
13-425 Screw Thread Vial, silanized	Clear	No	15x45	Flat Bottom	4mL	4mL	<800	C4015-S1	100
800µL Polyspring Conical Insert	Clear	–	8x38	Pulled Point	950µL	800µL	<9	C4015-638	100
350µL Conical Insert	Clear	–	6x40	Pulled Point	375µL	300µL	<8	C4015-643	100

National 13-425 screw thread caps and septa

- Polypropylene caps are chemically inert and suitable for most chromatography applications
- Phenolic resin caps perform well at high temperatures and are compatible with exposure to corrosives
- Open top caps are designed to be used with any of our 13mm septa
- Pre-assembled caps and septa are convenient and minimize contamination from handling
- Caps with bonded septa resist dislodging during injection when using large diameter blunt needles
- Integral Molded Polypropylene cap is an economical choice when septum resealing is not required



National 13-425 screw thread caps and septa

Images shown are 70% to scale

Description	Cap Color	Cap Material	Septum	Hardness shore	Thickness (mm)	Cat. No.	Pack of
13mm Open Top Screw Cap, 13-425 thread, 8.5mm hole	Black	Polypropylene	–	–	–	C4015-1A	100
Septum for 13-425 Screw Caps	–	–	White Virgin PTFE, 0.01"	53	0.25	C4015-10	1000
	–	–	Red PTFE/White Silicone/Red PTFE	55	1.25	C4015-40	100
	–	–	Red PTFE/White Silicone, Soft	45	1.5	C4015-45	100
	–	–	Red PTFE/White Silicone	50	1.5	C4015-60	100
13mm Open Top Screw Cap, 13-425 thread, 8.5mm hole	Black	Polypropylene	Ivory PTFE/Red Rubber	35	1.5	C4015-30A	100
	Black	Polypropylene	Red PTFE/White Silicone/Red PTFE	55	1.25	C4015-40A	100
	White	Polypropylene	Red PTFE/White Silicone, Soft	45	1.5	C4015-45W	100
	Black	Polypropylene	Blue PTFE/White Silicone, Pre-slit	55	1.5	C4015-55BLK	100
	Black	Polypropylene	Red PTFE/White Silicone	60	1.5	C4015-75A	100
13mm Single Piece Screw Cap, 13-425 thread	Natural	Polypropylene	Integral Molded Polypropylene	–	0.25	C4015-5A	100
13mm Open Top Screw Cap, 13-425 thread, 8.5mm hole	Black	Phenol	Red PTFE/White Silicone	60	1.5	C4015-66A	100
13mm Open Top Screw Cap, 13-425 thread, 8.5mm hole	Black	Polypropylene	Bonded Red PTFE/ White Silicone	45	1.5	C4015-67A	100

For more information, visit **thermofisher.com/national**

National 4ml screw thread convenience kits

- Save time during sample preparation
- Reduce the risk of contamination

Unassembled kits

- Includes 100 vials and 100 caps with pre-assembled septa



C4015-88

Assembled kits

- Include 100 vials with pre-attached caps and septa
- Packaged in convenient vial trays with clear covers or in economical polybags



C4015-21



C4015-017

National 4ml screw thread convenience kits

Items not shown to scale

Kit Type	Glass	Patched	Cap Color	Septum	Vial Cat. No.	Cap/Septum Cat. No.	Cat. No.	Pack of
Convenience Kit	Clear	No	Black	Red PTFE/White Silicone	C4015-1	C4015-75A	C4015-88	100
Assembled Kit	Clear	No	Black	White Virgin PTFE, 0.01"	C4015-1	C4015-1A/C4015-10	C4015-21	100
	Clear	No	Black	Red PTFE/White Silicone	C4015-1	C4015-75A	C4015-17	100
	Amber	No	Black	Red PTFE/White Silicone	C4015-2	C4015-75A	C4015-17A	100
	Amber	Yes	Black	Red PTFE/White Silicone	C4015-2W	C4015-75A	C4015-17AW	100
	Clear	Yes	Black	Red PTFE/White Silicone	C4015-11W	C4015-75A	C4015-17W	100
	Clear	No	Black	PTFE/Red Rubber	C4015-1	C4015-66/73816T-13P	C4015-482A	100
Assembled Kit, in Polybag	Clear	No	Black	Red PTFE/White Silicone	C4015-1	C4015-75A	C4015-017	100

National 4mL screw thread vial racks

- Polypropylene vial racks are resistant to most solvents
- Racks feature alphanumeric indexing for easier vial identification
- Racks can be stacked for efficient storage



C4015-27



C4015-25

Items not shown to scale

National 4mL Screw Thread Vial Racks

Description	Capacity	Cat. No.	Pack of
PVC storage rack for 15x45mm vials with clear lid	100vials, 10x10	C4015-27A	1
Polypropylene storage rack for 15x45mm vials, no lid, reusable	50 vials, 5x10	C4015-25	1

National shell vials and inserts

- Superior quality type 1 borosilicate and amber glass
- Polyethylene SepCap with starburst center design eases syringe needle penetration
- Convenient vial kits include equal quantities of vials and caps
- Polyspring inserts are self-aligning and provide a cushion against needle contact
- Microsampling vials allow maximum sample extraction without need for separate inserts

Recommended for the following instruments:

- Alcott
- Gilson
- Shimadzu
- Waters (Wisp 96 respectively 48 Position Carousel)



National shell vials and inserts

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume	Usable Volume	Residual (µL)	Cat. No.	Pack of
1mL Shell Vial with SepCap	Clear	No	8x40	Flat Bottom	1.25mL	1mL	<80	C4015-96	200
	Amber	No	8x40	Flat Bottom	1.25mL	1mL	<80	C4015-99	200
	Polypropylene	No	8x40	Flat Bottom	1.25mL	1mL	<80	C4015-95P	250
250µL Polyspring Conical Insert	Clear	–	5x34	Pulled Point	250µL	210µL	<3	C4015-96A	100
300µL Polyspring Conical Insert	Polypropylene	–	5x29	Precision Point	275µL	250µL	<3	C4015-96PA	100
0.7mL Accuform Shell Vial with SepCap	Polypropylene	No	8x40	Tapered Base	0.90mL	0.7mL	<8	C4015-94	1000
2mL Shell Vial with SepCap	Clear	No	12x32	Flat Bottom	2.4mL	1.8mL	<200	C4011-80	200
	Polypropylene	No	12x32	Flat Bottom	2.4mL	1.8mL	<200	C4011-77P	1000
4mL Shell Vial with SepCap	Clear	No	15x45	Flat Bottom	5.5mL	4mL	<800	C4015-48	100
	Polypropylene	No	15x45	Flat Bottom	5.5mL	4mL	<800	C4015-47P	100
800µL Polyspring Conical Insert	Clear	–	6x38	Pulled Point	950µL	800µL	<9	C4015-638	100
Positive Displacement Vial for Alcott with PE Plug Cap	Clear	No	8x35	Flat Bottom	1mL	900µL	–	C4008-50	1000

National headspace vials

- Superior quality 1st hydrolytic class glass (Type 1)
- Headspace vials are available with either a round or flat base
- Round bottom vials are compatible with most autosamplers and more easily handled by robotic arms that lift the vial from the tray
- Flat bottom vials maximize heating efficiency in manual headspace sampling and are required for use in some instrument models
- Vials feature beveled or square edge finish
- The bevel edge on the lip of the vial provides additional sealing power for greater leak resistance under high pressure



Images shown are 90% to scale

National headspace vials

Description	Glass	Dimension (mm)	Finish	Profile	Total Volume (mL)	Usable Volume (mL)	Cat. No.	Pack of
20mm Headspace Crimp Vial	Clear	22x38	Beveled Edge	Flat Bottom	9	6	C4020-60	1000
	Clear	22x38	Square Rim	Flat Bottom	9	6	C4020-6	1000
	Clear	23x46	Beveled Edge	Flat Bottom	12.5	10	C4020-10	100
	Clear	23x46	Beveled Edge	Round Bottom	12.5	10	C4020-210	100
	Clear	23x75	Beveled Edge	Flat Bottom	21.5	20	C4020-20	100
	Clear	23x75	Beveled Edge	Round Bottom	21.5	20	C4020-2	100
	Clear	23x75	Square Rim	Flat Bottom	21.5	20	C4020-25	1000
	Clear	30x60	Beveled Edge	Flat Bottom	27	25	C4020-27	1000
18mm Screw Top Headspace Vial	Clear	22.5x46	Screw Thread	Round Bottom	12	10	C4020-180	125
	Clear	22.5x76	Screw Thread	Round Bottom	21	20	C4020-18	125

National headspace caps and septa

- Aluminum seals are available in standard center hole and pressure release versions
- Pressure release seals (Aluminum-PR) are designed to open when internal pressure exceeds 3.0±0.5bar
- Use magnetic tinplate seals with CTC™ (Leap technologies), Gerstel and other magnetic transport autosamplers
- Pre-assembled caps and septa are convenient and minimize contamination from handling



Images shown are 50% to scale

National headspace caps and septa

Description	Cap Color	Cap Material	Septum	Hardness shore	Thickness (mm)	Cat. No.	Pack of
20mm Crimp Cap, 9.5mm hole	Silver	Aluminum	–	–	–	C4020-3A	1000
20mm Tear-off Crimp Cap	Silver	Aluminum	–	–	–	C4020-5A	1000
20mm Pressure Release Crimp Cap, 7.5mm hole	Silver	Aluminum -PR	–	–	–	C4020-6A	1000
Septum for 20mm Crimp Caps	–	–	20mm Gray Bromobutyl Stopper	37	–	C4020-30	1000
	–	–	20mm Tan PTFE/White Silicone	45	3.2	C4020-32	100
	–	–	20mm Gray PTFE/Red Rubber	50	3.0	C4020-34	100
	–	–	20mm Gray PTFE/Black Butyl Molded	50	3.0	C4020-36	100
	–	–	Unfaced Black Rubber	55	3.0	C4020-40	100
20mm Crimp Cap, 9.5mm hole	Silver	Aluminum	Gray PTFE/Red Rubber	50	3.0	C4020-34A	100
20mm Pressure Release Crimp Cap, 8mm hole	Silver	Aluminum-PR	Gray PTFE/Red Rubber	50	3.0	C4020-34AP	100
20mm Crimp Cap, 9.5mm hole	Silver	Aluminum	Clear PTFE/Gray Butyl Rubber	50	3.0	C4020-39A	100
20mm Pressure Release Crimp Cap, 8mm hole	Silver	Aluminum-PR	Clear PTFE/Gray Butyl Rubber	50	3.0	C4020-43AP	100
20mm Crimp Cap, 9.5mm hole	Silver	Aluminum	Gray PTFE/Gray Butyl Rubber, Pharmafix	50	3.0	C4020-36A	100
20mm Pressure Release Crimp Cap, 8mm hole	Silver	Aluminum-PR	Gray PTFE/Gray Butyl Rubber, Pharmafix	50	3.0	C4020-36AP	100
20mm Crimp Cap, 9.5mm hole	Silver	Aluminum	Tan PTFE/White Silicone	45	3.2	C4020-32A	100
20mm Pressure Release Crimp Cap, 8mm hole	Silver	Aluminum-PR	Tan PTFE/White Silicone	45	3.2	C4020-32AP	100
20mm Magnetic Crimp Cap, 5mm hole	Gold	Tin-plated	Clear PTFE/Translucent Blue Silicone	45	3.0	C4020-38A	100
20mm Magnetic Crimp Cap, 8mm hole	Gold	Tin-plated	Clear PTFE/Translucent Blue Silicone	45	3.0	C4020-42A	100
20mm Pressure Release Crimp Cap, 7.5mm hole	Silver	Aluminum-PR	Clear PTFE/Translucent Blue Silicone	45	3.0	C4020-42AP	100
18mm Magnetic Screw Cap, 8mm hole	Silver	Steel	18mm Blue Silicone/Natural PTFE	45	2.0	C4020-47	125
18mm Magnetic Screw Cap, 8mm hole, SPME	Silver	Steel	18mm Blue Silicone/PTFE, not prefitted	30	1.0	C4020-48	125

National 20mm crimp top headspace unassembled convenience kits

- Include matched quantities of vials and silver aluminum seals with pre-assembled septa
- Convenience kits save time during sample preparation



Item not shown to scale

National 20mm crimp top headspace unassembled convenience kits

Kit Type	Glass	Cap Color	Septum	Vial Cat. No.	Cap Cat. No.	Cat. No.	Pack of
Convenience Kit, 20mm Headspace Crimp Vial, Beveled Edge, Round Bottom, Pressure Release Crimp Cap, 7.5mm hole	Clear	Silver	Gray PTFE/Black Butyl Rubber, Pharmafix	C4020-2	C4020-36AP	C4020-139	100
	Clear	Silver	Tan PTFE/White Silicone	C4020-2	C4020-32AP	C4020-320	1000

National 20mm headspace crimping and decrimping tools

- Crimping tools provide a reproducible, secure vial closure
- Manual decrimping tools allow easy removal of aluminum seals without breakage
- Decapping pliers are an economical choice for small quantities of vials
- Clean room crimpers and decrimpers can be autoclaved

C4020-100



C4020-101



C4020-102



C4020-100SS



Items not shown to scale

National 20mm headspace crimping and decrimping tools

Description	Use	Cat. No.	Pack of
Manual Crimper	Attaches 20mm crimp seals	C4020-100	1
Decapping Pliers	Removes 20mm crimp seals, Protective gloves recommended	C4020-101	1
Manual Decrimper	Removes 20mm crimp seals	C4020-102	1
Manual stainless steel Cleanroom Crimper	Attaches 20mm crimp seals	C4020-100SS	1
Manual stainless steel Cleanroom Decrimper	Removes 20mm crimp seals without vial damage	C4020-102SS	1

For electronic crimpers and decrimpers look on page 2-091

Sample storage screw thread vials, caps and septa

- Capacity ranges from 2-40mL
- Superior quality 1st hydrolytic class glass (Type 1) in clear and amber
- Eliminate leaching of ions
- Provide consistent pH for duration of sample storage life
- PTFE-Lined Solid-top storage caps
- PTFE film/PE foam backing offers broad chemical resistance
- Not autoclavable





Images shown are 70% to scale

National sample storage screw thread vials

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume (mL)	Capacity (DRAMS)	Cat. No.	Pack of
8-425 Screw Vial	Clear	No	12x32	Flat Bottom	2	0.5	B7999-1	100
13-425 Screw Vial	Clear	No	15x45	Flat Bottom	4	1	B7999-2	100
15-425 Screw Vial	Clear	No	17x60	Flat Bottom	8	2	B7999-3	200
15-425 Screw Vial	Clear	No	19x65	Flat Bottom	12	3	B7999-12	200
18-400 Screw Vial	Clear	No	21x70	Flat Bottom	16	4	B7999-4	200
20-400 Screw Vial	Clear	No	23x85	Flat Bottom	22	6	B7999-5	200
24-400 Screw Vial	Clear	No	28x95	Flat Bottom	40	8	B7999-6	100
8-425 Screw Vial	Amber	No	12x32	Flat Bottom	2	0.5	B7999-1A	100
13-425 Screw Vial	Amber	No	15x45	Flat Bottom	4	1	B7999-2A	100
15-425 Screw Vial	Amber	No	17x60	Flat Bottom	8	2	B7999-3A	200
15-425 Screw Vial	Amber	No	19x65	Flat Bottom	12	3	B7999-12A	200
18-400 Screw Vial	Amber	No	21x70	Flat Bottom	16	4	B7999-4A	200
24-400 Screw Vial	Amber	No	28x95	Flat Bottom	40	8	B7999-6A	100



Images shown are 70% to scale

National sample storage screw thread caps and septa

Description	Cap Color	Cap Material	Septum	Hardness shore	Thickness (mm)	Cat. No.	Pack of
8-425 Screw Cap	White	Urethane	PTFE/PE Foam Liner	75	1.3	B7815-8	100
13-425 Screw Cap	White	Urethane	PTFE/PE Foam Liner	75	1.3	B7815-13	100
15-425 Screw Cap	White	Polypropylene	PTFE/PE Foam Liner	75	1.3	B7815-15	100
18-400 Screw Cap	White	Polypropylene	PTFE/PE Foam Liner	75	1.3	B7815-18	100
20-400 Screw Cap	White	Polypropylene	PTFE/PE Foam Liner	75	1.3	B7815-20	100
24-400 Screw Cap	White	Polypropylene	PTFE/PE Foam Liner	75	1.3	B7815-24	100
Septum for 13-425 Screw Cap	–	–	0.01" White PTFE/0.05" Clear Silicone	50	1.5	B7995-13	100
Septum for 15-425 Screw Cap	–	–	0.01" White PTFE/0.09" Clear Silicone	50	2.6	B7995-15	100
Septum for 18-400 Screw Cap	–	–	0.01" White PTFE/0.05" Clear Silicone	50	1.5	B7995-18	100
Septum for 20-400 Screw Cap	–	–	0.01" White PTFE/0.05" Clear Silicone	50	1.5	B7995-20	100
Septum for 24-400 Screw Cap	–	–	0.01" White PTFE/0.09" Clear Silicone	50	2.6	B7995-24	100
Septum for 24-400 Screw Cap	–	–	0.013" White PTFE/0.120" Clear Silicone	50	3.3	B7995-26	100
Open top 13-425 Screw Cap	Black	Polypropylene	–	–	–	B7807-13	100
Open top 15-425 Screw Cap	Black	Polypropylene	–	–	–	B7807-15	100
Open top 18-400 Screw Cap	Black	Polypropylene	–	–	–	B7807-18	100
Open top 20-400 Screw Cap	Black	Polypropylene	–	–	–	B7807-20	100
Open top 24-400 Screw Cap	White	Polypropylene	–	–	–	B7807-24	100

National sample storage convenience kits

- Convenience kits save time during sample preparation
- Solid top convenience kits include matched quantities of vials and screw caps with pre-assembled septa
- Open top convenience kits contain shrink-wrapped vials and separately packaged caps and septa in polybags


B7990-2


B7800-20

Items not shown to scale

National sample storage convenience kits

Kit Type	Glass	Total Volume (mL)	Cap Color	Cap Material	Septum	Vial Cat. No.	Cap/Septum Cat. No.	Cat. No.	Pack of
Screw Vial Convenience Kit, Solid-top Cap	Clear	2	White	Urethane	PTFE/ Polyethylene Foam Liner	B7999-1	B7815-8	B7800-1	100
	Clear	4	White	Urethane		B7999-2	B7815-13	B7800-2	100
	Clear	8	White	Polypropylene		B7999-3	B7815-15	B7800-3	200
	Clear	12	White	Polypropylene		B7999-12	B7815-15	B7800-12	200
	Clear	16	White	Polypropylene		B7999-4	B7815-18	B7800-4	200
	Clear	22	White	Polypropylene		B7999-5	B7815-20	B7800-5	200
	Clear	40	White	Polypropylene		B7999-6	B7815-24	B7800-6	100
	Amber	2	White	Urethane		B7999-1A	B7815-8	B7800-1A	100
	Amber	4	White	Urethane		B7999-2A	B7815-13	B7800-2A	100
	Amber	8	White	Polypropylene		B7999-3A	B7815-15	B7800-3A	200
	Amber	12	White	Polypropylene		B7999-12A	B7815-15	B7800-12A	200
	Amber	16	White	Polypropylene		B7999-4A	B7815-18	B7800-4A	200
	Amber	40	White	Polypropylene		B7999-6A	B7815-24	B7800-6A	100
Screw Vial Assembled Kit, Solid-top Cap	Clear	20	White	Polypropylene	PTFE/ Polyethylene Foam Liner	B7920-VO	B7815-24	B7800-20	100
	Amber	20	White	Polypropylene		B7921-VO	B7815-24	B7800-20A	100
0.01" White PTFE/ 0.05" Clear Silicone	Clear	4	Black	Polypropylene	0.01" White PTFE/ 0.05" Clear Silicone	B7999-2	B7807-13/ B7995-13	B7990-2	100
	Clear	8	Black	Polypropylene		B7999-3	B7807-15/ B7995-15	B7990-3	200
	Clear	12	Black	Polypropylene		B7999-12	B7807-15/ B7995-15	B7990-12	200
	Clear	22	Black	Polypropylene		B7999-5	B7807-20/ B7995-20	B7990-5	200
	Clear	40	White	Polypropylene		B7999-6	B7807-24/ B7995-24	B7990-6	100
	Amber	12	Black	Polypropylene		B7999-12A	B7807-15/ B7995-15	B7990-12A	200
	Amber	40	White	Polypropylene		B7999-6A	B7807-24/ B7995-24	B7990-6A	100

For more information, visit **thermofisher.com/national**

National EPA screw vials

EPA screw vial convenience kits

- Convenience kits save time during sample preparation
- Unassembled convenience kits include shrink-wrapped vials and separately packaged caps and septa in polybags
- Assembled kits include vials with pre-assembled caps and septa
- Recommended for discrete water sampling under EPA 40 CFR 136 “Guidelines for Establishing Test Procedures for the Analysis of Pollutants” and EPA 40 CFR 141 “National Interim Primary Drinking Water Regulations: Control of Trihalomethanes in Drinking Water”



B7920

Items not shown to scale

National epa screw vial convenience kits

Kit Type	Glass	Total Volume (mL)	Dimension (mm)	Septum	Cat. No.	Pack of
EPA Screw Vial Convenience Kit	Clear	40	28x95	0.01" White PTFE/0.09" Clear Silicone	B7950-B	100
EPA Screw Vial Assembled Kit	Clear	40	28x95	0.01" White PTFE/0.09" Clear Silicone	B7950	100
	Amber	40	28x95	0.01" White PTFE/0.09" Clear Silicone	B7951	100
	Clear	20	28x57	0.01" White PTFE/0.09" Clear Silicone	B7920	100
	Amber	20	28x57	0.01" White PTFE/0.09" Clear Silicone	B7921	100



B7950-VO B7951-VO B7950-1A B7995-24

National EPA screw vials, caps and septa

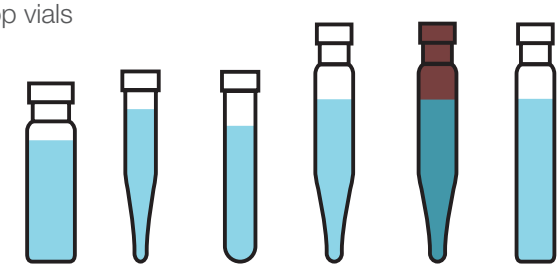
*60% to scale

Description	Glass	Cap Color	Dimension (mm)	Total Volume (mL)	Material	Cat. No.	Pack of
24-400 EPA Screw Vial	Clear	–	28x95	40	–	B7950-VO	100
	Amber	–	28x95	40	–	B7951-VO	100
24-400 EPA Screw Cap	–	White	–	–	Polypropylene	B7950-1A	100
Septum for 24-400 Screw Cap	–	–	–	–	0.01" White PTFE/0.09" Clear Silicone	B7995-24	100

National vial reference chart

*Drawing is valid for: C4000-1B, C4000-1G, C4000-1R, C4000-1Y
Images shown are 80% to scale

8mm crimp top vials



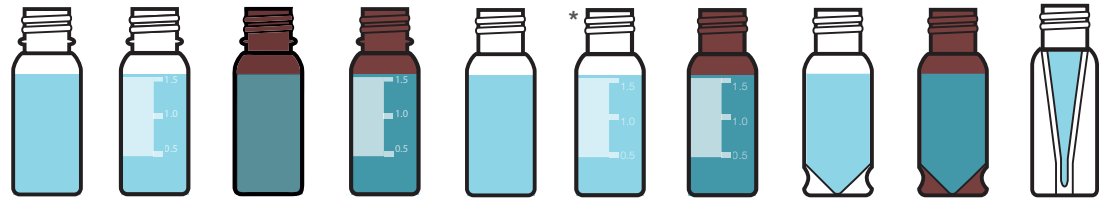
Part No.	C4008-1	C4008-632C	C4008-632R	C4008-739	C4008-740	C4008-741
Dimensions	8x30	6x32	6x32	7x40	7x40	7x40
Common Description	0.8mL	0.2mL	0.3mL	0.7mL	0.7mL	0.8mL
Approx. Total Capacity	1mL	250µL	325µL	575µL	575µL	775µL
Rec. Usable Volume	0.8mL	200µL	250µL	450µL	450µL	650µL
Residual Volume	<80µL	<3µL	<6µL	<2µL	<2µL	<70µL
Composition	Glass	Glass	Glass	Glass	Amber	Glass

Standard-opening 8-425 screw thread vials – 12x32mm



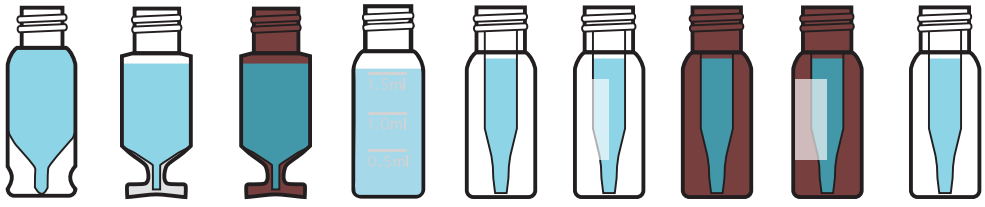
Part No.	C4013-1	C4013-1W	C4013-2	C4013-2W	C4013-11	C4013-13
Common Description	2mL	2mL	2mL	2mL	250µL	600µL
Approx. Total Capacity	1.9mL	1.9mL	1.9mL	1.9mL	475µL	850µL
Rec. Usable Volume	1.5mL	1.5mL	1.5mL	1.5mL	250µL	675µL
Residual Volume	<170µL	<170µL	<170µL	<170µL	<3µL	<8µL
Composition	Glass	Glass	Amber	Amber	Polypro	Polypro

Target DP 9mm screw vials 12x32mm



Part No.	C5000-1	C5000-1W	C5000-2	C5000-2W	C4000-1	C4000-1W	C4000-2W	C4000-9	C4000-9A	C4000-11
Common Description	2mL	2mL	2mL	2mL	2mL	2mL	2mL	1.5mL	1.5mL	450µL
Approx. Total Capacity	2mL	2mL	2mL	2mL	2mL	2mL	2mL	1.7mL	1.7mL	250µL
Rec. Usable Volume	1.5mL	1.5mL	1.5mL	1.5mL	1.5mL	1.5mL	1.5mL	1.3mL	1.3mL	250µL
Residual Volume	<170µL	<170µL	<170µL	<170µL	<170µL	<170µL	<170µL	<4µL	<4µL	<1µL
Composition	Glass	Glass	Amber	Amber	Glass	Glass	Amber	Glass	Amber	PolyPro

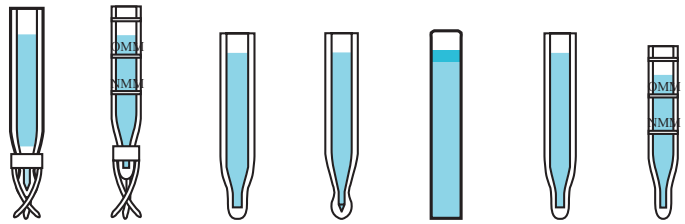
Target DP 9mm screw vials 12x32mm



Part No.	C4000-9TR	C4000-V1	C4000-V2	C4000-14	C4000-LV1	C4000-LV1W	C4000-LV2	C4000-LV2W	C4000-LV3W
Common Description	1.5mL	1.5mL	1.5mL	2mL	350µL	350µL	350µL	350µL	200µL
Approx. Total Capacity	1.5mL	1.4mL	1.4mL	2mL	475µL	475µL	475µL	475µL	375µL
Rec. Usable Volume	1.2mL	1.0mL	1.0mL	1.5mL	350µL	350µL	350µL	350µL	240µL
Residual Volume	<1µL	<4µL	<4µL	<180µL	<2µL	<2µL	<2µL	<2µL	<1µL
Composition	Glass	Glass	Amber	Clear PP	Glass	Glass	Amber	Amber	Glass

Target DP microvolume inserts

*Drawing is valid for: C4011-1B, C4011-1G, C4011-1R, C4011-1Y
Images shown are 80% to scale



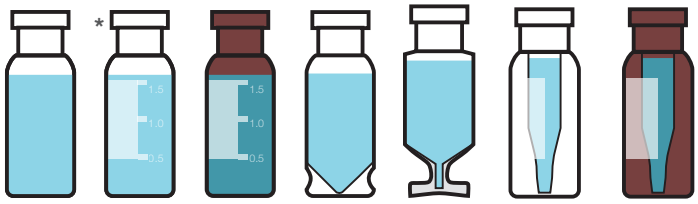
Part No.	C4010-630	C4010-630P	C4010-627L	C4010-629L	C4011-631	C4010-629	C4010-629P
Dimensions	6x29mm	6x30mm	6x31mm	6x31mm	6x31mm	6x29mm	6x30mm
Common Description	300µL	300µL	350µL	350µL	400µL	300µL	300µL
Approx. Total Capacity	375µL	325µL	400µL	400µL	500µL	375µL	325µL
Rec. Usable Volume	300µL	250µL	350µL	350µL	400µL	300µL	250µL
Residual Volume	<1µL	<2µL	<4µL	<2µL	<25µL	<4µL	<2µL
Composition	Glass	Polypro	Glass	Glass	Glass	Glass	Polypro

10mm wide opening screw thread vials – 12x32mm



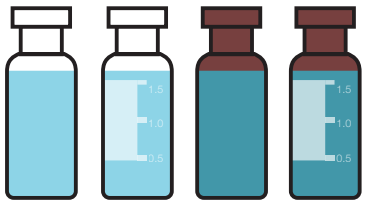
Part No.	C4010-1	C4010-1W	C4010-2	C4010-2W	C4010-LV1	C4010-LV2	C4010-11	C4010-14
Common Description	2mL	2mL	2mL	2mL	350µL	350µL	250µL	700µL
Approx. Total Capacity	2mL	2mL	2mL	2mL	450µL	450µL	600µL	750µL
Rec. Usable Volume	1.5mL	1.5mL	1.5mL	1.5mL	350µL	350µL	400µL	550µL
Residual Volume	<170µL	<170µL	<170µL	<170µL	<2µL	<2µL	<4µL	<70µL
Composition	Glass	Glass	Amber	Amber	Glass	Amber	Polypro	Polypro

11mm wide opening crimp top vials



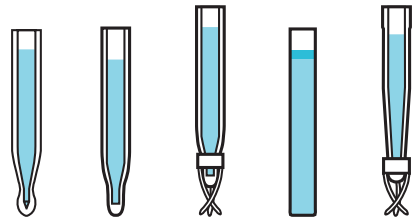
Part No.	C4011-1	C4011-1W	C4011-2W	C4011-9	C4011-V1	C4011-LV1W	C4011-LV2W
Common Description	2mL	2mL	2mL	1.5mL	1.5mL	250µL	250µL
Approx. Total Capacity	2mL	2mL	2mL	1.7mL	1.5mL	500µL	500µL
Rec. Usable Volume	1.5mL	1.5mL	1.5mL	1.3mL	1.1mL	350µL	350µL
Residual Volume	<170µL	<170µL	<170µL	<4µL	<4µL	<2µL	<2µL
Composition	Glass	Glass	Amber	Glass	Glass	Glass	Amber

11mm standard-opening crimp vials 12x32mm



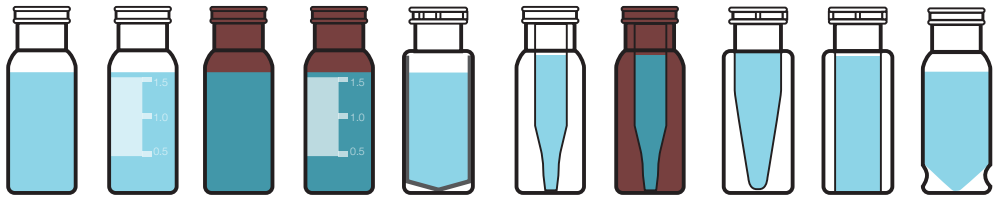
Part No.	C4012-1	C4012-1W	C4012-2	C4012-2W
Common Description	2mL	2mL	2mL	2mL
Approx. Total Capacity	2mL	2mL	2mL	2mL
Rec. Usable Volume	1.5mL	1.5mL	1.5mL	1.5mL
Residual Volume	<170µL	<170µL	<170µL	<170µL
Composition	Glass	Glass	Amber	Amber

Standard microvolume inserts



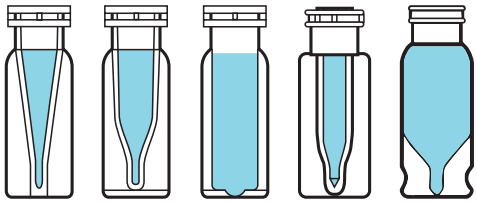
Part No.	C4012-529	C4012-529L	C4012-530	C4012-465	C4012-530P
Dimensions	5x29mm	5x31mm	5x29mm	5x31mm	5x30mm
Common Description	150µL	150µL	150µL	200µL	125µL
Approx. Total Capacity	200µL	200µL	200µL	250µL	175µL
Rec. Usable Volume	175µL	170µL	170µL	200µL	150µL
Residual Volume	<3µL	<2µL	<1µL	<12µL	<2µL
Composition	Glass	Glass	Glass	Glass	Polypro

11mm Snap-It-vials – 12x32mm



Part No.	C4011-5	C4011-5W	C4011-6	C4011-6W	C4011-24	C4011-LV1	C4011-LV2	C4011-11	C4011-14	C4011-4
Common Description	2mL	2mL	2mL	2mL	700µL	350µL	350µL	800µL	3700µL	1.5mL
Approx. Total Capacity	2mL	2mL	2mL	2mL	1000µL	500µL	500µL	800µL	1000µL	1.7mL
Rec. Usable Volume	1.5mL	1.5mL	1.5mL	1.5mL	750µL	350µL	350µL	600µL	800µL	1.3mL
Residual Volume	<170µL	<170µL	<170µL	<170µL	<8µL	<2µL	<2µL	<6µL	<80µL	<4µL
Composition	Glass	Glass	Amber	Amber	TPX	Glass	Amber	Polypro	Polypro	Glass

11mm Snap-It-vials – 12x32mm



Part No.	C4011-13	C4011-16	C4011-15	C4012-15	C4011-9TR
Common Description	250µL	600µL	850µL	250µL	1.5mL
Approx. Total Capacity	475µL	600µL	825µL	475µL	1.5mL
Rec. Usable Volume	300µL	400µL	650µL	350µL	1.2mL
Residual Volume	<2µL	<4µL	<8µL	<4µL	<1µL
Composition	Polypro	Polypro	Polypro	Glastic	Glass

Headspace vials



Part No.	C4020-6	C4020-60	C4020-27
Common Description	6mL	6mL	27mL
Approx. Total Capacity	9mL	9mL	27mL
Composition	Glass	Glass	Glass

Headspace vials

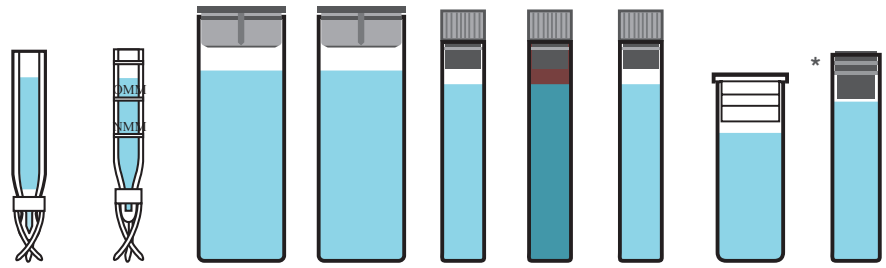


Part No.	C4020-180	C4020-18	C4020-20	C4020-10	C4020-2	C4020-210	C4020-25
Common Description	10mL	20mL	20mL	10mL	20mL	10mL	20mL
Approx. Total Capacity	12mL	21mL	21.5mL	12.5mL	21.5mL	12.5mL	21.5mL
Composition	Glass	Glass	Glass	Glass	Glass	Glass	Glass

Images shown are 80% to scale

*60% to scale

Shell vials and inserts



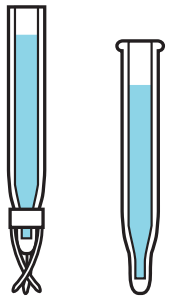
Part No.	C4015-96A	C4015-96PA	C4015-48	C4015-47P	C4015-96	C4015-99	C4015-95P	C4011-80	C4008-50
Dimensions	5x34mm	5x29mm	–	–	–	–	–	–	8x35mm
Common Description	250µL	275µL	4mL	4mL	1mL	1mL	1mL	2mL	1mL
Approx. Total Capacity	375µL	375µL	5.5mL	5.5mL	1.25mL	1.25mL	1.25mL	2.4mL	1mL
Rec. Usable Volume	210µL	250µL	4mL	4mL	1mL	1mL	1mL	1.8mL	850µL
Residual Volume	<3µL	<3µL	<800µL	<800µL	<80µL	<80µL	<80µL	<200µL	–
Composition	Glass	PolyPro	Glass	Polypro	Glass	Amber	PolyPro	Glass	Glass

15x45mm screw thread vials



Part No.	C4015-1	C4015-11W	C4015-2	C4015-2W	C4015-9	C4015-14
Common Description	4mL	4mL	4mL	4mL	3.5mL	2.5mL
Approx. Total Capacity	5.2mL	5.2mL	5.2mL	5.2mL	4.5mL	2.5mL
Rec. Usable Volume	4mL	4mL	4mL	4mL	3.5mL	2mL
Residual Volume	<800µL	<800µL	<800µL	<800µL	<15µL	<15µL
Composition	Glass	Glass	Amber	Amber	Glass	Polypro

Microvolume inserts for 15x45mm 4ml vials



Part No.	C4015-638	C4015-643
Dimensions	6x38mm	6x42mm
Common Description	700µL	500µL
Approx. Total Capacity	950µL	375µL
Rec. Usable Volume	800µL	300µL
Residual Volume	<9µL	<8µL
Composition	Glass	Glass

Images shown are 80% to scale
* 50% to scale
* Positive Displacement Vial for Alcott 708

National vial reference chart

There's a lot more that goes into our vials than just samples

Innovative glass technology and unmatched performance

Even more sensitive chromatography and mass spectrometry systems demand reliable vials which can routinely deliver the ultimate purity grade and the lowest surface activity possible. Sample security and confidence in data integrity are paramount in trace analysis and can only be achieved with the highest vial-glass quality.

Most autosampler vials are made from Type 1 hydrolytic-grade glass, which unfortunately absorbs analytes on vial walls when working with polar and/or highly adsorbing compounds at low concentration levels. We have introduced a higher grade of glass with the lowest levels of alkaline materials with our new inert vials range. You can maximize your analytical performance and have fewer failed assays with the Thermo Scientific Chromacol GOLD-Grade vials. These premium vials are manufactured in perfect conditions and at optimum surface-saving temperatures to ensure the maximum degree of the inertness of the low-alkaline glass.

Increase productivity and save time	Confidence in results with highest quality vial	A vial that reduces the cost of analysis
• Highest recovery rates; even with critical compounds (e.g. trisubstituted N-atoms, tertiary amines) in trace concentrations. • Highly reproducible; consistent peak heights and symmetry	• Made of 1st hydrolytic class, special 33 expansion glass; meeting current USPs and Pharmacopeias. • Ultra-low adsorption surface for critical polar compound; enables ultra trace-level analysis for strongly adsorbing analytes. • The high-class standard in Europe and Asia for decades. • Ultra-low pH shift, due to the minimized surface activity. • Lowest alkaline content, for less glass-wall interactions.	• Stable analysis and higher reproducibility; increases security and integrity of analytical results. • Buffer reduction possible. • No risk of run-stops during overnight analysis. • Optimal autosampler fit regardless of lot.



For more information, visit **thermofisher.com/inertvials**

Chromacol vials and closures

- Innovative products in micro- and precision sampling
- High quality, stringent manufacturing tolerances, have been extensively tested for comprehensive autosampler compatibility
- Products developed in close technical cooperation with the instrument manufacturers
- Detailed information regarding material specifications and compatibility
- Competent and experienced worldwide distributor network

Approximate chemical composition for borosilicate glass

Description	SiO_2	B_2O_3	Al_2O_3	CaO	MgO	Na_2O	K_2O	BaO
33 expansion Glass	80%	13%	3%	0.1%	–	4%	0.1%	<0.1%
N-51A Glass	72%	12%	7%	1%	–	6%	2%	<0.1%
Clear Borosilicate-GOLD Grade	80.6%	13%	2.3%	–	–	4%	–	–



Chromacol 8mm crimp top vials

- The SCI-VI system gives the chromatography user the ability to inject reproducibly from glass vials with residual volumes as low as 1µL to 5µL in a full range of autosampler instruments
- Precision-machined sleeves that allow the vials to be used in the vast majority of commercial autosamplers
- Sleeves are reusable and support the crimped, sealed vials in the correct position within both the autosampler carousel or racks
- Allow movement of the vials as a unit to injection positions in both GC and HPLC autosamplers
- Thermo Scientific Chromacol GOLD glass quality, a low expansion high purity glass with an extremely low concentration of active sites
- Available in both clear and amber glass these vials can be used with 8mm crimp and snap caps



Chromacol 8mm crimp top vials

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume (µL)	Usable Volume (µL)	Residual (µL)	Cat. No.	Pack of
0.3mL Sci-Vi Crimp Top Vial – GOLD Grade Glass	Clear	No	6x32	Round Bottom	325	250	<5	03-CVG	500
0.2mL Sci-Vi Crimp Top Vial – GOLD Grade Glass	Clear	No	6x32	Conical	250	200	<5	02-CTVG	500
0.1mL Sci-Vi Crimp Top Vial – GOLD Grade Glass	Clear	No	6x32	Round Bottom	125	80	<1	01-CVG	500
1.2mL Crimp Top Vial	Clear	No	8x40	Flat Bottom	1300	1200	<75	1.2-CWV	500
0.8mL Crimo Top Vial	Clear	No	7x40	Flat Bottom	775	650	<70	08-CPV	500
0.7mL Crimp Top Tapered Vial	Clear	No	7x40	Conical	575	450	<5	07-CPV	500
	Amber	No	7x40	Conical	575	450	<5	07-CPV(A)	500



Chromacol 8mm crimp top vials

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume (µL)	Usable Volume (µL)	Residual (µL)	Cat. No.	Pack of
0.6mL Crimp Top Tapered Vial	Amber	No	7x32	Conical	600	550	<5	06-CTV(A)	500
PTFE Vial Support Sleeve for 6x32mm vials, fits robotic autosamplers	PTFE	No	12x32	Flat Bottom	–	–	–	SV-S11A	25

For sleeves please contact your local sales representative.

Chromacol 8mm crimp top closures

- Aluminum crimp seals with prefitted septa
- Provide a secure leak-resistant seal
- Pre-assembled caps and septa are convenient and minimize contamination from handling



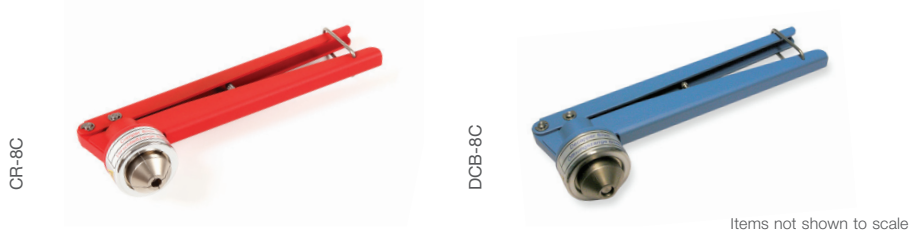
Chromacol 8mm crimp top closures

Description	Cap Color	Cap Material	Septum	Hardness shore	Thickness (mm)	Cat. No.	Pack of
8mm Crimp Cap, 4mm hole, Type 7 Rubber/PTFE Liner	Silver	Aluminum	Red Natural Rubber/Clear PTFE	60	1.0	8-AC7	1000
8mm Crimp Cap, 4mm hole	Silver	Aluminum	White Silicone/Red PTFE	50	1.3	8-AC-ST15	500
	Silver	Aluminum	Blue Silicone/PTFE	30	1.0	8-AC-ST101	500
	Silver	Aluminum	White Virgin PTFE, 0.01"	53	0.2	8-ACT	1000
	Silver	Aluminum	Red PTFE/White Silicone/Red PTFE	57	1.0	8-AC-TST1	500
8mm Snap Cap, Thinned penetration area	Clear	Polyethylene	Integral Molded In Polyethylene	–	–	8-PEC1	1000

For electronic crimpers look on page 2-091

Chromacol 8mm crimping and decrimping tools

- Crimping tools provide a reproducible secure closure
- High quality construction for durability and long life
- Fine textured surface (powder coated) for a better grip and corrosion resistance



Items not shown to scale

Chromacol 8mm crimping and decrimping tools

Description	Use	Cat. No.	Pack of
Manual Crimper	Attaches 8mm aluminum crimp seals	CR-8C	1
Manual Decrimper	Removes 8mm aluminum crimp seals without vial damage	DCB-8C	1

For electronic crimpers and decrimpers look on page 2-091

Chromacol 2mL, 12x32mm standard opening screw thread vials and inserts

- 8-425 thread finish vials are best suited for most instruments where the vial remains in the sample tray during injection
- Manufactured from superior quality 1st hydrolytic class glass (Type 1) in clear and amber
- GOLD grade glass quality is a low expansion high purity glass with an extremely low concentration of active sites
- Available with a graduated, write-on patch for convenient sample identification
- Small opening requires Micro-Inserts with a diameter of 5mm
- While maintaining the standard outer dimensions the internal volumes of these vials range from below 300µL to 2mL
- Where levels of inorganic ions have to be kept to an absolute minimum the use of plastics may be preferred to the more conventional glass vials



Chromacol 2mL, 12x32 standard opening screw thread vials and inserts

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume (mL)	Usable Volume (mL)	Residual (µL)	Cat. No.	Pack of
8-425 Screw Thread Vial	Clear	Yes	12x32	Flat Bottom	2.0	1.5	<170	2-SV	500
	Amber	Yes	12x32	Flat Bottom	2.0	1.5	<170	2-SV(A)	500
8-425 Screw Thread 0.3mL Vial	Polypropylene	No	12x32	Insert Vial	0.3	250µL	<3	03-PPSV	500
200µL Insert	Clear Glass	No	5x31	Flat Bottom	250µL	200µL	<12	02-NV	1000
	Clear Glass	No	5x30	Conical	200µL	160µL	<4	02-MTV	1000
Self-centering support device for tapered glass inserts	Polyethylene	–	–	–	–	–	–	MTS-1	500

Support sleeve allows conical tip vial to be used in standard 12x32mm autosampler trays

Chromacol 8-425 screw thread caps and septa

- Open top caps are designed to be used with any of our 8mm septa
- Polypropylene caps are chemically inert and suitable for most chromatography applications
- Flanged caps are particularly suitable for Shimadzu and Tosoh autosamplers
- Pre-assembled caps and septa are convenient and minimize contamination from handling
- Closures are shipped in sealed polybags to prevent contamination during transport



Chromacol 8-425 screw thread caps and septa

Description	Cap Color	Cap Material	Septum	Hardness shore	Thickness (mm)	Cat. No.	Pack of
8mm Open Top Screw Cap, 8-425 thread, 5mm hole	Black	Polypropylene	–	–	–	8-SC	500
8mm Open Top Screw Cap with flange, 8-425 thread, 5mm hole	Black	Polypropylene	–	–	–	8-SCJ	500
	White	Polypropylene	–	–	–	8-SCJ(W)	500
Septum for 8-425 Screw Caps	–	–	Red Natural Rubber/Clear PTFE	38	1.0	8-6RT1	1000
	–	–	White Silicone/Red PTFE	45	1.3	8-ST15	500
	–	–	Blue Silicone/PTFE	50	1.2	8-ST14	500
	–	–	Blue Silicone/PTFE, Pre-slit	50	1.2	8-ST14X	500
	–	–	Blue Silicone/PTFE	30	1.0	8-ST101	500
	–	–	White Virgin PTFE, 0.01"	53	0.3	8-T02	1000
8mm Open Top Screw Cap, 8-425 thread, 5mm hole, Type 8 Rubber/PTFE Liner	Black	Polypropylene	Red Natural Rubber/Clear PTFE	50	1.3	8-SC-8RT1	500
8mm Open Top Screw Cap, 8-425 thread, 5mm hole	Black	Polypropylene	White Silicone/Red PTFE	45	1.3	8-SC-ST15	500

Chromacol standard opening screw thread vial convenience and instrument select (IS) kits

- Convenience kits save time during sample preparation
- Includes 100 vials and 100 caps with pre-assembled septa for added convenience during sample preparation
- Reusable two compartment trays protect vials and closure while keeping matching supplies together



Convenience Kits

Items not shown to scale

Chromacol standard opening screw thread vial convenience and instrument select (IS) kits

Kit Type	Glass	Patched	Cap Color	Septum	Vial Cat. No.	Cap/ Septum Cat. No.	Cat. No.	Pack of
Convenience Kit, Standard Opening Screw Vial	Clear	Yes	White	Blue Silicone/ PTFE		8-SC(W)+ 8-ST101	2-SV101-CP	100
IS Kit, Standard Opening Screw Vial for Thermo Scientific LC Autosamplers	Clear	Yes	Black	White Silicone/ Red PTFE	2-SV	8-SC-ST15	TSL	100

For more information, visit **thermofisher.com/chromacol**

Chromacol 9mm wide opening screw thread vials and inserts

- SureStop 9mm vials as part of the Advanced Vial Closure System (AVCS) offer the sealing and performance characteristics of a crimp top vial and remove any subjectivity in achieving optimal seal compression closing a vial by incorporating a definite stop point into the design of the vial finish. See pages XX to XX
- SureStop 9mm vials should be used with AVCS 9-SCK closures in order to get the best possible performance
- Available with a graduated, write-on patch for convenient sample identification
- Wide neck opening design, allows easy filling, requires Micro-Inserts with a diameter of 6mm
- Manufactured from superior quality 1st hydrolytic class glass (Type 1) in clear and amber
- Microsampling and High Recovery Vials allow maximum sample extraction without need for separate inserts



Chromacol 9mm wide opening screw thread vials and inserts

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume	Usable Volume	Residual (µL)	Cat. No.	Pack of
9mm SureStop Screw Thread Vial (AVCS)	Amber	Yes	12x32	Flat Bottom	2.0mL	1.5mL	<170	2-SVWK(A)	100
9mm Screw Thread Vial	Clear	No	15x46	Flat Bottom	4.0mL	3.5mL	<500	4-SVQ	500
	Clear	Yes	12x32	Flat Bottom	2.0mL	1.5mL	<170	2-SVW	500
	Amber	Yes	12x32	Flat Bottom	2.0mL	1.5mL	<170	2-SVW(A)	500
9mm Screw Thread Vial, High Recovery with 30µL Reservoir	Clear	No	12x32	Tapered Base	1.5mL	1.3mL	<4	1.5-HRSV	100
9mm Screw Thread Vial, Ultra High Recovery with 10µL Reservoir	Clear	No	12x32	Mandrel Base	1.2mL	1.0mL	<2	1.2-UHRSV	100
9mm Screw Thread Vial 300µL, Fused Insert	Clear	Yes	12x32	Insert Vial	0.3mL	250µL	<3	03-FISV	500
	Amber	Yes	12x32	Insert Vial	0.3mL	250µL	<3	03-FISV(A)	500
300µL Insert	Clear	–	6x31	Flat Bottom	300µL	200µL	<12	03-NV	1000
Self-centering support device for tapered glass inserts	Polyethylene	–	–	–	–	–	–	MTS-1	500
9mm Screw Thread Vial	Polypropylene	No	12x32	Insert Vial, Mandrel	300µL	200µL	<4	03-PPSVW	500
0.6Ml Pe Screw Top Vial W Cylindrical Insert	Polyethylene	----	12x32	Insert Vial	600µL			06-PESVW	500
0.6Ml Pe Screw Top Vial W Cylindrical Insert	Polypropylene	----	12x32	Insert Vial	600µL			06-PPSVW	500

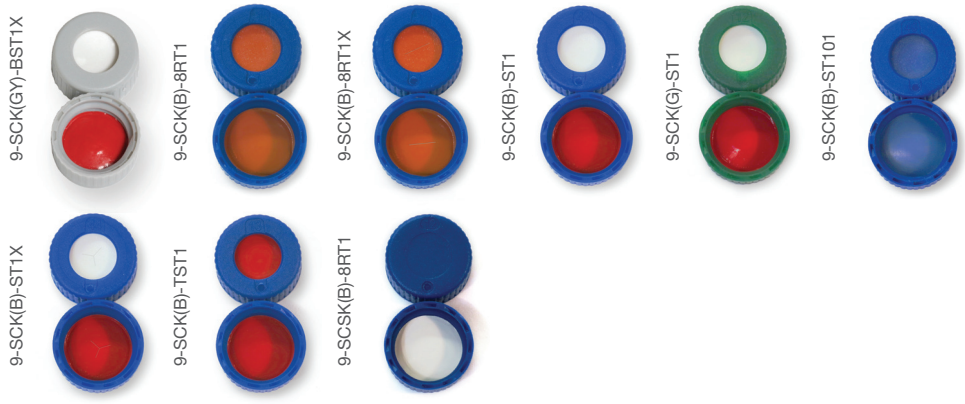
Chromacol 9mm screw thread closures

K-Series closures featuring AVCS technology (Advanced Vial Closure System)

- Septa push through virtually eliminated due to improved interior geometry
- Improved sealing capability
- Improved autosampler compatibility
- AVCS provides the freedom to select the best septum for your instrument and applications
- Cost efficient alternative to caps with bonded septa
- Optimized ergonomics, fine texturing and evenly spaced ribbing for superior handling

Further features are:

- Easy-on, easy-off convenience with just one turn
- Pre-assembled caps and septa are convenient and minimize contamination from handling
- Polypropylene caps are chemically inert and suitable for most chromatography applications
- Closures have the profile of a crimp or snap closure for compatibility with robotic autosamplers
- Closures are shipped in sealed polybags to prevent contamination during transport
- Special caps for magnetic transport autosamplers
- Flanged caps suitable for Shimadzu, Hitachi and Tosoh instruments



Chromacol 9mm screw thread closures

Description	Cap Color	Cap Material	Septum	Hardness shore	Thickness (mm)	Cat. No.	Pack of
9mm Open Top Short Screw Cap, 6mm hole	Gray	Polypropylene	Bonded Red PTFE/White Silicone, Pre-slit	45	1.2	9-SCK(GY)-BST1X	500
9mm Open Top Short Screw AVCS Cap, 6mm hole	Blue	Polypropylene	Red Rubber/Clear PTFE	58	1.0	9-SCK(B)-8RT1	500
	Blue	Polypropylene	Red Rubber/Clear PTFE, Pre-slit	58	1.0	9-SCK(B)-8RT1X	500
	Blue	Polypropylene	White Silicone/Red PTFE	57	1.0	9-SCK(B)-ST1	500
	Green	Polypropylene	White Silicone/Red PTFE	57	1.0	9-SCK(G)-ST1	500
	Blue	Polypropylene	Blue Silicone/PTFE	30	1.0	9-SCK(B)-ST101	500
	Blue	Polypropylene	White Silicone/Red PTFE, Y-Pre-slit	57	1.0	9-SCK(B)-ST1X	500
	Blue	Polypropylene	Red PTFE/White Silicone/ Red PTFE	57	1.0	9-SCK(B)-TST1	500
9mm Solid Top Short Screw AVCS Cap	Blue	Polypropylene	Red Natural Rubber/Beige PTFE	58	1.0	9-SCSK(B)-8RT1	500

Chromacol 9mm wide opening convenience and instrument select (IS) kits

- Convenience kits save time during sample preparation
- Includes 100 vials and 100 caps with pre-assembled septa for added convenience during sample preparation
- Reusable two compartment trays protect vials and closure while keeping matching supplies together



2-SVWGK8-CPK

For more information, visit **thermofisher.com/chromacol**

Chromacol 9mm wide opening screw thread vial convenience and instrument select (IS) kits

Kit Type	Glass	Patched	Cap Color	Septum	Vial Cat. No.	Cap Cat. No.	Cat. No.	Pack of
SureStop Convenience Kit	Amber	Yes	Blue	White Silicone/Red PTFE	2-SVWK(A)	9-SCK(B)-ST1	2-SVWK(A)ST-CPK	100
SureStop IS Kit, GOLD Grade, for Thermo GC Autosampler	Clear	Yes	Blue	Blue Silicone/PTFE	2-SVWGK	9-SCK(B)-ST101	TTRGKK	100
AVCS Convenience Kit	Clear	Yes	Blue	Red Rubber/ Clear PTFE	2-SVW	9-SCK(B)-8RT1	2-SVW8-CPK	100
	Clear	Yes	Blue	White Silicone/Red PTFE	2-SVW	9-SCK(B)-ST1	2-SVWST-CPK	100
	Amber	Yes	Blue	White Silicone/Red PTFE	2-SVW(A)	9-SCK(B)-ST1	2-SVW(A)ST-CPK	100
AVCS IS Kit, for Agilent LC Autosampler	Clear	Yes	Blue	Red Rubber/ Clear PTFE	2-SVW	9-SCK(B)-8RT1	HPLSK	100
AVCS IS Kit, for Thermo GC Autosampler	Clear	Yes	Blue	Blue Silicone/PTFE	2-SVW	9-SCK(B)-ST101	TTRK	100
AVCS Convenience Kit, for Varian GC Autosampler	Clear	Yes	Blue	White Silicone/Red PTFE	2-SVW	9-SCK(B)-ST1	VAGK	100
AVCS IS Kit, for Varian LC Autosampler	Clear	Yes	Blue	White Silicone/Red PTFE	2-SVW	9-SCK(B)-ST1	VALK	100
AVCS IS Kit, for Waters Alliance® LC Autosampler	Clear	Yes	Blue	White Silicone/Red PTFE	2-SVW	9-SCK(B)-ST1	WALK	100
AVCS IS Kit, for PerkinElmer LC Autosampler	Clear	Yes	Green	White Silicone/Red PTFE, Pre-slit	2-SVW	9-SCK(G)-ST1X	PELK	100

Chromacol 2mL, 12x32mm, 11mm crimp top vials and closures

- Thermo Scientific Chromacol GOLD glass quality, a low expansion high purity glass with an extremely low concentration of active sites
- Manufactured from superior quality 1st hydrolytic class glass (Type 1) in clear and amber
- Available with a graduated, write-on patch for convenient sample identification
- Wide neck opening design, allows easy filling, requires Micro-Inserts with a diameter of 6mm
- Microsampling and High Recovery Vials allow maximum sample extraction without need for separate inserts
- Where levels of inorganic ions have to be kept to an absolute minimum the use of plastics may be preferred to the more conventional glass vials

Compatible with:

Most HPLC and GC autosamplers

For autosampler compatibility visit **thermofisher.com/chromexpert**



Chromacol 2mL, 12x32mm, 11mm crimp top vials and inserts

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume	Usable Volume	Residual (µL)	Cat. No.	Pack of
11mm Crimp Top Vial, Wide Opening	Clear	Glass	15x46	Flat Bottom	4.0mL	3.5mL	<500	4-CV	500
	Clear	Glass	12x40	Flat Bottom	2.5mL	2.0mL	<170	2.5-CV	500
	Clear	Yes	12x32	Flat Bottom	2.0mL	1.5mL	<170	2-CV	500
	Amber	Yes	12x32	Flat Bottom	2.0mL	1.5mL	<170	2-CV(A)	500
11mm Crimp Top Vial, Wide Opening	Clear	Yes	12x32	Round Bottom	2.0mL	1.5mL	<170	2-CRV	500
11mm Crimp Top 1.5mL High Recovery Vial	Clear	No	12x32	High Recovery	1.5mL	1.3mL	<4µL	1.5-HRCV	100

For more information, visit **thermofisher.com/chromacol**



Chromacol 2mL, 12x32mm, 11mm crimp top vials and inserts (continued)

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume	Usable Volume	Residual (µL)	Cat. No.	Pack of
11mm Crimp Top 0.9mL Vial, Wide Opening	Clear	No	10x32	Conical	1.0mL	850µL	<5	09-CTV	500
	Clear	No	12x32	Insert Vial	0.9mL	830µL	<3	09-FIV	500
11mm Crimp Top 0.3mL Vial, Fused Insert	Clear	Yes	12x32	Insert Vial	0.3mL	250µL	<3	03-FIV	500
	Amber	Yes	12x32	Insert Vial	0.3mL	250µL	<3	03-FIV(A)	500
11mm Crimp Top 0.2mL Vial, Fused Insert – GOLD Grade Glass	Clear	Yes	12x32	Insert Vial	0.2mL	180µL	<2	02-FIVG	500



Chromacol 2mL, 12x32mm, 11mm crimp top vials and inserts (continued)

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume	Usable Volume	Residual (µL)	Cat. No.	Pack of
300µL Insert	Clear	–	6x31	Flat Bottom	300µL	200µL	<12	03-NV	1000

Chromacol 11mm crimp top closures

- Pre-assembled caps and septa are convenient and minimize contamination from handling
- Aluminum crimp closures provide a secure leak-resistant seal
- Aluminum seals must be applied with a crimping tool
- Closures are shipped in sealed polybags to prevent contamination during transport
- First crimp cap with assembled aluminum liner for interference free analysis of Elastomers, Polymers, Phthalates, Halogenated compounds and Silicones
- First crimp cap with tight PTFE sealing disk due to additional silicone ring



Chromacol 11mm crimp top closures

Description	Cap Color	Cap Material	Septum	Hardness shore	Thickness (mm)	Cat. No.	Pack of
11mm Crimp Cap, 6mm center hole, Type 6 Rubber/PTFE	Red	Aluminum	Red Chlorobutyl Rubber/ Clear PTFE, Sulphur free	40	1.0	11-AC6(R)	500
11mm Crimp Cap, 6mm center hole, Type 7 Rubber/PTFE	Silver	Aluminum	Red Natural Rubber/Clear PTFE	60	1.0	11-AC7	500
	Blue	Aluminum		60	1.0	11-AC7(B)	500
11mm Aluminium Crimp Cap Type 8 Rubber/PTFE	Silver	Aluminum	Type 8 Rubber / PTFE			11-AC8	500
11mm Aluminium Crimp Cap Type 8 Rubber/PTFE	Blue	Aluminum	Type 8 Rubber / PTFE			11-AC8(B)	500
	Green	Aluminum	Type 8 Rubber / PTFE			11-AC8(G)	500
	Gold	Aluminum	Type 8 Rubber / PTFE			11-AC8(GO)	500
	Red	Aluminum	Type 8 Rubber / PTFE			11-AC8(R)	500

For more information, visit **thermofisher.com/chromacol**



Chromacol 11mm crimp top closures (continued)

Description	Cap Color	Cap Material	Septum	Hardness shore	Thickness (mm)	Cat. No.	Pack of
11mm Crimp Cap, 6mm center hole	Blue	Aluminum	Blue Silicone/Red PTFE	20	1.4	11-AC(B)-ST144	500
	Silver	Aluminum	White Silicone/Red PTFE	50	1.3	11-AC-ST15	500
	Silver	Aluminum	Blue Silicone/PTFE	30	1.0	11-AC-ST101	500
	Silver	Aluminum	Blue Silicone/PTFE, Pre-slit	30	1.0	11-AC-ST101X	500
	Silver	Aluminum	White Virgin PTFE, 0.01"	–	0.25	11-ACT	1000
	Silver	Aluminum	Red PTFE/White Silicone/Red PTFE	57	1.0	11-AC-TST1	500



Chromacol 11mm crimp top closures (continued)

Description	Cap Color	Cap Material	Septum	Hardness shore	Thickness (mm)	Cat. No.	Pack of
11mm Crimp Cap, magnetic	Silver	Steel	White Silicone/Red PTFE	57	1.3	11-MC-ST15	500
11mm Snap Cap for Crimp Vials	Clear	Polyethylene	–	–	–	11-PEC1	1000
11mm Snap Cap for Crimp Vials, Pre cut	Clear	Polyethylene	–	–	–	11-PEC1X	1000
11mm Snap Cap for Crimp Vials	Clear	Polyethylene	White Silicone/Red PTFE	57	1.0	11-PEC-ST1	500

Chromacol 11mm crimp top convenience and instrument select (IS) kits

- Convenience kits save time during sample preparation
- Include matched quantities of vials and aluminum seals with pre-assembled septa for added convenience during sample preparation
- Reusable two compartment trays protect vials and closure while keeping matching supplies together



2-CV7-CP

Items not shown to scale

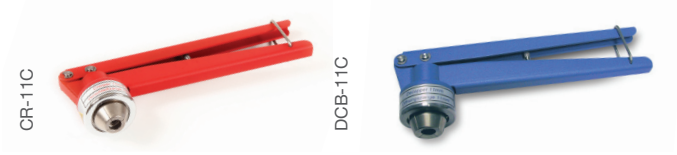
Chromacol 11mm crimp top convenience and instrument select (IS) kits

Kit Type	Glass	Patched	Cap Color	Septum	Vial Cat. No.	Cap Cat. No.	Cat. No.	Pack of
Convenience Kit, Wide Opening Crimp Top Vial	Amber	Yes	Silver	Red Natural Rubber/ Clear PTFE, Type 7	2-CV(A)	11-AC7	2-CV(A)7-CP	100
IS Kit, Wide Opening Crimp Top Vial for Agilent GC Autosampler	Clear	Yes	Silver	Red Natural Rubber/ Clear PTFE, Type 7	2-CV	11-AC7	HPG	100

For more information, visit **thermofisher.com/chromacol**

Chromacol 11mm crimping and decrimping tools

- Crimping tools provide a reproducible, secure vial closure for all 11mm vial and seal combinations
- Easy and convenient handling
- High quality construction for durability and long life
- Fine textured surface (powder coated) for a better grip and corrosion resistance



Items not shown to scale

Chromacol 11mm Crimpers and Decrimpers

Description	Use	Cat. No.	Pack of
Manual Crimper	Attaches 11mm aluminum crimp seals	CR-11C	1
Manual Decrimper	Removes 11mm aluminum crimp seals without vial damage	DCB-11C	1

For electronic crimpers and decrimpers look on page 2-091

Compatible with:

Most HPLC and GC autosamplers

Chromacol 2mL, 12x32mm, 11mm snap cap vials

- Superior quality 1st hydrolytic class glass (Type 1) in clear and amber
- Available with a graduated, write-on patch for convenient sample identification
- Wide neck opening design, allows easy filling; requires Micro-Inserts with diameter of 6mm
- Microsampling and High Recovery Vials allow maximum sample extraction without need for separate inserts
- Snap-Cap vials can be used with snap caps or aluminum crimp seal closures

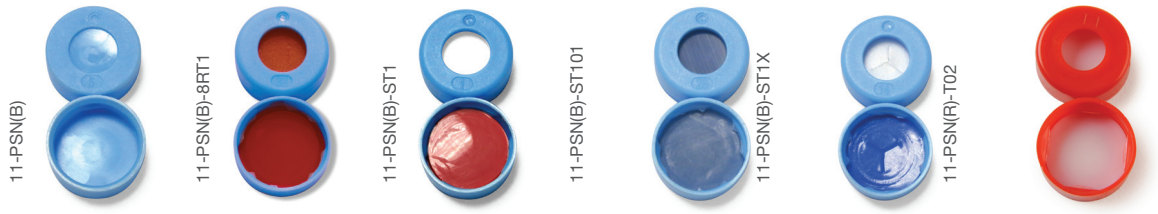


Chromacol 2mL, 12x32mm, 11mm snap vials and inserts

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume	Usable Volume	Residual (µL)	Cat. No.	Pack of
11mm Snap Cap Vial	Clear	Yes	12x32	Flat Bottom	2.0mL	1.5mL	<170	2-RV	500
	Amber	Yes	12x32	Flat Bottom	2.0mL	1.5mL	<170	2-RV(A)	500
11mm Snap Cap 1.5mL Vial	Clear	No	12x32	High Recovery	1.5mL	1.3mL	<4	1.5-HRRV	100
11mm Snap Cap 300µL Vial, Fused Insert	Clear	Yes	12x32	Fused Conical	300µL	250µL	<3	03-FIRV	500
	Amber	Yes	12x32	Fused Conical	300µL	250µL	<3	03-FIRV(A)	500
300µL Insert	Clear	–	6x31	Flat Bottom	300µL	200µL	<12	03-NV	1000
Self-centering support device for tapered glass inserts	Polyethylene	–	–	–	–	–	–	MTS-1	500
600Ul Crimp Top Vial Polyethylene Insert	Polypropylene		12x32	Insert Vial	600µL			06-PECV 06-PERV	500
600Ul Pe Crimp / Snap Vial, Cylindrical Insert	Polypropylene		12x32	Insert Vial	600µL			06-PERV	500

Chromacol 11mm snap closures

- New design of locking tabs provides easier application and removal of caps
- Enlarged open area allows for needle penetration across the entire vial opening
- Textured outer surface for easier gripping and improved detection by autosamplers with optical vial sensors
- Easy to apply and easy to remove from Snap vials without tools
- Pre-assembled caps and septa are convenient and minimize contamination from handling
- Snap caps eliminate the need for crimping or de-crimping tools
- Polyethylene caps are chemically inert and suitable for most chromatography applications
- Closures are shipped in sealed polybags to prevent contamination during transport



Chromacol 11mm snap closures

Description	Cap Color	Cap Material	Septum	Hardness shore	Thickness (mm)	Cat. No.	Pack of
11mm Snap Cap, thinned penetration area	Blue	Polyethylene	Integral Molded In Polyethylene	–	–	11-PSN(B)	500
11mm Snap Cap, 6mm hole	Blue	Polyethylene	Red Natural Rubber/Clear PTFE	58	1.0	11-PSN(B)-8RT1	500
	Blue	Polyethylene	White Silicone/Red PTFE	57	1.0	11-PSN(B)-ST1	500
	Blue	Polyethylene	Blue Silicone/PTFE	30	1.0	11-PSN(B)-ST101	500
	Blue	Polyethylene	White Silicone/Blue PTFE, Pre-slit	57	1.0	11-PSN(B)-ST1X	500
	Red	Polyethylene	White Virgin PTFE, 0.01"	53	0.3	11-PSN(R)-T02	500

Chromacol 11mm snap cap wide opening vial convenience kits

- Convenience kits save time during sample preparation
- Includes 100 vials and 100 caps with pre-assembled septa for added convenience during sample preparation
- Reusable two compartment trays protect vials and closure while keeping matching supplies together



Items not shown to scale

Chromacol 11mm snap cap wide opening vial convenience kits

Kit Type	Glass	Patched	Cap Color	Septum	Vial Cat. No.	Cap Cat. No.	Cat. No.	Pack of
Convenience Kit, Wide Opening Snap Vial	Clear	Yes	Blue	White Silicone/Red PTFE	2-RV	11-PSN(B)-ST1	2-RVST-CP	100
	Clear	Yes	Blue	Red Natural Rubber/Clear PTFE	2-RV	11-PSN(B)-8RT1	2-RV8-CP	100

Chromacol 13mm screw vials, 13-425 thread finish

- Superior quality 1st hydrolytic class glass (Type 1) in clear and amber
- Microsampling and High Recovery Vials allow maximum sample extraction without need for separate inserts



Images shown are 60% to scale
* 40% to scale

Chromacol 13mm screw vials, 13-425 thread finish

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume (mL)	Usable Volume (mL)	Residual (µL)	Cat. No.	Pack of
13-425 Screw Thread Vial	Clear	No	13x100	Round Bottom	10.0	8.5	<500	10-SV	125
	Clear	No	13x65	Round Bottom	5.0	4.5	<500	5-SV	125
	Clear	No	15x46	Flat Bottom	4.0	3.5	<800	4-SV	500
	Amber	No	15x46	Flat Bottom	4.0	3.5	<800	4-SV(A)	500
13-425 Screw Thread 3.5mL High Recovery Vial	Clear	No	15.25x46	High Recovery	3.5	3.0	<12	3.5-HRSV	250

Chromacol 13-425 Thread Caps and Septa

- Open top caps are designed to be used with any of our 12mm septa
- Polypropylene caps are chemically inert and suitable for most chromatography applications
- Pre-assembled caps and septa are convenient and minimize contamination from handling



Chromacol 13-425 Screw thread caps and septa

Description	Cap Color	Cap Material	Septum	Hardness shore	Thickness (mm)	Cat. No.	Pack of
13mm Open Top Screw Cap, 13-425 thread, 8mm hole	Black	Polypropylene	–	–	–	12-SC	500
13mm Solid Top Cap, 13-425 thread	Black	Polypropylene	–	–	–	12-SCS	500
Septum for 13-425 Screw Caps	–	–	Red Natural Rubber/ Clear PTFE	38	1.0	12-6RT1	500
	–	–	White Silicone/Red PTFE	57	2.0	12-ST2	500
	–	–	Blue Silicone/PTFE	30	1.0	12-ST101	500



Chromacol 13-425 Screw thread caps and septa (continued)

Description	Cap Color	Cap Material	Septum	Hardness shore	Thickness (mm)	Cat. No.	Pack of
13mm Open Top Screw Cap, 13-425 thread, 8mm hole	Black	Polypropylene	White Silicone/Red PTFE	57	1.3	13-SC-ST15	500
	Black	Polypropylene	Red Natural Rubber/Clear PTFE	58	1.0	12-SC-8RT1	500
	Black	Polypropylene	White Silicone/Red PTFE	57	2.0	12-SC-ST2	500

Chromacol shell/neckless vials

- Superior quality 1st hydrolytic class glass (Type 1) in clear
- Polyethylene cap with starburst center design eases syringe needle penetration
- Convenience kits include equal quantities of vials and caps



Chromacol shell/neckless vials

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume (mL)	Usable Volume (mL)	Residual (µL)	Cat. No.	Pack of
1mL Neckless/Shell Vial	Clear	No	8x40	Flat Bottom	1.25	1.0	<80	1-NWV	500
1mL Neckless/Shell Vial with PE-Cap	Clear	No	8x40	Flat Bottom	1.25	1.0	<80	1-NWV-C	200
1mL Neckless/Shell Vial with PE-Cap	Amber	No	8x40	Flat Bottom	1.25	1.0	<81	1-NWV(A)-C	200
2mL Neckless/Shell Vial	Clear	No	12x32	Flat Bottom	2.5	2.0	<175	2.5-NV	500
4mL Neckless/Shell Vial with PE-Cap	Clear	No	15x46	Flat Bottom	5.5	4.0	<350	4-NWV-C	100

Chromacol headspace vials

Glass vials with 20mm crimp seal or 18mm screw thread finish
are designed to fit most headspace autosamplers

- Superior quality 1st hydrolytic class glass (Type 1) in clear and amber, meets all requirements of Pharm. US, EU, JPN
- Round bottom vials are compatible with most autosamplers and more easily handled by robotic arms that lift the vial from the tray
- Vials feature beveled edge 20mm crimp finish
- The bevel edge on the lip of the vial provides additional sealing power for greater leak resistance under high pressure
- Screw thread headspace vials are convenient and do not require tools
- Multiple turn threading maintains a tight seal through extreme heating cycles



Chromacol headspace vials

Description	Glass	Patched	Dimension (mm)	Finish	Profile	Total Volume (mL)	Usable Volume (mL)	Cat. No.	Pack of
20mm Headspace Crimp Vial	Clear	No	30x60	Beveled Edge	Flat Bottom	27	27	27-CV	100
	Clear	No	23x75	Beveled Edge	Round Bottom	22	20	22-CV	125
	Clear	No	22.5x75	Beveled Edge	Round Bottom	21	20	20-CV	125
	Amber	No	22.5x75	Beveled Edge	Round Bottom	21	20	20-CV(A)	125

For more information, visit **thermofisher.com/chromacol**



Chromacol headspace vials (continued)

Description	Glass	Patched	Dimension (mm)	Finish	Profile	Total Volume (mL)	Usable Volume (mL)	Cat. No.	Pack of
20mm Headspace Crimp Vial	Clear	No	22.5x46	Beveled Edge	Round Bottom	12	10	10-CV	125
	Amber	No	22.5x46	Beveled Edge	Round Bottom	12	10	10-CV(A)	125
	Clear	No	18x50	Beveled Edge	Round Bottom	10	9	9-CV	100
	Clear	No	22x38	Beveled Edge	Round Bottom	8	6	6-CV	125
18mm Screw Top Headspace Vial	Clear	No	22.5x76	Screw Thread	Round Bottom	21	20	20-HSV	125
	Clear	No	22.5x46	Screw Thread	Round Bottom	12	10	10-HSV	125

Chromacol 20mm crimping and decrimping tools

- Crimping tools provide a reproducible, secure vial closure for all 20mm vial and seal combinations
- Easy and convenient handling
- High quality construction for durability and long life
- Fine textured surface (powder coated) for a better grip and corrosion resistance



Items not shown to scale

Chromacol 20mm crimping and decrimping tools

Description	Use	Cat. No.	Pack of
Manual Crimper	Attaches 20mm crimp seals	CR-20C	1
Decapping Pliers	Removes 20mm crimp seals, Protective gloves recommended	DCR-20	1
Manual Decrimper	Removes 20mm crimp seals without vial damage	DCB-20C	1

Chromacol headspace caps and septa

- Use magnetic seals with PAL/CTC/Leap Technologies, Gerstel and other magnetic transport autosamplers
- 20mm crimp seals must be applied with a crimping tool
- Pre-assembled caps and septa are convenient and minimize contamination from handling
- Extended temperature range products for high-temperature headspace applications



Images shown are 50% to scale

Chromacol headspace caps and septa

Description	Cap Color	Cap Material	Septum	Hardness °shore	Thickness (mm)	Cat. No.	Pack of
20mm Crimp Cap, 9mm hole	Silver	Aluminum	–	–	–	20-ACB	500
20mm Magnetic Crimp Cap, 6mm hole	Silver	Tinplate	–	–	–	20-MCB	500
	Red	Alu/ Tinplate	–	–	–	20-MCBC(R)	500
18mm Magnetic Screw Cap, 8mm hole	Silver	Steel	–	–	–	18-MSC	125



















Septum for 20mm Crimp Caps	–	–	20mm Gray Bromobutyl Stopper	55	3.0	20-B3P	500
	–	–	20mm Molded Gray Chlorobutyl	52	3.0	20-CB3	1000
	–	–	20mm Molded Gray Bromobutyl/ Gray PTFE	52	3.0	20-CBT3	1000
	–	–	20mm Molded Black Bromobutyl/Gray PTFE, Bellows Type	52	3.0	20-CBT3B	1000
	–	–	20mm Silicone/ PTFE for liquid – liquid extraction	–	0.25	20-LLX	100
	–	–	20mm Blue Silicone/Natural PTFE	45	3.0	20-ST3	500
	–	–	20mm Red Silicone/Natural PTFE, high temperature	45	3.1	20-ST3HT	100
	–	–	20mm Blue Silicone/PTFE	30	1.0	20-ST101	500

Chromacol headspace caps and septa (continued)

Description	Cap Color	Cap Material	Septum	Hardness °shore	Thickness (mm)	Cat. No.	Pack of
Septum for 18mm Screw Caps	–	–	18mm Blue Silicone/PTFE	30	1.0	18-ST101	125
20mm Composite Magnetic Crimp Cap, 8mm hole	Blue	Alu/ Tinplate	20mm Blue Silicone/Natural PTFE	45	3.0	20-MCBC-ST3	500
	Red	Alu/ Tinplate	20mm Molded Gray Chlorobutyl	52	3.0	20-MCBC(R)-CBT3	500
	Red	Alu/ Tinplate	20mm Blue Silicone/Natural PTFE	45	3.0	20-MCBC(R)-ST3	500
20mm Magnetic Tinplate Crimp Cap	Silver	Tinplate	20mm Blue Silicone/Natural PTFE	45	3.0	20-MCB-ST3	500
20mm Crimp Cap, 9mm hole	Silver	Aluminum	20mm Molded Gray/Bromobutyl/ Gray PTFE	52	3.0	20-AC-CBT3	500
	Silver	Aluminum	20mm Blue Silicone/Natural PTFE	45	3.0	20-AC-ST3	500
18mm Magnetic Screw Cap, 8mm hole	Silver	Steel	18mm Molded Blue Chlorobutyl/ Gray PTFE	52	3.0	18-MSC-CBT3	125
	Silver	Steel	18mm Blue Silicone/PTFE, not prefitted	30	1.0	18-MSC-ST101	125
	Silver	Steel	18mm Blue Silicone/Natural PTFE	45	2.0	18-MSC-ST201	125
20mm Magnetic Tinplate Crimp Cap	Silver	Tinplate	20mm Red Silicone/Natural PTFE, high temperature (300°C)	45	3.1	20-MCB-ST3HT	500
18mm Magnetic Screw Cap, 8mm hole	Silver	Steel	18mm Red Silicone/Natural PTFE, high temperature (250°C)	45	3.1	18-MSC-ST3HT	125
20mm Magnetic Crimp Cap, 8mm hole	Gold	Tinplate	20mm White Silicone/Blue PTFE with thin Penetration Area	45	3mm / 1.5mm	20-MCB-STME	100
20mm Magnetic Crimp Cap, 8mm hole	Blue	Alu/ Tinplate	20mm White Silicone/Blue PTFE with thin Penetration Area	45	3mm / 1.5mm	20-MCBC-STME	100
18mm Magnetic Crimp Cap, 8mm hole	Silver	Steel	20mm White Silicone/Blue PTFE with thin Penetration Area	45	2.2mm / 1.5mm	18-MSC-STME	100

Description	Cap Material	Septum	Cat. No.	Pack of
Wash Kit Closures, PE Snap Cap T/S, slit, PK/100	Polyethylene	PTFE/Silicone, Slit	WSKTCL-100	100

Chromacol headspace vial convenience kits

- Include matched quantities of vials and seals with pre-assembled septa for added convenience during sample preparation
- Convenience kits save time during sample preparation



20-HSVST201-CP



20-CVST3-CP

Items not shown to scale

Chromacol headspace vial convenience kits

Kit Type	Glass	Patched	Cap Color	Septum	Vial Cat. No.	Cap Cat. No.	Cat. No.	Pack of
Convenience Kit, 20mL Headspace Screw Vial, Round Bottom, Steel Screw Cap, 8mm hole	Clear	No	Silver	18mm Blue Silicone/Natural PTFE	20-HSV	18-MSC-ST201	20-HSVST201-CP	125
Convenience Kit, 20mL Headspace Crimp Vial, Beveled Edge, Round Bottom, Al Crimp Cap, 8mm hole	Clear	No	Silver	20mm Molded Blue Chlorobutyl/ Gray PTFE	20-CV	20-AC-CBT3	20-CVCBT3-CP	125
Convenience Kit, 20mL Headspace Crimp Vial, Beveled Edge, Round Bottom, Al Crimp Cap, 8mm hole	Clear	No	Silver	20mm Blue Silicone/Natural PTFE	20-CV	20-AC-ST3	20-CVST3-CP	125

Description	Glass	Septum	Cat. No.	Pack of
Wash Kit, PP Box 25 cavities, 10ml Glass Crimp Vial , PE Snap Cap S/T, slit, 25 each vial + closure	Clear	PTFE/Silicone, Slit	WSKT-25	25



Chromacol sample storage screw thread vials

- Capacity range up to 40mL
- Superior quality 1st hydrolytic class glass (Type 1) in clear and amber
- Provide consistent pH for duration of sample storage life
- PTFE-Lined Solid-top storage caps



Caps and Septa images 50% to scale

Chromacol sample storage screw thread vials

Description	Glass	Patched	Dimension (mm)	Profile	Total Volume (mL)	Capacity (DRAMS)	Cat. No.	Pack of
24-400 Screw Vial	Clear	No	28x95	Flat Bottom	40	8	40-SV	100
	Amber	No	28x95	Flat Bottom	40	8	40-SV(A)	100
20-400 Screw Vial	Clear	No	23x85	Flat Bottom	22	6	22-SQAAAAAV	200
18-400 Screw Vial	Clear	No	21x70	Flat Bottom	16	4	16-SV	200
	Amber	No	21x70	Flat Bottom	16	4	16-SV(A)	200
15-425 Screw Vial	Clear	No	19x65	Flat Bottom	12	3	12-SV	200
	Amber	No	19x65	Flat Bottom	12	3	12-SV(A)	200
	Clear	No	17x60	Flat Bottom	8	2	8-SV	200
	Amber	No	17x60	Flat Bottom	8	2	8-SV(A)	200

For smaller vials look at the previous sections



Caps and Septa images 50% to scale

Chromacol sample storage screw thread caps and septa

Description	Cap Color	Cap Material	Septum	Hardness °shore	Thickness (mm)	Cat. No.	Pack of
24-400 Screw Cap	White	Polypropylene	PTFE/PE Foam Liner	–	1.0	24-SCST	100
20-400 Screw Cap	White	Polypropylene	PTFE/PE Foam Liner	–	1.0	20-SCST	100
18-400 Screw Cap	White	Polypropylene	PTFE/PE Foam Liner	–	1.0	18-SCST	100
15-425 Screw Cap	White	Polypropylene	PTFE/PE Foam Liner	–	1.0	15-SCST	100
13-425 Screw Cap	White	Urea	PTFE/PE Foam Liner	–	1.0	13-SCST	100

For more information, visit **thermofisher.com/chromacol**

Chromacol vial racks and storage boxes

- For a safe working position on the lab bench and during transport
- Ideal for space-saving storage in fridges
- Temperature resistant from -90ºC to 121ºC (except Foam)
- Chemically resistant and fairly robust; autoclavable (except Foam)

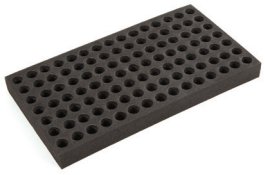
B-100



T-28



T-105



60180-1232



60180-0632



Items not shown to scale

Chromacol vial racks and storage boxes

Description	Color	Material	Dimension (mm)	No of Vials	OD of Vials (mm)	Stackable	Cat. No.	Pack of
Autoclavable freezer and storage box with lid, alphanumeric grid, -90ºC to 121ºC	5 assorted colors (red, yellow, blue, green, natural)	Polypropylene	155x140x55	100	12	Yes	B-100	5
	Silver	Anodised Aluminum	210x134	28	22	No	T-28	5
Vial Tray	Black	Foam	210x134	105	12	No	T-105	5
SBS/ANSI standard footprint Vial Rack	Silver	Anodised Aluminum	127,8x85,5	54	12	No	60180-1232	1
	Silver	Anodised Aluminum	127,8x85,5	96	6	No	60180-0632	1

Chromacol EPA, TOC and Scintillation screw vials

Level 300 cleaned and certified

- Processed and packaged under a registered ISO Quality Management System
- Laboratory certified to meet U.S. EPA Super Fund Standards in accordance with the latest edition of EPA's "Specifications and Guidance for Contaminant Free Sample Containers"
- Every case of Level 300 product contains a Certificate of Analysis and is custody sealed to ensure reliable chain-of-custody

Level 200 cleaned

- Processed and packaged under a strict registered ISO Quality Management System in the same manner as Level 300 products
- Level 200 products are not certified
- Every case of product is labeled with its production number and is custody sealed to ensure reliable chain-of-custody

Level 100

- Level 100 products are not certified or pre-cleaned
- Every case of product is labeled with its production number and is custody sealed to ensure reliable chain-of-custody

TOC vials

- The only low-level certified vials in the market for Total Organic Carbon (TOC) testing and sampling
- Major TOC instrument manufacturers recommend these vials when analysis of low levels of TOC requires low background level assurance
- Each lot of vials is tested and certified to contribute less than 10ppb TOC as background or for less stringent applications the 20ppb TOC version
- Certificate of Analysis is included with lot production numbers

Thermo Scientific™ Sterilin™ Scintillation vials

- Provide the very lowest background count and benefit from very high optical clarity.
- Typical background count of 13CPM or lower, compared to an average 16-65CPM from competitive products
- Noise level of 2.28 and a quenching index factor of 349

Chromacol EPA screw vial kits

Kit Type	Glass	Dimension (mm)	Total Volume (mL)	Level	Septum	Cat. No.	Pack of
EPA Screw Vial Assembled Kit Vials/Septa/Caps	Clear	28x95	40	Level 100	0.01" 1Silicone	40-EPAVCS	100
	Clear	28x95	40	Level 200 Pre-cleaned		40-EPAVCS-PC	72
	Clear	28x95	40	Level 300 Pre-cleaned		40-EPAVCS-PC3	72
	Amber	28x95	40	Level 100		40-EPAVCS(A)	100
	Amber	28x95	40	Level 200 Pre-cleaned		40-EPAVCS(A)-PC	72
	Clear	28x57	20	Level 100		20-EPAVCS	100
	Amber	28x57	20	Level 100		20-EPAVCS(A)	100

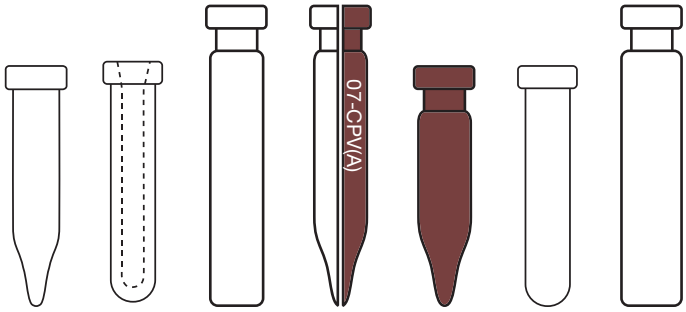
Chromacol TOC vial kits (assembled)

Description	Glass	Dimension (mm)	Total Volume (mL)	Cap Color	Cap Material	Septum	Cat. No.	Pack of
TOC clear vial with bonded cap cover, open top cap TOC 10ppb	Clear	28x96	40	White	Polypropylene	Beige PTFE/ White Silicone	40-TOCSV-10	72
TOC clear vial with cap bonded cover, open top cap TOC 20ppb	Clear	28x96	40	White	Polypropylene	Beige PTFE/ White Silicone	40-TOCSV-20	72

Chromacol scintillation vial kit

Description	Glass	Dimension (mm)	Total Volume (mL)	Noise	Background Count	Quenching Index Factor	Cat. No.	Pack of
20mL vial with foil lined caps	Clear	27x57	20	2.28	13 CPM	349	20-EPSVCA	500

Chromacol vial comparison chart



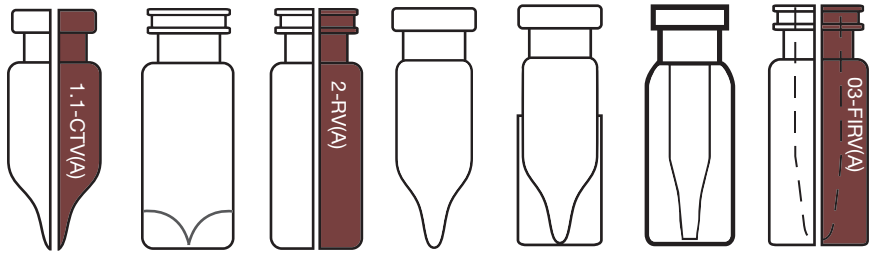
Part No.	02-CTVG	01-CVG	08-CPV	07-CPV	06-CTV(A)	03-CVG	1.2-CWV
Dimensions	6x32mm	6x32mm	7x40mm	7x40mm	7x32mm	6x32mm	8x40mm



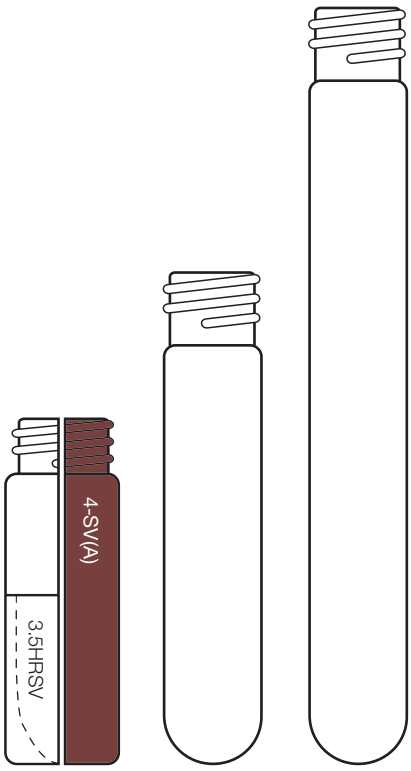
Part No.	2-SV	03-PPSV	2-SVWGK	2-SVWK(A)	2-SVW	1.1-STVG	4-SVQ	1.5-HRSV
Dimensions	12x32mm	12x32mm	12x32mm	12x32mm	12x32mm	12x32mm	15x46mm	12x32mm



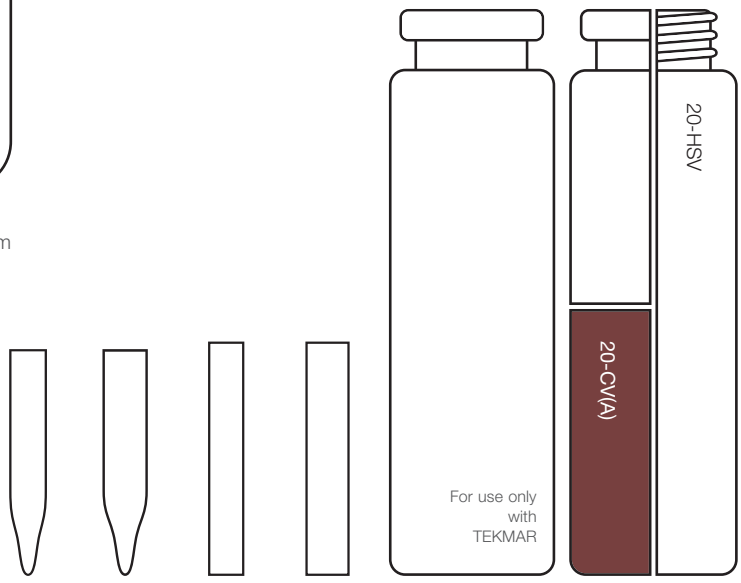
Part No.	03-FIV	03-FISV	1.2-UHRSV	02-FISVG	2.5-CV	4-CV	2-CV	2-CRV
Dimensions	12x32mm	12x32mm	12x32mm	12x32mm	12x40mm	15x46mm	12x32mm	12x32mm



Part No.	1.1-CTVG	1.5-HRRV	2-RV	09-CTV	09-FIV	02-FIVG	03-FIRV
Dimensions	12x32mm	12x32mm	12x32mm	10x32mm	12x32mm	12x32mm	12x32mm



Part No. Dimensions	4-SV 15x46mm	5-SV 13x65mm	10-SV 13x100mm



Part No. Dimensions	02-MTV 5x30mm	02-MTVWG 6x30mm	02-NV 5x31mm	03-NV 6x31mm	22-CV 22x75mm	20-CV/20-HSV 22x75mm



Part No. Dimensions	9-CV 18x50mm	6-CV 22x38mm	20-EPSVCA 27x57mm	27-CV 30x60mm	10-CV /10-HSV 22x46mm

Chromacol caps and septa comparison chart

Part No.	8-AC-ST15	8-AC-ST101
Dimensions	8x5mm	8x5mm

Part No.	8-ACT	8-PEC1	*8-SC	*8-SCJ	8-SC-8RT1	8-SC-ST15
Dimensions	8x5mm	8x5mm	8x9mm	8x9mm	8x9mm	8x9mm

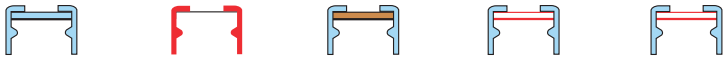
Part No.	8-ST14	8-ST14X	8-ST143	8-ST144	8-6RT1	8-ST101	8-T02	8-TST1	8-ST15
Dimensions	8x1.4mm	8x1.4mm	8x1.5mm	8x1.4mm	8x1mm	8x1mm	8x0.25mm	8x1mm	8x1.5mm

Part No.	*9-SCK(B)-8RT1	9-SCK(B) ST101	*9-SCK(B)-ST1	9-SCK(B)-TST1	9-SCSK-8RT1	*11-AC6
Dimensions	9x6.5mm	9x6.5mm	9x6.5mm	9x6.5mm	9x6.5mm	11x6mm

Part No.	*11-AC7	11-AC-ST101	11-AC-ST101X	11-AC(B)-ST144	11-AC-ST15	11-ACT
Dimensions	11x6mm	11x6mm	11x6mm	11x6mm	11x6mm	11x6mm

Part No.	11-AC-TST1	11-LLX	11-PEC1	11-PEC1X	11-PEC-ST1	11-MC-ST15
Dimensions	11x6mm	11x3mm	11x6mm	11x6mm	11x7mm	

*Cap available in alternative colors.
See below for more details



Part No.	11-PSN(B)-ST101	*11-PSN(R)-T02	11-PSN(B)-8RT1	*11-PSN(B)-ST1X	11-PSN(B)-ST1
Dimensions	11x6.5mm	11x6.5mm	11x6.5mm	11x6.5mm	11x6.5mm



Part No.	*12-SC	12-SCS	12-SC-ST2	12-SC-8RT1	13-SC-ST15	13-SCST
Dimensions	12x10mm	12x10mm	12x10mm	12x10mm	12x10mm	12x10mm



Part No.	12-ST2	12-6RT1	12-ST101
Dimensions	12x2mm	12x1mm	12x1mm



Part No.	18-MSC	18-MSC-CBT3	18-MSC-ST201	20-ACB	20-MCB	*20-MCBC
Dimensions	18x13mm	18x13mm	18x13mm	20x7mm	20x7mm	20x7mm



Part No.	20-MCBC(R)-CBT3	*20-MCBC-ST3	20-AC-CBT3	20-AC-ST3	20-CB3	20-CBT3
Dimensions		20x7mm	20x7mm	20x7mm	20x3mm	20x3mm



Part No.	20-CBT3B	20-LLX	20-ST3	20-ST3HT	20-ST15
Dimensions	20x3mm	20x3mm	20x3mm	20x3.1mm	20x1.5mm



Part No.	20-ST101	18-ST101	20-2FB3
Dimensions	20x1mm	18x1mm	20x13.4mm

Electronic crimping and decrimping tools

Adjustable crimp and highest sample security

Product features and benefits

- One hand operation with a simple push of a button
- Error message feedback after the incorrect crimping process
- Adjustable settings for best crimp results
- Actual crimp power setting displayed on the color screen
- 8 different languages available – EN, CN, JA, DE, FR, ES, IT, KO
- Statistics and log of recent crimping results
- Motor with extended lifetime and no particle emission



Versatile and programmable Crimp Station

Maximized sample security with electronic crimping tools

Our new electronic Thermo Scientific™ Crimper portfolio includes tools for 8mm, 11mm, 13mm, and 20mm Crimp Caps. The tools provide all important settings like actual crimp power at one glance. The hand-held Crimpers and Decrimpers allow crimping of vials with aluminum, pressure release and bi-metal caps while remaining in most sample trays. If steel caps are in use we recommend the Thermo Scientific™ High-Power Crimp Station as it provides the highest crimping force independent from battery charge status. The Crimp Head selection includes also special crimp heads for 13mm and 20mm flip-off caps, further specials are available on request.



Exchangeable jaw sets for crimping or decrimping of aluminum and stainless steel seals on various diameter vials

For more information, visit **thermofisher.com/chromacol**

Electronic High-Power Crimper

Each High-Power Crimper comes with 12 volt DC supply with power cord.

Crimp and Decrimp Heads for the High-Power Crimper are included in the kits and also available separately.

The High-Power Crimper can be used as a hand-held device – additional convenience applies with the optional adjustable accessory base which measures 25.4 x 17.7cm; the maximum height for the crimper stand is 37.6cm.

Description	Cat. No.	Pack of
Programmable Electronic High Power Crimper	60180-ECRHB	1
Programmable Electronic High Power Crimper Kit 11mm *Including 11mm Crimp Head and 11mm Decrimp Head*	60180-ECRH11KIT	1
Programmable Electronic High Power Crimper Kit 11mm *Including 13mm Crimp Head and 13mm Decrimp Head*	60180-ECRH13KIT	1
Programmable Electronic High Power Crimper Kit 20mm *Including 20mm Crimp Head and 20mm Decrimp Head*	60180-ECRH20KIT	1



Accessories for High-Power Crimper

Description	Cat. No.	Pack of
Accessory Base for Electronic Crimpers *Height adjustable and solvent resistant (consists of base plate and bar)*	ECRH-STAND	1
8mm Crimp Head	ECMJ-8	1
11mm Crimp Head	ECMJ-11	1
11mm Decrimp Head	ECDJ-11	1
13mm Crimp Head	ECMJ-13	1
13mm Decrimp Head	ECDJ-13	1
13mm Flip-Off Crimp Head	ECMJ-13FO	1
20mm Crimp Head	ECMJ-20	1
20mm Decrimp Head	ECDJ-20	1
20mm Flip-Off Crimp-Head	ECMJ-20FO	1

Electronic hand-held Crimpers and Decrimpers

The battery charge icon on the color screen of the hand-held tools changes to red when battery is low. Each hand-held tool comes with fully rechargeable lithium ion battery and universal power supply/recharger and international plug adapters.

Description	Cat. No.	Pack of
Crimper for 8mm Aluminum Crimp Caps	**60180-ECR8**	1
Crimper for 11mm Aluminum Crimp Caps	**60180-ECR11**	1
Crimper for 13mm Aluminum Crimp Caps	**60180-ECR13**	1
Crimper for 20mm Aluminum Crimp Caps	**60180-ECR20**	1
Decrimper for 11mm Aluminum Crimp Caps	**60180-EDCB11**	1
Decrimper for 13mm Aluminum Crimp Caps	**60180-ECDB13**	1
Decrimper for 20mm Aluminum Crimp Caps	**60180-EDCB20**	1



Well plates for chromatography

A full selection of high quality sample well plates for your UHPLC, LC and GC applications

We offer a comprehensive range of Thermo Scientific 96- and 384- well plates for complex and routine analyses in high-throughput screening laboratories.

We offer a broad selection of polypropylene (PP) well plates that meet ANSI and SBS standards with different sealing options and fit most manifolds, autosamplers, and robots.

Handle more samples in less time
- Low volume and high recovery cavity

Solutions for all applications
- Chromatography tested for solvent compatibility and inertness

Ultimate sample security
- No leeching due to high-end material



For more information, visit **thermofisher.com/webseal**

WebSeal well plates, plastic, non-coated, non-sterile, chromatography tested

- Thermo Scientific™ WebSeal™ well plates are manufactured from a GC/MS tested polypropylene material
- Microplates are chemically and thermally resistant and will tolerate temperatures from –80° C to +121°C
- SBS and ANSI standard footprint design for broad instrument compatibility
- Microplates are ideal for pharmaceutical applications, sample collection and storage, combinatorial chemistry and HTS applications
- U- and V- bottom wells for optimal sample recovery
- Low binding PP for homogenous assays and storage

60180-P130



60180-P104



60180-P105



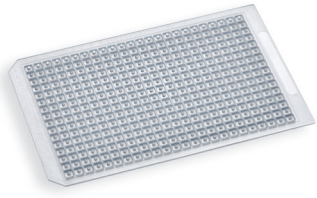
WebSeal well plates, plastic, non-coated, non-sterile, chromatography tested

Description	Material	Total Height	Well Format	Total Volume (µL)	Working Volume Range µL/ Well	Cat. No.	Pack of
96 Well Microplate, Round Well	PP	14.4	V-Shape, 8mm Diameter	450	10-400	60180-P100	20
	PP	14.4	V-Shape, 8mm Diameter	450	10-400	60180-P130	120
96 Well Plates, Round Well	PP	26.5	U-Shape, 8mm Diameter, Mid Height Plate	1100	50-900	60180-P154	50
	PP	31.6	U-Shape, 8mm Diameter, Mid Height Plate	1300	50-1000	60180-P103	5
	PP	31.6	U-Shape, 8mm Diameter, Mid Height Plate	1300	50-1000	60180-P133	50
	PP	45.0	U-Shape, 8mm Diameter	2000	50-1900	60180-P104	5
	PP	45.0	U-Shape, 8mm Diameter	2000	50-1900	60180-P124	50
96 Deep Well Plate, Square Well	PP	31.0	U-Shape, Square, Mid Height Plate	1600	50-1300	60180-P155	96
	PP	44.0	V-Shape, Square	2000	50-1900	60180-P105	5
	PP	44.0	V-Shape, Square	2000	50-1900	60180-P135	50
384 Well Microplate	PP	15.5	V-Shape, Square, Micro Titer Plate	145	4-120	60180-P109	10
	PP	15.5	V-Shape, Square, Micro Titer Plate	145	4-120	60180-P129	100
	PP	22.0	V-Shape, Square, Deep Well Plate	252	5-240	60180-P107	5
	PP	22.0	V-Shape, Square, Deep Well Plate	252	5-240	60180-P127	100

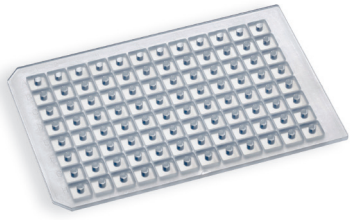
WebSeal mats and sealing tapes, non-sterile

- Mats manufactured of EVA (Ethylene-vinyl acetate) or pure silicone with or without PTFE coating
- The footprint permits plates to be securely stacked without robotic arm interference
- Eliminates cross contamination of samples
- Dry heat autoclavable (only Silicone mats) with excellent chemical compatibility, withstand low temperature to -80°C
- Resists coring and tearing
- Superior resealability after multiple injections
- Available pre-slit for easy penetration and reduced vacuum formation
- Sealing tapes minimize evaporation and protect samples from contamination and spilling.
- Adhesive seals effectively seal all microplate formats
- Wide range of adhesive seals for every assay
- Thin, lightweight tapes seal onto the plate with a convenient, handheld applicator (available separately, Cat. No. 60180-M950)

60180-M126



60180-M121



60180-M123



60180-M999



For more information, visit **thermofisher.com/webseal**

WebSeal mats and sealing tapes, non-sterile

Description	Color	Material	Well Design	Pre-slit	Cat. No.	Pack of
WebSeal Mats CLR Silicone Mat, Round Well	Clear	Silicone	96 Round Well, 8mm Diameter, Flat Base with Cross	No	60180-M184	50
WebSeal Mats (Alcohol Resistant), Round Well	Clear	EVA	96 Round Well, 8mm Diameter	No	60180-M101	5
	Clear	EVA	96 Round Well, 8mm Diameter	No	60180-M171	50
WebSeal CLR Silicone Mat, Round Well	Clear	Silicone	96 Round Well – Flat Base, 8mm Diameter, Large Penetration Area	No	60180-M134	5
	Clear	Silicone	96 Round Well – Flat Base, 8mm Diameter, Large Penetration Area	Yes	60180-M183	5
WebSeal Mats (Solvent Resistant), Round Well	Blue	Silicone/PTFE	96 Round Well – Flat Base, 8mm Diameter, Large Penetration Area	No	60180-M102	5
	Blue	Silicone/PTFE	96 Round Well – Flat Base, 8mm Diameter, Large Penetration Area	Yes	60180-M103	5
WebSeal Mats (Alcohol Resistant), Square Well	Clear	EVA	96 Square Well - Flat Base	No	60180-M177	5
	Clear	EVA	96 Square Well - Flat Base	No	60180-M178	50
WebSeal CLR Silicone Mat, Square Well	Clear	Silicone	96 Square Well – Flat Base, 8mm Diameter, Large Penetration Area	No	60180-M121	5
	Clear	Silicone	96 Square Well – Flat Base, 8mm Diameter, Large Penetration Area	Yes	60180-M123	5
	Clear	Silicone	96 Square well – Flat Base, 8mm Diameter, Flat Base with Cross	No	60180-M185	50
	Clear	Silicone	384 Square Well	No	60180-M126	5
	Clear	Silicone	384 Square Well	Yes	60180-M150	5
	Clear	Silicone	384 Square Well, Flat Base with Cross	No	60180-M186	50
Sealing Tape, -40°C - 90°C	Clear	PE/Silicone	N/A	No	60180-M142	100
Sealing Tape, -70°C - 100°C	Clear	PES/Silicone	N/A	No	60180-M143	100
Sealing Tape, -80°C - 120°C	Silver	Aluminum/ Silicone	N/A	N/A	60180-M144	100
Sealing Tape with SRA (Synthetic Rubber Adhesive)	Clear	Polyolefin/ Rubber	N/A	No	60180-M145	100
Re-sealing Tape with 3 Layer No Adhesive at Cavity Area	Clear	PET/Silicone/ PET	N/A	Yes	60180-M146	100
	Clear	PET/Silicone/ PET	N/A	Yes	60180-M176	25
Hand held Sealing Tape Applicator	Gold	N/A	N/A	N/A	60180-M950	2
Hand Held Mat Applicator	Black	N/A	N/A	N/A	60180-M999	1
WebSeal Cutter for Vial Removal	Silver	N/A	N/A	N/A	60180-M975	1

WebSeal well plates, plastic, non-coated, non-sterile, certified

- Polypropylene microplates are manufactured from ultra low bleed high purity basis resin
- Plates are fully LOT tested by GC-MS and LC/MS for organic extractables
- Microplates are chemically and thermally resistant and will tolerate temperatures from -80°C to +121°C
- SBS and ANSI standard footprint design for broad instrument compatibility
- Microplates are ideal for pharmaceutical applications, sample collection and storage, combinatorial chemistry and HTS applications
- U- and V- bottom wells for optimal sample recovery, Total V-Plates for low volume applications

60180-P201



60180-P202



60180-P204



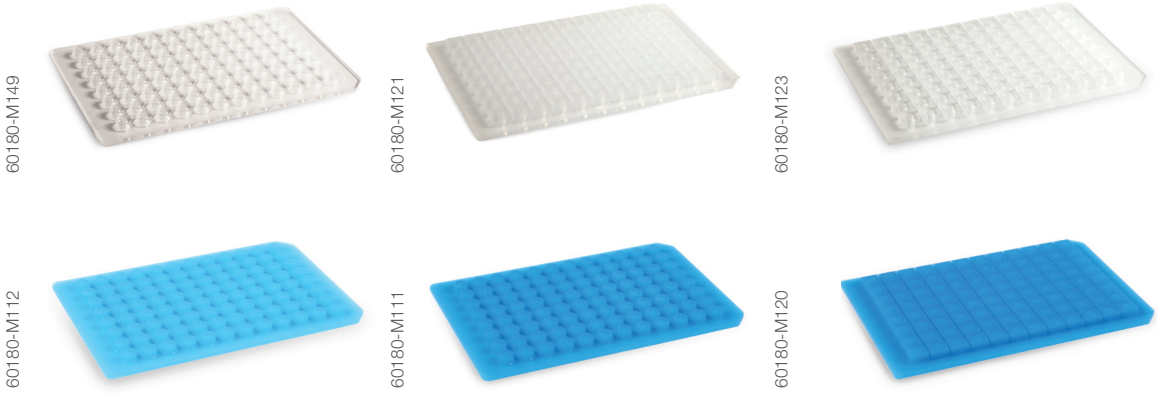
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WebSeal well plates, plastic, non-coated, non-sterile, certified

Description	Material	Total Height	Well Format	Total Volume (µL)	Working Volume Range µL/Well	Cat. No.	Pack of
96 Well Microplate, Low Volume	PP	15.0	Total V-Shape, 5.6mm Diameter	100	5-80	60180-P210	50
96 Well Microplate, Round Well	PP	14.7	Flat Bottom, 7mm Diameter	350	10-300	60180-P205	100
	PP	14.7	Flat Bottom, 7mm Diameter	350	10-300	60180-P215	10
	PP	14.7	U-Shape, 7mm Diameter	270	10-250	60180-P206	100
	PP	14.7	U-Shape, 7mm Diameter	270	10-250	60180-P216	10
	PP	14.7	V-Shape, 7mm Diameter	220	10-190	60180-P207	100
	PP	14.7	V-Shape, 7mm Diameter	220	10-190	60180-P217	10
96 Well Mid Height Plates, Round Well	PP	33.0	U-Shape, 7mm Diameter	1000	50-900	60180-P208	96
	PP	41.6	U-Shape, 7mm Diameter	1200	50-900	60180-P201	50
	PP	41.6	U-Shape, 7mm Diameter	1200	50-900	60180-P211	5
96 Deep Well Plate, Square Well	PP	44.4	V-Shape, 8mm Diameter	2000	50-1900	60180-P202	50
	PP	44.4	V-Shape, 8mm Diameter	2000	50-1900	60180-P212	5
384 Well Microplate	PP	14.4	U-Shape, Square, Micro Titer Plate	58	2-35	60180-P203	60
	PP	14.4	U-Shape, Square, Micro Titer Plate	58	2-35	60180-P213	10
	PP	30.2	V-Shape, Square, Deep Well Plate	300	5-240	60180-P204	48
	PP	30.2	V-Shape, Square, Deep Well Plate	300	5-240	60180-P214	6

WebSeal mats, non-sterile

- Manufactured of pure silicone with or without PTFE coating
- The footprint permits plates to be securely stacked without robotic arm interference
- Eliminates cross contamination of samples
- Dry heat autoclavable with excellent chemical compatibility, withstand low temperature to -80°C
- Resists coring and tearing
- Superior resealability after multiple injections
- Available pre-slit for easy penetration and reduced vacuum formation



For more information, visit **thermofisher.com/webseal**

WebSeal mats, non-sterile

Description	Color	Material	Well Design	Pre-slit	Cat. No.	Pack of
WebSeal Mats (alcohol resistant), Round Well	Clear	EVA	96 Round Well, 7mm Diameter	No	60180-M179	100
WebSeal CLR Silicone Mat, Round Well	Clear	Silicone	96 Round Well – Flat Base, 5.6mm Diameter, Cross	No	60180-M210	50
	Clear	Silicone	96 Round Well – Flat Base, 7mm Diameter, Large Penetration Area	No	60180-M105	5
	Clear	Silicone	96 Round Well – Flat Base, 7mm Diameter, Large Penetration Area	Yes	60180-M116	5
	Clear	Silicone	96 Round Well – 7mm Diameter, Step, Small Penetration Area	Yes	60180-M113	5
	Clear	Silicone	96 Round Well – 7mm Diameter, Step, Small Penetration Area	No	60180-M149	5
WebSeal CLR Silicone Mat, Square Well	Clear	Silicone	96 Square Well – Flat Base, 8mm Diameter, Flat Base with Cross	No	60180-M185	50
	Clear	Silicone	96 Square Well – Flat Base - 8mm Diameter, Large Penetration Area	No	60180-M121	5
	Clear	Silicone	96 Square Well – Flat Base - 8mm Diameter, Large Penetration Area	Yes	60180-M123	5
	Clear	Silicone	384 Square Well for 384 Deep Well Plates	No	60180-M126	5
	Clear	Silicone	384 Square Well for 384 Deep Well Plates	Yes	60180-M150	5
	Clear	Silicone	384 Square Well, Flat Base with Cross for 384 Microtiter Plates	No	60180-M186	50
WebSeal Mat (Solvent Resistant), Round Well	Blue	Silicone/ PTFE	96 Round Well – Flat Base, Step, 7mm Diameter	No	60180-M111	5
	Blue	Silicone/ PTFE	96 Round Well – Flat Base, Step, 7mm Diameter	Yes	60180-M112	5
WebSeal Mat, (Solvent Resistant), Square Well	Blue	Silicone/ PTFE	96 Square Well – Flat Base - 8mm Diameter, Large Penetration Area	No	60180-M120	5
	Blue	Silicone/ PTFE	96 Square Well – Flat Base - 8mm Diameter, Large Penetration Area	Yes	60180-M122	5
	Blue	Silicone/ PTFE	384 Square Well for 384 Deep Well Plates	No	60180-M125	5
	Blue	Silicone/ PTFE	384 Square Well for 384 Deep Well Plates	Yes	60180-M131	5
WebSeal Mat for Plate+	Blue	Silicone/ PTFE	96 Round well – Dome Base, 7.2mm Diameter	No	60180-M108	5
	Blue	Silicone/ PTFE	96 Round well – Dome Base, 7.2mm Diameter	Yes	60180-M115	5

WebSeal plate+ glass coated microplates

- High quality polypropylene microplates coated with 200nm thick layer of silicone dioxide
- Plate+ provides microplates with a chemical resistance similar to glass while retaining the advantages of polypropylene
- Eliminates the need to use glass limited volume inserts
- Excellent for applications where plastic microplates are not applicable
- Plate+ is chemically and thermally resistant and will tolerate temperatures from -80°C to +80°C
- Lightweight, precision molded, cost-effective alternative to solid glass plates



WebSeal Plate+ Glass Coated Microplates

Description	Material	Total Height	Well Format	Total Volume	Working Volume	Cat. No.	Pack of
96 Well Microplate, Round Well	Glass Coated PP	14.6	U-Shape, 7.2mm Diameter	300µL	250µL	60180-P300	10
	Glass Coated PP	14.6	V-Shape, 7.2mm Diameter	220µL	190µL	60180-P302	10
	Glass Coated PP	14.6	Flat Bottom, 7.2mm Diameter	370µL	300µL	60180-P304	10
96 Well Mid Height Plate, Round Well	Glass Coated PP	41.5	U-Shape, 7.2mm Diameter	1.2mL	1.0mL	60180-P306	10
96 Deep Well Plate, Square Well	Glass Coated PP	44.0	V-Shape, 8mm Diameter	2.4mL	2.0mL	60180-P308	10
384 Well Microplate	Glass Coated PP	14.4	Square-Rounded, Flat, Micro Titer Plate	120µL	90µL	60180-P310	10
	Glass Coated PP	22.0	Square-Rounded, U-Shape, Deep Well Plate	240µL	180µL	60180-P312	6

For more information, visit **thermofisher.com/webseal**

WebSeal glass inserted plate kits with 96-position mats

- Convenient wellplate kits with pre-assembled glass or PTFE vials
- Replacement parts for kits available separately
- Unique cutting tool allows removal of individual samples with the seal in place, eliminating cross contamination
- Mats with solid plugs are used for sample storage

60180-K100



60180-K101



60180-K104



60180-K105



60180-K106



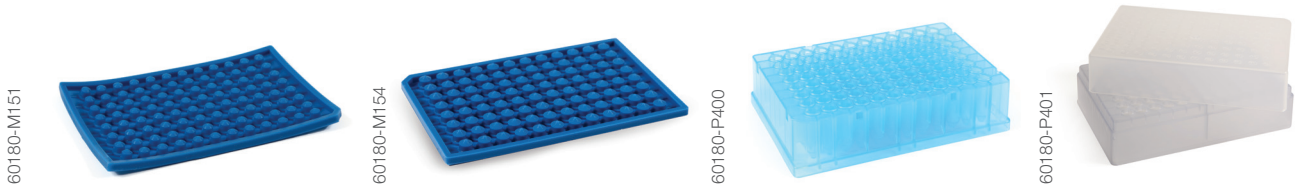
60180-K107



WebSeal glass inserted plate kits with 96-position mats

Kit Type	Vial Material	Total Volume (µL)	Vial Dimension (mm)	Profile	Mat Material	Total Height (mm)	Vial Cat. No.	Mat Cat. No.	Kit Cat. No.	Pack of
96 Well Small Volume Microplate with Sealing Mat	Clear Glass	500	6.5x31	Taper	Silicone/ PTFE	32.0	60180-V100	60180-M151	60180-K100	5
96 Well Small Volume Microplate with Sealing Mat and Cutting Tool	Clear Glass	700	6.5x41.4	Taper	Silicone/ PTFE	44.0	60180-V101	60180-M151	60180-K101	5
96 Well Small Volume Microplate with Sealing Mat and Cutting Tool	PTFE	700	6.5x41.4	Round	Silicone/ PTFE	44.0	60180-V103	60180-M151	60180-K103	1
96 Well Microplate with Sealing Mat and Cutting Tool	Clear Glass	1100	7.45x38.5	Round	Silicone/ PTFE	41.5	60180-V104	60180-M153	60180-K104	5
96 Well Microplate with Crimp Top Vials, Pre-Inserted	Clear Glass	1100	7.45x45	Round	N/A	47.0	60180-V105	N/A	60180-K105	5
96 Deep Well Plate with Sealing Mat	Clear Glass	1500	7.25x60.5	Round	Silicone/ PTFE	64.5	60180-V106	60180-M153	60180-K106	5
96 Square Well Plate with Sealing Mat	Clear Glass	1000	7.6x45	Constricted	Silicone/ PTFE	47.3	60180-V107	60180-M111	60180-K107	1
96 Square Well Plate with Sealing Mat - Precut	Clear Glass	1000	7.6x45	Constricted	Silicone/ PTFE	47.3	60180-V107	60180-M112	60180-K108	1

WebSeal kit accessories





WebSeal kit accessories

Kit Type	Vial Material	Total Volume (µL)	Vial Dimension (mm)	Profile	Mat material	Total Height (mm)	Pre-slit	Cat. No.	Pack of
Micro Titer Plate Vial for 96 Wells	Clear Glass	500	6.5x31	Taper	N/A	N/A	N/A	60180-V100	500
	Clear Glass	700	6.5x41.4	Taper	N/A	N/A	N/A	60180-V101	500
	PTFE	700	6.5x41.4	Round	N/A	N/A	N/A	60180-V103	100
	Clear Glass	1100	7.45x38.5	Round	N/A	N/A	N/A	60180-V104	500
Square/Deep Well Plate Crimp Top Vial for 96 Wells	Clear Glass	1100	7.45x45	Round	N/A	N/A	N/A	60180-V105	500
Deep Well Plate Vial for 96 Wells	Clear Glass	1500	7.25x60.5	Round	N/A	N/A	N/A	60180-V106	500
Square Well Plate Vial for 96 Wells	Clear Glass	1000	7.6x45	Constricted	N/A	N/A	N/A	60180-V107	960
96 Well WebSeal Mat (60180-K100, 101, 103)	N/A	N/A	N/A	N/A	Silicone/ PTFE	N/A	No	60180-M151	5
96 Well WebSeal Mat (60180-K100, 101, 103)	N/A	N/A	N/A	N/A	Silicone/ PTFE	N/A	Yes	60180-M152	5
96 Well WebSeal Mat (60180-K104, 106)	N/A	N/A	N/A	N/A	Silicone/ PTFE	N/A	No	60180-M153	5
96 Well WebSeal Mat (60180-K104, 106)	N/A	N/A	N/A	N/A	Silicone/ PTFE	N/A	Yes	60180-M154	5
96 Well WebSeal Mat, Welled Plugs (60180-K107)	N/A	N/A	N/A	N/A	Silicone/ PTFE	N/A	No	60180-M111	5
96 Well WebSeal Mat, Welled Plugs (60180-K108)	N/A	N/A	N/A	N/A	Silicone/ PTFE	N/A	Yes	60180-M112	5

WebSeal kit accessories continued

Kit Type	Vial Material	Total Volume (µL)	Vial Dimension (mm)	Profile	Mat Material	Total Height (mm)	Pre-slit	Cat. No.	Pack of
Plastic 96 Round Well Micro Titer Plate (60180-K100)	N/A	800	N/A	V-Shape, 7mm Diameter	N/A	31.5	N/A	60180-P400	5
PP 96 Round Well Micro Rack (60180-K101, K102)	N/A	N/A	N/A	U-Shape, 7mm Diameter	N/A	41.6	N/A	60180-P211	5
Plastic 96 Well Micro Titer Rack (60180-K104)	N/A	N/A	N/A	Rack	N/A	31.2	N/A	60180-P401	5
PP 96 Well Micro Titer Plate (60180-K105)	N/A	2200	N/A	U-Shape	N/A	42.5	N/A	60180-P402	5
PP 96 Well Square Well Plate (60180-K107/108/109)	N/A	2000	N/A	U-Shape, Square	N/A	44.0	N/A	60180-P403	1
PP 96 Well Square Well Plate (60180-K106)	PP	2000	N/A	V-Shape, Square	N/A	44.0	N/A	60180-P212	5
WebSeal Cutter for Vial Removal	N/A	N/A	N/A	N/A	N/A	N/A	N/A	60180-M975	1

WebSeal Kit Accessories



WebSeal kit accessories

Kit Type	Vial Material	Total Volume (µL)	Vial Dimension (mm)	Profile	Septum	Total Height (mm)	Cat. No.	Pack of
Micro Titer Plate Vial for 96 Wells	Clear Glass	100	5.7x15.5	Flat Bottom	N/A	N/A	60180-V108	960
Deep Well Plate Vial for 96 Wells	Clear Glass	350	6x42.5	Taper	N/A	N/A	60180-V109	960
Square Well Vial for 96 Wells	Clear Glass	1000	7.6x45.9	Round	N/A	N/A	60180-V110	960
MTRS Vial for 96 Wells	Clear Glass	800	7.6x40	Round	N/A	N/A	60180-V111	960
PE Cap, Red, Center Hole for 96 Well Plate Inserts	N/A	N/A	N/A	N/A	Silicone/PTFE, Pre-slit, 45°	N/A	60180-C100	96
8mm PE Plug, Blue, for 60180-K204	N/A	N/A	N/A	N/A	PE Plug	N/A	60180-C101	96
MT-Plate, PP, 96 Positions	N/A	350	N/A	Flat Bottom, 7mm Diameter	N/A	14.3	60180-P404	10
DW-Block, PP, 96 Positions	N/A	1200	N/A	U-Shape	N/A	40.0	60180-P405	10
SQW-Block, PP, 96 Positions	N/A	2000	N/A	U-Shape	N/A	44.3	60180-P406	10
Micro-Tube-Rack-System, PP, 96 Positions	N/A	N/A	N/A	N/A	N/A		60180-P407	10

WebSeal glass inserted plate kits with individual closures

- 96 Position Block Systems with Glass Inserts are used when the pure PP Block is not inert enough
- Inserts manufactured from clear, Type 1 Class A or amber, Type 1 Class B borosilicate glass
- Inserts are sealed individually with a PE Cap Seal and can be easily removed and used externally without risk of losing sample
- The products can be obtained as individual components or as completely assembled, ready-to-use convenience blocks
- Assembled kits include 96 vials with pre-attached caps and septa
- Pre-assembled kits reduce the risk of vial contamination before use
- Snap Caps offer the same functionality as for screw or crimp caps: PTFE layered Silicone septa for excellent solvent stability
- Polyethylene caps are chemically inert and suitable for most chromatography applications

60180-K200



60180-K201



60180-K203



60180-K204



WebSeal glass inserted plate kits with individual closures

Kit Type	Vial Material	Total Volume (µL)	Vial Dimension (mm)	Profile	Septum	Vial Cat. No.	Cap Cat. No.	Kit Cat. No.	Pack of
96 Well Microplate	Clear Glass	100	5.7x15.5	Flat Bottom	Silicone/PTFE, Pre-slit, 45°	60180-V108	60180-C100	60180-K200	1
96 Deep Well Plate	Clear Glass	350	6x42.5	Taper	Silicone/PTFE, Pre-slit, 45°	60180-V109	60180-C100	60180-K201	1
96 Square Well Plate	Clear Glass	1000	7.6x45.9	Round	Silicone/PTFE, 45°	60180-V110	60180-C102	60180-K202	1
	Clear Glass	1000	7.6x45.9	Round	Silicone/PTFE, Pre-slit, 45°	60180-V110	60180-C100	60180-K203	1
96 Micro-Tube-Rack-System	Clear Glass	800	7.6x40	Round	PE Plug	60180-V111	60180-C101	60180-K204	1

For more information, visit **thermofisher.com/webseal**

Barcoded well plates for Vanquish systems

The well established Thermo Scientific™ WebSeal™ system offers a new range of chromatography tested, orientation barcoded well plates for Thermo Scientific™ Vanquish™ and Thermo Scientific™ Vanquish™ Flex UHPLC Systems. These well plates provide advanced sample security and sample integrity.

- This secure choice offers a tested portfolio for chromatography applications
- Barcoded well plates have an assured plate fit and a pre-applied orientation barcode in the correct reader position; therefore there is no risk of placing the plate incorrectly
- The secured side orientation in the autosampler alleviates the risk of starting the sequence at the wrong plate position
- The instrument controls plate orientation and verifies the plate before implementing the sequence

60180-P206-216B



60180-P207-217B



WebSeal well plates barcoded for Vanquish systems

Description	Material	Total Height	Well Format	Total Volume µL/Well	Working Volume Range µL/Well	Cat. No.	Pack of
96 Well Microplate, Round Well, Barcoded	Polypropylene	14.7	U-Shape, 7mm Diameter	270	10-250	60180-P206B	100
	Polypropylene	14.7	U-Shape, 7mm Diameter	270	10-250	60180-P216B	10
	Polypropylene	14.7	U-Shape, 7mm Diameter	220	10-190	60180-P207B	100
	Polypropylene	14.7	U-Shape, 7mm Diameter	220	10-190	60180-P217B	10
96 Well Mid Height Plate, Round Well, Barcoded	Polypropylene	31.6	U-Shape, 8mm Diameter	1300	50-1000	60180-P103B	5
	Polypropylene	31.6	U-Shape, 8mm Diameter	1300	50-1000	60180-P133B	50
	Polypropylene	41.6	U-Shape, 7mm Diameter	1000	50-900	60180-P201B	50
	Polypropylene	41.6	U-Shape, 7mm Diameter	1000	50-900	60180-P211B	5
96 Deep Well Plate, Square Well, Barcoded	Polypropylene	44.0	V-Shape, Square	2000	50-1900	60180-P105B	5
	Polypropylene	44.0	V-Shape, Square	2000	50-1900	60180-P135B	50

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