

LC Certified Vials

For over 150 years Grace has been a leader in the material science and chemical industry. Whether using our extensive labs for our own R&D or providing products for our customer's R&D, everything we do revolves around scientific applications.

Just as a bad vial disrupts productivity in your lab, the same happens in ours. It is for this reason that we set out to deliver a vial that can give peace of mind and help you stay focused on your results.

We trace each piece of the vial, cap, and septa manufacturing to ensure they are of the highest grade. We constantly monitor the manufacturing process to maintain a contaminant free environment all the way through to the kit packaging.

Benefits

- Helps ensure peaks are from your sample, not your vial
- Designed to high tolerances for optimal functioning



LC Certified 12x32mm Screw Thread Autosampler Vial Kit with Blue 9mm Bonded PTFE/Silicone Cap - 100 pack

	Non-Slit Septa	Pre-Slit Septa
2mL Clear with Marking Spot	8625312	8625313
2mL Amber with Marking Spot	8625314	8625315
1.5mL High Recovery Clear	8625316	8625317
1.5mL High Recovery Amber	8625318	8625319
1.2mL Ultra Recovery Clear*	8625340	8625341
300uL Limited Volume Fused Glass Insert Clear with Marking Spot	8625342	8625343
300uL Limited Volume Fused Glass Insert Amber with Marking Spot	8625344	8625311

*For precision extractions with less than 2uL dead volume

Instrument Compatibility*

Agilent	Dynatech®	Hitachi®	Shimadzu®	Thermo®	Waters®
Beckman®	Gilson®	Perkin-Elmer™	Spark®	Varian®	

*Using 12x32 autosampler vials

www.discoverysciences.com

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W. R. Grace & Co.-Conn. 7500 Grace Drive, Columbia, MD 21044

Grace Davison Discovery Sciences Regional Headquarters:

IN THE AMERICAS:
2051 Waukegan Road
Deerfield, IL 60015-1899
Tel: 1 847 948 8600
Fax: 1 847 948 1078
Email: discoverysciences@grace.com

IN EUROPE:
Brandstraat 12
B-9160 Lokeren, Belgium
Tel: +32 09 340 65 65
Fax: +32 09 340 65 60
Email: discoverysciences.EU@grace.com

IN ASIA:
19th Floor, K.Wah Center
1010 Huai Hai Zhong Road
Shanghai, 200031 PRC
Tel: +86 21 5467 4678
Fax: +86 21 5405 1500
Email: dsbiz.asia@grace.com

IN INDIA:
17 Commerce Center
Opposite Krishna Hospital, Paud Road
Pune, 411038 India
Tel: +91 20 6644 9900
Fax: +91 20 2544 1740
Email: pune@grace.com

IN AUSTRALIA/NEW ZEALAND:
2 Kerr Court
Rowville, 3178
Victoria, Australia
Tel: +61 3 9237 6100
Fax: +61 3 9237 6101
Email: discoverysciences.AU@grace.com

Grace Davison Discovery Sciences
Vial Certificate of Analysis

7500 Grace Drive • Columbia, MD 21044, U.S.A. • U.S. Toll Free: 888.395.9294 • International Tel: 847.282.2100
Fax: 847.948.1078 • Email: discoverysciences@grace.com • Web: www.discoverysciences.com

GRACE

Part Number:

Description:

Lot Number:

Grace Quality

ISO 9001

14001

13485

cGMP compliant

Glass Material
The glass below is certified to meet the standards of the USP XXVI, The National Formulary XXII for Type I, II, & III glass, under "Physical Test-Glass Containers", as well as the ASTM E-438 specification for Type I, II, & III Class A & B. Clear vials are Type 33 expansion glass, Amber vials are Type 51.

Dimensional Characteristics of Vial	
Height	32mm +/-0.5mm
I.D. Neck*	6.045mm +/-0.255mm
O.D. at Body	11.65mm +/-0.25mm

*Not applicable to fused inserts

Cap Septum	
Material	PTFE / Silicone
Dimension	9mm
Physical Test	Seal and Bond Strength Test
Chemical Test	Level II GC headspace

HPLC Chemical Test of Vial and Cap Assembly	
Tested & Conforms to Grace Method	105

Testing performed by HPLC with a Grace VisionHT™ C18 5um Column (Part 5151993) Using the proprietary protocol of Grace Method 105 (75/25/0.1- ACN/H2O/TFA)

QC Approval: _____
Date: _____

F408 01/10

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Certificate of Analysis

- Material Specifications as set by international standards (USP, EP, ASTM, ISO)
- HPLC test data from batch tested assembled vials & caps

Vials Introduction

Your sample, the type of vial, cap and septa, the solvent used, and the type of autosampler and detector all contribute to the end quality of your analysis. Choose from our wide selection of vial options to get the right vial for your analysis.

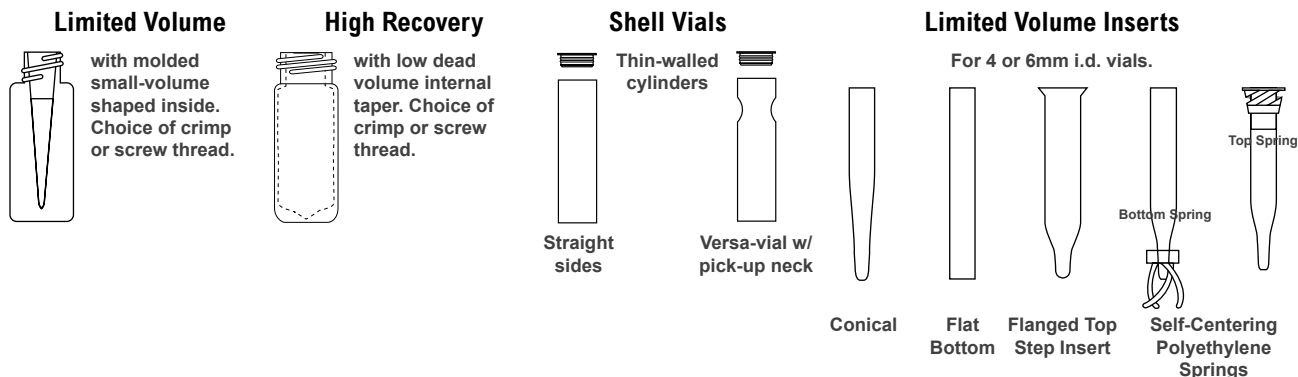
Screw Thread



Crimp Style



Additional Vial Options



Properties of Plastics

	LDPE (Low-Density Polyethylene)	HDPE (High-Density Polyethylene)	PP (Polypropylene)	PMP(TPX) (Polymethyl-pentene)	PS (Polystyrene)	PTFE
Max. Temperature	80°C/176°F	120°C/248°F	135°C/275°F	175°C/347°F	90°C/194°F	260°C/500°F
Transparency	Translucent	Translucent	Translucent	Clear	Clear	Opaque
Sterilization Method						
Autoclaving	No	No	Yes	Yes	No	Yes
Disinfectants	Yes	Yes	Yes	Yes	No	Yes
Dry Heat	No	No	No	Yes	No	Yes
Radiation	Yes	Yes	No	No	Yes	Yes
Specific Gravity	0.92	0.95	0.90	0.83	1.05	2.14–2.24
Flexibility*	Good	Rigid	Rigid	Rigid	Rigid	Rigid

*Depends on thickness.

Chart is general guideline only. Always test your selection using your test conditions.

Borosilicate Glass Properties

	Clear	Amber
Linear Coefficient of Expansion:	33	51
Strain Point (Max. Use Temp.):	515°C	535°C
USP Class Type:	Type 1	Type 1
Light Protection:	No	Yes

Note: Vials in this catalog are not recommended or designed for use with elevated temperatures, pressures, or vacuum reactions. This restriction includes vials that use the term "pressure" or "reaction" in the description.

Vial Volumes vs. Dimensions

Volume	Dram	Dimensions (o.d. x Height)
2mL	0.5	12 x 32mm
4mL	1	15 x 45mm
7mL	2	17 x 60mm
15mL	4	21 x 70mm
22mL	6	23 x 85mm
40mL	10.7	29 x 81mm

Vial Introduction

Septum Materials Capability

Capability Chart	Natural (cispolyisoprene)	Butyl (isobutylene isoprene)	Silicone (polysiloxane)	PTFE (polytetra fluorocarbon)	Fluoroelastomer Polymer (fluorocarbon)
<i>Property:</i>					
Specific Gravity (g/cc)	0.93	0.9	1.1–1.6	2.14–2.24	1.4–1.95
Minimum Use Temp. °C	-51	-53	-84	-65	-53
Maximum Use Temp. °C	82	149	204	260	260
Hardness (Durometer)	30–90	40–90	30–90	50–65	65–90
Tear Resistance	Excellent	Good	Fair	—	Poor to Fair
Abrasion Resistance	Excellent	Good to Excellent	Poor	—	Good
Resealability	Good	Good	Excellent	Poor	Fair
<i>Chemical Resistance:</i>					
Oxidation	Good	Excellent	Excellent	Excellent	Excellent
Heat Aging	Good	Excellent	Excellent	Excellent	Excellent
<i>Solvents</i>					
Aliphatic Hydrocarbons	Poor	Poor	Fair	Excellent	Excellent
Aromatic Hydrocarbons	Poor	Poor	Poor	Excellent	Excellent
Alcohols	Good	Very Good	Excellent	Excellent	Excellent
Oil, Gasoline	Poor	Poor	Poor	Very Good	Very Good
Animal, Vegetable Oils	Poor to Good	Excellent	Excellent	Very Good	Very Good
Acids	Fair to good	Excellent	Very Good	Excellent	Good to Excellent
Alkalies	—	—	—	Excellent	Poor to Good
Permeability to Gases	Low	Very Low	High	—	Low
Water-swell Resistance	Fair	Excellent	Excellent	Excellent	Excellent

Note: 1. Chemical resistance data are general guides only. Many factors such as temperature, chemical combinations, concentration, pressure, exposure time, etc. can influence or alter the resistance characteristics of a product. Always test your selection using your test conditions. As a general rule, as temperature increases, resistance to attack decreases. 2. Combination septum (Ex. PTFE/Silicone) has the resistance of the facing material (PTFE) prior to puncture. After puncture, a small portion of the other material is exposed and its sealing and resistance characteristics must then be considered. 3. Colored closures and septa are free of heavy metals to comply with CONEG standards.

How to Measure for Vial, Cap, and Septum Selection

Bottles and caps are described with a two-part number system referred to as the Finish*. (Example: 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 outer 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).

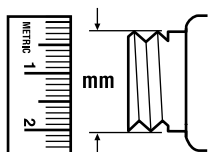


Figure 1

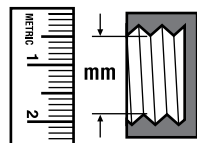


Figure 2

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

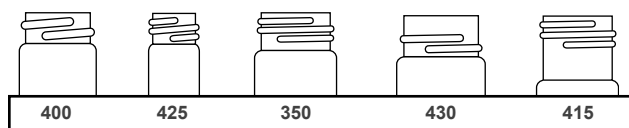


Figure 3

*Neck finish specifications of both caps and vials are controlled by the GCM-I-Glass Container Manufacturers Institute.

Septum size can be determined by comparing septa or crimp seals to the measured circles (Figure 4).

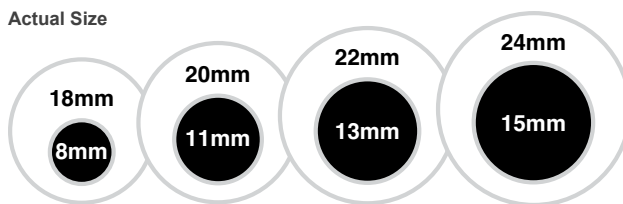


Figure 4

With combination septa (Ex: PTFE/silicone, 5/55), the numbers represent the thickness of the individual components of the septum in mils. This same septum could be described as 0.060" or 60 mil.

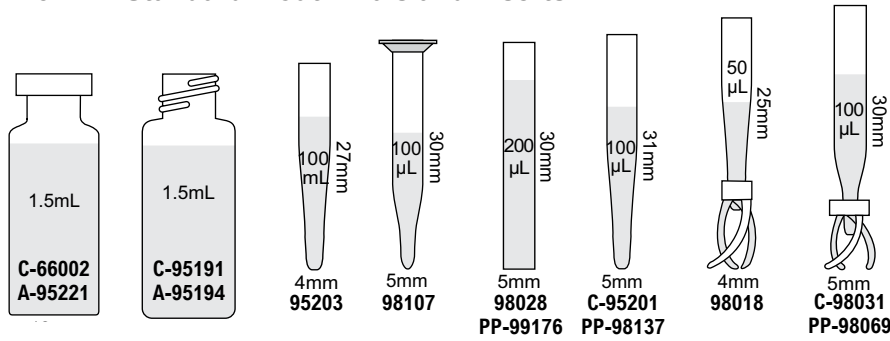
Durometer or hardness of septum material is referred to as a "shore" and is an important consideration in working with some autosamplers (45-60 shore is the typical range for autosampler septa). Septa with slits or molded starburst patterns (Figure 5) allow easier needle penetration which can prevent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



Figure 5

Actual Size Drawings of Vials with Fill Volumes

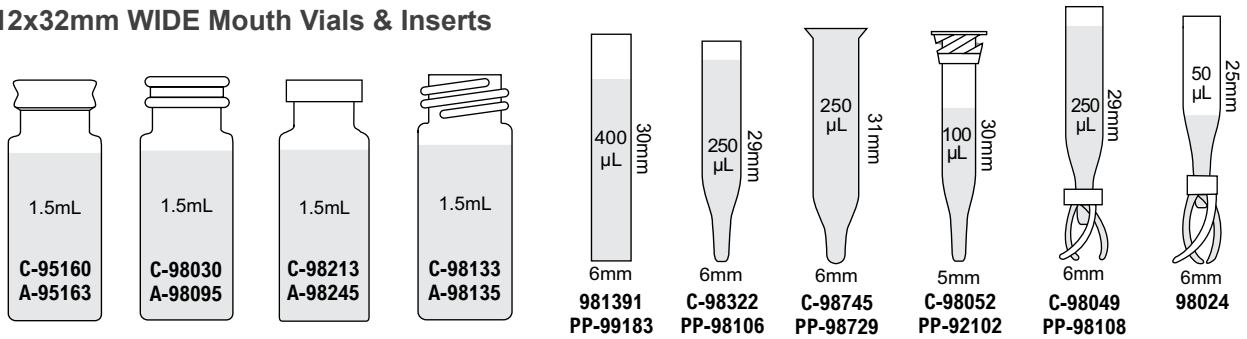
12x32mm Standard Mouth Vials and Inserts



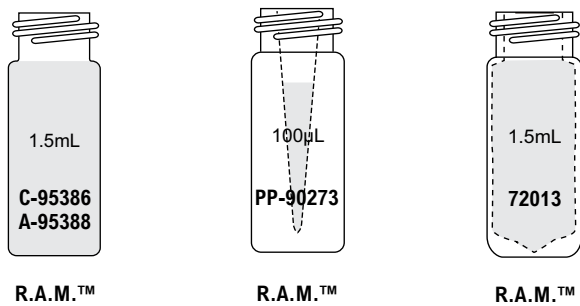
Abbreviation Key

- A = Amber
 - BT = Bevel Top, Rounded or Flat Bottom
 - C = Clear Glass
 - GI/PI = Glass Insert/Plastic Outside
 - GI/GI = Glass Insert/Glass Outside
 - PE = Polyethylene
 - PP = Polypropylene
 - TPX = Polymethylpentene (PMP)
- Part Numbers are indicated in Bold.
Unless otherwise indicated, vials are clear glass.

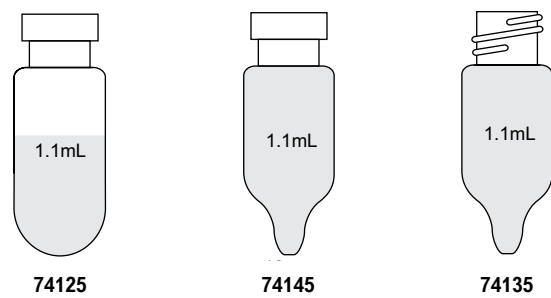
12x32mm WIDE Mouth Vials & Inserts



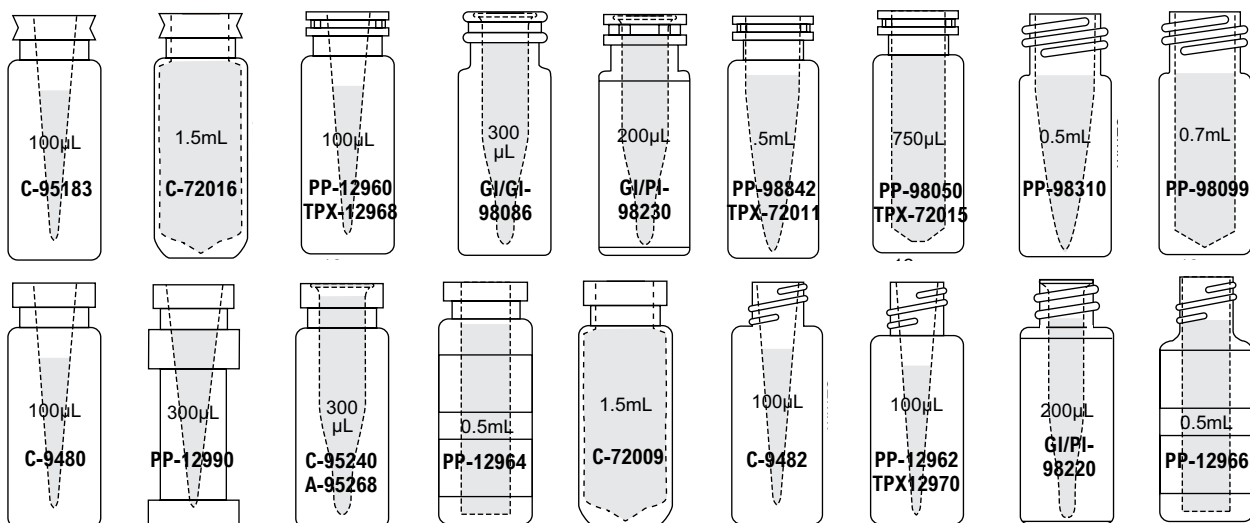
12x32mm Robotic Autosampler Vials



12x32mm Conical Vials

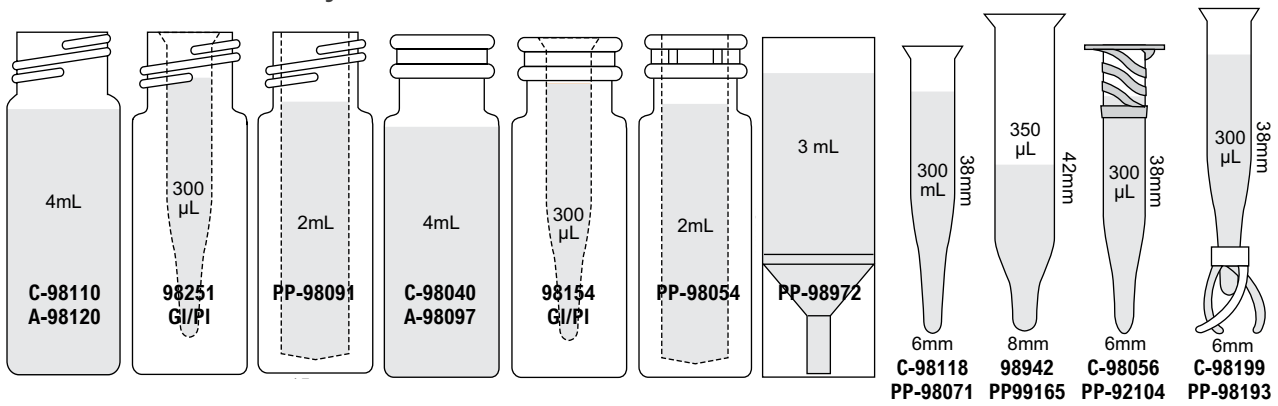


12x32mm Limited Volume Vials (One Piece, No Assembly)

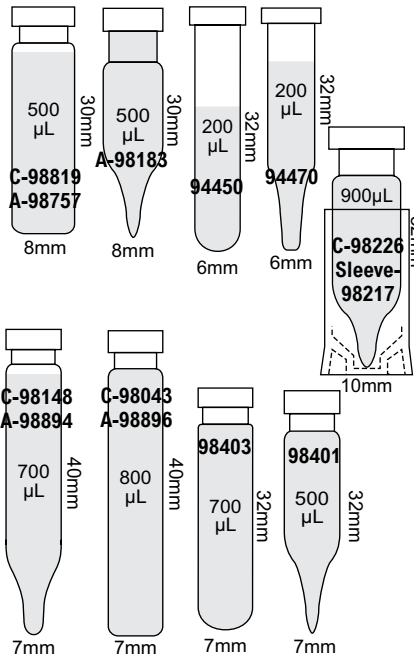


vials

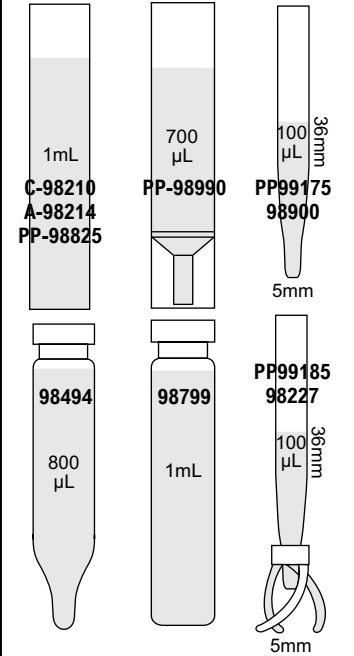
15x45mm 4mL WISP™ Style Vials and Inserts



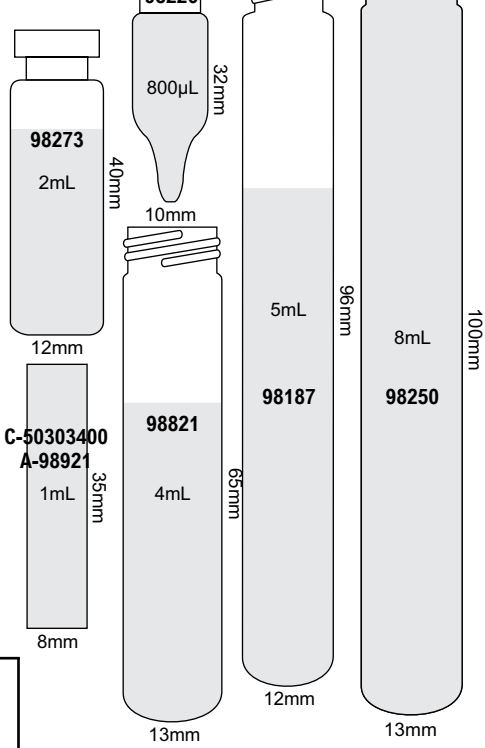
8mm Crimp Top



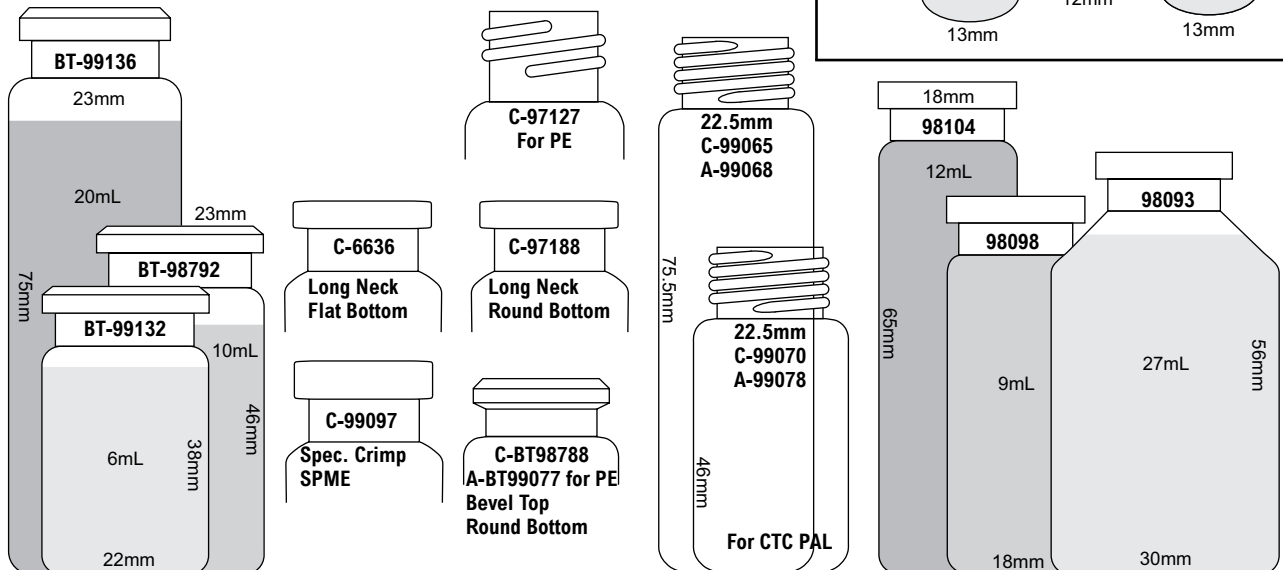
8x40mm 1mL WISP™ Style



Misc.



Headspace Vials



vials

Vial Selection by Autosampler

12x32 Screw Thread, 8/425,
12x32 Crimp Style
12x32 Screw Thread, 10/425
12x32 Screw Thread, Robotic
12x32 Snap Seal Wide Mouth
15x45, Screw Thread, 13/425
15x45, Crimp Style
8x40 Crimp Style
8x30 Crimp Style
7x32 Crimp Style
7x40 Crimp Style
6x32 Crimp Style
Headspace
Specialty

Autosampler Chart		12x32 Screw Thread, 8/425, 12x32 Crimp Style	12x32 Screw Thread, 10/425	12x32 Screw Thread, Robotic	12x32 Snap Seal Wide Mouth	15x45, Screw Thread, 13/425	15x45, Crimp Style	8x40 Crimp Style	8x30 Crimp Style	7x32 Crimp Style	7x40 Crimp Style	6x32 Crimp Style	Headspace	Specialty
Agilent	1100, 1200 8042, 1050, 1084, 1080 7670A, 7671A, 7672, 1042 1090 (LC), 1082, 7673A/B, Headspace 7673, 7683		•	•	•									
Alcott	738 718AL, 719D	•	•	•	•									•
Alltech (Grace)	570, 580 (standard tray)	•	•	•	•									
Beckman	501, 502, 507 504 508	•		•	•						•		•	
Carlo Erba/Fisons Instruments	AS-V42, AS 105 AS-V 60 AS 800, 8000 A200S HS250		•		•			•						•
Dynatech/Precision Sampling	42 Vial Tray, LC 2000 60 Vial Tray GC111, 311	•	•	•	•			•	•			•		
Finnigan	A200S		•		•						•			
Gilson	232-401, 231-401 Asted™ Aspec™	•	•		•						•	•		
Hitachi**	AS-2000, AS-6000 S6551 L-7200, 7250	•			•								•	
Jasco**	851-AS, AS-950 LC 800,900 Series AS-2055/2057/2059	•	•		•									
Leap Technologies	CTC A200S CTC A105S Headspace	•	•	•	•				•	•		•		•
LDC	Marathon, Promis 713 Others	•	•	•				•	•			•		•
PerkinElmer	Autosystem Integral 4000 AI-1, ISS100, ISS200 LC600 42 Tray LC600 (60), AS100 420/B, 4900 AS100B, AS300, 8300 AS2000, LC30, 2000, B2000 Headspace, HS40 Series 200	•	•	•	•				•				•	•
Pharmacia LKB	2157-010 2157-020	•	•		•						•			•
Phillips/Pye UNICAM	LC-XP S4, S8, 4700LC/GC 4247, 4710	•	•		•		•				•			
Shimadzu**	AOC-8B/9, SIL-6A AOC-14/1400, AOC-17 SIL-2AS SIL-6B, -9A, -8A, -10A Headspace HSS-2B AOC-20i/20S AOC-5000 LC-10A SIL-Hta/SIL-HTc	•	•		•		•						•	
Spark Holland	SPH 125 Marathon Promis Triathlon, Midas	•	•		•									•
Spectra-Physics/TSP	8875, 8880 AS100/1000;300/3000		•		•									
Varian	Prostar 400, 410, 430 8000, 9000 Series	•	•	•	•									
Waters	Alliance® 2690 48-Position 96-Position 717 Alliance® Acquity UPLC® Breeze™ 2710 Sample Manager	•	•	•	•		•	•		•		•		

**Special Cap is Required.

Vials by Autosampler Part No. Cross Reference

Autosampler Part No. Cross Reference Chart					
Agilent	PerkinElmer	Varian	Waters	Grace	Description
<i>12x32mm Standard Mouth Screw Thread Vials</i>					
5183-4428	N930-2945	392611639	—	95191	8/425 Clear Screw Thread Vial
5183-4429	—	392611640	—	95194	8/425 Amber Screw Thread Vial
—	—	—	WAT094174	98061	8/425 Black Polypropylene (PP) Open-Hole Cap with PPTFE/Silicone Septum
5183-4442	N930-3441	392611641	—	980611	8/425 Flush-Fit Black PP Open-Hole Cap with PTFE/Silicone Septum
<i>12x32mm Wide Mouth Screw Thread Vials</i>					
—	—	392611646	WAT063300	98133	10/425 Clear Screw Thread Vial
5182-3454	—	—	186000984	72009	High Recovery Vial (HRV), Wide Mouth Crimp
—	—	392611650	WAT094174	98144	10/425 Black PP Open-Hole Cap with PTFE/Silicone Septum
—	—	—	WAT058876	97013	10/425 Black PP Open-Hole Cap with PTFE/Silicone Septum with Slit
<i>12x32mm Vials for Use with Robotic Arm, Wide Mouth, Screw Thread Vials</i>					
5182-0714	—	392611653	186000273	95386	R.A.M. [™] Clear Vial for Robotics
5182-0715	—	—	—	88540	R.A.M. [™] Clear Vial with Marking Spot for Robotics
5182-0716	—	392611654	186000848	88542	R.A.M. [™] Amber Vial with Marking Spot for Robotics
5183-2030	—	—	—	72013	High Recovery Vial (HRV) for Robotics
5182-0717	—	392611661	—	95308	9mm Blue Cap with PTFE/Butyl Septum
5182-0720	—	392611659	186000274	95360	9mm Blue Cap with PTFE/Silicone Septum
5183-2076	—	392611660	186000305	95385	9mm Blue Cap with PTFE/Silicone Septum with Slit
<i>12x32mm Standard Mouth Crimp Style Vials</i>					
—	N930-1385	392611626	—	66002	12x32mm Clear Standard Mouth Crimp Vial
—	N930-2680	392611628	—	95221	12x32mm Amber Standard Mouth Crimp Vial
5182-0544	—	—	WAT094219	98030	12x32mm Clear Snap Ring Vial
5182-0546	—	—	—	98033	12x32mm Clear Snap Ring Vial with Marking Spot
5182-0545	—	—	WAT094220	98083	12x32mm Amber Snap Ring Vial with Marking Spot
5182-0550	—	—	—	98038	11mm Snap TOP Cap with PTFE/Butyl Septum
5182-0541	—	—	186000303	98034	11mm Snap TOP Cap with PTFE/Silicone Septum
5183-4511	—	—	186000304	98168	11mm Snap TOP Cap with PTFE/Silicone Septum with Slit
—	—	392611875	—	95232	11mm Poly Crimp Seal with PTFE/Butyl Septum
—	—	392611873	—	95234	11mm Poly Crimp Seal with PTFE/Silicone Septum
—	—	392611874	—	95325	11mm Poly Crimp Seal with PTFE/Silicone Septum with Slit
<i>12x32mm Wide Mouth Crimp Style Vials</i>					
5181-3375	—	392611634	WAT094222	98213	12x32mm Clear Wide Mouth Crimp Vial
5182-0543	—	—	—	98001	12x32mm Clear Wide Mouth Crimp Vial with Marking Spot
5181-3376	—	392611635	WAT094223	98003	12x32mm Amber Wide Mouth Crimp Vial with Marking Spot
<i>11mm Aluminum Seals for 12x32mm Standard and Wide Mouth Crimp Style Vials</i>					
5181-1210	N930-6015	392611632	—	73070	11mm Aluminum Seal with PTFE/Butyl Septum
5182-0552	—	392611631	—	98740	11mm Aluminum Seal with PTFE/Silicone Septum
<i>Limited Volume Inserts for 12x32mm Autosampler Vials, i.d. as noted</i>					
5183-2089	N930-2681	392611593	—	95201	100µL LV Glass Insert for Standard Mouth Vial
5183-2088	—	392611591	—	98031	100µL LV Glass Insert with Polyethylene (PE) Bottom Spring for Std Mouth Vial
5183-2090	—	—	—	98028	250µL LV Glass Flat bottom Insert for Standard Mouth Vial
5183-2085	—	392611596	—	98322	250µL LV Glass Insert for Wide Mouth Vial
5181-1270	—	392611594	WAT094170	98049	250µL LV Glass Insert with PE Bottom Spring for Wide Mouth Vial
5181-3377	—	—	—	981391	400µL LV Glass Flat Bottom Insert for Wide Mouth Vial
5182-0549	—	—	—	98108	250µL LV PP Insert with PE Bottom Spring for Wide Mouth Vial
5183-2087	—	—	—	99183	350µL LV PP Flat Bottom Insert for Wide Mouth Vial
<i>15x45mm (4mL) Vials</i>					
5183-4448	—	—	186000840	98110	15x45mm Clear Glass Vial
5183-4450	—	—	186001135	98120	15x45mm Amber Glass Vial
5183-4464	—	—	186000841	98610	13/425 Black PP Open-Hole Cap with PTFE/Silicone Septum
—	—	—	186000842	97017	13/425 Black PP Open-Hole Cap with PTFE/Silicone Septum with Slit
—	—	—	WAT015199	98118	300µL Glass Limited Volume Insert, 6x38mm
<i>8x40mm (1mL) WISP™ Style Vials</i>					
—	—	—	WAT078515	88613	8mm PE Starburst Snap Plugs, Clear

Note: This list contains some of the more popular products used in these instruments. Every effort has been made to provide the Grace equivalent product or one most similar to the manufacturers' product description. There are many more Grace[®] vial, cap, liner, and kit combinations available on the individual product page listings.

related products

Accessories for your system. Grace has an assortment of Accessories Quick Reference guides available for many popular instruments.

- Waters[®] Alliance[®] System Accessories – Request M202
- Agilent 1100 and 1200 System Accessories – Request M203
- Waters[®] Acquity[®] System Accessories – Request M204



8x40mm (1mL) Shell Vials

- Shell vials with thicker walls for safer sample handling
- 8x40mm vials for Waters® WISP™ 96 style autosamplers



8x40 Shell Vial Kits are Ideal for Waters® or Shimadzu® Autosamplers

Convenience kits simplify ordering with one part number to remember. Kits provide both vials and caps for a perfect fit every time.



Limited Volume Inserts for 8x40 Shell Vials

- Select the appropriate limited volume insert for your microsampling needs
- Polyethylene springs act as shock adsorbers and help maintain proper insert alignment



8x40mm Shell Vials for WISP™ 96 Style

Description	100/pk Part No.
<i>Shell Vials, 1mL, 8x40mm, Use 8mm Snap Plugs</i>	
Clear Shell Vial	88610
Amber Shell Vial	88614
Polypropylene Shell Vial	88625
Silanized, Clear Shell Vial	886101
<i>Limited Volume Shell Vial, 8mm, Use Polyethylene Conical Snap Plugs</i>	
8x40mm Polypropylene Vial, 700µL	98990

8x40mm Vial Kits

Description	100/pk Part No.
<i>8x40mm Shell Vial Kits for WISP™ Style Autosamplers</i>	
Clear Vials, Clear Snap Plugs with Starburst†	88617
Amber Vials, Clear Snap Plugs with Starburst†	88597
Polypropylene Vials, Clear Snap Plugs with Starburst†	88626
Clear Silanized Vials, Clear Snap Plugs	982108
<i>8x40mm Shell Vial Kits for Shimadzu® Autosamplers</i>	
Clear Vials, Clear Easy Pierce Snap Plugs with Starburst†	70118
Amber Vials, Clear Easy Pierce Snap Plugs with Starburst*	70134

*Use to prevent bent needles.

†Thinner starburst for use with Shimadzu® autosamplers.

Limited Volume Inserts for 8x40mm Shell Vials

Description	100/pk Part No.
<i>Glass</i>	
150µL, 5x29mm, Requires Spring	95201
150µL, with Bottom Spring, 5x29mm	73054
200µL, 5x36mm	98900
200µL, with Bottom Spring, 5x36mm	98227
250µL, with Bottom Spring, 6x29mm	98658
200µL, 5x31mm	73024
Metal Springs for Inserts	73026
200µL, Silanized, No Spring	989008
<i>Polypropylene</i>	
250µL, 6x31mm, No Spring	98106
250µL, with Bottom Spring, 6x31mm	98108
200µL, with Bottom Spring, 5x36mm	99185

Polyethylene Snap Plugs with Starburst† 8mm

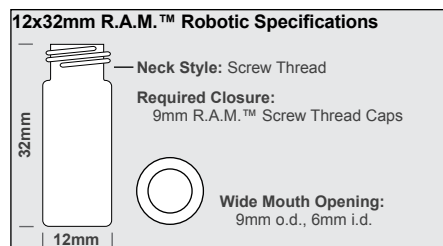
Description	100/pk Part No.
<i>Easy Pierce Snap Plug†</i>	
Clear Plug	70117
<i>Snap Plug with Starburst*</i>	
Clear Plug	88613
Red Plug	88618
Blue Plug	88615
Green Plug	88622
Yellow Plug	88624
Silicone Lined Snap Plug, Clear, Resealable	98662
<i>Conical Snap Plug for Limited Volume Polyethylene Vial</i>	
Clear Plug	98994
Red Plug	99003
Blue Plug	99005
Green Plug	99007
Yellow Plug	99009

*Use to prevent bent needles.

†Thinner starburst for use with Shimadzu® autosamplers.

12x32mm R.A.M.™ Robotic Screw Thread Vials

- Works on virtually every autosampler
- Use to replace crimp vials for use with robotic arms on autosamplers
- Crimp style height with screw thread configuration
- Incorporates unique StepVial design to precisely align insert and vial
- Economical kits simplify ordering
- Choose pre-slit septa for Waters® Acquity® Systems



	100/pk	Silanized 100/pk	With White Marking Spot 100/pk	With White Graduated Marking Spots 100/pk
<i>Vials</i>				
Clear	95386	953861	88540	95521
Amber	95388	953881	88542	95531
<i>Limited Volume Vials</i>				
1.5mL High Recovery Vials	72013	—	—	—
100µL Polypropylene Vials	90273	—	—	—
100µL PMP (TPX) Vials	95096	—	—	—
<i>Kits: Vials Open-Hole Caps with Septa</i>				
Clear Vials 9mm	PTFE/Butyl Septa	89135	—	89120
Amber Vials 9mm	PTFE/Butyl Septa	89137	—	89125
Clear Vials 9mm	PTFE/Silicone Septa	89145	953868	89100
Clear Vials 9mm	PTFE/Silicone/PTFE Septa	89149	—	89128
Amber Vials 9mm	PTFE/Silicone/PTFE Septa	89151	—	89130
<i>9mm R.A.M.™ Open-Hole Caps with Septa</i>				
Blue Cap	Bonded Interseal PTFE/Silicone Septa with Slit	70416	—	70416
Blue Cap	Bonded Interseal PTFE/Silicone Septa	70415	—	70415
Black Cap	PTFE/Silicone Septa with Slit	95380	—	95380
Blue Cap	PTFE/Silicone Septa with Slit	95385	—	95385
Black Cap	PTFE/Butyl Septa	95320	—	95320
Blue Cap	PTFE/Butyl Septa	95308	—	95308
Clear Cap	PTFE/Butyl Septa	95352	—	95352
Green Cap	PTFE/Butyl Septa	95346	—	95346
Red Cap	PTFE/Butyl Septa	95356	—	95356
Yellow Cap	PTFE/Butyl Septa	95358	—	95358
Black Cap	PTFE/Silicone Septa	95324	—	95324
Blue Cap	PTFE/Silicone Septa	95360	—	95360
Clear Cap	PTFE/Silicone Septa	95365	—	95365
Green Cap	PTFE/Silicone Septa	95362	—	95362
Red Cap	PTFE/Silicone Septa	95367	—	95367
Yellow Cap	PTFE/Silicone Septa	95377	—	95377
Black Cap	PTFE/Silicone/PTFE Septa	95328	—	95328
Blue Cap	PTFE/Silicone/PTFE Septa	95379	—	95379
Clear Cap	PTFE/Silicone/PTFE Septa	95371	—	95371
Green Cap	PTFE/Silicone/PTFE Septa	95369	—	95369
Red Cap	PTFE/Silicone/PTFE Septa	95374	—	95374
Yellow Cap	PTFE/Silicone/PTFE Septa	95376	—	95376
<i>9mm Unlined, Open-Hole R.A.M.™ Caps</i>				
Black Cap		90257	—	90257
Red Cap		90259	—	90259
Blue Cap		90261	—	90261
Green Cap		90263	—	90263
Yellow Cap		90265	—	90265
Clear Cap		90267	—	90267
<i>Septa for 9mm R.A.M.™ Caps</i>				
PTFE/Red Rubber—40mil		88701	—	88701
PTFE/Silicone—40mil		88705	—	88705
PTFE/Silicone/PTFE—40mil		88710	—	88710

more info

12x32 R.A.M.™ Vials are compatible with Waters® Alliance® and Acquity® Systems, Agilent 1100 & 1200, and Varian® 8000 & 9000. Refer to page 352 for more autosampler compatibility.



related products

Do you have small samples? Choose limited volume vials or see our selection of limited volume inserts on page 361.

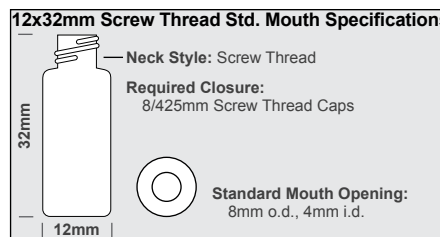
vials

12x32 Screw Thread Standard Mouth Vials

- Work with a variety of autosamplers that require narrow neck vials
- Economical kits simplify ordering

more info

Compatible with Waters® Alliance®, Hitachi, Jasco, and Varian® autosamplers. Refer to page 352 for more autosampler compatibility.

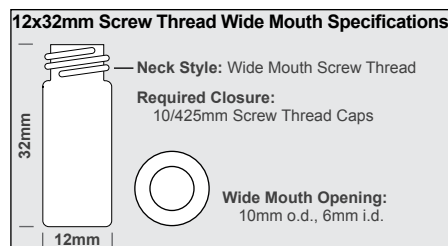


	100/pk	Silanized 100/pk	With White Marking Spot 100/pk	With White Graduated Marking Spots 100/pk
<i>Vials</i>				
Clear	95191	951911	98068	95481
Amber	95194	951941	98078	95491
<i>Limited Volume Vials</i>				
1.1mL Glass Tapered Bottom, requires sleeve	74135	—	—	—
Support Sleeve for 74135 (50/pk)	98558	—	—	—
100µL Heavy-Walled Glass with PTFE/Silicone-Lined Cap (12/pk, 10x12/pk)	9482	—	—	—
600µL Polypropylene Vials (500/pk)	89073	—	—	—
100µL Polypropylene Vials	12962	—	—	—
100µL PMP (TPX) Microvials	12970	—	—	—
200µL Glass Insert in Clear Plastic Vial	98220	—	—	—
200µL Glass Insert in Amber Plastic Vial	98225	—	—	—
<i>Preassembled Kits</i>				
<i>Vials</i>	<i>Caps</i>	<i>with Septa</i>		
Clear Vials	8/425 Black	PTFE Septa—10mil	98533	—
Clear Vials	8/425 Black	PTFE/Butyl Septa—40mil	98380	—
Clear Vials	8/425 Black	PTFE/Silicone Septa—45mil	95175	—
Clear Vials	8/425 Black	PTFE/Silicone Septa	—	72666
Amber Vials	8/425 Black	PTFE/Silicone Septa—45mil	95179	—
Amber Vials	8/425 Black	PTFE/Silicone Septa	72670	—
<i>Preassembled Kits Spectra Physics/Varian®</i>				
<i>Vials</i>	<i>Caps</i>	<i>with Septa</i>		
Clear Vials	Flush-Fit 8/425 Black	PTFE/Silicone Septa	895175	—
Clear Vials	Flush-Fit 8/425 Black	PTFE/Butyl Septa	898380	—
Clear Vials	Flush-Fit 8/425 Black	PTFE/Silicone/PTFE Septa	898537	—
Amber Vials	Flush-Fit 8/425 Black	PTFE/Butyl Septa	898385	—
<i>Preassembled 8/425 Polypropylene</i>				
<i>Open-Hole Caps</i>		<i>with Septa</i>		
Black Cap		Bonded Interseal PTFE/Silicone Septa	70412	70412
Black Flush-Fit Cap		PTFE/Silicone Septa	980611	980611
Black Cap		PTFE/Silicone Septa with Slit	97018	97018
Black Cap		PTFE/Silicone Septa	98061	98061
Black Cap		PTFE/Silicone/PTFE Septa	98701	98701
Black Cap		PTFE/Silicone TOP Hat Septa	98065	98065
Yellow Cap		PTFE/Silicone TOP Hat Septa	98055	98055
Clear Cap		TOP Seal Closure, Molded Poly Septa—10mil	98060	98060
<i>Solid 8/425 Top Caps</i>		<i>with Septa</i>		
Green Phenolic Cap		PTFE Septa	73067	73067
Black Polypropylene Cap		Rubber/PTFE Septa	98063	98063
Black Polypropylene Cap		—	98105	98105
<i>Open-Hole Unlined 8/425 Caps</i>				
Black Flush-Fit Side Cap for Spectra-Physics and Varian® Autosamplers			730441	730441
Black Cap			73044	73044
Red Cap			98072	98072
Blue Cap			98074	98074
Green Cap			98076	98076
White Cap			98084	98084
White Cap for Shimadzu®, Hitachi, and Jasco Autosamplers			98087	98087
Yellow Cap for Shimadzu®, Hitachi, and Jasco Autosamplers			73063	73063
<i>Septa for 8/425 Caps</i>				
PTFE/Silicone with Slit—5/40mil			98088	98088
White PTFE—10mil			98094	98094
Red PTFE/White Silicone—5/55mil			73048	73048
Red PTFE/White Silicone—5/60mil			98096	98096
PTFE/Silicone—10/90mil			98499	98499
Blue PTFE/White Silicone—5/60mil			98747	98747
PTFE/Silicone/PTFE—2/36/2mil			98081	98081
PTFE/Butyl—5/40mil			98190	98190
Black Fluoroelastomer Polymer—30mil			98026	98026

vials

12x32mm Screw Thread Wide Mouth Vials

- 40% larger opening aids in sample transfers
- Larger target area prevents bent needles
- StepVial design precisely aligns insert and vial
- Economical kits simplify ordering



	100/pk	Silanized 100/pk	With White Marking Spot 100/pk	With White Graduated Marking Spots 100/pk
<i>Vials</i>				
Clear	98133	981331	98291	95501
Amber	98135	981351	98622	95511
<i>Limited Volume Vials</i>				
500µL Polypropylene Vial	98310	—	—	—
750µL Polypropylene Vial	98099	—	—	—
<i>Preassembled Kits:</i>				
<i>Vials</i>	<i>Caps</i>	<i>with Septa</i>		
Clear Vials	Black 10/425	PTFE Septa	98891	—
Clear Vials	Black 10/425	PTFE/Silicone Septa	98893	981338
Clear Vials	Black 10/425	PTFE/Silicone/PTFE Septa	98895	—
Clear Vials	Black 10/425	PTFE/Butyl Septa	98290	—
Amber Vials	Black 10/425	PTFE Septa	98274	—
Amber Vials	Black 10/425	PTFE/Silicone Septa	98281	981358
Amber Vials	Black 10/425	PTFE/Butyl Septa	98294	—
<i>Unassembled Kits:</i>				
<i>Vials</i>	<i>Caps</i>	<i>with Septa</i>		
Clear Vials	Black 10/425	PTFE/Silicone Septa	97239	—
Amber Vials	Black 10/425	PTFE/Silicone Septa	97249	—
<i>Preassembled 10/425</i>				
<i>Open-Hole Caps</i>		<i>with Septa</i>		
Black Cap		Bonded Interseal PTFE/Silicone Septa w/Slit	70422	70422
Black Cap		Bonded Interseal PTFE/Silicone Septa	70411	70411
Black Cap		PTFE/Silicone Septa with Slit	97013	97013
Black Cap		PTFE/Silicone Septa	98144	98144
Black Cap		PTFE/Silicone/PTFE Septa	98705	98705
Black Cap		PTFE/Red Rubber Septa	97274	97274
Clear Cap		TOP Seal Closure, Molded Poly Septa	98405	98405
<i>Solid Polypropylene 10/425 Top Caps with Septa</i>				
Black Cap		PTFE Septa	98124	98124
Black Cap			98162	98162
<i>Unlined 10/425 Caps</i>				
Black Cap			98143	98143
Red Cap			98136	98136
Blue Cap			98138	98138
Green Cap			98140	98140
Yellow Cap			98122	98122
White Cap			98126	98126
<i>Septa for 10/425 Caps</i>				
		PTFE/Silicone with Slit—5/55mil	98021	98021
		White PTFE—10mil	98023	98023
		Red PTFE/White Silicone—5/55mil	98141	98141
		Red PTFE/White Silicone—5/65mil	98025	98025
		PTFE/Silicone/PTFE—2/36/2mil	98027	98027
		PTFE/Butyl Rubber—5/40mil	98029	98029

more info

12x32 Screw Thread Wide Mouth Vials are compatible with Waters® Alliance®, Agilent 1100 & 1200, Varian® 8000 & 9000. Refer to page 352 for more autosampler compatibility.

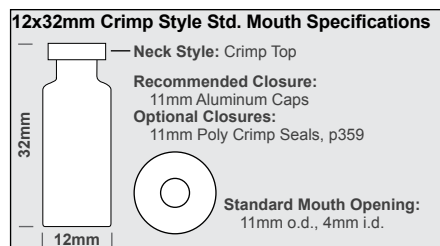


related products

Do you have small samples? Choose limited volume vials or see our selection of limited volume inserts on page 361.

12x32mm Crimp Style Standard Mouth Vials

- Work with most autosamplers
- Economical kits simplify ordering
- For small samples use limited volume vials or inserts — see page 361 for inserts



	100/pk	With White Marking Spot 100/pk	With White Graduated Marking Spots 100/pk
<i>Vials</i>			
Clear	66002	98073	95461
Amber	95221	98077	95471
<i>Limited Volume Vials</i>			
100µL Glass Heavy Walled (12/pk, 10x12/pk)	9480*	—	—
600µL Polypropylene Vial (500/pk)	—	—	—
300µL Polypropylene Microvial	12990	—	—
300µL Polypropylene Microvial (12x31mm)	12982	—	—
<i>Kits: Vials Seals with Septa</i>			
Clear Vials	11mm Aluminum Seals	PTFE Septa—10mil	98389
Clear Vials	11mm Aluminum Seals	PTFE/Silicone Septa	98318
Clear Vials	11mm Aluminum Seals	PTFE/Butyl Septa	95161
Amber Vials	11mm Aluminum Seals	PTFE/Silicone Septa	98368
Amber Vials	11mm Aluminum Seals	PTFE/Butyl Septa	95151
<i>11mm Aluminum Caps with Septa</i>			
Silver Cap	1/8" Center Hole with PTFE/Butyl Septa—40mil	98298	98298
Silver Cap	PTFE/Butyl Septa—40mil	73070	73070
Red Cap	PTFE/Butyl Septa—40mil	98051	98051
Blue Cap	PTFE/Butyl Septa—40mil	98053	98053
Green Cap	PTFE/Butyl Septa—40mil	98057	98057
Gold Cap	PTFE/Butyl Septa—40mil	98059	98059
Silver Cap	PTFE/Silicone Septa—3/37mil	98740	98740
Silver Cap	PTFE/Silicone/PTFE Septa—2/36/2mil	94855	94855
Silver Cap	Black Fluoroelastomer Polymer Septa—40mil	94852	94852
Silver Cap	PTFE/Gray Chlorobutyl Septa—2/38mil	98742	98742
Silver Cap	Polypropylene Septa—10mil	98011	98011
Silver Cap	PTFE Septa—10mil	98013	98013
<i>Unlined 11mm Aluminum Seals</i>			
Silver Seal, Open-Hole		98746	98746
<i>Septa for 11mm Aluminum Seals</i>			
White PTFE—10mil		98007	98007
PTFE/Silicone—5/55mil		98009	98009
PTFE/Silicone/PTFE—2/36/2mil		98010	98010
PTFE/Butyl Rubber—5/40mil		98398	98398

*See correct quantity specified in description.

more info

12x32mm Crimp Style Vials (on pages 358, 359) are compatible with Agilent and Varian® autosamplers. Refer to page 352 for detailed autosampler compatibility.

technical assistance

Contact Tech Support: Phone: 1.800.255.8324 (North America)
 Email: contact.alltech@grace.com
 Online: www.discoverysciences.com



related products

Looking for a crimper or decrimper?
 Refer to page 383.



12x32mm Crimp Style Wide Mouth Vials

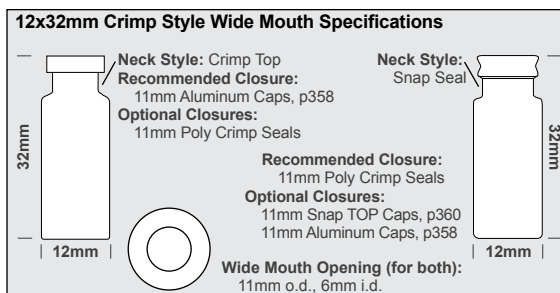
Standard Crimp Top

- 40% larger opening aids in sample transfers and prevents bent needles
- StepVial design precisely aligns insert and vial
- Economical kits simplify ordering



Snap Seal

- Unique design allows secure seal
- Economical kits simplify ordering



	100/pk	With White Marking Spot 100/pk	With White Graduated Marking Spots 100/pk
<i>Snap Seal Vials</i>			
Clear	95160	95165	95401
Amber	95163	95167	95411
<i>Crimp Top Vials</i>			
Clear	98213	98001	95441
Amber	98245	98003	95451
<i>Snap Seal Limited Volume Vials</i>			
100µL Clear Glass Micro Vial, Heavy Wall	95183	—	—
1.5mL Clear Glass High Recovery (HRV) Vial	72016	—	—
<i>Crimp Top Limited Volume Vials</i>			
1.5mL Glass High Recovery (HRV) Vial	72009	—	—
2mL Glass Round Bottom Vial	74125	—	—
1.1mL Glass Tapered Bottom Vial, Requires Sleeve	74145	—	—
Support Sleeve for 74145 (50/pk)	98558	—	—
300µL Clear Glass LVI Vial	—	95240	—
300µL Amber Glass LVI Vial	—	95268	—
<i>Snap Seal Kits:</i>			
<i>Vials</i>	<i>Seals</i>	<i>with Septa</i>	
Clear Vials	11mm Poly Crimp Seals	PTFE/Butyl Septa	88487
Clear Vials	11mm Poly Crimp Seals	PTFE/Silicone Septa	88496
Clear Vials	11mm Poly Crimp Seals	PTFE/Silicone/PTFE Septa	88494
Amber Vials	11mm Poly Crimp Seals	PTFE/Butyl Septa	88493
Amber Vials	11mm Poly Crimp Seals	PTFE/Silicone Septa	88498
<i>Crimp Top Kits:</i>			
<i>Vials</i>	<i>Seals</i>	<i>with Septa</i>	
Clear Vials	11mm Aluminum Seals	PTFE Septa—10mil	98457
Clear Vials	11mm Aluminum Seals	PTFE/Silicone Septa	98419
Clear Vials	11mm Aluminum Seals	PTFE/Silicone/PTFE Septa	98447
Clear Vials	11mm Aluminum Seals	PTFE/Butyl Septa	98397
Amber Vials	11mm Aluminum Seals	PTFE/Silicone Septa	98434
Amber Vials	11mm Aluminum Seals	PTFE/Butyl Septa	98413
Clear Vials	11mm Poly Crimp Seals	PTFE/Silicone Septa	88369
Clear Vials	11mm Poly Crimp Seals	PTFE/Butyl Septa	88368
Amber Vials	11mm Poly Crimp Seals	PTFE/Silicone Septa	88375
Amber Vials	11mm Poly Crimp Seals	PTFE/Butyl Septa	88374
<i>11mm Poly Crimp Seals</i>			
Clear Seal		PTFE/Silicone Septa with Slit	95325
Clear Seal		PTFE/Silicone Septa with Starburst	95335
Clear Seal		PTFE Septa—10mil	95230
Red Seal		PTFE Septa—10mil	95207
Blue Seal		PTFE Septa—10mil	95215
Green Seal		PTFE Septa—10mil	95217
Yellow Seal		PTFE Septa—10mil	95219
Clear Seal		PTFE/Butyl Septa	95232
Red Seal		PTFE/Butyl Septa	95235
Blue Seal		PTFE/Butyl Septa	95237
Green Seal		PTFE/Butyl Septa	95239
Yellow Seal		PTFE/Butyl Septa	95233
Clear Seal		PTFE/Silicone Septa	95234
Red Seal		PTFE/Silicone Septa	95293
Blue Seal		PTFE/Silicone Septa	95295
Green Seal		PTFE/Silicone Septa	95297
Yellow Seal		PTFE/Silicone Septa	95285
Clear Seal		PTFE/Silicone/PTFE Septa	95236
Red Seal		PTFE/Silicone/PTFE Septa	95310
Blue Seal		PTFE/Silicone/PTFE Septa	95312
Green Seal		PTFE/Silicone/PTFE Septa	95316
Yellow Seal		PTFE/Silicone/PTFE Septa	95318

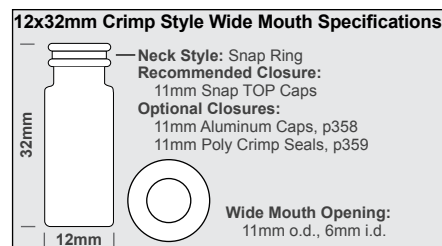
12x32mm Crimp Style Wide Mouth Vials

Snap Ring

- 40% larger opening aids in sample transfers
- StepVial design precisely aligns insert and vial
- Economical kits simplify ordering



4714



	100/pk	With White Marking Spot 100/pk	With White Graduated Marking Spots 100/pk
<i>Snap Ring Vials</i>			
Clear	98030	98033	95421
Amber	98095	98083	95431
<i>Snap Ring Limited Volume Vials</i>			
300µL Glass Insert in Clear Glass Vial	98086	—	—
750µL Polypropylene Vial	98050	—	—
750µL TPX (PMP) Vial	72015	—	—
500µL Polypropylene Vial	98842	—	—
500µL TPX (PMP) Vial	72011	—	—
100µL Polypropylene Vial	12960	—	—
100µL TPX (PMP) Microvial	12968	—	—
200µL Glass Insert in Clear Vial	98230	—	—
200µL Glass Insert in Amber Vial	98235	—	—
<i>Snap Ring Kits:</i>			
<i>Vials</i>	<i>Caps</i>	<i>with Septa</i>	
Clear Vials	11mm Snap TOP Caps	PTFE/Silicone Septa with Slit	98465
Clear Vials	11mm Snap TOP Caps	PTFE/Silicone Septa with Starburst	98469
Clear Vials	11mm Snap TOP Caps	PTFE/Butyl Septa	98473
Clear Vials	11mm Snap TOP Caps	PTFE/Silicone Septa	98483
Amber Vials	11mm Snap TOP Caps	PTFE/Butyl Septa	98479
Amber Vials	11mm Snap TOP Caps	PTFE/Silicone Septa	98487
<i>11mm Snap TOP Caps</i>			
Clear Cap		PTFE/Silicone Septa with Slit	98168
Clear Cap		PTFE/Silicone Septa with Starburst	98252
Clear Cap		PTFE/Silicone/PTFE Septa with Starburst	98257
Clear Cap		Red Fluoroelastomer Polymer Septa	98223
Clear Cap		PTFE Septa—10mil	98032
Red Cap		PTFE Septa—10mil	98332
Blue Cap		PTFE Septa—10mil	98334
Green Cap		PTFE Septa—10mil	98336
Yellow Cap		PTFE Septa—10mil	98338
Clear Cap		PTFE/Silicone Septa—10mil	98034
Red Cap		PTFE/Silicone Septa—10mil	98340
Blue Cap		PTFE/Silicone Septa—10mil	98342
Green Cap		PTFE/Silicone Septa—10mil	98344
Yellow Cap		PTFE/Silicone Septa—10mil	98346
Clear Cap		PTFE/Silicone/PTFE Septa—40mil	98036
Red Cap		PTFE/Silicone/PTFE Septa—40mil	98348
Blue Cap		PTFE/Silicone/PTFE Septa—40mil	98350
Green Cap		PTFE/Silicone/PTFE Septa—40mil	98352
Yellow Cap		PTFE/Silicone/PTFE Septa—40mil	98354
Clear Cap		PTFE/Butyl Rubber Septa—40mil	98038
Red Cap		PTFE/Butyl Rubber Septa—40mil	98356
Blue Cap		PTFE/Butyl Rubber Septa—40mil	98358
Green Cap		PTFE/Butyl Rubber Septa—40mil	98362
Yellow Cap		PTFE/Butyl Rubber Septa—40mil	98364
Clear Cap		Polyethylene Septa—10mil	98170
<i>11mm GC Snap TOP Caps</i>			
Clear Cap		PTFE/Red Butyl Septa	88351
Clear Cap		PTFE/Silicone Septa	88359
Clear Cap		PTFE/Silicone/PTFE Septa	88362

more info

GC Snap TOP Caps provide better seal for volatile samples.

related products

Looking for crimping tools? Refer to page 383.

Limited Volume Inserts for 12x32mm Vials

- Select the appropriate limited volume insert for your microsampling needs
- Polyethylene springs act as shock adsorbers and help to maintain proper insert alignment
- Flange step inserts align precisely in StepVial design neck



4747

Vial Adapter

For Use with Waters® Alliance® Autosampler

- Reuseable adapter
- Adds versatility to use of your Waters® 717 and Alliance® autosamplers



5222

Prepare samples in one 8x30mm vial and analyze using either the Waters® WISP™ 96 or Alliance® autosampler trays.

technical assistance

Contact Tech Support: Phone: 1.800.255.8324 (North America)
 Email: contact.alltech@grace.com
 Online: www.discoverysciences.com

Limited Volume Inserts for Standard Mouth Vials (4mm i.d.)

Description	100/pk Part No.
<i>Glass</i>	
100µL, No Spring	95201
100µL, with Polyethylene Bottom Spring	98031
50µL, with Polyethylene Bottom Spring	98018
50-100µL, Requires Spring	95203
Metal Springs for (95203)	95205
250µL, Flat Bottom	98028
100µL, Silanized, No Spring Required	952018
<i>Polypropylene</i>	
100µL, No Spring	98137
100µL, with Polyethylene Bottom Spring	98069
250µL, Flat Bottom, 5x31mm	99176
<i>Glass for Screw Thread 4mm i.d. Only</i>	
100µL, with Polyethylene Top Flange	98107

Limited Volume Inserts for Wide Mouth Vials (6mm i.d.)

Description	100/pk Part No.
<i>Glass</i>	
250µL, No Spring	98322
250µL, Glass Flange Step Insert	98745
50µL, with Polyethylene Bottom Spring	98024
100µL, with Polyethylene Top Spring	98052
250µL, with Polyethylene Bottom Spring	98049
400µL, Flat Bottom	981391
250µL, Silanized	983228
250µL, Silanized with Polyethylene Bottom Spring	99060
<i>Polypropylene</i>	
100µL, with Polyethylene Top Spring	92102
250µL, with Polyethylene Bottom Spring	98108
250µL, No Spring Required	98106
250µL, Polyethylene Flange Step Insert	98729
350µL, Flat Bottom, 6x30mm	99183

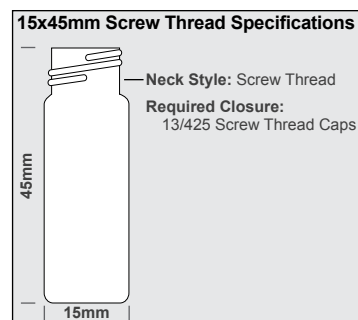
Vial Adapter for Waters® Alliance® Autosampler

Description	100/pk Part No.
<i>Reuseable Adapter for Alliance® 12x32mm Autosampler Tray</i>	
Adapter for Use of 8x30mm Vials in a 12x32mm Tray, 24/pkg	98374*
<i>Kits—Vials and Caps for Use with Waters® 717 or Alliance® Autosamplers</i>	
8x30mm Shell Vials, 8mm Clear Starburst Snap Plugs	98100
<i>Vials and Caps for Use with Waters® 717 or Alliance® Autosamplers</i>	
8x30mm Shell Vials, Clear Glass	97029
8x30mm Polypropylene Shell Vial, 900µL	99184
8x30mm Polypropylene LV Shell Vial, 500µL	99178
8mm Clear Starburst Snap Plugs	88613
<i>Vials and 10/425 Caps for Waters® Alliance® Autosamplers</i>	
12x32mm Clear Wide Mouth Vials	98133
12x32mm Amber Wide Mouth Vials	98135
Black Polypropylene Caps, PTFE/Silicone Septum, 60mil	98144

*Correct quantity specified in description.

15x45mm Screw Thread Vials

- Compatible with Waters® WISP™ 48 position, 717, Breeze™ and Shimadzu® autosamplers
- Use for waste/wash vials for other autosamplers
- 13/425 open top caps and septa
- StepVial design precisely aligns insert and vial
- Economical kits simplify ordering



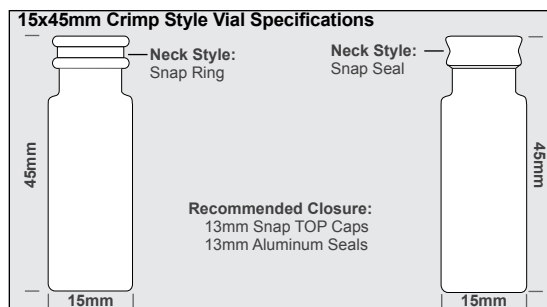
	100/pk	Silanized 100/pk	With White Marking Spot 100/pk	With White Graduated Marking Spots 100/pk
<i>Vials</i>				
Clear	98110	981101	98241	97084
Amber	98120	981201	98261	97097
<i>Limited Volume Vials</i>				
3.1mL Glass High Recovery Vial	72018	—	—	—
1.2mL Polypropylene Limited Volume Vial	70149	—	—	—
2.5mL Polypropylene Vial	98091	—	—	—
300µL Plastic Vial with Glass Insert	98251	—	—	—
<i>Preassembled Kits:</i>				
<i>Vials</i>	<i>Caps</i>	<i>with Septa</i>		
Clear Vials	Open-Hole Caps	PTFE Septa—10mil	98000	—
Amber Vials	Open-Hole Caps	PTFE Septa—10mil	98004	—
Clear Vials	Open-Hole Caps	PTFE/Silicone Septa—10/50mil	98008	72676
Amber Vials	Open-Hole Caps	PTFE/Silicone Septa—10/50mil	98014	72680
Clear Vials	Open-Hole Caps	PTFE/Silicone/PTFE Septa	98549	—
Amber Vials	Open-Hole Caps	PTFE/Silicone/PTFE Septa	98618	—
Clear Vials	Open-Hole Caps	PTFE/Butyl Septa—40mil	98623	—
Amber Vials	Open-Hole Caps	PTFE/Butyl Septa—40mil	98628	—
Clear Vials	Open-Hole Caps	TOP Hat Septa—65mil	98633	—
<i>Limited Volume Inserts</i>				
250µL Flange Step Glass Insert	70205	—	70205	70205
275µL 7x44mm Polypropylene LV Insert	99165	—	99165	99165
300µL 6x38mm Glass Insert, Requires Metal Spring	98118	—	98118	98118
300µL 6x38mm Polypropylene Insert, Requires Metal Spring	98071	—	98071	98071
Metal Springs for 300µL Inserts	98121	—	98121	98121
300µL Self Centering Glass Top Spring	98056	—	98056	98056
300µL Self Centering Polyethylene Top Spring	92104	—	92104	92104
300µL Self Centering Glass Bottom Spring	98199	—	98199	98199
300µL Self Centering Polyethylene Bottom Spring	98193	—	98193	98193
300µL Silanized Glass Insert	—	981188	—	—
350µL Flange Step Glass Insert	98942	—	98942	98942
500µL 8x43mm Glass Flat Bottom Insert	98581	—	98581	98581
<i>Preassembled 13/425</i>				
<i>Open-Hole Caps</i>		<i>with Septa</i>		
Black Cap	Bonded Interseal PTFE/Silicone Septa	70420	—	70420
Black Cap	PTFE/Silicone Septa with Slit—60mil	97017	—	97017
Black Cap	PTFE/Silicone Septa—65mil	98610	—	98610
Black Cap	PTFE/Silicone/PTFE Septa	98735	—	98735
Black Cap	PTFE/Silicone TOP Hat Septa	98075	—	98075
Clear Cap	TOP Seal Closure with Molded Septa—10mil	98070	—	98070
<i>Solid 13/425 TOP Caps with Septa</i>				
Solid Green Phenolic Cap with PTFE Septa	98209	—	98209	98209
Solid White Cap with Interseal PTFE/Silicone Bonded Septa	99031	—	99031	99031
Solid Black Cap with PTFE/F217 Septa	98430	—	98430	98430
Solid Black Cap	98614	—	98614	98614
<i>Unlined 13/425 Caps</i>				
Black Cap	73090	—	73090	73090
Red Cap	98454	—	98454	98454
Blue Cap	98456	—	98456	98456
Green Cap	98458	—	98458	98458
Yellow Cap	98460	—	98460	98460
White Cap	98462	—	98462	98462
<i>Septa for 13/425 Caps</i>				
PTFE—10mil	73094	—	73094	73094
PTFE/Silicone with Slit—5/55mil	98164	—	98164	98164
PTFE/Butyl Rubber—5/55mil	98367	—	98367	98367
Red PTFE/Silicone—5/55mil	98846	—	98846	98846
PTFE/White Silicone—10/50mil	98123	—	98123	98123
PTFE/White Silicone—10/90mil	98219	—	98219	98219
PTFE/Silicone/PTFE—2/36/2mil	98280	—	98280	98280
Black Fluoroelastomer Polymer—30mil	98606	—	98606	98606

15x45mm Crimp Style Vials

- Compatible with Waters® WISP™ 48 position, 717 and Shimadzu® autosamplers
- Use for waste/wash vials for other autosamplers
- Economical kits simplify ordering



4717



	100/pk	With White Graduated Marking Spots 100/pk		
<i>Snap Seal Vials, 4mL</i>				
Clear	98040	95545		
Amber	98097	95547		
<i>Snap Ring Limited Volume Vials</i>				
300µL Plastic Vial with Glass Insert	98154	—		
2.5mL Polypropylene Vial	98054	—		
<i>Unassembled Kits:</i>				
<i>Snap Seal Vials</i>	<i>Caps</i>	<i>with Septa</i>		
Clear Vials	13mm Snap TOP Caps	PTFE Septa—10mil	98390	—
Clear Vials	13mm Snap TOP Caps	PTFE/Silicone Septa	98874	—
Amber Vials	13mm Snap TOP Caps	PTFE/Silicone Septa	98870	—
Clear Vials	13mm Snap TOP Caps	PTFE/Butyl Septa	98636	—
Amber Vials	13mm Snap TOP Caps	PTFE/Butyl Septa	98640	—
Clear Vials	13mm Snap TOP Caps	PTFE/Silicone/PTFE Septa	98646	—
<i>Unassembled Kits:</i>	<i>Seals</i>	<i>with Septa</i>		
Clear Vials	Caps	PTFE/Silicone Septa	98132	—
Clear Vials	Caps	PTFE/Butyl Septa	98145	—
Clear Vials	Caps	PTFE/Silicone/PTFE Septa	98147	—
<i>Limited Volume Inserts</i>				
250µL Flange Step Glass Insert	70205	70205		
275µL 7x44mm Polypropylene LV Insert	99165	99165		
300µL 6x38mm Glass Insert, Requires Metal Spring	98118	98118		
300µL 6x38mm Polypropylene Insert, Requires Metal Spring	98071	98071		
Metal Springs for 300µL Inserts	98121	98121		
300µL Self Centering Glass Top Spring	98056	98056		
300µL Self Centering Polyethylene Top Spring	92104	92104		
300µL Self Centering Glass Bottom Spring	98199	98199		
300µL Self Centering Polyethylene Bottom Spring	98193	98193		
350µL Flange Step Glass Insert	98942	98942		
500µL 8x43mm Glass Flat Bottom Insert	98581	98581		
<i>13mm Snap TOP Caps</i>				
Clear Cap	PTFE Septa—10mil	98042	98042	
Clear Cap	PTFE/Silicone Septa	98044	98044	
Clear Cap	PTFE/Silicone/PTFE Septa	98046	98046	
Clear Cap	PTFE/Butyl Rubber Septa	98048	98048	
Clear Cap	PTFE/Silicone Septa with Starburst	98586	98586	
Clear Cap	PTFE/Silicone/PTFE Septa with Starburst	98593	98593	
<i>13mm Aluminum Seals</i>				
Silver Seal	PTFE Septa—10mil	98101	98101	
Silver Seal	PTFE/Silicone Septa	98283	98283	
Silver Seal	White PTFE/Butyl Septa	98776	98776	
Silver Seal	PTFE/Silicone/PTFE Septa	98596	98596	
Gold Seal	Pharma-Fix Septa	6687	6687	
<i>13mm Aluminum Seals, Unlined</i>				
Silver Seal, Center Tear Off	98778	98778		
Red Seal, Center Tear Off	98780	98780		
Blue Seal, Center Tear Off	98783	98783		
Green Seal, Center Tear Off	98785	98785		
Gold Seal, Center Tear Off	98787	98787		
Silver Seal, Tear-Away	98789	98789		
<i>13mm Septa for Aluminum Seals</i>				
White PTFE—10mil	98177	98177		
PTFE/Silicone—10/50mil	98791	98791		
PTFE/Silicone—10/90mil	98793	98793		
PTFE/Silicone/PTFE—2/36/2mil	98180	98180		
PTFE/Butyl Rubber—40mil	98173	98173		

vials

Headspace Vials

- Crimp style vials, made of borosilicate glass
- New screw thread headspace vial
- Five finish styles available
- Choose from three vial sizes, 6, 10, or 20mL

For reproducible results, it's very important that the headspace vials and caps form a tight seal. In headspace analysis, the sample is sealed into the vial and heated until the concentration in the gas phase (headspace) is in equilibrium with the concentration in the liquid phase. An aliquot from the headspace is then analyzed.



Shimadzu® HSS-2B



30x60mm
27mL

Vials for Tekmar®



18x50mm
9mL

18x65mm
12mL

Bevel Top,
Round Bottom
20mL

Headspace Vials

Description	100/pk Part No.
<i>Flat Top, Flat Bottom, Clear Glass, Long Neck</i>	
22.5x75.5mm, 20mL Vials	6636
22.5x46mm, 10mL Vials	6655
<i>Flat Top, Round Bottom, Clear Glass</i>	
22.5x75.5mm, 20mL Vials for CTC PAL, Long Neck	97188
22.5x75.5mm, 20mL Vials, for SPME**	99097
<i>Bevel Top, Flat Bottom, Clear Glass</i>	
23x75mm, 20mL Vials	99136
23x46mm, 10mL Vials	98792
22x38mm, 6mL Vials	99132
<i>Bevel Top, Round Bottom</i>	
23x75.5mm, 20mL Vials, Clear	98788
23x75.5mm, 20mL Vials, Amber	99077
22.5x46mm, 10mL Vials, Clear	98938
22x38.25mm, 5mL Vials, Clear	99056
<i>Shimadzu® Headspace Vials</i>	
30x60mm, 27mL, Clear Vials	98093
<i>Tekmar® Headspace Vials</i>	
18x50mm, 9mL, Clear Vials, 125/pk	98098*
18x65mm, 12mL, Clear Vials, 125/pk	98104*
23x75.5mm, 20mL, Clear Vials	95128
<i>Screw Thread Headspace Vials for CTC PAL***</i>	
20mL Clear	99065
20mL Amber	99068
10mL Clear	99070
10mL Amber	99078

*Correct quantity specified in description.

**SPME vial has thicker glass top so cap with thinner septum will crimp tightly.

***New units only. Older models have weak magnets.

Cross Reference of Headspace Vials to Autosamplers

Instrument manufacturers recommend use of various vial shapes for best results with their analytical systems so we offer all of the vial shapes available.

Headspace Vials** and Corresponding Autosamplers

Recommended For Autosampler	Part No.	Vial Description
PerkinElmer® HS6	99056	5mL Bevel Top/Bound Bottom
Carlo Erba HS250/HS800; CTC500;	98938	10mL Bevel Top/Round Bottom
Fisons HS500/HS800; Chrompack™ 9020/25		
PerkinElmer® HS40/HS100/101	98788	20mL Bevel Top/Round Bottom
Tekmar® 7000 Series	95128	20mL Bevel Top/Round Bottom
CTC PAL	97188	20mL Flat Top/Round Bottom
Carlo Erba HS850; Dani HS86.50/HS39.5;	6655,6636	10mL, 20mL Flat Top/Flat Bottom
Fisons HS850; Hewlett-Packard HS 7694		
SPME	99097	20mL, Magnetic Cap
Shimadzu®	98093	27mL, 30x60mm
CTC PAL, Gerstel	99065/99070	Screw Thread Magnetic Cap
	99065/99070	Screw Thread Magnetic Cap

**This list is only a guide to the most popular vial and autosampler combinations. Many instruments will allow use of other combinations of flat or beveled tops with flat or rounded bottoms. If a particular type of vial is required for your instrument, the information should be provided by your autosampler or instrument manufacturer.

20mm Seals and Septa for Headspace Vials

- Increased selection of septa in aluminum, pressure release (PR), or magnetic seals
- Now available in convenience kits with headspace vials and pressure release caps

20mm Polyethylene Seal

Low cost, polyethylene seal for rinse vials or low pressure analysis. No crimping is required.



Types of Aluminum Seals



Center Hole



Pressure Release (PR)



Center Tear-Off



Tear-Away

Magnetic Caps



5mm Center Hole



8mm Center Hole

Types of Septa



Aluminum Faced/Silicone



Silicone or PTFE/Silicone



PTFE Faced/Butyl Molded Septum (Pharma-Fix Septum)

Stoppers



20mm Seals and Septa for Headspace Vials

Description	Qty.	Part No.	Qty.	Part No.
<i>Polyethylene Seal</i>				
with PTFE/Silicone Septum—5/45mil	100	95586		
<i>Aluminum Seals, Open Center Hole with Septa</i>				
Seal, PTFE/Butyl Rubber Septum	100	98801	500	98552
Seal, PTFE/Silicone Septum—10/50mil	100	95756		
Seal, PTFE/Silicone Septum—125mil	100	95587		
Seal, PTFE/Chlorobutyl Septum	100	95584		
Seal, Aluminum/Silicone Septum	100	98687		
Seal, Black Butyl Rubber Septum	100	98683		
Center Tear-Off Seal, Butyl Septum	72	98841	10x72	98550
<i>Specialty Seals with Septa</i>				
Seal with Pharma-Fix Septum	100	6689		
PR Seal, PTFE/Silicone Septum—118mil	100	95581		
PR Seal, PTFE/Gray Butyl Septum—118mil	100	95590		
PR Seal, Aluminum/Silicone Septum—118mil	100	98691		
Magnetic*, 5mm Center, PTFE/Silicone Septum—118mil	100	95594		
Magnetic*, 8mm Center, PTFE/Silicone Septum—118mil,	100	95139		
Magnetic*, 5mm Center, PTFE/Gray Butyl Septum—118mil	100	95592		
Magnetic*, 8mm Center, PTFE/Gray Butyl Septum—118mil	100	95156		
Magnetic Seal for SPME Vial, PTFE/Silicone Septum 1.5mm	100	99102		
Magnetic Seal for SPME, Fluoroelastomer Polymer Septum, 1.0mm	100	99104		
<i>Aluminum Seals without Septa</i>				
Standard Seals, 10mm Center Hole	100	66381		
Tear-Away Seals, Silver	100	66501	10x144	98805
Silver, Center Tear-Off Seal	100	66440	10x144	98803
Red, Center Tear-Off Seal	100	66441	10x144	66418
Blue, Center Tear-Off Seal	100	66442	10x144	66419
Green, Center Tear-Off Seal	100	66443	10x144	66425
Gold, Center Tear-Off Seal	100	66444	10x144	66426
Magnetic Tinplate Seal*, 5mm Center	100	98532		
<i>Septa for 20mm Aluminum Seals</i>				
Red Butyl Septum	100	98695		
Red Silicone Septum	72	98536	10x72	98538
PTFE/Silicone Septum—10/90mil	72	95313	10x72	98809
PTFE/Gray Butyl Septum	72	98540	10x72	98542
Aluminum Faced/Silicone—60mil	72	98665	10x72	98667
<i>Stoppers for 20mm Crimp Top Vials</i>				
Natural Rubber Stoppers	72	95304		
Butyl Rubber Stoppers	72	95305		
Hycar Rubber Stoppers	72	6683	10x72	98813
<i>Magnetic Screw Thread Caps with Septa for Screw Thread Headspace Vials</i>				
White PTFE/Blue Silicone Septum, 1.3mm	100	99071		
PTFE/ Red Butyl Septum, 1.6mm	100	99073		
Blue PTFE/White Silicone Septum, 1.5mm	100	99076		
Fluoroelastomer Polymer, 1.0mm	100	99079		

*Magnetic Seals are used with CTC and Carlo Erba autosamplers.

Specialty Autosampler Vials



8x40mm



8x30mm



7x32mm



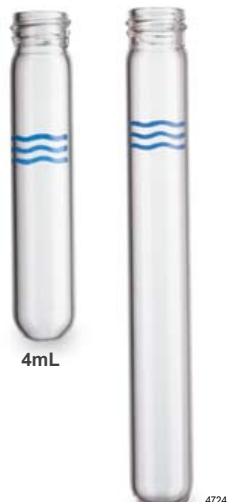
7x40mm

**Shimadzu®
ASI-5000**

**DuPont®
Vials**



5mL Vial
5mL Tube



4mL
8mL

8mm Closures



Aluminum Seals with Septa



Polypropylene Snap Seal

Specialty Autosampler Vials

Description	Qty.	Part No.	Qty.	Part No.
<i>8x40mm WISP™ Crimp Style Vials (Use 8mm Closures Below)</i>				
1.0mL Clear Vial	125	98799		
1.0mL Clear Taper Vial	500	97269		
<i>8x30mm Crimp Top Vials (Use 8mm Closures Below)</i>				
0.5mL Clear, Flat Bottom	200	98819		
0.5mL Amber, Tapered Bottom	—	—	500	97260
Sleeve for Tapered Vial (98183)	50	98146	—	—
<i>7x32mm Crimp Top Vials (Use 8mm Closures Below)</i>				
500µL Amber, Tapered Bottom	—	—	500	97264
700µL Amber, Round Bottom	125	98403	500	98411
Sleeve for 7x32mm Vials	40	98415	—	—
<i>7x40mm Crimp Top Vials (Use 8mm Closures Below)</i>				
700µL Clear, Tapered Bottom	125	98148		
700µL Amber, Tapered Bottom	200	98894		
800µL Clear, Flat Bottom	200	98043		
800µL Amber, Flat Bottom	200	98896		
<i>6x32mm Crimp Top Vials (not shown) (Use 8mm Closures Below)</i>				
6x32mm Tapered, 0.2mL	100	94470		
6x32mm Round, 0.3mL	100	94450		
Black Support Sleeve for HP1090A	20	94455	—	—
White Support Sleeve for HP1050, 7673A	20	94460	—	—
<i>Miscellaneous Vials, Clear Glass (not shown) (Use 11mm Seals)</i>				
12x40mm, Use 11mm Seal	100	98273		
10x32, 0.9mL, Use 11mm Seal	500	98226		
Support Sleeve for 98226	100	98217		
<i>Alcott Micromeritics Vials (not shown)</i>				
8x35mm, Clear Shell Vial with Plugs, 1mL	200	98903		
<i>Shimadzu® Autosampler Vials and Tubes</i>				
Vial, 12x96mm, 5mL, 10/425 Threads	100	98187		
Tube, 12x96mm, 5mL, No Cap Required	100	98375		
<i>DuPont® Autosampler Vials (Use 13/425 Screw Cap)</i>				
13x65mm, 4mL, 13/425 Threads	125	98821		
13x100mm, 8mL, 13/425 Threads	125	98250		

8mm Closures

Description	Qty.	Part No.	Qty.	Part No.
<i>Aluminum Seals with Septum</i>				
Silver Seal with PTFE/Butyl Rubber Septum	100	94831		
Silver Seal with PTFE/Silicone Septum	100	94832		
Silver Seal with PTFE/Silicone/PTFE Septum	100	94251		
Silver Seal with Black Fluoroelastomer Polymer Septum—50mil	100	94834		
<i>Polypropylene Snap Seal</i>	100	83122		

Silanized Glassware



4711

tech tip

Use of silanized glassware can often improve the separations of polar compounds such as antibodies, amines, pesticides, phenols, and proteins. Pharmaceutical compounds in solution and metabolites are especially sensitive and often absorb to the walls of an untreated glass container destroying any quantitative value the solution might have.

Our HMDS, high temperature silanization process eliminates active sites and prevents sample loss or degradation.

more info

Convenience kits simplify ordering with one part number to remember. Kits provide both vials and caps for a perfect fit every time.



4932

Silanized Vials

Description	Qty.	Part No.
<i>12x32mm Vials</i>		
Clear, Standard Mouth, 4mm i.d., 8/425 Thread	100	951911
Amber, Standard Mouth, 4mm i.d., 8/425 Thread	100	951941
Clear, Wide Mouth, 6mm i.d., 10/425 Thread	100	981331
Amber, Wide Mouth, 6mm i.d., 10/425 Thread	100	981351
Clear, R.A.M.™ Robotic, 6mm i.d., 9mm Thread	100	953861
Amber, R.A.M.™ Robotic, 6mm i.d., 9mm Thread	100	953881
<i>8x40mm Shell Vials</i>		
Clear	100	886101
<i>15x45mm Vials</i>		
Clear, 13/425 Thread	100	981101
Amber, 13/425 Thread	100	981201

more info

See individual product pages for a complete listing of closure options.

Silanized Inserts and Specialty Vials

Description	Qty.	Part No.
<i>Limited Volume Inserts for Vials</i>		
100µL for 12x32 Standard Mouth	100	952018
250µL for 12x32 Wide Mouth	100	983228
250µL with PE Bottom Spring for Wide Mouth	100	99060
100µL for 1mL WISP™ 96 Style Vials, 8x40	100	989008
300µL for 15x45 WISP™ Style Vials	100	981188

Special Silanized Vials

300µL Crimp Top Microvials, 8mm Seals with PTFE/Butyl Septa	100	944508
---	-----	---------------

Silanized Vial Kits

Description	Qty.	Part No.
<i>12x32mm (2mL) Silanized Screw Cap Vial kits</i>		
Clear, Standard Mouth Vials, 8/425 Caps, PTFE/Silicone Septa	100	72666
Amber, Standard Mouth Vials, 8/425 Caps, PTFE/Silicone Septa	100	72670
Clear, Wide Mouth Vials, 10/425 Caps, PTFE/Silicone Septa	100	981338
Amber, Wide Mouth Vials, 10/425 Caps, PTFE/Silicone Septa	100	981358
Clear, R.A.M.™ Robotic Vials, 9mm Caps, PTFE/Silicone Septa	100	953868
Amber, R.A.M.™ Robotic Vials, 9mm Caps, PTFE/Silicone Septa	100	895388
<i>1mL WISP™ Style 96 Silanized Vial Kit</i>		
Clear Vials with Clear Snap Plugs	100	982108
<i>15x45mm (4mL) Silanized Screw Thread Cap Vial Kits</i>		
Clear Vials, 13/425 Caps, PTFE/Silicone Septa	100	72676
Amber Vials, 13/425 Caps, PTFE/Silicone Septa	100	72680



4741

related products

Custom Silanization Service
Have we missed a vial or tube size that you need? Call to inquire about custom silanization for any vial or tube size that you need for your application, C-8500.

Screw Thread Vials and Storage Bottles

Screw Cap Vials



4745

Boston Round Screw Cap Bottles



4746

PTFE Septum Vials

- Usable to 250°C
- Ideal for alkaline reactions
- Useful for silylation, acylation, alkylation, and hydrolysis reactions
- Do not use as a pressure vessel



more info

For Screw Thread Closures see page 369.

Screw Cap Vials and Bottles for Sample Storage

Volume	Glass Color	Neck Finish	Dia x Ht (mm)	Qty.	Part No.	Qty.	Part No.
<i>Screw Cap Vials</i>							
2mL	Clear	8/425	12x32	100	95191	1000	95192
2mL	Amber	8/425	12x32	100	95194	1000	95195
2mL	Clear	10/425	12x32	100	98133	1000	98433
2mL	Amber	10/425	12x32	100	98135	1000	98435
4mL	Clear	13/425	15x45	100	98110	1000	98207
4mL	Amber	13/425	15x45	100	98120	1000	98484
8mL	Clear	15/425	17x60	144	98862*	200	988621
8mL	Amber	15/425	17x60	144	98864*	200	988641
14–16mL	Clear	18/400	21x70	144	98866*	200	988661
14–16mL	Amber	18/400	21x70	144	98186*	—	—
24mL	Clear	20/400	23x85	144	98868*	200	988681
40mL	Clear	24/400	28x95	100	98912	1000	98914
<i>Boston Round Screw Cap Bottles</i>							
30mL–1oz	Clear	20/400	31x79	12	9529	—	—
30mL–1oz	Amber	20/400	31x79	12	9536	—	—
60mL–2oz	Clear	20/400	39x94	12	9531	—	—
60mL–2oz	Amber	20/400	39x94	12	9537	—	—
125mL–4oz	Clear	22/400	48x112	12	9523	—	—
125mL–4oz	Amber	22/400	48x112	12	9538	—	—
250mL–8oz	Clear	24/400	60x136	12	9535	—	—
250mL–8oz	Amber	24/400	60x136	12	9539	—	—
480mL–16oz	Amber	28/400	75x168	12	95391	—	—
960mL–32oz	Clear	33/400	94x206	12	95392	—	—

*Includes vials and caps with white styrene butadiene rubber septa.

Sampling Devices

Volume	Qty.	Part No.
<i>PTFE Mini-Vials (Supplied with Caps and Septa)**</i>		
5mL PFA Mini-Vials, 2.54x3.5cm	10	97050
7mL PFA Mini-Vials, 2x3.4cm	10	97070
15mL PFA Mini-Vials	10	97150
30mL PFA Mini-Vials	10	97300
23mm PTFE/Silicone Septum, Fit 5, 7mL	30	95363
31mm PTFE/Silicone Septum, Fit 15, 30mL	30	95373
24mm Mininert® Valve, Fit 5, 7mL	12	95326

**Vials are made of PTFE, a perfluoroalkoxy copolymer with properties similar to PTFE and FEP.

related products

Refer to pages 380–381 for racks and storage containers.



4951

Screw Thread Closures

Open-Hole Screw Thread Caps, Unlined



Open-Hole Screw Thread Caps, Unlined

Neck Finish	Description	Qty.	Part No.
<i>Open-Hole Screw Caps, Unlined, Polypropylene</i>			
8/425	Black Open-Hole Cap	100	73044
8/425	Black Open-Hole Cap	1000	73059
10/425	Black Open-Hole Cap	100	98143
10/425	Black Open-Hole Cap	1000	98443
13/425	Black Open-Hole Cap	100	73090
13/425	Black Open-Hole Cap	1000	73092
15/425	Black Open-Hole Cap	72	95261
18/400	Black Open-Hole Cap	72	95281
20/400	Black Open-Hole Cap	72	95301
22/400	Black Open-Hole Cap	72	95331
24/400	Black Open-Hole Cap	72	95321

Septa for Open-Hole Caps



Septa for Open—Hole Caps

Neck Finish	Description	Qty.	Part No.
<i>Septa for Open—Hole Screw Thread Caps</i>			
8/425	PTFE/Silicone Septum—5/55mil	100	73048
8/425	PTFE/Silicone Septum—5/55mil	1000	73060
8/425	PTFE/Silicone Septum—10/90mil	100	98499
8/425	PTFE/Silicone Septum—10/90mil	1000	98497
10/425	PTFE/Silicone Septum—5/55mil	100	98141
10/425	PTFE/Silicone Septum—5/55mil	1000	98441
13/425	PTFE/Silicone Septum—5/55mil	100	98846
13/425	PTFE/Silicone Septum—5/55mil	1000	98848
13/425	PTFE/Silicone Septum—10/90mil	100	98219
13/425	PTFE/Silicone Septum—10/90mil	1000	95248
15/425	PTFE/Silicone Septum—10/50mil	72	95262
15/425	PTFE/Silicone Septum—10/90mil	100	98793
18/400	PTFE/Silicone Septum—10/50mil	72	95282
18/400	PTFE/Silicone Septum—10/90mil	72	95283
20/400	PTFE/Silicone Septum—10/50mil	72	95302
20/400	PTFE/Silicone Septum—10/90mil	72	95303
22/400	PTFE/Silicone Septum—10/90mil	72	95333
24/400	PTFE/Silicone Septum—10/50mil	72	95322
24/400	PTFE/Silicone Septum—10/90mil	72	95323

Open-Hole Screw Thread Caps with Septa



Polypropylene Screw Thread Caps with Septa

Neck Finish	Description	Qty.	Part No.
<i>Open-Hole Screw Caps with PTFE/Silicone Septa—60mil</i>			
8/425	Black Cap with PTFE/Silicone Septum	100	98061
10/425	Black Cap with PTFE/Silicone Septum	100	98144
13/425	Black Cap with PTFE/Silicone Septum	100	98610
<i>Open-Hole Screw Caps with PTFE/Silicone/PTFE Septa—40mil</i>			
8/425	Black Cap with PTFE/Silicone/PTFE Septum	100	98701
10/425	Black Cap with PTFE/Silicone/PTFE Septum	100	98705
13/425	Black Cap with PTFE/Silicone/PTFE Septum	100	98735

Screw Thread Caps with Molded Septa

- One-piece “Top Seal” closure saves time
- 0.010" molded septum allows easy needle penetration
- Polypropylene construction for solvent resistance



Top Seal Closures with Septa—10mil

Neck Finish	Description	Qty.	Part No.
<i>Top Seal Closures with Molded Polypropylene Septa—10mil</i>			
8/425	Clear Cap with Polypropylene Septum	100	98060
8/425	Clear Cap with Polypropylene Septum	1000	98160
10/425	Clear Cap with Polypropylene Septum	100	98405
10/425	Clear Cap with Polypropylene Septum	1000	98407
13/425	Clear Cap with Polypropylene Septum	100	98070
13/425	Clear Cap with Polypropylene Septum	1000	98480

Solid Top Screw Caps with Septa

- Convenient for sample storage



Solid Screw Thread Caps and Septa

Neck Finish	Description	Qty.	Part No.
<i>Solid Screw Thread Caps with Interseal PTFE/Silicone Bonded Septa</i>			
13/425	White Cap with PTFE Septum	100	99031
15/425	White Cap with PTFE Septum	100	99041
18/400	White Cap with PTFE Septum	100	99050
20/400	White Cap with PTFE Septum	100	99051
22/400	White Cap with PTFE Septum	100	99052
24/400	White Cap with PTFE Septum	100	99054
<i>Phenolic Solid Screw Thread Caps with PTFE/F217* Septa</i>			
15/425	Green Cap with PTFE Septum	50	95269
18/400	Green Cap with PTFE Septum	50	95289
20/400	Green Cap with PTFE Septum	50	95309
22/400	Green Cap with PTFE Septum	50	95339
24/400	Green Cap with PTFE Septum	50	95329
28/400	Green Cap with PTFE Septum	50	95395
<i>Polypropylene Solid Screw Thread Caps with PTFE Septa</i>			
8/425	Black Cap with PTFE Septum	100	98063
8/425	Black Cap with PTFE Septum	1000	98163
10/425	Black Cap with PTFE Septum	100	98124
10/425	Black Cap with PTFE Septum	1000	98424
13/425	Black Cap with PTFE Septum	100	98430
13/425	Black Cap with PTFE Septum	1000	98432
<i>Polypropylene Solid Threaded Cap with Polyethylene-Cone Septa</i>			
13/425	Black Cap with Poly-Cone Septum	100	95247
15/425	Black Cap with Poly-Cone Septum	100	95267
18/400	Black Cap with Poly-Cone Septum	100	95287
20/400	Black Cap with Poly-Cone Septum	100	95307
22/400	Black Cap with Poly-Cone Septum	100	95337
24/400	Black Cap with Poly-Cone Septum	100	95327
28/400	Black Cap with Poly-Cone Septum	100	95393
33/400	Black Cap with Poly-Cone Septum	100	95394
<i>Polypropylene Solid Screw Thread Caps, Unlined</i>			
8/425	Black Cap	100	98105
10/425	Black Cap	100	98162
13/425	Black Cap	100	98614

*F217—Polyethylene foam material.

Crimp Top Vials and Storage Bottles

Crimp Top Containers Provide Positive Seal and Serve as Ideal Storage Vessels

- Borosilicate glass containers
- Supplied without seals



Serum bottles are made of borosilicate glass that has a higher coefficient of expansion than autosampler vials. They have less resistance to sudden temperature changes.

Crimp Top Vials and Bottles

Volume	Glass Color	Neck Finish	Dia x Ht (mm)	Qty.	Part No.	Qty.	Part No.
<i>Crimp Top Vials and Bottles</i>							
0.3mL	Clear	11mm	12x32	100	95240	1000	—
0.3mL	Amber	11mm	12x32	100	95268	1000	—
0.5mL	Clear	8mm	8x30	200	98819	1000	98823
0.8mL	Clear	8mm	7x40	200	98043	1000	98045
0.8mL	Amber	8mm	7x40	200	98896	1000	95170
1mL	Clear	8mm	8x40	125	98799	1000	98035
1.5mL	Clear	11mm	12x32	100	72009	1000	—
2mL	Clear	11mm	12x32	100	66002	1000	66003
2mL	Amber	11mm	12x32	100	95221	1000	95222
2mL	Clear	11mm	12x40	100	98273	1000	98570
4mL	Clear	13mm	15x45	100	98040	1000	98240
4mL	Amber	13mm	15x45	100	98097	1000	98297
6mL	Clear	20mm	22x38.5	100	99056	1000	99058
9mL	Clear	20mm	18x50	125	98098	1000	98548
10mL	Clear	20mm	22.5x46	100	6655	1000	66551
12mL	Clear	20mm	18x65	125	98104	1000	98877
20mL	Clear	20mm	22.5x75.5	100	6636	1000	66361
27mL	Clear	20mm	30x60	100	98093	1000	98546

Crimp Top Serum Bottles



Crimp Top Bottles and Stoppers

Volume	Glass Color	Neck Finish	Dia x Ht (mm)	Qty.	Part No.	Qty.	Part No.
<i>Crimp Top Vials and Bottles, Wheaton™ 400</i>							
2mL	Clear	13mm	15x40	288	66021	—	—
5mL	Clear	20mm	23x47	288	66041	—	—
10mL	Clear	20mm	25x54	288	66036	—	—
30mL	Clear	20mm	37x63	288	66038	—	—
50mL	Clear	20mm	43x73	288	66040	—	—
100mL	Clear	20mm	52x95	144	66042	—	—
<i>Stoppers for Serum Bottles</i>							
11mm	Natural Rubber Stoppers			100	6626	1000	66261
13mm	Natural Rubber Stoppers			72	95244	1000	95250
13mm	Butyl Rubber Stoppers			72	95245	1000	95252
20mm	Natural Rubber Stoppers			72	95304	1000	95255
20mm	Butyl Rubber Stoppers			72	95305	720	98811

Stoppers



Crimpers and Decappers

Volume	Description	Qty.	Part No.
<i>Adjustable Hand Crimpers for Crimp Top Vials</i>			
8mm	Hand Crimper*	ea	666008
11mm	Hand Crimper	ea	60041
13mm	Hand Crimper	ea	60043
20mm	Hand Crimper	ea	60045
<i>Hand Decappers for Crimp Top Vials</i>			
8mm	Hand Decapper	ea	98709
11mm	Hand Decapper	ea	98711
13mm	Hand Decapper	ea	98713
20mm	Hand Decapper	ea	98719
<i>Plier Decappers for Crimp Top Vials</i>			
8mm	Plier Decapper	ea	6662
11mm	Plier Decapper	ea	6660
13mm	Plier Decapper	ea	6661
20mm	Plier Decapper	ea	6663

*Not adjustable.

more info

For Aluminum Seals and Septa see page 371.

more info

For more information on Crimpers and Decappers, see page 383.

Aluminum Seals and Septa

Aluminum Seals with Septa

- One-piece design saves time by eliminating the process of inserting septa into the closures
- For maximum sample protection, the seal should be replaced before storing the sample
- Available in a wide assortment of colors



Aluminum Seals with Septa

Description	Size	Qty.	Part No.
<i>Seal with PTFE Septum—10mil</i>			
Silver Seal	11mm	100	98013
		1000	98113
	13mm	100	98101
		1000	98103
	20mm*	100	99103
1000		99105	
<i>Seal with PTFE/Butyl Septum</i>			
Silver Seal	8mm	100	94831
		1000	95172
	11mm	100	73070
		1000	73071
	13mm	100	98776
1000		98206	
20mm	100	98801	
	500	98552	
	1000	98552	
Red Seal	11mm	100	98051
Blue Seal	11mm	100	98053
Green Seal	11mm	100	98057
Gold Seal	11mm	100	98059
<i>Seal with PTFE/Silicone—10/40mil</i>			
Silver Seal	8mm	100	94832
		1000	94833
	11mm	100	98740
		1000	94867
	13mm	100	98283
1000		98289	
20mm	100	95756	
	1000	95758	
<i>Seal with PTFE/Silicone/PTFE</i>			
Silver Seal	8mm	100	94251
		1000	94253
	11mm	100	94855
		1000	94865
	13mm	100	98596
1000		98598	
<i>Seal with PP Septum—10mil</i>			
Silver Seal	11mm	100	98011
<i>Seal with Pharma-Fix Septum</i>			
Silver Seal	13mm	100	6687
	20mm	100	6689
<i>Seal with Black Fluoroelastomer Polymer Septum</i>			
Silver Seal	8mm	100	94834
		1000	94835
	11mm	100	94852
		1000	94862

*Not suitable for headspace seals.

Aluminum Seals, Unlined

- Also available in a wide assortment of colors. Call for additional colors.



Aluminum Seals, Unlined

Description	Size	Qty.	Part No.
<i>Standard Seals</i>			
Silver—Open Center	11mm	100	98746
		1000	66405
Silver—Center Tear-Off	13mm	100	98778
		1000	66410
Silver—Center Tear-Off	20mm	144	66440
		1440	98803
<i>Tear-Away</i>			
Silver	13mm	100	98789
		1000	66416
	20mm	144	66501
1440		98805	
<i>Magnetic Tinplate</i>			
Silver	20mm	100	98532

Septa for Aluminum Seals

- Refer to the septum compatibility guide on page 349 to choose the septum best suited for your application



Septa for Aluminum Seals

Description	Size	Qty.	Part No.
<i>White PTFE Septum—10mil</i>			
	11mm	100	98007
		100	98177
<i>PTFE/Silicone Septum—60mil</i>			
	11mm	100	98009
		1000	98019
		100	98791
	13mm	100	95253
		1000	95253
<i>PTFE/Silicone Septum—100mil</i>			
	13mm	100	98793
		72	95313
<i>PTFE/Silicone/PTFE Septum—40mil</i>			
	11mm	100	98010
		1000	98020
		100	98180
	13mm	100	98180
		1000	98182
		1000	98182
<i>PTFE/Butyl Rubber Septum—40mil</i>			
	11mm	100	98398
		1000	98400
		100	98173
	13mm	100	98173
		1000	98175
<i>Red Butyl Septum</i>			
	20mm	100	98695
<i>Red Silicone Septum</i>			
	20mm	72	98536
		1000	99108
<i>PTFE/Gray Butyl Septum</i>			
	20mm	72	98540
<i>Aluminum/Silicone Septum—60mil</i>			
	20mm	72	98665

more info

For a complete listing of 20mm Aluminum Seals and Septa see page 365.

Shell Vials and Kits

Shell Vials with Polyethylene Conical Starburst[†] Snap Plug Style Closures

- Thicker glass walls for safer handling
- Special safety plug eliminates sore fingers when pressing plugs into shell vials



Limited Volume Vials



TITSEAL[®] Disposable Glass Shell Vials and Polyethylene Plug Style Closures

- Maximum temperature use of 80°C for stopper



Shell Vial Kits and Replacement Caps

Description	100/pk Part No.	1000/pk Part No.
<i>8x40mm (1mL) Kit Includes: Shell Vials, Clear Conical Snap Plugs</i>		
Clear Vials, 200/pk	88631**	98834
Amber Vials, 200/pk	88612**	98838
Polypropylene Vials, 200/pk	88626**	98224
<i>Limited Volume Shell Vials (use Conical Plugs, not supplied with vials)</i>		
700µL Polypropylene, 8x40mm	98990	98992
<i>8mm Replacement Polyethylene Conical Starburst Snap Plugs[†]</i>		
Clear Plug	98994	98996
Red Plug	99003	99013
Blue Plug	99005	99015
<i>12x32mm (2mL) Kit Includes: Shell Vials, Clear Conical Snap Plugs</i>		
Clear Vials	98840	98843
Amber Vials	98845	98847
Polypropylene Vials	98849	98851
Polypropylene Vials for Dionex	91450	91455
<i>12mm Replacement Polyethylene Conical Starburst Snap Plugs[†]</i>		
Clear Plug	98980	98989
Red Plug	99033	99053
Blue Plug	99035	99055
<i>15x45mm (4mL) Kit Includes: Shell Vials, Clear Conical Snap Plugs</i>		
Clear Vials	98853	98857
Amber Vials	98859	98863
Polypropylene Vials	98867	98869
<i>Limited Volume Shell Vials (use Conical Plugs, not supplied with vials)</i>		
15x45mm Polypropylene, 3mL	98972	98974
<i>15mm Replacement Polyethylene Conical Starburst Snap Plugs[†]</i>		
Clear Plug	98976	98978
Red Plug	99023	99043
Blue Plug	99025	99045
Green Plug	99027	99047
Yellow Plug	99029	99049
<i>Safety Plug for Inserting Plugs into Any Size Shell Vial</i>		
Multi-Plug Safety Sleeve, 5/pk	96431**	—

[†]With Starburst for easier needle penetration.
^{**}Correct quantity specified in description.

TITSEAL[®] Disposable Shell Vial Kits

Description	200/pk Part No.	1000/pk Part No.
<i>Unassembled Disposable Vial Kits</i>		
8x30mm (0.75mL), Clear Vials and Plugs	98824	73101
8x43mm (1mL), Clear Vials and Plugs	98578	73146
12x31mm (2mL), Clear Vials and Plugs	73112	98826
15x45mm (4mL), Clear Vials and Plugs	98828	73131
<i>Replacement Plugs for TITSEAL[®] Disposable Vials</i>		
Plugs for 8mm Vials, 500/pk	73108**	—
Plugs for 12mm Vials, 500/pk	73120**	—
Plugs for 15mm Vials, 500/pk	73139**	—

^{**}Correct quantity specified in description.

Polypropylene Vials for Ion Chromatography



Polypropylene vials eliminate interferences associated with glass surfaces.

tech tip

Polypropylene containers

Use of polypropylene containers is important to avoid the possibilities of interference from metallic ions that can be leached from glass containers under certain sampling conditions.

related products

Looking to further eliminate interferences in your samples for IC?

See our IC SPE devices on pages 304 and 310.

Polypropylene Vials and Caps

Description	100/pk Part No.	1000/pk Part No.
<i>12x32mm Standard Mouth Screw Thread Vials, 4mm i.d.</i>		
600µL Polypropylene Vial, 8/425 Thread, 500/pk	—	89073*
100µL Polypropylene Vial with 8/425 Thread	12962	12963
8/425 Black Cap with PTFE/Silicone Septum	98061	98066
<i>12x32mm Wide Mouth Screw Thread Vials, 6mm i.d.</i>		
Kit—Includes Polypropylene Vial (98099), Red 10/425 Cap and 10mil PTFE Septum	88538	—
750µL Polypropylene Vial with 10/425 Thread	98099	98211
500µL Polypropylene Vial with 10/425 Thread	98310	98314
10/425 Black Cap with PTFE/Butyl Septum	97274	97216
10/425 Black Cap with PTFE/Silicone Septum	98144	98152
<i>12x32mm Robotic LV Vials, 6mm i.d.</i>		
1.5mL Clear Polypropylene Vial	99098	99140
1.5mL Amber Polypropylene Vial	99109	99142
100µL Polypropylene R.A.M.™ Vial	90273	90271
9mm Blue R.A.M.™ Cap, PTFE/Silicone Septum	95360	95359
<i>12x32mm Crimp Style Vials, use 11mm Seal</i>		
750µL Polypropylene Vial	98050	98215
600µL Polypropylene Vial, 500/pk	—	88363*
500µL Polypropylene Vial	98842	98844
300µL Polypropylene Vial	12990	12991
100µL Polypropylene Vial	12960	12961
11mm Aluminum Seal with PTFE/Butyl Septum	73070	73071
11mm Aluminum Seal with PTFE/Silicone Septum	98740	94867
11mm Poly Crimp Seal with PTFE/Butyl Septum	95232	95332
11mm Poly Crimp Seal with PTFE/Silicone Septum	95234	95334
<i>8x30 and 8x40mm Shell Vials</i>		
8x30mm Shell Vial, 900µL	99184	99192
8x30mm Limited Volume Vial, 500µL	99178	99182
8x40mm Polypropylene Shell Vial, 1mL	88625	98827
8mm Polyethylene Starburst Snap Plug	88613	98865
700µL LVI Polypropylene vial	98990	98992
8mm Polyethylene Conical Plug	98994	98996
<i>15x45mm Vials</i>		
2.5mL Polypropylene Vial, 13/425 Thread	98091	98491
1.2mL Polypropylene Vial, 13/425 Thread	70149	70198
13/425 Black Cap with PTFE/Silicone Septum	98610	98612
3mL Polypropylene LVI Shell Vial	98972	98974
13mm Clear Conical Plug	98976	98978
2.5mL Crimp Style	98054	98254
13mm Snap TOP Cap, PTFE/Silicone Septum	98044	98244

*Actual quantity listed in description.

For Polypropylene Limited Volume Inserts see:

more info

For 4mm i.d. Standard Mouth Vials, see page 361.

more info

For 6mm i.d. Wide Mouth Vials, see page 361.

more info

For 8x40mm Shell Vials, see page 354.

more info

For 15x45mm Vials, see page 362.



Limited volume inserts provide greater access to small sample volumes.

Finneran Versa-Vials™

- Secure seal for sample integrity
- Vase-like neck allows pick up with autosampler's robotic arm
- Selection of closures improves sample compatibility



6460

Easy use of pipet tips with 9.5mm i.d. opening.



6461

A new generation of 12x32mm shell vials to upgrade and automate your shell vial sampling.

Versa-Vials™ and Plug Closures

Description	100/pk Part No.	1000/pk Part No.
<i>Versa-Vials™, 12x32mm, 1.8mm</i>		
Clear Glass	99063	99163
Amber Glass	99064	99164
Clear Glass with Marking Spot	99066	99166
Amber Glass with Marking Spot	99067	99167
<i>Limited Volume Inserts with Flanged Top</i>		
250µL Glass, LVI	99095	99195
250µL Polypropylene LVI	99089	99191
350µL Polypropylene Flat Bottom	99183	99189
<i>Plug Closures</i>		
PTFE/Silicone Plug with Slit*	99080	99082
PTFE/Silicone Plug	99085	99087
PTFE/Gray Chlorobutyl Plug	99090	99092
Polyethylene Plug with Conical Starburst	99094	99096

*Prevents bent needles.



6461

Soft press-in plugs eliminate breakage when capping.

Tubes and Vials for Robotics

Tubes and Vials for Robotics

Description	Qty.	Part No.	Qty.	Part No.
<i>Culture Tubes, Borosilicate Glass</i>				
10x75mm Tubes, 5mL	250	98829	1000	98590
12x75mm Tubes, 6mL	250	98585	1000	98587
13x100mm Tubes, 10mL	250	98589	1000	98591
16x100mm Tubes, 15mL	250	98593	1000	98595
20x150mm Tubes, 23mL	125	98597	500	98599
25x150mm Tubes, 60mL	125	98601	500	98603
<i>Glass Autosampler Vials, Caps Sold Separately</i>				
12x32mm Clear, Crimp Top, 11mm	100	66002	1000	66003
12x32mm Amber, Crimp Top, 11mm	100	95221	1000	95222
15x45mm Clear, 13/425 Screw Thread	100	98110	1000	98207
15x45mm Amber, 13/425 Screw Thread	100	98120	1000	98484
<i>Scintillation Vials (Supplied with White Urea Caps with Cork Foil Liners)</i>				
20mL Glass Scintillation Vials, 28x57	100	98613	500	98615
20mL Polyethylene Scintillation Vials	100	98617	500	98619



0522

more info

See also R.A.M.™ Vial page 355.

Mini-Vials, Maxi-Vials, and Accessories

Mini-Vials and Maxi-Vials

- Heavy wall, clear borosilicate glass
- Tapered cone for maximum recovery



Mini-Vials and Accessories

Description	Qty.	Part No.
<i>Clear Mini-Vials and Maxi-Vials (Supplied with Screw Caps)</i>		
1.0mL Mini-Vials, 13/425	12	95010
2.0mL Mini-Vials, 20/400	12	95020
3.0mL Mini-Vials, 20/400	12	95030
5.0mL Mini-Vials, 20/400	12	95050
10.0mL Maxi-Vials, 20/400	12	95100
<i>Caps</i>		
20/400 Replacement Phenolic Caps	48	95053

Mininert® Valves

- PTFE is only sample contact
- Replace septum without exposing sample
- Maximum pressure = 120psig
- Use 20–26 gauge needles
- Do not autoclave



Mininert® Valves and Accessories

Description	Qty.	Part No.
<i>Mininert® Valves</i>		
13mm Mininert® Valve for 13/425 Neck	12	95246
20mm Mininert® Valve for 20/400 Neck	12	95306
24mm Mininert® Valve for 24/400 Neck	12	95326
<i>Mininert® Accessories</i>		
Mininert® Septum Inserter	ea	644850
Replacement Mininert® Septa	50	644350

Crimp Top Micro-Reaction Vials

- Reusable, crimp-top mini-vial
- Use 20mm aluminum seals
- Cone-shaped interior for sample retrieval



Crimp Top Micro-Reaction Vials

Description	Qty.	Part No.
5.0mL Vials, 20mm Septa and Seals	5	9498
20mm Tear-Away Seals	144	66501

EPA Sample Containers

Variety of storage bottle sizes and styles in glass or polyethylene. Available unwashed or cleaned to meet requirements for VOA analyses



Septa Bottles 4944



Wide Mouth Glass Jars 4945

related products

Working on an EPA method?
Refer to pages 232–234 for our Guide to Capillary Columns for Environmental Analysis.



6534

EPA Sample Containers

Volume, Description, Neck Finish (Cap Size)	Dimensions Ht x Dia	Qty.	Unwashed Part No.	Washed Part No.
<i>Septa Bottles — Supplied with Open Top Poly Caps with PTFE/Silicone Septa</i>				
4oz (125mL), Clear Tall Septa Jar, 48/400	4" x 1-7/8"	24	—	89079
<i>Wide Mouth Glass Jars — Supplied with Poly Caps with PTFE Septa</i>				
4oz (125mL), Clear Short Glass Jar, 58/400	2-1/8" x 2-3/8"	24	89309	89308
4oz (125mL), Amber Glass Jar, 38/400	3-13/16" x 2"	24	89332	89320
8oz (250mL), Amber Glass Jar, 45/400	4-3/4" x 2-1/2"	24	89359	89351
16oz (500mL), Amber Glass Jar, 53/400	5-7/8" x 3-1/8"	12	89360	89353
32oz (.95L), Amber Glass Jar, 53/400	6-1/2" x 3-5/8"	12	89368	89355

technical assistance

Contact Tech Support: Phone: 1.800.255.8324 (North America)
Email: contact.alltech@grace.com
Online: www.discoverysciences.com

EPA Vials for Volatile Organic Analyses



- Available washed* or unwashed in 20, 40, and 60mL vial sizes and in 12x32 and 15x45mm autosampler vial sizes
- Washed* EPA vials are supplied with a certificate of analysis—equivalent to I-CHEM™ Series 3
- Washed vials are recommended for the analysis of volatile organics
- All vials are borosilicate glass
- Three septum choices for maximum versatility—0.125" for EPA/VOA Samples, 0.125" TOP Hat Septum Locks Securely Into Cap, 0.06" for autosampler use (purchase separately)
- All are supplied as kits with vial and cap specified

*Washed to Protocol B specifications.

Cleaning Protocol B

1. Wash bottles, septa, and caps in laboratory grade, biodegradable, non-phosphate detergent.
2. Rinse three times with tap water.
3. Rinse three times with ASTM Type one deionized water.
4. Oven dry.
5. Assemble in organic-free environment.

tech tip

Advantages of TOP Hat Closure

- Molded TOP* Hat PTFE/Silicone septum locks into its unique cap opening
- Prevents septa falling out of caps
- Available for washed or unwashed vials in all sizes

Cross-Section Cap and Septum



TOP Hat Septum locks securely into the black cap.

125 mil Septum

*Time Oriented Products.

EPA/VOA Vial Kits

Description	Qty.	Unwashed Part No.	Qty.	Washed Part No.
<i>20mL Vials</i>				
Clear Vials, White Caps, PTFE/Silicone Septa	72	89515	72	89517
Amber Vials, White Caps, PTFE/Silicone Septa	72	89516	72	89518
Clear Vials, Solid White Cap, PTFE Septum	—	—	72	89325
<i>40mL Vials</i>				
Clear Vials, White Caps, PTFE/Silicone Septa	72	89525	72	89527
Amber Vials, White Caps, PTFE/Silicone Septa	72	89526	72	89528
Clear Vials, Solid White Cap PTFE Septum	—	—	72	89326
Amber Vials, Solid White Cap, PTFE Septum	—	—	72	89199
Clear Vials, Black Caps, TOP Hat PTFE/Silicone Septa*	72	98649	72	98651
<i>60mL Vials</i>				
Clear Vials, White Caps, PTFE/Silicone Septa	72	89535	72	89537
<i>24/414 Replacement Caps with Septa for EPA Vials, Unwashed</i>				
White Caps with 0.060" PTFE/Silicone Septa	100	89519	—	—
White Cap Only	100	89226	—	—
0.125" Septum for EPA Vials	100	89277	—	—

*Patented TOP Hat Closure with 125mil septum meets EPA Requirements.

I-CHEM™ Vials

- 20, 40, and 60mL I-CHEM vials for EPA volatile organic analyses
- All vials are borosilicate glass
- Choice of closure/liner for maximum versatility—0.06 for autosampler use, 0.125 for EPA/VOA samples



4943

I-CHEM™ Sample Containers

Septa Bottles and Jars

- For analysis of volatile organics



4944

Wide Mouth Glass Jars

- For semi-volatile, PCBs/pesticide, metals, and cyanide analysis



4945

I-Chem™ EPA/VOA Vials—Series 2**

Description	Qty.	Part No.
<i>Processed* I-CHEM™ Vials, Assembled with Caps and Septa</i>		
20mL Vials, Processed		
Clear Vials, 24/414 Solid Caps, PTFE Septum	72	98704
40mL Vials, Processed		
Clear Vials, 24/414 Open-Hole Caps, 0.125" PTFE/Silicone Septum	72	98706
Amber Vials, 24/414 Open-Hole Caps, 0.125" PTFE/Silicone Septum	72	98708
Clear Vials, 24/414 Open-Hole Caps, 0.060" PTFE/Silicone Septum	72	98710
60mL Vials, Processed		
Clear Vials, 24/414 Open-Hole Caps, 0.125" PTFE/Silicone Septum	72	97022
Amber Vials, 24/414 Open-Hole Caps, 0.125" PTFE/Silicone Septum	72	97024
<i>Unwashed I-CHEM™ Vials, Assembled with Caps and Septa</i>		
20mL Vials, Unwashed		
Clear Vials, 24/414 Solid Caps, PTFE Septum	72	98684
40mL Vials, Unwashed		
Clear Vials, Open-Hole Caps, 0.125" PTFE/Silicone Septum	72	98686
Amber Vials, 24/414 Solid Caps, PTFE Septum	72	98696
60mL Vials, Unwashed		
Clear Vials, Open-Hole Caps, 0.125" PTFE/Silicone Septum	72	97012
Amber Vials, Open-Hole Caps, 0.125" PTFE/Silicone Septum	72	97014

*Processed vials are recommended for use in analysis of volatile organics.

**Certificate of analysis is available by lot number. Request after purchase.

Replacement Caps and Septa for I-CHEM™ Vials

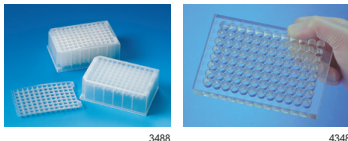
Description	Qty.	Part No.
Septa Only, 0.125" PTFE/Silicone	24	92416

I-CHEM™ Sample Containers

Volume	Description	Neck Finish (Cap Size)	Dimensions (Ht x Dia)	Qty.	Part No.
<i>Septa Bottles— Supplied with Open Top Poly Caps with PTFE/Silicone Septa</i>					
8oz (250mL)	Amber Septa Bottle	24/414	5-11/16" x 2-3/8"	12	98720
<i>Wide Mouth Glass Jars— Supplied with Poly Caps with PTFE Septa</i>					
4oz (125mL)	Clear Short Glass Jar	58/400	2-1/8" x 2-3/8"	24	98732
4oz (125mL)	Amber Glass Jar	38/400	3-13/16" x 2"	12	98734
8oz (250mL)	Amber Glass Jar	45/400	4-3/4" x 2-1/2"	12	98700
16oz (500mL)	Clear Short Glass Jar	89/400	3-3/4" x 3-1/2"	12	98736

96-Well Products

96-Deep Well Microplates and Cover Mats



- Standard 8x12 format
- Borosilicate glass plates
- Polypropylene square or round wells

Microplates and Accessories

Description, Well Capacity, Well Volume	Qty.	Part No.
<i>All-Glass 96-Well, Class A Borosilicate Plates</i>		
Glass, Flat Bottom, 500µL	1	91504

Racks and Storage Containers

Polypropylene Vial Storage Racks

- Choice of sizes to fit 12 to 28mm o.d. vials
- Autoclavable
- Stackable



4951

Polypropylene Vial Storage Racks

Fits Vial Diameter	Holds (#Vials)	Description	Qty.	Part No.
12mm	50	194mm x 100mm x 23mm	5	94875
15mm	48	270mm x 97mm x 30mm	5	94878
15mm	90	327mm x 172mm x 30mm	5	94880
28mm	50	325mm x 171mm x 30mm/EPA	5	94882

Polypropylene Rack with Handle

- Stackable—empty or full
- Autoclavable



3432

Polypropylene with Handle

Fits Vial Diameter	Holds (#Vials)	Description	Qty.	Part No.
16–20	40	10" x 4-3/8" x 3-1/2"	ea	2039
26–30	24	11-3/4" x 5" x 3-3/4"	ea	2043

Ampul-store

- Eliminates need to relabel or transfer open 2mL ampule contents
- Minimizes sample odors in the lab

To use: Break off the ampule top. Place the ampule in the Ampul-store and attach cap. Inject through the open top screw cap/stopper to remove sample.



4957

Ampul-store

Description	Qty.	Part No.
Ampul-store for 2mL Ampules	5	98932

Stretch-it—PTFE Sealing Tape

- Provides a chemically resistant cover for reactions in progress
- Eliminates deteriorated foil and paraffin film covers
- 108ft per roll



3426

Stretch-it-PTFE Sealing Tape

Description	Qty.	Part No.
1/2" Wide	ea	3241
3/4" Wide	ea	3243
1" Wide	ea	3245
3" Wide	ea	3247

Racks and Storage Containers

VialTainer Storage Box

- Clear polystyrene box
- Designed for use with autosampler vials



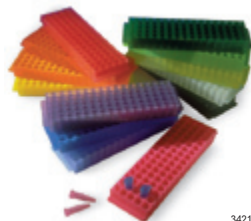
3428

VialTainer Storage Box

Fits Vial Diameter	Holds (#Vials)	Description	Qty.	Part No.
12mm	72	Small, 189x94x62mm	4	2049
15mm	40	Large, 189x94x62mm	4	2051

Freezer Racks

- Hold 80 microcentrifuge tubes
- Autoclavable
- Polypropylene racks



3421

Freezer Racks

Description	Qty.	Part No.
Racks, 1 of ea: Red, Blue, Orange, Green, Yellow	5	7363

Polypropylene Gridded Boxes in Neon Colors

- Hold 100 12x32mm vials
- Available in blue, green, orange, yellow, and clear for colorful storage and identification



3697

Specifications

Raised Edges Provide Non-Slip, Stackable Storage with Writing Panel on Lid Front for i.d.

Alpha-Numeric Code on Grids for Easy Sample i.d.

Hinged Lid with Secure Snap Clasp

Rated to -90°C, Ideal for Freezer or Room Storage

Dimensions: 100 Grid—2.1" H x 6.0" W x 5.5" L
(53mm H x 152mm W x 140mm L)

Neon Storage Boxes

Fits Vial Diameter	Holds (#Vials)	Description	Qty.	Part No.
<i>To Hold 100 Vials</i>				
12mm	100	Clear	5	95129
12mm	100	Blue Neon	5	95131
12mm	100	Green Neon	5	95132
12mm	100	Orange Neon	5	95133
12mm	100	Yellow Neon	5	95135
12mm	100	Assorted, 1 of ea/5 Colors	5	95005

Sampling Handling Accessories

Vacuum Bottles with Septum Ports

Description	Qty.	Part No.
<i>Replacement Parts for Vacuum Bottles</i>		
Septa, Red Silicone, 6mm o.d. x 8mm	12/pk	7000

Diazomethane Generators

Description	Qty.	Part No.
Replacement PTFE/Silicone Septa	72	95242

related products

Looking for gas sampling bags and other gas sampling accessories?
See pages 276–279.



6647



4664

technical assistance

Contact Tech Support: Phone: 1.800.255.8324 (North America)
Email: contact.alltech@grace.com
Online: www.discoverysciences.com

Crimpers and Decappers

Adjustable Hand Crimper

- Adjustable block corrects for differences in septum thicknesses

The Adjustable Crimper has an adjustable pressure block in the crimper head that allows crimping of liners with a thickness range of 0.25 to 3.0mm. The unit looks like the standard hand crimper but it is supplied with an allen wrench and special instructions for making adjustments.

Adjustable Crimper Instructions

The crimper has an adjustment feature which will allow it to be used with a variety of septa, discs, stoppers or lined caps. The user may adjust the stroke or movement for each application as needed.

Adjustment Method:

- Hold crimper with jaws up, notice hex socket screw.
- Insert hex wrench into screw socket.
- For looser septa, turn screw clockwise 1/8" turn. For tighter septa, turn screw counter clockwise 1/8" turn.



Hand Crimper

- Permits minor handle pressure adjustments
- Works best for seals with 40–50mil liners



Hand Decapper

- Removes crimped seals from vials



Plier Decapper

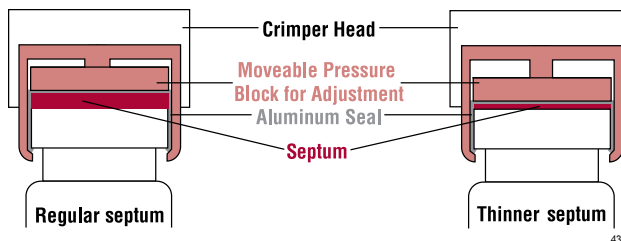
- Inexpensive tool to remove sealed caps



tech tip

What's special about the adjustable hand crimpers?

The new design has an adjustable pressure block that corrects for differences in septum thickness and provides a tighter seal. Crimping is accomplished by placing the crimper head over the aluminum seal and squeezing the handle.



Crimpers and Decappers

Volume	Description	Qty	Part No.
<i>Adjustable Hand Crimpers for Crimp Top Vials</i>			
11mm	Hand Crimper	ea	60041
13mm	Hand Crimper	ea	60043
20mm	Hand Crimper	ea	60045
<i>Hand Crimpers for Crimp Top Vials</i>			
8mm	Hand Crimper	ea	666008
11mm	Hand Crimper	ea	666011
13mm	Hand Crimper	ea	666013
20mm	Hand Crimper	ea	666020
<i>Hand Decappers for Crimp Top Vials</i>			
8mm	Hand Decapper	ea	98709
11mm	Hand Decapper	ea	98711
13mm	Hand Decapper	ea	98713
20mm	Hand Decapper	ea	98719
<i>Plier Decappers for Crimp Top Vials</i>			
8mm	Plier Decapper	ea	6662
11mm	Plier Decapper	ea	6660
13mm	Plier Decapper	ea	6661
20mm	Plier Decapper	ea	6663

vials

