Thermo Scientific
Chromatography Columns
and Consumables 2016-2017

Connected chromatography solutions

Thermo SCIENTIFIC

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%	–	–

For autosampler compatibility visit **www.thermoscientific.com/chromexpert**

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
0.2mL Sci-Vi Crimp Top Vial	Amber	No	6x32	Conical	250	200	<5	**02-CTV(A)**	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
1mL Crimp Top Tapered Vial	Clear	No	8x40	Conical	1180	1000	<5	**1-CWV**	500
0.8mL Crimp Top Vial	Clear	No	8x30	Flat Bottom	1000	800	<80	**08-CV**	500
	Clear	No	7x40	Flat Bottom	775	650	<70	**08-CPV**	500
	Amber	No	7x32	Round Bottom	700	600	<30	**08-CRV(A)**	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

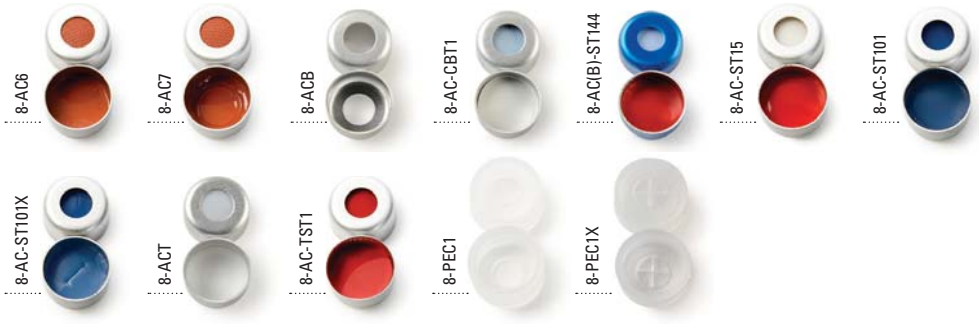
Chromacol 8mm Crimp Top Vials

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
0.5mL Crimp Top Tapered Vial	Amber	No	7x30	Conical	500	450	<5	**05-CTV(A)**	500
PTFE Vial Support Sleeve for 6x32mm vials, fits most autosamplers	PTFE	No	12x31	Flat Bottom	–	–	–	**SV-S1**	50
PTFE Vial Support Sleeve for 6x32mm vials, fits robotic autosamplers	PTFE	No	12x32	Flat Bottom	–	–	–	**SV-S11A**	25
Glass Vial Support Sleeve for 6x32mm vials, fits robotic autosamplers	Clear	Yes	12x32	Flat Bottom	–	–	–	**SV-S11G**	25
PTFE Vial Support Sleeve for 7x32mm vials, fits most autosamplers	PTFE	No	12x32	Flat Bottom	–	–	–	**WS-5**	40

Sleeves adapt 6x32mm vials for use in autosamplers designed for 12x32mm vials. Use sleeve SV-S1 for autosamplers that do not lift the vial from the tray. Use SV-S11A or SV-S11G for autosamplers that move the vial during sampling. Use WS-5 for 06-CTV(A) and 08-CRV(A).

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

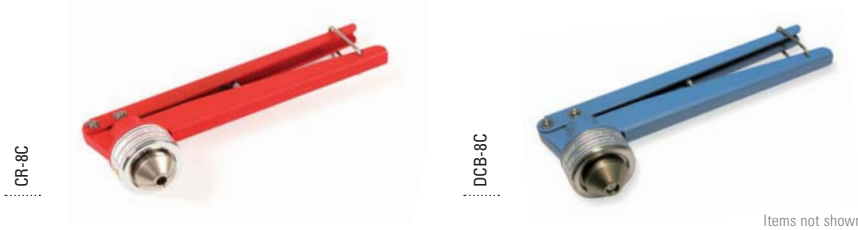


Chromacol 8mm Crimp Top Closures

Description	Cap Color	Cap Material	Septum	Hardness °shore	Thickness (mm)	Cat. No.	Pack of
8mm Crimp Cap, 4mm hole, Type 6 Rubber/PTFE Liner	Silver	Aluminum	Red Natural Rubber/Clear PTFE	38	1.0	**8-AC6**	1000
	Blue	Aluminum	Red Natural Rubber/Clear PTFE	38	1.0	**8-AC6(B)**	1000
	Red	Aluminum	Red Natural Rubber/Clear PTFE	38	1.0	**8-AC6(R)**	1000
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	–	–	–	**8-ACB**	1000
	Silver	Aluminum	Gray Chlorobutyl Rubber/Clear PTFE	52	1.0	**8-AC-CBT1**	500
	Blue	Aluminum	Blue Silicone/Red PTFE	20	1.4	**8-AC(B)-ST144**	500
	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	Blue Silicone/PTFE, Pre-slit	30	1.0	**8-AC-ST101X**	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
	Clear	Polyethylene	Integral Molded In Polyethylene, Pre-cut	–	–	**8-PEC1X**	1000

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 **2-092**

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

Recommended for the following instruments:

- Beckman
- CTC
- Gilson
- Knauer
- Shimadzu
- Spark Holland
- Varian
- VWR (Merck)/Hitachi

For autosampler compatibility visit **www.thermoscientific.com/chromexpert**

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 Vial – GOLD Grade Glass	Clear	No	12x32	Flat Bottom	2.0	1.5	<170	**2-SVG**	500
8-425 Screw Thread 1.1mL Vial – GOLD Grade Glass	Clear	No	12x32	Conical	1.2	1.1	<5	**1.1-STVG**	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 for 1.1-STVG	PTFE	–	–	–	–	–	–	**TTS-312**	50

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
	Red	Polypropylene	–	–	–	**8-SC(R)**	500
	White	Polypropylene	–	–	–	**8-SC(W)**	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
	–	–	White Silicone/PTFE	20	1.4	**8-ST143**	500
	–	–	Blue Silicone/PTFE	30	1.0	**8-ST101**	500
	–	–	Red PTFE/White Silicone/Red PTFE	57	1.0	**8-TST1**	500
	–	–	White Virgin PTFE, 0.01"	53	0.3	**8-T02**	1000
	–	–	Blue Silicone/Red PTFE	20	1.4	**8-ST144**	500
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, flanged	Blue Silicone/PTFE	2-SV	8-SCJ(W) + 8-ST101	**2-SVJ(W)101-CP**	100
IS Kit, Standard Opening Screw Vial for Shimadzu LC Autosamplers	Clear	Yes	White, flanged	Blue Silicone/PTFE	2-SV	8-SCJ(W) + 8-ST101	**SHL**	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

Trying to decide what septum is right for you?

Use our selection guide at www.thermoscientific.com/chromexpert

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 **2-005** to **2-006**
- 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

Compatible with:

Most HPLC and GC autosamplers

For autosampler compatibility visit **www.thermoscientific.com/chromexpert**

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) – GOLD Grade Glass	Clear	Yes	12x32	Flat Bottom	2.0mL	1.5mL	<170	**2-SVWGK**	100
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
9mm Screw Thread Vial 200µL, Fused Insert-GOLD grade glass	Clear	Yes	12x32	Insert Vial	0.2mL	180µL	<2	**02-FISVG**	500
300µL Insert	Clear	–	6x31	Flat Bottom	300µL	200µL	<12	**03-NV**	1000
200µL Insert – GOLD Grade Glass	Clear	–	6x30	Pulled Point	200µL	160µL	<4	**02-MTVWG**	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

* For information about AVCS see page **2-005**

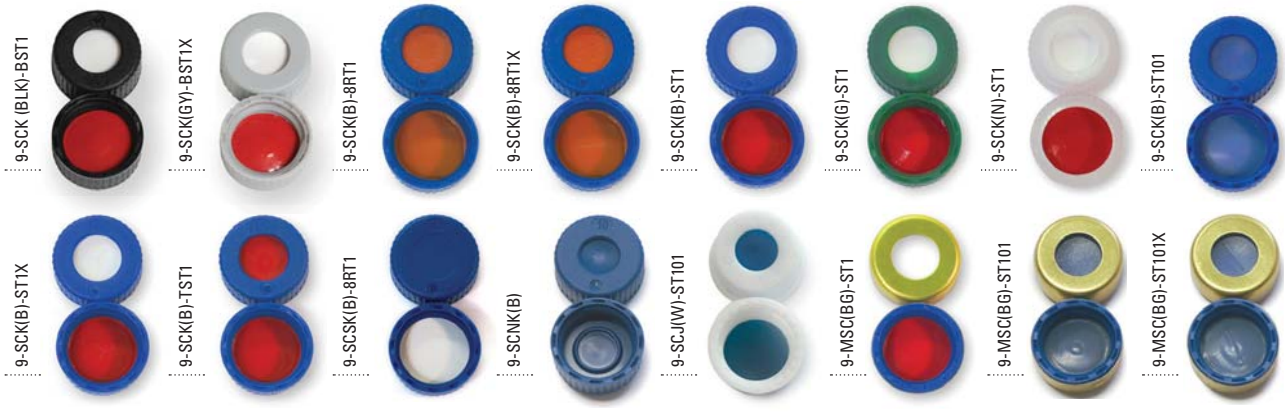
Chromacol 9mm Screw Thread Closures

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	Black	Polypropylene	Bonded Red PTFE/White Silicone	57	1.0	**9-SCK (BLK)-BST1**	500
	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
	Clear	Polypropylene	White Silicone/Red PTFE	57	1.0	**9-SCK(N)-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
9mm Short Screw AVCS Cap with Integral PP-Membrane	Blue	Polypropylene				**9-SCNK(B)**	500
9mm Open Top Short Screw Cap with flange, 6mm hole	White	HDPE	Blue Silicone/PTFE	30	1.0	**9-SCJ(W)-ST101**	500
9mm Open Top Short Screw AVCS Cap, 6mm hole, magnetic	Blue/Gold	PP/Steel	White Silicone/Red PTFE	57	1.0	**9-MSC(BG)-ST1**	100
	Blue/Gold	PP/Steel	Soft septum, Blue Silicone/PTFE	30	1.0	**9-MSC(BG)-ST101**	100
	Blue/Gold	PP/Steel	Soft septum, Blue Silicone/PTFE, Pre-slit	30	1.0	**9-MSC(BG)-ST101X**	100

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

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, GOLD Grade	Clear	Yes	Blue	Red Natural Rubber/ Clear PTFE	2-SVWGK	9-SCK(B)-8RT1	**2-SVWGK8-CPK**	100
	Clear	Yes	Blue	White Silicone/Red PTFE	2-SVWGK	9-SCK(B)-ST1	**2-SVWGKST-CPK**	100
SureStop Convenience Kit	Amber	Yes	Blue	Red Natural Rubber/ Clear PTFE	2-SVWK(A)	9-SCK(B)-8RT1	**2-SVWK(A)8-CPK**	100
	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 Natural 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	Red Natural Rubber/ Clear PTFE	2-SVW(A)	9-SCK(B)-8RT1	**2-SVW(A)8-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 Natural 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
AVCS IS Kit, for Waters Alliance LC Autosampler	Clear	Yes	Black	Bonded Red PTFE/ White Silicone	2-SVW	9-SCK(BLK)-BST1	**WALBK**	100
Convenience Kit	Clear	Yes	Gray	Bonded Red PTFE/White Silicone, Pre-slit	2-SVW	9-SCK(GY)-BST1X	**2-SVWBSTX-CPK**	100
	Amber	Yes	Gray	Bonded Red PTFE/White Silicone, Pre-slit	2-SVW(A)	9-SCK(GY)-BST1X	**2-SVW(A)BSTX-CPK**	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 **www.thermoscientific.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 – GOLD Grade Glass	Clear	Yes	12x32	Flat Bottom	2.0mL	1.5mL	<170	**2-CVG**	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

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 1.1mL Vial, Wide Opening – GOLD Grade Glass	Clear	No	12x32	Conical	1.4mL	1.1mL	<5	**1.1-CTVG**	500
11mm Crimp Top 1.1mL Vial, Wide Opening	Amber	No	12x32	Conical	1.4mL	1.1mL	<5	**1.1-CTV(A)**	500
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
200µL Insert – GOLD Grade Glass	Clear	–	6x30	Pulled Point	200µL	160µL	<4	**02-MTVWG**	1000
Self-centering vial support device for tapered glass inserts	Polyethylene	–	–	–	–	–	–	**MTS-1**	500
PTFE Vial Support 1.1-CTVG	PTFE	–	–	–	–	–	–	**TTS-312**	50
Plastic Vial Support Sleeve for 09-CTV Only	Polyethylene	–	–	–	–	–	–	**WS-6**	100

Support sleeves allow conical tip vials to be used in standard 12x32mm autosampler trays

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
Septum for 11mm Crimp Caps	–	–	Silicone/PTFE for liquid – liquid extraction	–	0.2	**11-LLX**	100
11mm Crimp Cap, 6mm hole	Silver	Aluminum	Solid Aluminum Disk with Silicone sealing ring		0.06	**11-AC-AL**	100
11mm Crimp Cap, 6mm center hole	Silver	Aluminum	–	–	–	**11-ACB**	500
11mm Crimp Cap, 6mm center hole, Type 6 Rubber/PTFE	Silver	Aluminum	Red Chlorobutyl Rubber/Clear PTFE, Sulphur free	40	1.0	**11-AC6**	500
	Red	Aluminum		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
	Red	Aluminum		60	1.0	**11-AC7(R)**	500
	Green	Aluminum		60	1.0	**11-AC7(G)**	500
	Gold	Aluminum		60	1.0	**11-AC7(GO)**	500

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	Gray Chlorobutyl/PTFE	52	1.0	**11-AC-CBT1**	500
	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" with clear Silicone sealing ring	53	0.25	**11-ACTS**	1000
	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 Crimp Cap, magnetic, Type 8 Rubber/PTFE	Silver	Steel	Red Natural Rubber/Clear PTFE	38	1.0	**11-MC-8RT1**	500
11mm Crimp Cap, magnetic	Silver	Steel	Blue Silicone/PTFE	30	1.0	**11-MC-ST101**	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

2-CV(A)ST-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	Clear	Yes	Silver	Red Natural Rubber/Clear PTFE, Type 7	2-CV	11-AC7	**2-CV7-CP**	100
	Clear	Yes	Silver	White Silicone/Red PTFE	2-CV	11-AC-ST15	**2-CVST-CP**	100
	Amber	Yes	Silver	Red Natural Rubber/Clear PTFE, Type 7	2-CV(A)	11-AC7	**2-CV(A)7-CP**	100
	Amber	Yes	Silver	White Silicone/Red PTFE	2-CV(A)	11-AC-ST15	**2-CV(A)ST-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
IS Kit, Wide Opening Crimp Top Vial for Agilent LC Autosampler	Clear	Yes	Silver	Red Natural Rubber/Clear PTFE, Type 7	2-CV	11-AC7	**HPL**	100
IS Kit, Wide Opening Crimp Top Vial for VWR(Merck)-Hitachi LC Autosampler	Clear	Yes	Silver	Blue Silicone/ PTFE-Pre-Cut	2-CV	11-AC-ST101X	**MEL**	100
IS Kit, Wide Opening Crimp Top Vial for PerkinElmer GC Autosampler	Clear	Yes	Silver	Red Natural Rubber/Clear PTFE, Sulphur free, Type 6	2-CV	11-AC6	**PEG**	100
IS Kit, Wide Opening Crimp Top Vial for Shimadzu LC Autosampler	Clear	Yes	Silver	Blue Silicone/PTFE	2-CV	11-AC-ST101	**SHG**	100
IS Kit, Wide Opening Crimp Top Vial for Thermo Scientific GC Autosamplers	Clear	Yes	Silver	Blue Silicone/Red PTFE	2-CV	11-AC(N)-ST144	**TQG**	100
IS Kit, Wide Opening Crimp Top Vial for Thermo LC Autosampler	Clear	Yes	Silver	White Silicone/Red PTFE	2-CV	11-AC-ST15	**TQL**	100

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
Decapping Pliers	Removes 11mm aluminum crimp seals, Protective gloves recommended	**DCR-11**	1
Manual Decrimper	Removes 11mm aluminum crimp seals without vial damage	**DCB-11C**	1

For electronic crimpers and decrimpers look on page **2-092**

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
- Available silanized* (deactivated) for optimal recovery of critical polar, labile or chelating compounds.
- Snap-Cap vials can be used with snap caps or aluminum crimp seal closures

Compatible with:

Most HPLC and GC autosamplers

For autosampler compatibility visit **www.thermoscientific.com/chromexpert**

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 1.5mL Vial, silanized*	Clear	No	12x32	High Recovery	1.5mL	1.3mL	<4	**1.5-HRRV(S)**	100
11mm Snap Cap Vial, Ultra High Recovery with 10µL Reservoir	Clear	No	12x32	Mandrel Base	1.2mL	1mL	<2	**1.2-UHRRV**	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
11mm Snap Cap 200µL Vial, Fused Insert – GOLD grade glass	Clear	Yes	12x32	Fused Conical	200µL	180µL	<2	**02-FIRVG**	500
300µL Insert	Clear	–	6x31	Flat Bottom	300µL	200µL	<12	**03-NV**	1000
200µL Insert – GOLD Grade Glass	Clear	–	6x30	Pulled Point	200µL	160µL	<4	**02-MTVWG**	1000
Self-centering support device for tapered glass inserts	Polyethylene	–	–	–	–	–	–	**MTS-1**	500

* For information about silanized products visit **www.thermoscientific.com/chromexpert**

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
- Integral Molded Polyethylene cap is an economical choice for routine HPLC applications, but with low sealing properties and zero resealing capacity

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
	Blue	Polyethylene	Red PTFE/White Silicone/Red PTFE	57	1.0	**11-PSN(B)-TST1**	500
	Red	Polyethylene	White Virgin PTFE, 0.01"	53	0.3	**11-PSN(R)-T02**	500
	Blue	Polyethylene	White Virgin PTFE, 0.01"	53	0.3	**11-PSN(B)-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

Compatible with:

The 4mL vials are preferentially used on instruments of the following manufacturers:

- Thermo Scientific
- Shimadzu
- Spark Holland, Varian
- VWR (Merck)/Hitachi
- Waters (Wisp 48 Position Carousel)

For autosampler compatibility visit **www.thermoscientific.com/chromexpert**

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	4.0	<800	**4-SV**	500
	Amber	No	15x46	Flat Bottom	4.0	4.0	<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
	White	Polypropylene	–	–	–	**12-SC(W)**	500
	Red	Polypropylene	–	–	–	**12-SC(R)**	500
	Yellow	Polypropylene	–	–	–	**12-SC(Y)**	500
13mm Solid Top Cap, 13-425 thread	Black	Polypropylene	–	–	–	**12-SCS**	500
PTFE Lined Solid Top Storage Cap for 13-425 Thread	White	Urea	PTFE/PE Foam Liner	–	–	**13-SCST**	100
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	57	1.8	**12-ST18**	500
	–	–	Blue Silicone/PTFE	30	1.0	**12-ST101**	500
	–	–	White Virgin PTFE, 0.01"	53	0.25	**12-T02**	1000

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 and amber
- Polyethylene cap with starburst center design eases syringe needle penetration
- Convenience kits include equal quantities of vials and caps

Recommended for the following instruments:

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

For autosampler compatibility visit **www.thermoscientific.com/chromexpert**

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
8mm PE-Cap/Plug for 1mL Shell-Vial	Polyethylene	–	–	–	–	–	–	**8-NPWP**	1000
12mm Polyethylene Plug for 2mL Shell-Vial	Polyethylene	–	–	–	–	–	–	**12-NPEP4**	1000

Trying to decide what glass quality is right for you?

Use our selection guide at **www.thermoscientific.com/chromexpert**

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
	Clear	No	18x65	Beveled Edge	Round Bottom	12	10	**12-CV**	100

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

For electronic crimpers and decrimpers look on page **2-092**

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
20mm Composite Magnetic Crimp Cap, 8mm hole	Blue	Alu/Tinplate	–	–	–	**20-MCBC**	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 Gray Butyl Freezer Bung	55	3.0	**20-2FB3**	2000
	–	–	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 Red Silicone/Aluminum Face Seal 3mm Thick, for >170°C.	45	3.0	**20-ASH3**	100
	–	–	20mm White Silicone/Aluminum Face Seal 3mm Thick, for <170°C.	45	3.0	**20-AS3**	100
	–	–	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/Red PTFE Seal 1.5mm Thick	20	1.5	**20-ST15**	500
	–	–	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 Plug	Natural	Polyethylene	PE Membrane	–	–	**20-PEPC5**	250
20mm Composite Magnetic Crimp Cap, 8mm hole	Natural	Alu/Tinplate	20mm Red Silicone/Natural PTFE, high temperature (250°C)	45	3.1	**20-MCBC(N)-ST3HT**	500
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

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

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

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-SV**	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

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-10/20

T-25

T-28

T-55

T-104

T-105

T-200

Items not shown to scale

60180-1232

60180-0632

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	155x140x5.5	100	12	Yes	**B-100**	5
Vial Tray	White	Polypropylene	195x103	10	22	No	**T-10/20**	1
Sci-Rack	Blue	Anodised Aluminum	85x85	25	12	No	**T-25**	1
	Silver	Anodised Aluminum	210x134	28	22	No	**T-28**	5
	Silver	Anodised Aluminum	210x134	55	15	Yes	**T-55**	5
	Red	Anodised Aluminum	210x134	104	12	Yes	**T-104**	5
Vial Tray	Black	Foam	210x134	105	12	No	**T-105**	5
	Black	Foam	210x134	200	8	No	**T-200**	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 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

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" White PTFE/ 0.09" Clear Silicone	**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
	Clear	28x140	60	Level 100		**60-EPAVCS**	72

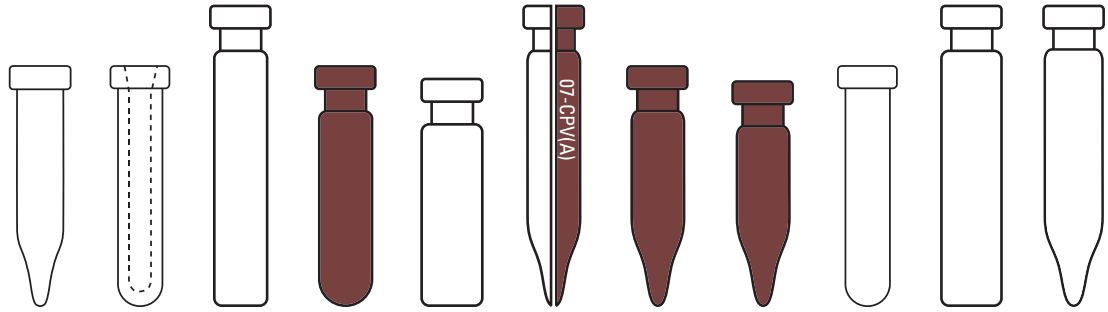
Chromacol TOC Vial Kits (Assembled)

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

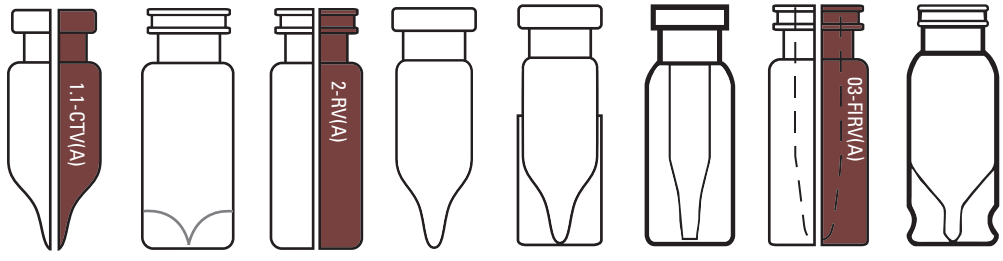
Chromacol Vial Comparison Chart



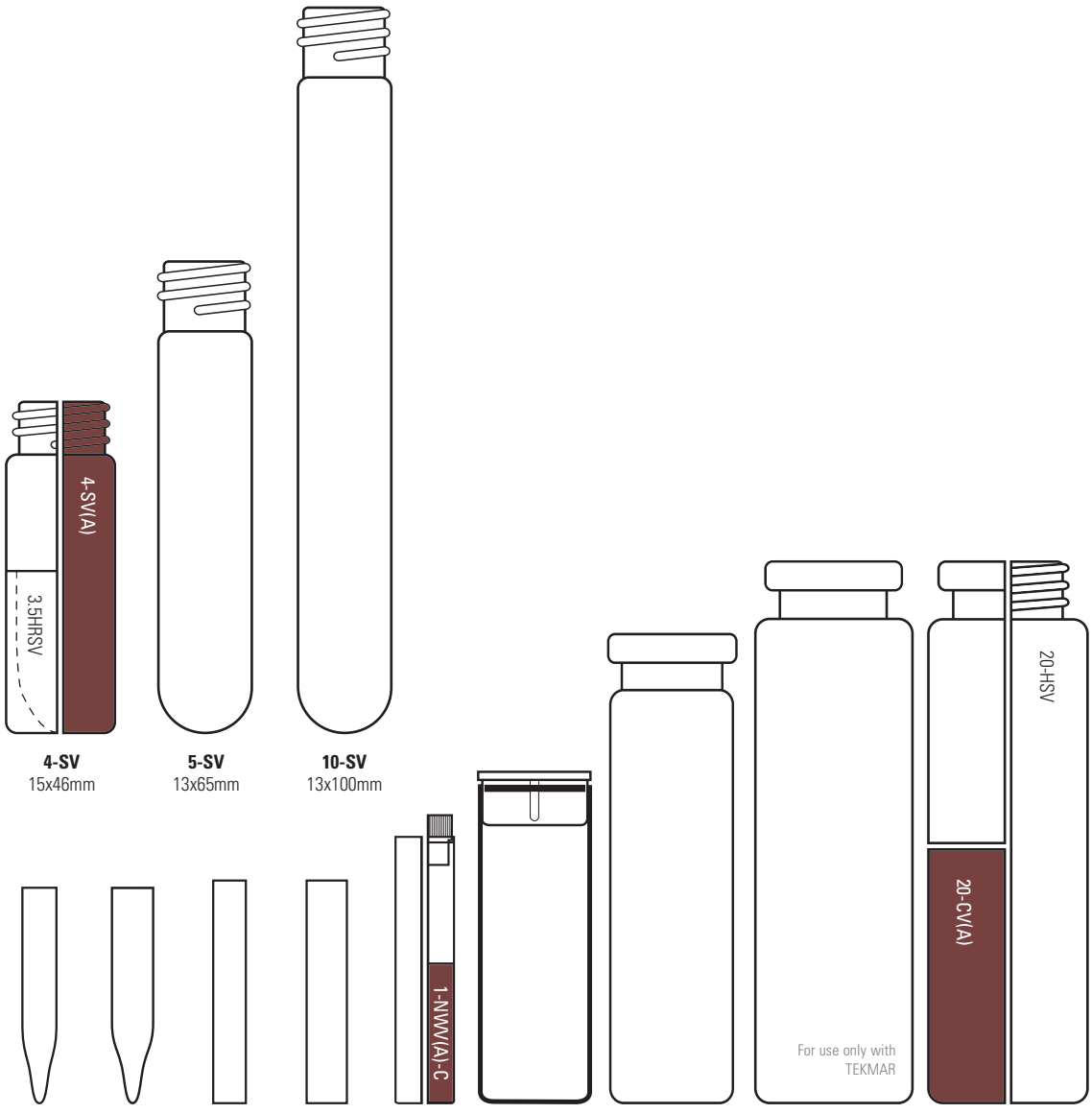
Part No.	**02-CTVG**	**01-CVG**	**08-CPV**	**08-CRV(A)**	**08-CV**	**07-CPV**	**06-CTV(A)**	**05-CTV(A)**	**03-CVG**	**1.2-CWV**	**1-CWV**
Dimensions	6x32mm	6x32mm	7x40mm	7x32mm	8x30mm	7x40mm	7x32mm	7x30mm	6x32mm	8x40mm	8x40mm

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**	**1.2-UHRRV**
Dimensions	12x32mm	12x32mm	12x32mm	10x32mm	12x32mm	12x32mm	12x32mm	12x32mm



Part No.	**4-SV**	**5-SV**	**10-SV**					
Dimensions	15x46mm	13x65mm	13x100mm					
Part No.	**02-MTV**	**02-MTVWG**	**02-NV**	**03-NV**	**1-NWV**	**4-NWV-C**	**12-CV**	**22-CV**	**20-CV/20-HSV**
Dimensions	5x30mm	6x30mm	5x31mm	6x31mm	8x40mm	15x46mm	18x65mm	22x75mm	22x75mm

Part No.	**9-CV**	**6-CV**	**20-EPSVCA**	**27-CV**	**10-CV /10-HSV**
Dimensions	18x50mm	22x38mm	27x57mm	30x60mm	22x45mm

Chromacol Caps and Septa Comparison Chart

Part No.	Dimensions
*8-AC6	8x5mm
8-AC7	8x5mm
8-ACB	8x5mm
8-AC-CBT1	8x5mm
8-AC-ST15	8x5mm
8-AC-ST101	8x5mm
8-AC-ST101X	8x5mm
8-AC(B)-ST144	8x5mm
8-ACT	8x5mm
8-AC-TST1	8x5mm
8-PEC1	8x5mm
8-PEC1X	8x5mm
*8-SC	8x9mm
*8-SCJ	8x9mm
8-SC-8RT1	8x9mm
8-SC-ST15	8x9mm
8-ST14	8x1.4mm
8-ST14X	8x1.4mm
8-ST143	8x1.5mm
8-ST144	8x1.4mm
8-6RT1	8x1mm
8-ST101	8x1mm
8-T02	8x0.25mm
8-TST1	8x1mm
8-ST15	8x1.5mm
9-MSC(BG)-ST1	9x6.5mm
*9-SCK(B)-8RT1	9x6.5mm
9-SCK(B)ST101	9x6.5mm
*9-SCK(B)-ST1	9x6.5mm
9-SCK(B)-TST1	9x6.5mm
9-SCSK-8RT1	9x6.5mm
9-SCJ(W)-ST101	12.9x7.9mm
*11-AC6	11x6mm
*11-AC7	11x6mm
11-ACB	11x6mm
11-AC-CBT1	11x6mm
11-AC-ST101	11x6mm
11-AC-ST101X	11x6mm
11-AC(B)-ST144	11x6mm
11-AC-ST15	11x6mm
11-ACT	11x6mm
11-AC-TST1	11x6mm
11-LLX	11x3mm
11-PEC1	11x6mm
11-PEC1X	11x6mm
11-PEC-ST1	11x7mm
11-MC-ST15	
11-MC-8RT1	
11-MC-ST101	

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

Alternative Colors

8-AC6
- 8-AC6(R)
- 8-AC6(B)

8-SC
- 8- SC(R)
- 8- SC(W)

8-SCJ
- 8-SCJ(W)

9-SCK(B)-8RT1
- 9- SCK(G)-8RT1
- 9- SCK(N)-8RT1
- 9- SCK(B)-8RT1X

9-SCK(B)-ST1
- 9- SCK(G)-ST1
- 9- SCK(N)-ST1
- 9- SCK(B)-ST1X
- 9- SC(BLK)-BST1
- 9- SC(GY)-BST1X

11-AC6
- 11-AC6(R)

11-AC7
- 11-AC7(R)
- 11-AC7(GO)
- 11-AC7(G)
- 11-AC7(B)

Part No.	**11-PSN(B)**	**11-PSN(B)-ST101**	***11-PSN(B)-T02**	**11-PSN(B)-TST1**	**11-PSN(B)-8RT1**	***11-PSN(B)-ST1X**	**11-PSN(B)-ST1**
Dimensions	11x6.5mm	11x6.5mm	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-ST18**	**12-6RT1**	**12-ST101**	**12-T02**	**8-NPWP**	**12-NPEP4**
Dimensions	12x2mm	12x1.8mm	12x1mm	12x1mm	12x0.25mm	8x9mm	12x7mm

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-ASH3**	**20-LLX**	**20-ST3**	**20-ST3HT**	**20-ST15**
Dimensions	20x3mm	20x1.5mm	20x3mm	20x3mm	20x3.1mm	20x1.5mm

Part No.	**20-ST101**	**18-ST101**	**20-B3P**	**20-2FB3**	**20-PEPC5**
Dimensions	20x1mm	18x1mm	20x9mm	20x13.4mm	20x10mm

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

Alternative Colors

11-PSN(B)-T02
- 11-PSN(R)-TO2

11-PSN(B)-ST1X
- 11-PSN(G)-ST1X

12-SC
- 12- SC(R)
- 12- SC(W)
- 12- SC(Y)

20-MCBC
- 20-MCBC(R)

20-MCBC-ST3
- 20-MCBC(R)-ST3
- 20-MCBC(N)-ST3

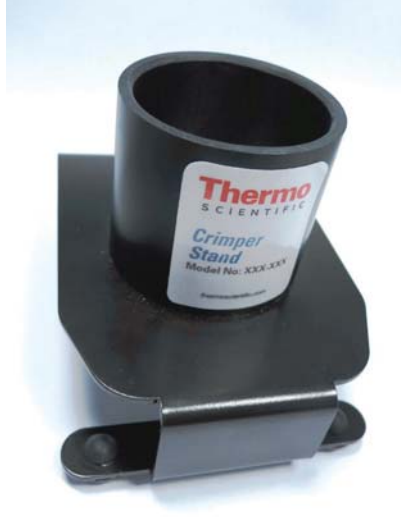
Crimping and Decrimping Tools

Electronic crimpers and decrimpers provide an adjustable crimp with reproducible results.

We offer electronic crimpers for crimping or removal of aluminum seals on 8, 11, 13 and 20mm vials. The crimper is a hand held device, which allows aluminum seals to be firmly attached to the vial while it remains in most sample trays with the touch of a button. A separate decrimper allows the removal of the seal just as easily. The instruments have an adjustment for septa of varying thicknesses. Power is supplied by rechargeable Lithium Ion Cells. The 7.5 volt DC power supply comes with a set of plug adaptors to fit power outlets for most countries.

Electronic Crimpers and Decrimpers

- One hand, secure, reproducible crimps of 8, 11, 13 and 20mm vials with the push of a button
- Reduces hand strain compared to manual crimper operation
- Quick and easy removal of aluminum seals with the push of a button
- Ergonomic design eliminates wrist strain
- Vials can be crimped while they remain in most standard removable sample trays
- Adjustable crimp settings for compatibility with most vial/septum/seal combinations
- Fully rechargeable Lithium Ion Battery
- Provided with universal power supply/recharger and international plug adaptors



Electronic Hand-Held Crimpers and Decrimpers

Description	Cat. No.	Pack of
Electronic Hand-held Crimper for 8mm Crimp Caps, Generation 3	**ECR-8C**	1
Electronic Hand-held Crimper for 11mm Crimp Caps, Generation 3	**ECR-11C**	1
Electronic Hand-held Crimper for 13mm Crimp Caps, Generation 3	**ECR-13C**	1
Electronic Hand-held Crimper for 20mm Crimp Caps, Generation 3	**ECR-20C**	1
Electronic Hand-held Decrimper for 11mm Crimp Caps, Generation 3	**EDCB-11C**	1
Electronic Hand-held Decrimper for 13mm Crimp Caps, Generation 3	**EDCB-13C**	1
Electronic Hand-held Decrimper for 20mm Crimp Caps, Generation 3	**EDCB-20C**	1
Replacement Battery, 6.4V Lithium Ion, For Generation 3 Electronic Crimpers and Decrimper	**ECR-CBATT**	1
Table/Wall Holder for Electronic Hand-held Crimper	**ECR-HOLDER**	1

Programmable Electronic High Power Crimp Station

Fully programmable with quick exchange crimp and decrimp heads

We now offer a new fully programmable electronic Thermo Scientific High Power Crimper (HPC) station with adjustable accessory base, external power supply and exchangeable jaw sets for crimping or de-crimping of aluminum and stainless steel seals on 8, 11, 13 and 20mm diameter vials. The crimper is a bench top tool, including a versatile height adjustable stand which frees both hands for faster crimping operations. The crimper can be used on the stand or as a hand-held device. For each set of crimping or decrimping jaws up to 10 individual programs can be easily saved, in order to automatically preset the correct head-adjustment for different cap/septum/vial combinations. Special jaws are available for 13mm and 20mm flip-off seals. The crimping force is higher than on battery powered units and is not limited by battery life or charge state. Power is supplied by the included 12 volt power supply (110 – 240V) for unlimited, consistent operation, superior compared to every similar hand held device.

Product features and benefits

- Adjustable crimp settings for compatibility with most vial/septum/seal combinations including aluminum, steel and bi-metal seals
- Crimp-force sensing automatically determines when a proper seal has been formed and opens the jaws to release the vial
- Higher power, perfect for steel caps
- Exchangeable crimp and decrimp heads can be removed or installed in seconds
- For each head, a set of up to 10 adjustment programs are available and can be saved
- Fully electric operation eliminates the need for pressurized air supplies at the operation location

Programmable Electronic High Power Crimp Station

Description	Cat. No.	Pack of
Programmable Electronic High Power Crimper* *Includes the basic high power crimper and the 12 volt DC supply with the power cord. (Accessory Base is not included)*	**ECRH-B**	1
Programmable Electronic High Power Crimper 11mm Kit* *Includes the basic high power crimper, the 12 volt DC supply with the power cord and a set of crimp heads: 1×11mm crimp head and 1×11mm decrimp head. (Accessory Base is not included)*	**ECRH-11KIT**	1
Programmable Electronic High Power Crimper 20mm Kit* *Includes the basic high power crimper, the 12 volt DC supply with the power cord and a set of crimp heads: 1×20mm crimp head and 1×20mm decrimp head. (Accessory Base is not included)*	**ECRH-20KIT**	1

Replacement and Optional Parts

Description	Cat. No.	Pack of
Accessory Base for Electronic Crimpers (base plate and bar) *Adjustable in height, base plate is solvent resistant* *Dimensions: 37.6 × 25.4 × 17.7cm*	**ECRH-STAND**	1
8mm Crimper Jaw Set	**ECMJ-8**	1
11mm Crimper Jaw Set	**ECMJ-11**	1
11mm Decrimper Jaw Set	**ECDJ-11**	1
13mm Crimper Jaw Set	**ECMJ-13**	1
13mm Decrimper Jaw Set	**ECDJ-13**	1
13mm Flip-Off Crimper Jaw Set (for circular rim flip caps)	**ECMJ-13FO**	1
20mm Crimper Jaw Set	**ECMJ-20**	1
20mm Decrimper Jaw Set	**ECDJ-20**	1
20mm Flip-Off Crimper Jaw Set (for circular rim flip caps)	**ECMJ-20FO**	1

* Crimping jaws for other seals available on request.

Resources
for Chromatographers

Chromatography Resource Center

Our web-based resource center provides technical support, applications, technical tips and literature to help move your separations forward.
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