

A photograph of laboratory glassware. In the foreground, a large glass syringe with a scale from 0 to 10 mL is shown. Behind it, two vials are visible: one clear with a white stopper and one amber with a black stopper. The background is a light, neutral color.

# Vials & Syringes



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# Vials

Top: Jeff Corman, Restek Performance Coatings Technician

Bottom: Paula Zuchowski, Customer Service Representative



Manufacturer	Instrument/ Model #	11mm Crimp-Top (p. 249-250)	9mm Short-Cap, Screw-Thread (p. 252)	8mm Crimp-Top, 8 x 30mm (p. 254)	Headspace (p. 255)	8mm Screw-Thread (p. 258-259)	10mm Screw-Thread (p. 259)	WISP™ 48 Style (p. 260-261)	WISP™ 96 Style (p. 261)
A.I.M.	CPS -100, 200	X				X			
A.I.	42 vial tray	X							
A.I.	60 vial tray			X					
A.I.	Headspace				X				
Agilent	1042, 1050, 1080, 1082, 1084, 1090, 1100, 5890, 6850, 6890, 7670A, 7671A, 7672, 7673A/B, 7683, 8042	X	X						
Agilent	Headspace				X				
Alcott	738	X				X	X		
Alltech	570	X				X	X		
Alltech	580 (standard tray)	X							
Altex		X					X		
AMS	42	X							
Antek	736 Unisampler, 738	X							
ASC		X				X	X		
Beckman	501, 502, 507					X	X		
Bruker	LC 51							X	
Carlo Erba/Fisons	42 vial tray	X							
Carlo Erba/Fisons	60 vial tray, AS 105 tray			X					
Carlo Erba/Fisons	AS 800	X	X			X			
Carlo Erba/Fisons	8000					X			
Carlo Erba	HS 250, HS 500, HS 800				X				
Carnegie	CMA-250/200	X							
Chrompack	CP 9000 GC Series	X							
CTC	CTC A105S	X							
CTC	Headspace				X				
Cueni	Headspace				X				
Dani	ALS 39.80, 86.80	X	X			X			
Dani	HSS 39.50, HSS 86.50, SPT 37.50				X				
Delsi		X							
Dynatech	42 vial tray	X	X			X			
Dynatech	60 vial tray			X					
Dynatech	LC2000		X						
Fisons	42 vial tray	X							
Fisons	60 vial tray			X					
GBC		X							
Gerstel		X							
Gilson	231 XL, 232 XL, 233 XL, Aspec XL	X	X			X			
Gilson	Asted XL	X				X			
Gynkotek	Gina, others	X				X			
Hitachi	AS-2000, AS-6000	X	X						
Hitachi	S6551					X			
Hitachi	L-7200					X	X	X	
Hitachi	L-7250					X	X		
IBM		X				X			
ICI	other	X				X			
Infochroma		X				X			
Jasco	851-AS, AS-950	X				X			
Jasco	LC800 & 900 series					X			
Kipp		X				X			
Kontron	360	X				X			
Kontron	460					X			
LDC	Marathon, Promis	X	X						
LDC	other	X							
LDC	713			X					
LDC	all except 713					X			
L.E.A.P Technologies	CTC A200S	X	X			X	X		
L.E.A.P Technologies	CTC A105S	X							

Manufacturer	Instrument/ Model #	11mm Crimp-Top (p. 249-250)	9mm Short-Cap, Screw-Thread (p. 252)	8mm Crimp-Top, 8 x 30mm (p. 254)	Headspace (p. 255)	8mm Screw-Thread (p. 258-259)	10mm Screw-Thread (p. 259)	WISP™ 48 Style (p. 260-261)	WISP™ 96 Style (p. 261)
L.E.A.P Technologies	HS 500				X				
Magnus Scientific						X			
PerkinElmer	AI-1	X	X	X					
PerkinElmer	ISS 100, LC 600 42 vial tray	X	X						
PerkinElmer	ISS 200	X	X		X				
PerkinElmer	Integral 4000	X			X				
PerkinElmer	Autosystem	X			X	X			
PerkinElmer	420/B, 4900	X				X			
PerkinElmer	F40, F45, HS 6, HS 40				X				
PerkinElmer	LC 600 (60), AS100/B, 300, 8300, AS2000, LC 30, 2000, B 2000			X					
Pharmacia LKB	2157-010	X				X			
Precision Sampling	GC111, GC 311, LC 241-60	X		X		X			
Phillips	4247, 4710	X				X			
Phillips	LC-XP	X				X		X	
Polymer-Labs	GPC 110/210	X							
Pye	LXP	X							
S.G.E.	M280D	X				X			
Sedere		X				X			
Shimadzu	SIL-10A, 10Ai, 10AxL	X	X			X	X		
Shimadzu	AOC-8B/9, SIL-6A, SIL-6B, -9A, -8A					X			
Shimadzu	AOC-14/L400, AOC-17					X		X	
Shimadzu	SIL-2AS							X	
Shimadzu	HSS-2B				X				
Siemens	AS 32, AS 200	X							
Sigma	2000			X					
Spark Holland	SPH 125	X	X						
Spark Holland	Marathon, Promis	X	X			X			
Spark Holland	Triathlon, Midas	X				X			
Spectra-Physics	8875, 8880	X	X			X			
Talbot		X				X			
Tekmar	7000, 7000/7050				X				
Thermo Electron	A200S	X	X	X					
TOA	ICA5450					X			
TosohHaas	TSK-6080, AS-8010, AS-8020	X				X		X	
Tosca 1		X							
Tracor	770, 771, 772	X							
TSP	8875, 8880, AS 100/1000, AS 300/3000	X				X			
Unicam	4710	X							
Unicam	4700LC, 4247	X				X			
Unicam	LC-XP	X				X		X	
United Technologies		X				X			
Varian/Rainin	Dynamax AI-1A, AI-200, Dynamax AI-3	X							
Varian/Rainin	DynamaxAI-3AI-1A, AI-2W					X			
Varian	8100/8200	X	X			X	X		
Varian	Marathon	X	X			X			
Varian	9100/9090/9095	X				X			
Varian	8035, 8000 series, 8055, 8085, 3800 GC					X			
Varian	Genesis				X				
Waters	Alliance 2690	X	X			X	X		
Waters	710, 717+							X	X
Waters	48-pos. M700							X	
Waters	96-pos. M700								X

## Vial Size Quick Reference Chart

All vials pictured are actual size, with description and Restek catalog number and page number for quick reference.

### WISP™ Vials

4.0mL Screw-Thread Step Vial



24654, 24655  
24656, 24657  
Page 261

4.0mL Clear Crimp-Top



24658, 24659  
Page 260

700µL Limited Volume



24680,  
24681  
Page 261

96 Style



24662, 24663,  
24664, 24665,  
24678, 24679  
Page 261

### Headspace Vials

10mL Clear Flat Bottom



24683,  
24684  
Page 255

10mL Clear Rounded Bottom



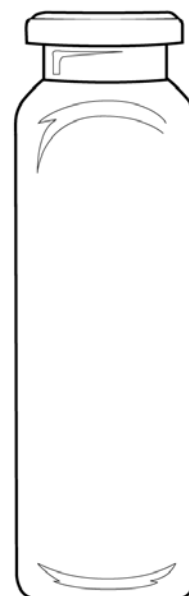
21164,  
21165  
Page 255

20mL Clear Flat Bottom



24685,  
24686  
Page 255

20mL Clear Rounded Bottom



21162,  
21163  
Page 255

All vials pictured are actual size, with description and Restek catalog number and page number for quick reference.

## Limited Volume Inserts

250µL Big Mouth Insert



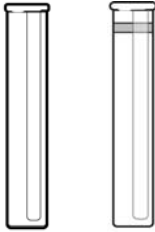
24516, 21779  
Page 250

250µL Glass Flat Bottom



24510  
Page 259

350µL Glass Flat Bottom w/ID Ring



21780, 24517  
Page 250

24692, 24693  
Page 250

500µL Glass WISP™ Flat Bottom



21787, 21788  
Page 261

100µL Glass or Polypropylene w/ Polypropylene Bottom Spring



24508, 21775  
24512  
Page 259

250µL Glass or Polypropylene w/ Bottom Spring



21776, 21777  
Pages 250, 260, 261  
24518  
Page 250

## 8mm Screw-Thread Vials

2.0mL Clear or Amber w/ White Graduated Marking Spot



24619, 24620, 24621, 24622  
Page 258

## 8mm Crimp-Top Sample Vials

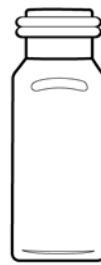
0.8mL Clear Flat Bottom



24695, 24696  
Page 254

## 9mm Short-Cap Vials

2.0mL Clear or Amber w/ White Graduated Marking Spot



21154, 21155, 21140, 21141, 21142, 21143  
Page 252

## 10mm Screw-Thread Vials

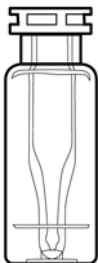
2.0mL Big Mouth Step™ Clear or Amber



24626, 24627, 24628, 24629  
Page 259

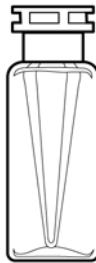
## 11mm Crimp-Top Vials

Limited Volume 100µL Glass Insert, Clear Plastic Vial



24653  
Page 250

Limited Volume 100µL Polypropylene



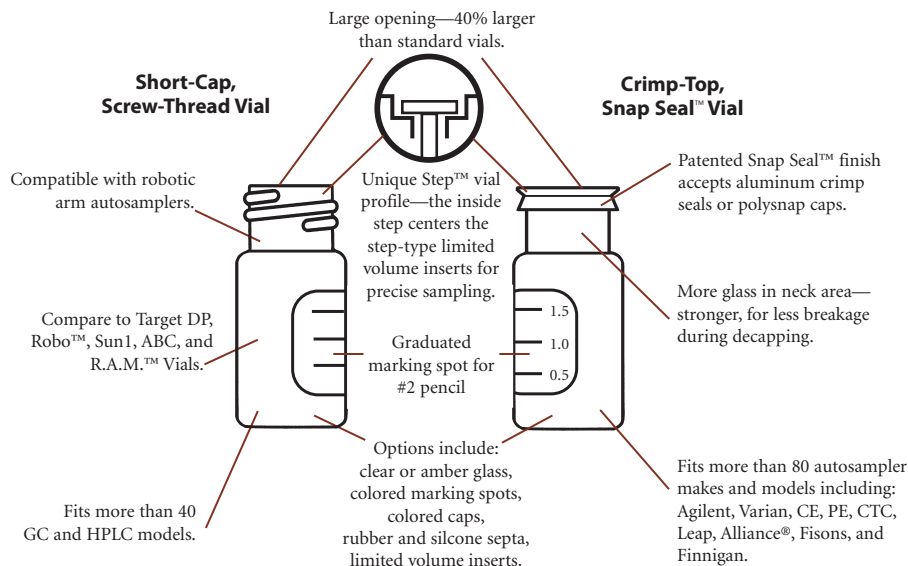
24651, 24652  
Page 250

2.0mL Snap Seal™ Style Clear or Amber Glass



21152, 21153, 24383, 24384, 24385, 24386  
Page 250

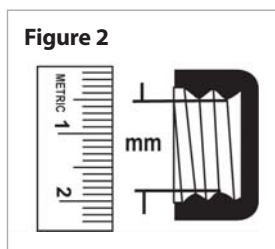
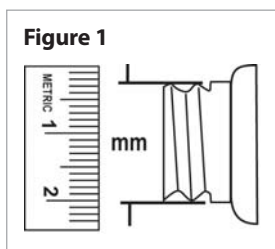
### The Ultimate Autosampler Vials



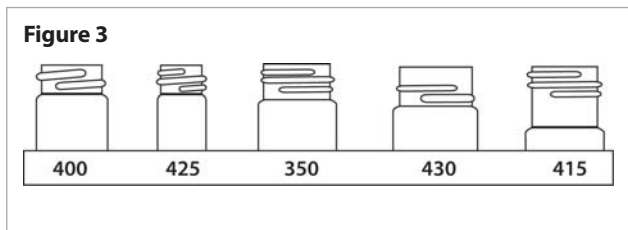
#### How to Measure for Vial, Cap, Liner, and Seal Selection

Bottles and caps are described with a two part number system referred to as the Finish\* (e.g., 13/425). The first number represents the neck size of the vial or cap in millimeters.

The vial is measured from the outside edge of the threads on one side to the outside edge of the threads on the opposite side (Figure 1). The cap is measured from one side of the inner wall to the opposite side of the inner wall (Figure 2).



The second number describes the thread pattern and assures that the bottle and cap will fit together (Figure 3).



\*Finish sizes are standardized and controlled by the GCMI—the Glass Container Manufacturers Institute. Both cap and vial manufacturers use these specifications.

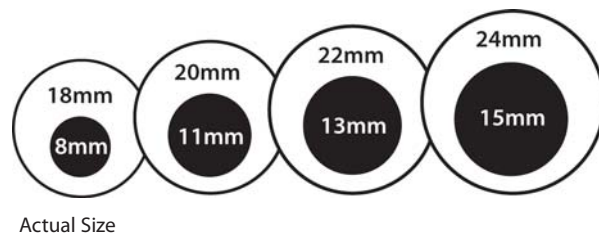
for **more** info

Refer to the Septum Selection Guide on [page 251](#) for solvent compatibilities, resealability, and temperature limits.

Liner size can be determined by comparing liners or crimp seals to the measured circles (Figure 4). The seals will be slightly larger than the circle size measured for the liner.

**Figure 4**

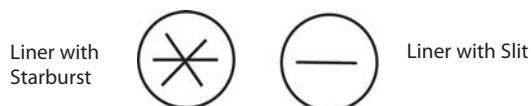
Liner thickness is measured in mils: 1 mil = 0.001 inch



With combination liners (e.g., TFE/silicone, 5/55), the numbers represent the thickness of the individual components of the liner in mils. This same liner could be described as 0.060" or 60 mil.

Durometer or hardness of liner material is referred to as "shore" and is an important consideration in working with some autosamplers (45-60 shore is the typical range for autosampler liners). Liners with slits or molded starburst patterns (Figure 5) allow easier needle penetration which can prevent needles from bending or jamming on the autosampler arm.

**Figure 5**



**For a highly inert surface, we recommend Siltek® deactivation for your vials:**

- Maximizes inertness, minimizes sample breakdown—ideal for difficult matrices and reactive compounds.
- Inert over a wide sample pH range.
- Low bleed.
- Thermally stable.

Our proprietary Siltek® deactivation process (US patent # 6,444,326) produces a highly inert glass surface that features high temperature stability, extreme durability, and low bleed. Try Siltek® deactivated vials for better recovery of sample analytes.

For Siltek® vials, add the corresponding suffix number to the vial catalog number.

Qty.	Siltek® Deactivation	
100-pk.	-222	addl. cost
1000-pk.	-223	addl. cost

instrument **reference****For 11mm Crimp-Top Vials**

Manufacturer	Instrument/Model #	Manufacturer	Instrument/Model #
A.I.M.	CPS -100, 200	LDC	Marathon, Promis, other than 713
A.I.	42 vial tray	L.E.A.P. Technologies	CTC A200S, CTC A105S
Agilent	1042, 1050, 1080, 1082, 1084, 1090, 1100, 5890, 6850, 6890, 7670A, 7671A, 7672, 7673A/B, 7683, 8042	Magnus Scientific	
Alcott	738	PerkinElmer	Autosystem GC, AI-1, Integral 4000, ISS 100, ISS 200, LC 600 42 vial tray, 420/B, 4900
Alltech	570, 580 (standard tray)	Pharmacia LKB	2157-010
Altex		Precision Sampling	GC111, GC 311, LC 241-60
AMS	42	Phillips	LC-XP, 4247, 4710
Antek	736 Unisampler, 738	Polymer-Labs	GPC 110/210
ASC		Pye	LCXP
Carlo Erba/Fisons	42 vial tray AS 800	S.G.E.	M280D
Carnegie	CMA-250/200	Sedere	
Chrompack	CP 9000 GC Series	Shimadzu	SIL-10A, 10Ai, 10AxL
CTC	CTC A105S	Siemens	AS 32, AS 200
Dani	ALS 39.80, 86.80	Spark Holland	SPH 125, Marathon, Promis, Triathlon, Midas
Delsi		Spectra-Physics	8875, 8880
Dynatech	42 vial tray	Talbot	
Fisons	42 vial tray, AS800	Thermo Electron	A200S
GBC		TosoHaas	TSK-6080, AS-8010, AS-8020
Gerstel		Tosca 1	
Gilson	231 XL, 232 XL, 233 XL, Asted XL, Aspec XL	Tracor	770, 771, 772
Gynkotech	Gina, others	TSP	8875, 8880, AS 100/1000, AS 300/3000
Hitachi	AS-2000, AS-6000	Unicam	4710, LC-XP, 4247
IBM		United Technologies	
ICI	other than LC 1600	Varian/Rainin	Dynamax AI-IA, AI-200, Dynamax AI-3
Infochroma		Varian	8100/8200, 9100/9090/9095
Jasco	851-AS, AS-950	Marathon	
Kipp		Waters	Alliance 2690
Kontron	360		

## 11mm Crimp-Top Vials



**Crimp-Top Vials, 2.0mL, 12 x 32mm, 11mm Crimp Finish**  
White graduated marking spots are a standard feature unless otherwise noted.

### Crimp-Top Vials, Snap Seal™ Style—12 x 32mm, 11mm Crimp

Description	100-pk.	1000-pk.
2.0mL Clear Glass Vial w/White Graduated Marking Spot	24383	24384
2.0mL Amber Glass Vial w/White Graduated Marking Spot	24385	24386
2.0mL Clear Glass Vial without Graduated Marking Spot	21152	21153

### 11mm Aluminum Crimp Seals with Septa

Description	100-pk.	500-pk.	1000-pk.
Silver Seal, PTFE/Natural Rubber Septa	21174	—	21175
Blue Seal, PTFE/Red Rubber Septa	24351	—	24352
Green Seal, PTFE/Red Rubber Septa	24353	—	24354
Red Seal, PTFE/Red Rubber Septa	24355	—	24356
Yellow Seal, PTFE/Red Rubber Septa	24357	—	24358
Mixed Colors, PTFE/Rubber Septa	—	21724	—
Silver Seal, PTFE/Silicone Septa	24359	—	24360
Blue Seal, PTFE/Silicone Septa	24361	—	24362
Green Seal, PTFE/Silicone Septa	24363	—	24364
Red Seal, PTFE/Silicone Septa	24365	—	24366
Yellow Seal, PTFE/Silicone Septa	24367	—	24368
Mixed Colors, PTFE/Silicone Septa	—	21725	—
Silver Seal, PTFE/Silicone/PTFE Septa*	24369	—	24370

### Convenience Kits: Vials, Caps, & Septa

Vials packaged in a clear-lid tray. Caps with septa packaged in a plastic bag.

Description	100-pk.	1000-pk.
2.0mL Clear Vial, deactivated, PTFE/Natural Rubber Silver Seal†	24671	24672
2.0mL Amber Vial, deactivated, PTFE/Natural Rubber Silver Seal†	24673	24674
2.0mL Clear Vial, untreated, PTFE/Natural Rubber Silver Seal	21196	21197
2.0mL Amber Vial, untreated, PTFE/Natural Rubber Silver Seal	21198	21199
2.0mL Clear Vial, untreated, PTFE/Silicone Silver Seal	24646	24647
2.0mL Amber Vial, untreated, PTFE/Silicone Silver Seal	24648	24649

### Limited Volume Inserts for 2mL Crimp-Top & Short-Cap, Screw-Thread Vials

Description	100-pk.	1000-pk.
50µL Glass, Big Mouth, Bottom Spring	24513	21782
250µL Glass, Big Mouth Insert w/ Bottom Spring	21776	21777
250µL Glass, Big Mouth Insert w/ Glass Flange (Step™ Design)‡	24516	21779
350µL Glass, Flat Bottom Insert	21780	24517
350µL Glass, Flat Bottom Insert w/ ID Ring	24692	24693
250µL Polypropylene, Big Mouth, Bottom Spring	24518	—
250µL Polypropylene, Big Mouth, Top Flange	24519	—
250µL Polypropylene, Big Mouth, No Spring	24520	—

### Limited Volume Vials, 11mm Crimp-Top

Description	100-pk.	1000-pk.
100µL Polypropylene	24651	24652
100µL Glass Insert/Clear Plastic Vial	24653	—

\*Individual colored seals available on request.

†Silcote™ CL7 deactivation.

‡Not to be used with 9mm screw-thread vials.

### for more info

see page 256 for electronic crimpers and decappers.



**Versa Vial™ Vials, Glass, 2.0mL, 12 x 32mm**

- Increased neck length for accommodating fluctuations in robotic arm settings.
- Eliminate cracked necks, breakage and dangerous sharp edges, using soft Versa-Vial™ PTFE/silicone plugs.
- Largest target area available, ideal for sampling and pipet use.
- Vials available with or without graduated marking spots.

Description	100-pk.	1000-pk.
2.0mL Clear Glass Vial	22701	22702
2.0mL Clear Glass Vial w/Graduated Marking Spot	22703	22704
2.0mL Amber Glass Vial	22697	22698
2.0mL Amber Glass Vial w/Graduated Marking Spot	22699	22700

Patent pending.

**Versa Vial™ Vials, Polypropylene, 1.5mL, 12 x 32mm**

Description	100-pk.	1000-pk.
1.5mL Polypropylene Vial	22705	22706

**Versa Vial™ Inserts**

Description	100-pk.	1000-pk.
250µL Glass Insert w/Glass Flange	22707	22708
250µL Polypropylene w/Flange	22709	22710
250µL Glass Flat Bottom Insert	22711	22712

**Versa Vial™ Plugs**

Description	100-pk.	1000-pk.
12mm, Green Polyethylene Plug	22713	22714
12mm, Grey Chlorobutyl/Siliconized Plug	22715	22716
12mm, White PTFE/Silicone Plug	22717	22718
12mm, White PTFE/Silicone Plug w/Slit*	22719	22720

\*Eliminates needle damage to plug.

**Septum Selection Guide**

Materials	Compatibility	Incompatibility	Resealability	Max. Temp.
Red Rubber (synthetic)	acetone, alcohols, DMF, DMSO, ether THF, toluene	ACN, benzene, chloroform, heptane, hexane, pyridine,	very good	90°C
PTFE/ Natural Rubber	PTFE: resistance until punctured Rubber: acetone, ACN, alcohols, diethylamine, DMF, DMSO, phenol	aromatics, carbon disulfide, chlorinated solvents, hydrocarbon solvents	very good	90°C
PTFE/Silicone PTFE/Silicone/PTFE	PTFE: resistance until punctured Silicone: acetone, alcohols, DMF, DMSO, ether	ACN, benzene, chloroform, heptane, hexane, pyridine, THF, toluene	very good	205°C
Polyethylene	Good resistance to solvents and weak acids or bases. Unreactive with most chemicals, but some solvents cause softening or swelling.	hydrocarbon solvents	one-time use	175°C
Gray Chlorobutyl	acids or bases, water solutions, buffer solutions, oxygenated solvents, vegetable oils	aliphatic or aromatic hydrocarbons, halogenated solvents, mineral oils, strong acids	very good	100°C

Abbreviations: ACN - acetonitrile, DMF - dimethylformamide, DMSO - dimethylsulfoxide, THF - tetrahydrofuran

## 9mm Short-Cap Screw-Thread Vials

**Agilent  
Compatible!**



Ideal for Agilent 7673 & other autosamplers that process 12 x 32mm crimp-top vials.

### 9mm Short-Cap, Screw-Thread Vials, 12 x 32mm, 9mm Opening Fit all 2.0mL, 12 x 32mm, Crimp-Top Vial Based Autosamplers.

- Shorter screw cap allows the robotic autosampler to function properly.
- Wider opening prevents syringe problems.
- Dimensions are effectively identical to the crimp-top vial.
- Variety of colors and liner material.

Are you tired of dealing with crimp-top vials, but worried about using screw-thread vials with your autosampler? If you want the performance of a crimp-top vial with the convenience of a screw-thread vial, these vials are the answer for you.

### 9mm Short-Cap, Screw-Thread Vials, 12 x 32mm, 9mm Opening

Description	100-pk.	1000-pk.
2.0mL Clear Vial, w/White Graduated Marking Spot	21140	21141
2.0mL Amber Vial, w/White Graduated Marking Spot	21142	21143
2.0mL Clear Vial, without Graduated Marking Spot	21154	21155

### 9mm Thread Pre-Assembled Short-Cap, Screw-Vial Closures

Description	100-pk.	500-pk.	1000-pk.
Blue Cap, PTFE/Red Rubber Liner	24473	—	24474
Mixed Colors, PTFE/Red Rubber Liner	—	24668	—
Blue Cap, PTFE/Silicone Liner	24485	—	24486
Green Cap, PTFE/Silicone Liner	24487	—	24488
Yellow Cap, PTFE/Silicone Liner	24493	—	24494
Mixed Colors, PTFE/Silicone Liner	—	24669	—
Blue Cap, PTFE/Silicone/PTFE Liner	24497	—	24498
Black Cap, PTFE/Silicone/PTFE Liner	24495	—	24496
Mixed Colors, PTFE/Silicone/PTFE Liner Cap	—	24670	—



Limited volume inserts are available on page 250.

## instrument reference

### For 9mm Short-Cap, Screw-Thread Vials

Manufacturer	Instrument/Model #
Carlo Erba / Fisons	AS 800
Dani	ALS 39.80, 86.80
Dynatech	42 vial tray, LC2000
Gilson	231 XL, 232 XL, 233 XL, Aspec XL
Agilent	1042, 1050, 1080, 1082, 1084, 1090, 1100, 5890, 6890, 7670A, 7671A, 7672, 7673A/B, 7683, 8042
Hitachi	AS-2000, AS-6000
LDC	Marathon, Promis
L.E.A.P. Technologies	CTC A200S
PerkinElmer	AI-1, ISS 100, ISS 200, LC 600 42 vial tray
Shimadzu	SIL-10A, 10Ai, 10AxL
Spark Holland	SPH 125, Marathon, Promis
Spectra-Physics	8875, 8880
Thermo Electron	A200S
Varian	8100/8200, Marathon
Waters	Alliance 2690

**11mm Poly Crimp™ Seal: Snap-on or Crimp**

The patented Poly Crimp™ Seal is versatile, working as either a snap-on or crimp-top cap. Simply use a standard crimping tool to secure the Poly Crimp™ Seal onto any crimp-top vial. It's that easy! The Poly Crimp™ Seal also forms an airtight seal by hand when the additional sealing of a crimping tool is not required. The Poly Crimp™ Seal offers the following benefits:

- Works on any crimp style vial.
- Crimps smoothly and easily—no more sharp edges from an aluminum crimp cap.
- Easily decaps using standard decapping tools.
- Eliminates inconsistent sealing that results from improper crimping.
- Unique design holds the septum firmly in place.
- Provides better seal than snap caps.\*
- Meets CONEG standards. The Poly Crimp™ Seal is free of heavy metals and is easily disposed of or incinerated.



Description	100-pk.	400-pk.	1000-pk.
Clear Seal, PTFE/Red Rubber Liner	24433	—	24434
Blue Seal, PTFE/Red Rubber Liner	24435	—	24436
Clear Seal, PTFE/Silicone Liner	24443	—	24444
Blue Seal, PTFE/Silicone Liner	24445	—	24446
Clear Seal, PTFE/Silicone/PTFE Liner	24453	—	24454
Blue Seal, PTFE/Silicone/PTFE Liner	24455	—	24456
Mixed Color Seals, PTFE/Silicone/PTFE Liner	—	21728	—

\*Based on continual use for 3–4 days.

**tech tip**

**Compatibility concerns?**  
Refer to the Septum Selection Guide on [page 251](#).

**11mm GC Snap-Top Cap™ with Septum**

- Clear polypropylene cap provides a tighter seal than standard Snap-Top Cap™.
- Good for pressurized injection systems.
- Save money! Use this snap cap when you don't need to crimp.



Description	100-pk.	1000-pk.
Polypropylene Cap, 10mil PTFE Liner	21729	21730
Polypropylene Cap, PTFE/Natural Rubber Septum	21731	21732
Polypropylene Cap, PTFE/Silicone Septum	21733	21734

## 8mm Crimp-Top Vials, Vial Holders, Micro-Vials



### 8mm Crimp-Top Vials, 0.8mL, 8 x 30mm

#### 0.8mL Crimp-Top Vials (8 x 30mm, 8mm Crimp)

Description	100-pk.	1000-pk.
0.8mL Clear Flat Bottom Vials	24695	24696

#### 8mm Aluminum Seals w/Septa

Description	100-pk.	1000-pk.
Silver Seals w/Clear PTFE/Natural Rubber Septa	21757	21758

### 8mm Crimper and Decapper

Description	qty.	cat.#
8mm Crimper	ea.	21735
8mm Decapper	ea.	21736

### ReadySpike™ Vial & Syringe Holders

#### 21-Hole Holder

- Convenient storage for 19 vials and 2 syringes.
- Holds vials securely for easy transportation.
- Allows easy spiking of samples.
- Kit includes 19 pre-cleaned vials and Mininert® caps.

Description	qty.	cat.#
21-Hole ReadySpike™ Holder	ea.	21048
21-Hole ReadySpike™ Holder Kit w/ Vials	kit	21068



### for more info

see page 257 for Mininert® valve caps & sampling valves to use with Accuform Micro-Vials.

### Accuform Micro-Vials with Screw Threads

Description	Screw Thread Size	qty.	cat.#
1.0mL Micro-Vial, Accuform Borosilicate Glass, Screw Thread, Graduated, Open Top Closure (attached)	13mm-425	12-pk.	21050
3.0mL Micro-Vial, Accuform Borosilicate Glass, Screw Thread, Graduated, Open Top Closure (attached)	20mm-400	12-pk.	21051



### instrument reference

#### For 8mm Crimp-Top Vials, 8 x 30mm

Manufacturer	Instrument/Model #
A.I.	60 vial tray
Carlo Erba/Fisons	60 vial tray, AS 105 tray
Dynatech	60 vial tray
Fisons	60 vial tray
LDC	713
PerkinElmer	LC 600 (60), AS100/B, 300, 8300, AI-1, AS2000, LC 30, 2000, B 2000
Precision Sampling	GC 111, GC 311, LC241-60
Sigma	2000
Thermo Electron	A200S

## Headspace Vials

### Headspace Autosampler Vials\*

Description	100-pk.	1000-pk.
a) 6mL Clear Vial	21166	21167
b) 10mL Clear Vial, Flat Bottom	24683	24684
c) 10mL Clear Vial, Rounded Bottom	21164	21165
d) 20mL Clear Vial, Flat Bottom	24685	24686
e) 20mL Clear Vial, Rounded Bottom	21162	21163
f) 27mL Clear Vial	21160	21161

\*a) - f) designated in instrument reference chart below.



### 20mm Aluminum Seals w/Septa, Assembled

Description	100-pk.	1000-pk.
Silver Seal w/ PTFE/Gray Butyl Rubber	21761	21762
Silver Seal w/ PTFE/Silicone	21763	21764
Pressure Release Silver Seal w/ PTFE/Gray Butyl Rubber Septum	21765	21766
Pressure Release Silver Seal w/ PTFE/Silicone Septum	21767	21768
20mm Magnetic Crimp Cap w/Teflon®/Silicone Septum (tan/white) with 8mm Hole	22831	22832
20mm Magnetic Crimp Cap w/Teflon®/Silicone Septum (tan/white) with 5mm Hole	22833	22834
20mm Magnetic Crimp Cap w/PTFE/Butyl Septum with 8mm Hole	22835	22836
20mm Magnetic Crimp Cap w/PTFE/Butyl Septum with 5mm Hole	22837	22838

5mm hole is compatible with the following systems: Carlo Erba HS500/HS800, CTC 500, Fisons HS500/HS800 and Varian/Chrompack 9020/25. 8mm hole is compatible with the Combi Pal.



new!

### Pre-Cleaned Volatile Organic Analyte (VOA) Sampling Vials

- Container, liner and closure cleaned and assembled.
- Clear or amber.
- Open top caps.
- Teflon® faced 0.125" silicone septa.
- Each case lot numbered.

Description	qty.	cat.#
20mL Clear Pre-Cleaned VOA Vials	72-pk.	21798
20mL Amber Pre-Cleaned VOA Vials	72-pk.	21799
40mL Clear Pre-Cleaned VOA Vials	72-pk.	21796
40mL Amber Pre-Cleaned VOA Vials	72-pk.	21797
60mL Collection Vials, Clear Glass, for ASE® 200	72-pk.	26121
60mL Collection Vials, Amber Glass, for ASE® 200	72-pk.	26122
Replacement Septa for 20, 40 & 60mL Vials (24mm Teflon® faced 0.125" silicone septa)	100-pk.	24694

for **more** info

see [page 256](#) for 20mm electronic crimper and decapper.



new!

### For Headspace Vials

Manufacturer	Instrument/Model #	Manufacturer	Instrument/Model #
<b>a)</b> Carlo Erba	HS 500, HS 800	<b>d)</b> A.I.	Headspace
Agilent	Headspace	Carlo Erba	HS500, HS 800
PerkinElmer	ISS 200	CTC	Headspace
		Cueni	Headspace
<b>b)</b> A.I.	Headspace	Dani	HSS 39.50, HSS 86.50, SPT 37.50
Carlo Erba	HS500, HS 800	Agilent	Headspace
Cueni	Headspace		
Dani	HSS 39.50, HSS 86.50	<b>e)</b> A.I.	Headspace
Agilent	Headspace	Cueni	Headspace
		Dani	HSS 39.50, HSS 86.50, SPT 37.50
<b>c)</b> A.I.	Headspace	L.E.A.P. Technologies	HS 500
Cueni	Headspace	PerkinElmer	Autosystem, F40, F45, HS 6, Integral 4000, HS 40
Dani	HSS 39.50, HSS 86.50	Tekmar	7000, 7000/7050
L.E.A.P. Technologies	HS 500	Varian	Genesis
PerkinElmer	Autosystem, F40, F45, HS 6, Integral 4000, HS 40		
Tekmar	7000, 7000/7050	<b>f)</b> Shimadzu	HSS-2B
Varian	Genesis		

instrument  
reference

**tech tip**

**Compatibility concerns?**  
Refer to the Septum Selection Guide on [page 251](#).

## Electronic Crimpers and Decappers

### Hand-held Rechargeable Crimpers and Rechargeable Decappers

- Easy to use; comfortable grip.
- Hundreds of operations from one charge.
- Adjustable crimping force.
- All kits include battery charger.



Powered by a standard Black and Decker Versapak® battery, these electronic tools for 11mm or 20mm caps will cycle hundreds of times on a single charge. The cycle is controlled precisely, through an internal counter, and is adjusted with two buttons on the side of the case. The tools fit comfortably in the hand and weigh approximately 600 grams. The jaws can be positioned easily around closely-spaced vials in standard autosampler trays. Each kit includes the tool, a Versapak® Gold rechargeable battery, which uses environmentally friendly NiMH technology, and a charger. Recharging generally takes 6-9 hours.

The Electronic Crimper fits around vials in standard autosampler trays. The adjustable setting provides a precision crimp, vial after vial.



### Decapping has never been easier!

one



two



three



#### Description

Description	qty.	cat.#
11mm Electronic Crimper (110 volt battery charger)	kit	22853
11mm Electronic Crimper (220 volt European battery charger)	kit	22853-EUR
11mm Electronic Crimper (220 volt UK battery charger)	kit	22853-UK
11mm Electronic Decapper (110 volt battery charger)	kit	22854
11mm Electronic Decapper (220 volt European battery charger)	kit	22854-EUR
11mm Electronic Decapper (220 volt UK battery charger)	kit	22854-UK
20mm Electronic Crimper (110 volt battery charger)	kit	22851
20mm Electronic Crimper (220 volt European battery charger)	kit	22851-EUR
20mm Electronic Crimper (220 volt UK battery charger)	kit	22851-UK
20mm Electronic Decapper (110 volt battery charger)	kit	22852
20mm Electronic Decapper (220 volt European battery charger)	kit	22852-EUR
20mm Electronic Decapper (220 volt UK battery charger)	kit	22852-UK



**Aluminum Seal Crimpers and Decappers**

The crimper is adjustable for optimized sealing performance and is comfortable enough for prolonged use. If you need to save, transfer, or dispose of your samples, our decapper allows you to remove a crimp-top cap safely and easily. Far safer than removing caps with pliers, knife or screwdriver blade, etc. If you aren't currently using a seal decapper, we recommend you order one today!

Description	qty.	cat.#
8mm Crimper	ea.	21735
8mm Decapper	ea.	21736
11mm Crimper	ea.	21170
11mm Decapper	ea.	21171
13mm Crimper	ea.	21739
13mm Decapper	ea.	21740
20mm Crimper	ea.	21737
20mm Decapper	ea.	21738



Safer than removing caps with pliers, knife or screwdriver blade!



Decapper



Crimper

**Snap Rack™ Storage Unit**

The Snap Rack™ sample vial rack is an innovation that allows you to keep your vials and caps together. Constructed of tough polypropylene, the Snap Rack™ holds 50 12 x 32mm size vials. The Snap Rack™ is stackable too! Simply “snap” one rack on top of another. Double rack capacity by snapping a rack across another rack. With a standard vial rack, once the post breaks, a replacement rack is needed. The Snap Rack™ eliminates this problem!

Description	Capacity	qty.	cat.#
50 Position Snap Rack™ for 12 x 32mm Vials	50	ea.	24521



Snap Rack™ vial racks are stackable for maximum storage of vials and caps!

**Mininert® Precision Sampling Valves for Vials**

Mininert® valves are on/off valves that are very convenient for repetitive sampling, while limiting sample exposure to the silicon septum. Models are available for screw-cap and crimp-top vials. The screw-cap Mininert® valve is available in 13, 15, 18, 20, and 24mm cap sizes. The crimp-top valve for 20mm ID glass-ware slides into the neck of the vial. Turn the threaded flange to secure a tight fit.

Description	Thread Size	qty.	cat.#
13mm Mininert® Screw Cap	13mm-425	12-pk.	24900
15mm Mininert® Screw Cap	15mm-425	12-pk.	24901
18mm Mininert® Screw Cap	18mm-400	12-pk.	24902
20mm Mininert® Screw Cap	20mm-400	12-pk.	24903
24mm Mininert® Screw Cap	24mm-400	12-pk.	24904
20mm Mininert® Crimp Top	—	12-pk.	24905
Replacement Septa	—	50-pk.	24906
Septum Insertion Tool	—	ea.	24907



Mininert® Screw Cap



Mininert® Crimp Top

for **more** info

see **page 254** for Accuform Micro-Vials to use with Mininert® caps & valves.

## 8mm Screw-Thread Vials



8mm (2.0mL)  
Screw-Thread Vial

### Screw-Thread Vials, 12 x 32mm, 8mm/425 Thread

#### Fit all 2.0mL, 12 x 32mm, Screw-Thread Vial-Based Autosamplers.

These vials provide the most secure environment for your sample, because evaporation is minimized. We offer both deactivated (on request) and non-deactivated vials.

#### Screw-Thread Vials—12 x 32mm, 8mm/425 Thread

Description	100-pk.	1000-pk.
2.0mL Clear Vial, White Graduated Marking Spot	24619	24620
2.0mL Amber Vial, White Graduated Marking Spot	24621	24622

#### 8mm Pre-Assembled Caps and Septa

Description	100-pk.	1000-pk.
8/425 Black Cap w/ Red PTFE/Silicone Septa, 0.065"	21149	21720
8/425 Black Top Hat™ PTFE/Silicone Septa	21721	21722

#### Pre-Assembled Vial Kits: 8mm/425 Screw-Thread, Unmarked Vials, Septa, and Caps

Caps attached to vials.

Description	100-pk.	1000-pk.
Clear Vial, Black Cap, Red PTFE/Silicone Septa, 0.045"	24630	24631
Amber Vial, Black Cap, Red PTFE/Silicone Septa, 0.045"	24632	24633
Clear Vial, Black Cap, Red PTFE/Silicone Septa, 0.065"	24634	24635
Amber Vial, Black Cap, Red PTFE/Silicone Septa, 0.065"	24636	24637

#### Convenience Kits: Vials w/Pre-Assembled Caps and Septa Packed Separately (Black Polypropylene Open-Hole Caps and 8mm Red PTFE/Silicone Septa, 0.065")

Vials packaged in a clear-lid tray. Caps with septa packaged in a plastic bag.

Description	100-pk.	1000-pk.
2.0mL Clear Vial, Silcote™ CL7-Deactivated	24638	24639
2.0mL Amber Vial, Silcote™ CL7-Deactivated	24640	24641
2.0mL Clear Vial, untreated	21192	21193
2.0mL Amber Vial, untreated	21194	21195

#### 8mm/425 Thread Polypropylene Caps for 8mm Screw-Thread Vials

Description	100-pk.	1000-pk.
Black, Open-Hole Cap	21176	21177

\*Best fit for Shimadzu.

\*\*Best fit for Varian.

## instrument reference

### For 8mm Screw-Thread Vials

Manufacturer	Instrument/Model #	Manufacturer	Instrument/Model #
A.I.M.	CPS-100, 200	PerkinElmer	Autosystem GC, 420/B, 4900
Alcott	738	Pharmacia LKB	2157-010
Alltech	570	Precision Sampling	GC111, GC 311, LC241-60
ASC		Phillips	LC-XP, 4247, 4710
Beckman	501, 502, 507	S.G.E.	M280D
Carlo Erba/Fisons	AS 800, 8000	Sedere	
Dani	ALS 39.80, 86.80	Shimadzu	AOC-8B/9, SIL-6A, AOC14/1400, AOC-17, SIL-6B, -9A, -8A, SIL-10A, 10Ai, 10AxL
Dynatech	42 vial tray	Spark Holland	Marathon, Promis, Tiathalon, Midas
Gilson	231XL, 232XL, 233XL, Asted XL, Aspec XL	Spectra-Physics	8875, 8880
Gynkoteck	Gina, others	Talbot	
Hitachi	S6551, L-7200, L-7250	TOA	ICA5450
IBM		TosoHaas	TSK-6080, AS-8010, AS-8020
ICI	All except LC1600	TSP	8875, 8880, AS100/1000, AS300/3000
Infocroma		Unicam	4700LC, LC-XP, 4247
Jasco	851-AS, AS-950, LC800 & 900 series	United Technologies	
Kipp		Varian/Rainin	Dynamax AI-3AI-IA, AI-2W
Kontron	360, 460	Varian	8100/8200, 8035, 8000 SSeries, Marathon, 8055, 8085, 9100/9090/9095, 3800 GC
LDC	All except 713	Waters	Alliance 2690
L.E.A.P. Technologies	CTC A200S		
Magnus Scientific			

## Septa for 8mm Screw-Thread Vials

Description	100-pk.	1000-pk.
8mm x 0.045" Red PTFE/Silicone	21178	21179
8mm x 0.065" Red PTFE/White Silicone	21795	21147

## Limited Volume Inserts for 8mm/425 Screw-Thread Vials

Description	100-pk.	1000-pk.
100µL Glass w/ Polypropylene Bottom Spring	24508	21775
250µL Glass, Flat Bottom	—	24510
250µL Glass, Flat Bottom w/ ID Ring	—	24691
100µL Polypropylene, No Spring	24511	—
100µL Polypropylene, Bottom Spring	24512	—

## Limited Volume Vials, 12 x 32mm, 8mm/425 Thread

Description	100-pk.	1000-pk.
100µL Polypropylene	24623	24624
100µL Glass Insert/Clear Plastic Vial*	24625	—

\*Amber glass/clear plastic available on request (1000 packs only).



Limited Volume Insert



Limited Volume Vial

## Screw-Thread Vials, 12 x 32mm, 10mm/425 Thread, Big Mouth Step™ Design

- 40% larger opening than other vials.
- Step™ profile automatically centers glass flange limited volume inserts.
- Pre-assembled caps with septa, with or without vials.
- Designed for Waters Alliance® autosamplers.

The Big Mouth Step™ Vial System has a larger ID than conventional vials and incorporates a neck finish that is uniquely designed to allow the insert to be precisely aligned in the center of the vial. This precise alignment provides maximum sample withdrawal and eliminates any chance of missed injections. All vials with the large opening are designed with the Step™ Vial System. (See page 248.)

## Big Mouth Step™ Screw-Thread Vials (12 x 32mm, 10mm/425 Thread)

Description	100-pk.	1000-pk.
2.0mL Clear Step™ Vial, White Graduated Marking Spot	24626	24627
2.0mL Amber Step™ Vial, White Graduated Marking Spot	24628	24629

## 10mm Pre-Assembled Big Mouth Step™ Vial Kits (w/Black Cap)

Caps attached to vials.

Description	100-pk.	1000-pk.
2.0mL Clear Vial, PTFE/Silicone/Red PTFE Septa, 0.040"	24675	24676
2.0mL Clear Vial, Red PTFE/Silicone Septa, 0.065"	24642	24643
2.0mL Amber Vial, Red PTFE/Silicone Septa, 0.065"	24644	24645

## instrument reference

## For 10mm Screw-Thread Vials

Manufacturer	Instrument/Model #
Alcott	738
Alltech	570
Altex	
ASC	
Beckman	501, 502, 507
L.E.A.P. Technologies	CTC A200S
Shimadzu	SIL-10A, 10Ai, 10AxL
Varian	8100/8200
Waters	Alliance 2690

## for more info

see page 260 for 10mm caps and septa; see pages 250 and 260 for additional limited volume inserts.

## tech tip

## Compatibility concerns?

Refer to the Septum Selection Guide on page 251.

# Caps for Big Mouth Vials, Crimp-Top WISP™ 48 Style Vials

## Caps, Septa, and Limited Volume Inserts for Big Mouth Screw-Thread Vials, 2.0mL, 10mm/425 Thread, Step™ Design



### 10mm Caps and Septa

Description	1000-pk.	
Caps w/Septa, Pre-Assembled, Red PTFE/White Silicone, 0.060"	24677	
Septa Only, Red PTFE/White Silicone, 0.060"	21148	
Cap w/Septa, Pre-Assembled, PTFE/Silicone/PTFE, 0.040"	21723	
Septa Only, Red PTFE/Silicone/Red PTFE, 0.040"	24682	



Glass Limited Volume Insert with Polypropylene Bottom Spring (left). Flat Bottom Insert with ID Ring (right).

### Limited Volume Inserts\*

Description	100-pk.	1000-pk.
250µL Glass, Big Mouth Insert w/ Bottom Spring	21776	21777
350µL Glass, Flat Bottom Insert	21780	24517
350µL Glass, Flat Bottom Insert w/ ID Ring	24692	24693
250µL Glass, Big Mouth Insert w/ Glass Flange (Step™ Design)‡	24516	21779

\*Polypropylene inserts available on request (1000 packs only).

‡Not to be used with 9mm screw-thread vials.

## Crimp-Top Vials, 4.0mL, WISP™ 48 Style, 15 x 45mm Snap Seal™

### WISP™ 48 Crimp-Top Vial (15 x 45mm Snap Seal™ Vial, 13mm Crimp-Top)

Description	100-pk.	1000-pk.
4.0mL Clear Vial, White Graduated Marking Spot	24658	24659



WISP™ 48 Style Crimp-Top Vials

### 13mm Aluminum Seals w/Septa

Description	100-pk.	1000-pk.
Silver, PTFE/Natural Rubber	21753	21754
Silver, PTFE/Silicone	21755	21756

### 13mm Crimper and Decapper

Description	qty.	cat.#
13mm Crimper	ea.	21739
13mm Decapper	ea.	21740



For other crimpers/decappers, see pages 256 and 257.

## Screw-Thread Step™ Vials, 4.0mL, WISP™ 48 Style, 13mm/425 Screw-Thread

## WISP™ 48 Screw-Thread Step™ Vials (15 x 45mm, 13/425 Screw-Thread)

Description	100-pk.	1000-pk.
4.0mL Clear Step™ Vial, White Grad. Marking Spot*	24654	24655
4.0mL Amber Step™ Vial, White Grad. Marking Spot*	24656	24657

## Caps and Septa

Description	100-pk.	1000-pk.
Top Hat™, PTFE/Silicone Septa	21745	21746
Pre-Assembled, Red PTFE/Silicone, 0.065"	21743	21744
Caps, Black, Polypropylene, Open-Hole	21741	21742
Septa, Red PTFE/Silicone, 0.040"	21751	21752
Septa, Red PTFE/Silicone, 0.060"	21749	21750

## Limited Volume Inserts\*\*

Description	100-pk.	1000-pk.
500µL, Glass, WISP™, Flat Bottom***	21787	21788



4.0mL Clear Step™ Vial

## instrument reference

## For WISP™ 48 Style Vials

Manufacturer	Instrument/Model #	Manufacturer	Instrument/Model #
Bruker	LC 51	TosoHaas	TSK-6080, AS-8010, AS-8020
Hitachi	L-7200, L7250	Unicam	LC-XP
Phillips	LC-XP	Waters	48-pos. M700, 710, 717+
Shimadzu	AOC-14/1400, AOC-17, SIL-2AS		

## Shell Vials, 1.0mL, WISP™ 96 Style, 8 x 40mm

## WISP™ 96 Style, 8 x 40mm Shell Vials

Description	200-pk.	1000-pk.
1.0mL Clear Vial	24662	24663
1.0mL Amber Vial	24664	24665
1.0mL Polypropylene Vial	24678	24679
700µL Limited Volume Polypropylene Vial	24680	24681

## 8mm Starburst Plugs

Description	200-pk.	1000-pk.
Snap Plug, Clear Polyethylene	21769	21770
Snap Plug, Conical, Clear Polyethylene	21771	21772
Snap Plug, Silicone Lined, Clear Polyethylene	21773	21774

## Limited Volume Inserts for Shell Vials

Description	100-pk.	1000-pk.
250µL Glass, Big Mouth Insert w/ Bottom Spring	21776	21777



## instrument reference

## For WISP™ 96 Style Vials

Manufacturer	Instrument/Model #
Hitachi	L-7200
Waters	96-position M-700, 710, 717+

\*Colored graduated marking spots available on request in blue, green, rust, and yellow (1000 packs only).

\*\*Polypropylene inserts available on request (1000 packs only).

\*\*\*Also fit 4.0mL Snap Seal™ Vials (page 260).