



Vials & Syringes

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Siltek® Coated Vials

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

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

Siltek® deactivation produces a highly inert glass surface that features high temperature stability, extreme durability, and low bleed. Try Siltek® deactivated vials for better recovery of sample analytes.

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

Qty.	Siltek Deactivation	
100-pk.	-222	addl. cost
1,000-pk.	-223	addl. cost

Septum Selection Guide

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

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

NOTE: This chemical resistance chart is intended only as a guideline. It does not cover all compounds or all solvents. Tests were done at room temperature on pure, single solvents, and there is no data on solvent combinations. Always confirm the compatibility of your vial, closure, and chemical combination prior to sample preparations.

Manufacturer	Instrument/Model #	11 mm Crimp-Top	9 mm Short Cap Screw-Thread	Headspace	8 mm Screw-Thread	10 mm Screw-Thread	4 mL WISP 48 Style	1 mL WISP 96 Style
A.I.M.	CPS-100, 200	x			x			
A.I.	42 Vial Tray	x						
A.I.	Headspace (HS: 10, 20 mL)			x				
Agilent	1042, 1050, 1080, 1082, 1084, 1090, 1100, 5890, 6850, 6890, 7670A, 7671A, 7672, 7673A/B, 7683, 7890, 8042	x	x					
Agilent	Headspace (HS: 6, 10, 20 mL, Flat)			x				
Alcott	738	x			x	x		
Alltech	570	x			x	x		
Alltech	580 (standard tray)	x						
Altex		x				x		
AMS	42	x						
Antek	736 Unisampler, 738	x						
ASC		x			x	x		
Beckman	501, 502, 507				x	x		
Bruker	LC 51						x	
Bruker/Varian	8100/8200	x	x		x	x		
Bruker/Varian	Marathon	x	x					
Bruker/Varian	8035, 8000 Series, 8055, 8085, 3800 GC				x			
Bruker/Varian	9100/9090/9095	x			x			
Bruker/Varian	Genesis (HS: 10, 20 mL Rounded)			x				
Bruker/Varian/Rainin	Dynamax AI-1A, AI-200, Dynamax AI-3	x						
Bruker/Varian/Rainin	Dynamax AI-3AI-1A, AI-2W				x			
Carlo Erba/Fisons	42 vial tray AS 800	x						
Carlo Erba/Fisons	AS 800		x					
Carlo Erba/Fisons	AS 800, 8000				x			
Carlo Erba	HS 500, HS 800 (HS: 6, 10, 20 mL, Flat)			x				
Carnegie	CMA-250/200	x						
Chrompack	CP 9000 GC Series	x						
Cueni	Headspace (HS: 10, 20 mL)			x				
CTC	CTC A1055	x						
CTC	Headspace (HS: 20 mL, Flat)			x				
Dani	ALS 39.80, 86.80	x	x		x			
Dani	HSS 39.50, HSS 86.50 (HS: 10, 20 mL)			x				
Dani	SPT 37.50 (HS: 20 mL)			x				
Delsi		x						
Dynatech	42 vial tray	x	x		x			
Dynatech	LC2000		x					
Fisons	42 vial tray, AS800	x						
GBC		x						
Gerstel		x						
Gilson	231 XL, 232 XL, 233 XL, Aspec XL	x	x		x			
Gilson	Asted XL	x			x			
Gynkoteck	Gina, others	x			x			
Hitachi	AS-2000, AS-6000	x	x					
Hitachi	S6551				x			
Hitachi	L-7200				x		x	x
Hitachi	L-7250				x		x	
IBM		x			x			
ICI	other than LC 1600	x			x			
Infochroma		x			x			

Manufacturer	Instrument/Model #	11 mm Crimp-Top	9 mm Short Cap Screw-Thread	Headspace	8 mm Screw-Thread	10 mm Screw-Thread	4 mL WISP 48 Style	1 mL WISP 96 Style
Jasco	851-AS, AS-950	x			x			
Jasco	LC800 & 900 series				x			
Kipp		x			x			
Kontron	360	x			x			
Kontron	460				x			
LDC	Marathon, Promis	x	x		x			
LDC	other than 713	x			x			
L.E.A.P. Technologies	CTC A1055	x						
L.E.A.P. Technologies	CTC A2005	x	x		x	x		
L.E.A.P. Technologies	HS 500 (HS: 10, 20 mL Rounded)			x				
Magnus Scientific		x			x			
PerkinElmer	AI-1	x	x					
PerkinElmer	Autosystem GC (HS: 10, 20 mL, Rounded)	x		x	x			
PerkinElmer	F40, F45, HS 6, HS 40 (HS: 10, 20 mL, Rounded)			x				
PerkinElmer	Integral 4000 (HS: 10, 20 mL, Rounded)	x		x				
PerkinElmer	ISS 100, LC 600 42 vial tray	x	x					
PerkinElmer	ISS 200 (HS: 6 mL)	x	x	x				
PerkinElmer	420/B, 4900	x			x			
Pharmacia LKB	2157-010	x			x			
Phillips	424T, 4710	x			x			
Phillips	LC-XP	x			x		x	
Polymer-Labs	GPC 110/210	x						
Precision Sampling	GC111, GC 311, LC 241-60	x			x			
Pye	LCXP	x						
S.G.E.	M280D	x			x			
Sedere		x			x			
Shimadzu	AOC 20i	x				x		
Shimadzu	AOC-14/1400, AOC-17				x		x	
Shimadzu	AOC-8B/9, SIL-6A, SIL-6B, -9A, -8A				x			
Shimadzu	HSS-2B (HS: 27 mL)			x				
Shimadzu	SIL-2AS						x	
Shimadzu	SIL-10A, 10Ai, 10AxL	x	x		x	x		
Siemens	AS 32, AS 200	x						
Spark Holland	SPH 125	x	x					
Spark Holland	Marathon, Promis	x	x		x			
Spark Holland	Triathlon, Midas	x			x			
Spectra-Physics	8875, 8880	x	x		x			
Talbot		x			x			
Tekmar	7000, 7000/7050 (HS: 10, 20 mL, Rounded)			x				
Thermo Scientific	TRACE GC 2000, AS2000	x	x					
TOA	ICA5450				x			
Tosca 1		x						
TosoHaas	TSK-6080, AS-8010, AS-8020	x			x		x	
Tracor	770, 771, 772	x						
TSP	8875, 8880, AS 100/1000, AS 300/3000	x			x			
Unicam	4710	x						
Unicam	4700LC				x			
Unicam	4247	x			x			
Unicam	LC-XP	x			x		x	
United Technologies		x			x			
Waters	Alliance 2690	x	x		x	x		
Waters	710, 717+						x	x
Waters	48-pos. M700						x	
Waters	96-pos. M700							x

Vial Size Quick Reference Chart

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

WISP Vials

4.0 mL Screw-Thread Step Vial

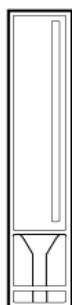


24654, 24655
24656, 24657
Page 343

4.0 mL Clear Crimp-Top



24658, 24659
Page 343

700 μ L Limited Volume

24680,
24681
Page 343

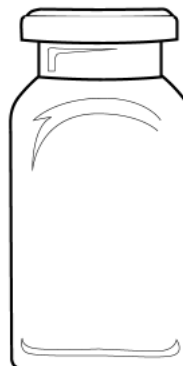
96 Style



24662, 24663,
24664, 24665,
24678, 24679
Page 343

Headspace Vials

10 mL Clear Flat Bottom



24683,
24684
Page 344

10 mL Clear Rounded Bottom



21164,
21165
Page 344

20 mL Clear Flat Bottom



24685,
24686
Page 344

20 mL Clear Rounded Bottom



21162,
21163
Page 344

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

Limited Volume Inserts

250 μ L Big
Mouth Insert



24516,
21779
Page 337

250 μ L Glass
Flat Bottom



24510
Page 337

350 μ L Glass
Flat Bottom Inserts
w/ID Ring



21780,
24517
Page
337



24692,
24693
Page
337

500 μ L Glass
WISP
Flat Bottom



21787, 21788
Page 337

100 μ L Glass or
Polypropylene
w/ Polypropylene
Bottom Spring



24508, 21775
24512
Page 337

250 μ L Glass
or Polypropylene
w/ Bottom Spring



21776, 21777,
24518
Page 337

8 mm Screw-Thread Vials

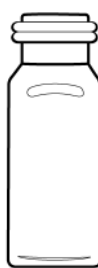
2.0 mL Clear or
Amber w/ White Graduated
Marking Spot



24619, 24620,
24621, 24622
Page 341

9 mm Short-Cap Vials

2.0 mL Clear or
Amber w/ White Graduated
Marking Spot



21154*, 21155*
*w/out white graduated marking spot
21140, 21141
21142, 21143
Page 340

10 mm Screw-Thread Vials

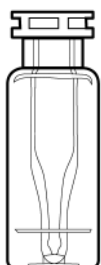
2.0 mL Big Mouth Step
Clear or Amber



24626, 24627,
24628, 24629
Page 342

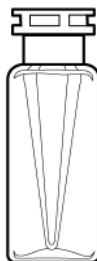
11 mm Crimp-Top Vials

Limited Volume 100 μ L
Glass Insert, Clear Plastic Vial



24653
Page 338

Limited Volume
100 μ L Polypropylene



24651, 24652
Page 338

2.0 mL Snap Seal Style
Clear or Amber Glass



21152, 21153, 24383, 24384, 24385, 24386
Page 338

Microsampling Vials and Inserts

Microsampling vials and inserts are ideal for applications where sample volume is limited because they provide maximum sample extraction and minimal sample waste. One-piece interlock vials offer less handling of vial components and reduce the chance of sample loss due to spillage. Limited-volume inserts are designed to work in 2 mL vials.



22437



22439

Interlock Vials

Interlock limited volume vials offer the performance and convenience of a one-piece microvial for a fraction of the cost. A 300 µL insert is fused into a 12 x 32 mm clear or amber glass vial. This one-piece design reduces the potential for contamination.

Description	Type	Volume	Color	Material	100-pk.	500-pk.
Interlock Vial	9 mm Thread	300 µL	Clear	Glass	22433	22434
Interlock Vial	9 mm Thread	300 µL	Amber	Glass	22435	22436
Interlock Vial	11 mm Crimp or Snap Ring	300 µL	Clear	Glass	22437	22438
Interlock Vial	11 mm Crimp or Snap Ring	300 µL	Amber	Glass	22439	22440



21050



21051

Micro-Vials with Screw Threads

- Two sizes available.
- Tapered for high recovery of contents.
- Work with Mininert® sampling valves.

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

also available

Mininert® sampling valves

See **page 346**.



Inserts for 2.0 mL, 11 mm Crimp-Top & 2.0 mL, 9 mm Short-Cap, Screw-Thread Vials
(Vials shown on pages 338 and 340.)

Description	Volume	Material	100-pk.	1,000-pk.
Big Mouth Insert w/Bottom Spring	50 µL	Glass	24513	21782
Big Mouth Insert w/Bottom Spring	250 µL	Glass	21776	21777
Big Mouth Insert w/Glass Flange (Step Design)*	250 µL	Glass	24516	21779
Insert, Flat Bottom	350 µL	Glass	21780	24517
Insert, Flat Bottom w/ID Ring	350 µL	Glass	24692	24693
Big Mouth Insert w/Bottom Spring	250 µL	Polypropylene	24518	—
Big Mouth Insert w/Bottom Spring & Graduated Markings	250 µL	Polypropylene	24518A	—
Big Mouth Insert, Top Flange	250 µL	Polypropylene	24519	—
Big Mouth Insert, No Spring	250 µL	Polypropylene	24520	—

*Big Mouth insert w/glass flange (step design) not to be used with 9 mm screw-thread vials.

Inserts for 2.0 mL, 8 mm Screw-Thread Vials
(Vials shown on page 341.)

Description	Volume	Material	100-pk.	1,000-pk.
Insert w/Polypropylene Bottom Spring	100 µL	Glass	24508	21775
Insert, Flat Bottom	250 µL	Glass	—	24510
Insert, Flat Bottom w/ID Ring	250 µL	Glass	—	24691
Insert, No Spring	100 µL	Polypropylene	24511	—
Insert w/Bottom Spring	100 µL	Polypropylene	24512	—

Inserts for 2.0 mL, 10 mm Big Mouth Step Design Screw-Thread Vials
(Vials shown on page 342.)

Description	Volume	Material	100-pk.	1,000-pk.
Big Mouth Insert w/Bottom Spring	250 µL	Glass	21776	21777
Insert, Flat Bottom	350 µL	Glass	21780	24517
Insert, Flat Bottom w/ID Ring	350 µL	Glass	24692	24693
Big Mouth Insert w/Glass Flange (Step Design)	250 µL	Glass	24516	21779

Polypropylene inserts available on request (1,000-packs only).

Inserts for 4.0 mL WISP 48 Screw-Thread Step Vials
(Vials shown on page 343.)

Description	Volume	Material	100-pk.	1,000-pk.
Insert for WISP 48 Vials, Flat Bottom**	500 µL	Glass	21787	21788

Polypropylene inserts available on request (1,000-packs only).

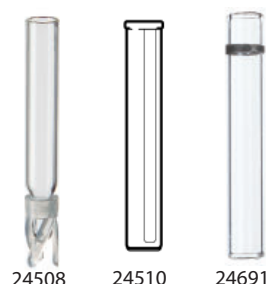
**Also fit 4.0 mL Snap Seal vials. See page 343.

Limited Volume Inserts for Shell Vials, 1.0 mL WISP 96 Style, 8 x 40 mm
(Vials shown on page 343.)

Description	Volume	Material	100-pk.	1,000-pk.
Big Mouth Insert w/Bottom Spring	250 µL	Glass	21776	21777

Versa Vial™ Inserts
(Vials shown on page 345.)

Description	Volume	Material	100-pk.	1,000-pk.
Versa Vial Insert w/Glass Flange	250 µL	Glass	22707	—
Versa Vial Insert w/Flange	250 µL	Polypropylene	22709	22710
Versa Vial Insert, Flat Bottom	250 µL	Glass	22711	22712



also available
Crimpers & Decappers
See **page 347.**





24383



24385

2.0 mL Crimp-Top Vials, 12 x 32 mm, 11 mm

White graduated marking spots are a standard feature unless otherwise noted.

2.0 mL Crimp-Top Vials, 12 x 32 mm, 11 mm

Description	Color	Material	100-pk.	1,000-pk.
Vial w/White Graduated Marking Spot	Clear	Glass	24383	24384
Vial w/White Graduated Marking Spot	Amber	Glass	24385	24386
Vial without Graduated Marking Spot	Clear	Glass	21152	21153



2.0 mL, 11 mm Aluminum Crimp Seals with Septa

Seal Color	Septa Material	100-pk.	500-pk.	1,000-pk.
Silver	PTFE/Natural Rubber	21174	—	21175
Blue	PTFE/Red Rubber	24351	—	24352
Green	PTFE/Red Rubber	24353	—	24354
Red	PTFE/Red Rubber	24355	—	24356
Yellow	PTFE/Red Rubber	24357	—	24358
Mixed	PTFE/Rubber	—	21724	—
Silver	PTFE/Silicone	24359	—	24360
Blue	PTFE/Silicone	24361	—	24362
Green	PTFE/Silicone	24363	—	24364
Red	PTFE/Silicone	24365	—	24366
Yellow	PTFE/Silicone	24367	—	24368
Mixed	PTFE/Silicone	—	21725	—
Silver	PTFE/Silicone/PTFE	24369	—	24370



24673

2.0 mL Crimp Vial Convenience Kits (Vials, Caps, & Septa)

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

Description	100-pk.	1,000-pk.
Clear 2.0 mL Vial, Deactivated, Silver Seal, PTFE/Natural Rubber Septa	24671	24672
Amber 2.0 mL Vial, Deactivated, Silver Seal, PTFE/Natural Rubber Septa	24673	24674
Clear 2.0 mL Vial, Untreated, Silver Seal, PTFE/Natural Rubber Septa	21196	21197
Amber 2.0 mL Vial, Untreated, Silver Seal, PTFE/Natural Rubber Septa	21198	21199
Clear 2.0 mL Vial, Untreated, Silver Seal, PTFE/Silicone Septa	24646	24647
Amber 2.0 mL Vial, Untreated, Silver Seal, PTFE/Silicone Septa	24648	24649



24651

2.0 mL Crimp-Top Vial with 100 µL Insert

- Plastic vial.
- Choice of glass or polypropylene insert.

Description	100-pk.	1,000-pk.
Clear Plastic Vial w/100 µL Polypropylene Insert	24651	24652
Clear Plastic Vial w/100 µL Glass Insert	24653	—

also available

Limited Volume Inserts
for 2.0 mL, 11 mm Crimp-Top Vials

See **page 337**.

2.0 mL, 11 mm Poly Crimp Seal Caps: Snap-on or Crimp

The Poly Crimp seal is versatile, working as either a snap-on or crimp-top cap. Simply use a standard crimping tool to secure the Poly Crimp seal onto any crimp-top vial. It's that easy!



Seal Color	Liner Material	100-pk.	400-pk.	1,000-pk.
Clear	PTFE/Butyl Rubber	24433	—	24434
Clear	PTFE/Silicone	24443	—	24444
Blue	PTFE/Silicone	24445	—	24446
Clear	PTFE/Silicone/PTFE	24453	—	24454
Blue	PTFE/Silicone/PTFE	24455	—	24456
Mixed	PTFE/Silicone/PTFE	—	21728	—



2.0 mL, 11 mm GC Snap Ring Cap with Septum

- Snaps on any crimp-style vial.
- Save money! Use this snap cap when you don't need to crimp.

Description	Liner/Septa Material	100-pk.	1,000-pk.
Polypropylene Snap Ring Cap w/Liner	PTFE, 10 mil	21729	21730
Polypropylene Snap Ring Cap w/Septum	PTFE/Butyl Rubber	21731	21732
Polypropylene Snap Ring Cap w/Septum	PTFE/Silicone	21733	21734



2.0 mL Sample Vial Racks

- Racks feature alphanumeric indexing for easier vial identification.
- Racks can be stacked for efficient storage.
- Fits most 2.0 mL, 12 x 32 mm vials (vials sold separately).

Description	Capacity	qty.	cat.#	qty.	cat.#
Polypropylene Storage Rack for 12 x 32 mm Vials	50 vials, 5 x 10	ea.	22856	5-pk.	22857



also available

Crimpers & Decappers

See page 347.





21140

Ideal for Agilent 7673, 7683, 7693 & other autosamplers that process 12 x 32 mm crimp-top vials.



also available

Limited Volume Inserts
for 2.0 mL, 9 mm Short-Cap
Screw-Thread Vials

See **page 337**.



2.0 mL, 9 mm Short-Cap, Screw-Thread Vials, 12 x 32 mm

Fit all 2.0 mL, 12 x 32 mm, crimp-top vial-based autosamplers.

2.0 mL, 9 mm Short-Cap, Screw-Thread Vials (vial only)

Description	Color	100-pk.	1,000-pk.
Short-Cap Vial w/White Graduated Marking Spot	Clear	21140	21141
Short-Cap Vial w/White Graduated Marking Spot	Amber	21142	21143
Short-Cap Vial without Graduated Marking Spot	Clear	21154	21155

2.0 mL, 9 mm Short-Cap, Screw-Vial Closures (Polypropylene, preassembled)

Cap Color	Liner Material	100-pk.	500-pk.	1,000-pk.
Blue	PTFE/Red Rubber	24473	—	24474
Mixed	PTFE/Red Rubber	—	24668	—
Blue	PTFE/Silicone	24485	—	24486
Green	PTFE/Silicone	24487	—	24488
Yellow	PTFE/Silicone	24493	—	24494
Mixed	PTFE/Silicone	—	24669	—
Blue	PTFE/Silicone/PTFE	24497	—	24498
Black	PTFE/Silicone/PTFE	24495	—	24496
Natural	PTFE/Silicone/PTFE	24501	—	24502
Red	PTFE/Silicone/PTFE	24503	—	24504
Yellow	PTFE/Silicone/PTFE	24505	—	24506
Mixed	PTFE/Silicone/PTFE	—	24670	—

also available

Mininert® sampling valves
See **page 346**.

Certified Autosampler Vial Kits

Certified 2.0 mL Screw-Thread Vials

- Certificates enclosed with each kit.
- Vials of clear or amber borosilicate glass, with ID marking spots.
- Closures with pre-inserted septa.
- Each kit sealed for integrity.

Certification Parameters Include:

Vial Dimensions: height, diameter, bottom thickness, neck length, thread profile, and annealing

Cap/Septum: diameter, height, thread integrity, center flash, septa insertion, sealing/resealing test, residue by headspace GC, and extractables

Chemical Test: HPLC Test: nonvolatile residue
GC Test: volatile residue



22788



22792

Description	100-pk.
Assembled Clear 2.0 mL Vial w/Marking Spot, Cap, Bonded PTFE/Silicone Slit Septa	22789
Assembled Amber 2.0 mL Vial w/Marking Spot, Cap, Bonded PTFE/Silicone Slit Septa	22788
Unassembled Clear 2.0 mL Vial w/Marking Spot, Cap, Bonded PTFE/Silicone Septa	22792
Unassembled Amber 2.0 mL Vial w/Marking Spot, Cap, Bonded PTFE/Silicone Septa	22790
Unassembled Clear 2.0 mL High Recovery Vial w/Marking Spot, Cap, Bonded PTFE/Silicone Slit Septa	22793
Unassembled Amber 2.0 mL Vial w/Marking Spot, Cap, Bonded PTFE/Silicone Slit Septa	22791

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

- Fit all 2.0 mL, 12 x 32 mm, screw-thread 8 mm/425 vial-based autosamplers.

2.0 mL, 8 mm Screw-Thread Vials (vial only)

These vials provide the most secure environment for your sample because evaporation is minimized.

Description	Volume	Color	100-pk.	1,000-pk.
Vial w/White Graduated Marking Spot	2.0 mL	Clear	24619	24620
Vial w/White Graduated Marking Spot	2.0 mL	Amber	24621	24622

2.0 mL, 8 mm Caps and Septa (preassembled)

Cap Color	Septa Material	100-pk.	1,000-pk.
Black	Red PTFE/Silicone, 0.065"	21149	21720
Black Top Hat	PTFE/Silicone	21721	21722

Caps & Septa for 2.0 mL, 8 mm Screw-Thread Vials

Description	Septa Material	100-pk.	1,000-pk.
Black Polypropylene, Open-Hole Caps		21176	21177
Septa, 8 mm x 0.045"	Red PTFE/Silicone	21178	21179
Septa, 8 mm x 0.065"	Red PTFE/White Silicone	21795	21147

2.0 mL Autosampler Vial Convenience Kits

- Vials packaged in a clear-lid tray. Preassembled caps with septa packaged separately in a plastic bag.
- Black polypropylene open-hole caps and 8 mm red PTFE/silicone septa, 0.065".

Description	100-pk.	1,000-pk.
Clear 2.0 mL Vial, Silcote CL7-Deactivated, Black Cap, Red PTFE/Silicone Septa, 0.065"	24638	24639
Amber 2.0 mL Vial, Silcote CL7-Deactivated, Black Cap, Red PTFE/Silicone Septa, 0.065"	24640	24641
Clear 2.0 mL Vial, Untreated, Black Cap, Red PTFE/Silicone Septa, 0.065"	21192	21193
Amber 2.0 mL Vial, Untreated, Black Cap, Red PTFE/Silicone Septa, 0.065"	21194	21195

2.0 mL Preassembled Vial Kits

8 mm/425 Screw-Thread, Unmarked Vials, Septa, and Caps

Caps attached to vials.

Description	100-pk.	1,000-pk.
Clear 2.0 mL Vial, Black Cap, Red PTFE/Silicone Septa, 0.045"*	24630	24631
Amber 2.0 mL Vial, Black Cap, Red PTFE/Silicone Septa, 0.045"*	24632	24633
Clear 2.0 mL Vial, Black Cap, Red PTFE/Silicone Septa, 0.065"***	24634	24635
Amber 2.0 mL Vial, Black Cap, Red PTFE/Silicone Septa, 0.065"***	24636	24637

*Best fit for Shimadzu.

**Best fit for Varian.

2.0 mL, 8 mm Screw-Thread Vials with 100 µL Insert

- Plastic vials.
- Choice of glass or polypropylene insert.

Description	Color	100-pk.	1,000-pk.
Plastic Vial w/100 µL Polypropylene Insert	Clear	24623	24624
Plastic Vial w/100 µL Glass Insert	Clear*	24625	—

*Amber plastic vial with clear glass insert available on request. (1,000-packs only)



All vials undeactivated unless otherwise noted.



also available

Limited Volume Inserts
for 2.0 mL, 8 mm Screw-Thread Vials

See page 337.



24623



24626

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

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

The Big Mouth Step vial system has a larger ID than conventional vials and incorporates a neck finish that is uniquely designed to allow the insert to be precisely aligned in the center of the vial. This precise alignment provides maximum sample withdrawal and eliminates any chance of missed injections.

2.0 mL Big Mouth Step Screw-Thread Vials (vial only)

Description	Volume	Color	100-pk.	1,000-pk.
Big Mouth Step Vial w/White Graduated Marking Spot	2.0 mL	Clear	24626	24627
Big Mouth Step Vial w/White Graduated Marking Spot	2.0 mL	Amber	24628	24629



21148

Caps and Septa for 2.0 mL Big Mouth Step Vials (preassembled)

Description	Septa Material	1,000-pk.
Caps and Septa, Preassembled	PTFE/Silicone/PTFE, 0.040"	21723
Caps and Septa, Preassembled	Red PTFE/White Silicone, 0.060"	24677

Septa for 2.0 mL Big Mouth Step Vials

Description	Septa Material	qty.	cat.#
Septa Only	Red PTFE/White Silicone, 0.060"	1,000-pk.	21148

also available

Limited Volume Inserts
for 2.0 mL, 10 mm Big Mouth Step
Design Screw-Thread Vials

See **page 337**.



2.0 mL Big Mouth Step Vial Kits w/Black Caps (preassembled)

Caps attached to vials.

Description	100-pk.	1,000-pk.
Clear 2.0 mL Vial, Black Cap, PTFE/Silicone/Red PTFE Septa, 0.040"	24675	24676
Clear 2.0 mL Vial, Black Cap, Red PTFE/Silicone Septa, 0.065"	24642	24643
Amber 2.0 mL Vial, Black Cap, Red PTFE/Silicone Septa, 0.065"	24644	24645

4.0 mL WISP 48 Crimp-Top 13 mm Vials, 15 x 45 mm, Snap Seal

4.0 mL WISP 48 Crimp-Top Vial (vial only)

Description	Volume	Color	100-pk.	1,000-pk.
WISP 48 Snap Seal Vial w/White Graduated Marking Spot	4.0 mL	Clear	24658	24659

Aluminum Seals w/Septa for 4.0 mL WISP Crimp-Top Vials

Seal Color	Septa Material	100-pk.	1,000-pk.
Silver	PTFE/Natural Rubber	21753	21754
Silver	PTFE/Silicone	21755	21756



24658

4.0 mL WISP 48 Screw-Thread Step Vials, 15 x 45 mm, 13/425

4.0 mL WISP 48 Screw-Thread Step Vials (vials only)

Description	Volume	Material	100-pk.	1,000-pk.
WISP 48 Step Vial w/White Graduated Marking Spot	4.0 mL	Clear	24654	24655
WISP 48 Step Vial w/White Graduated Marking Spot	4.0 mL	Amber	24656	24657



24654

4.0 mL WISP 48 Caps and Septa

Description	Septa Material	100-pk.	1,000-pk.
WISP 48 Caps and Septa, Top Hat	PTFE/Silicone	21745	21746
WISP 48 Caps and Septa, Preassembled	Red PTFE/Silicone, 0.065"	21743	21744
WISP 48 Caps, Black Polypropylene, Open-Hole		21741	21742
Septa	Red PTFE/Silicone/PTFE, 0.040"	21751	21752
Septa	Red PTFE/Silicone, 0.060"	21749	21750

also available

Limited Volume Inserts
for 4.0 mL WISP 48 Screw-Thread
Step Vials and 1.0 mL WISP 96 Style
Shell Vials

See **page 337**.



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

Available in three styles.

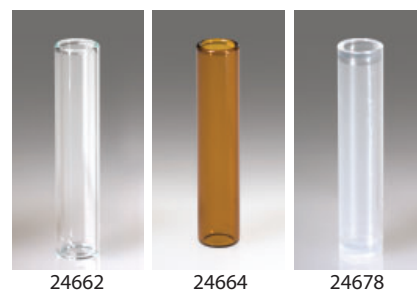
1.0 mL WISP 96 Style, 8 x 40 mm Shell Vials

Description	Volume	Color	Material	200-pk.	1,000-pk.
WISP 96 Style Vial	1.0 mL	Clear	Glass	24662	24663
WISP 96 Style Vial	1.0 mL	Amber	Glass	24664	24665
WISP 96 Style Vial	1.0 mL	Clear	Polypropylene	24678	24679
WISP 96 Style Vial	700 µL Limited Volume	Clear	Polypropylene	24680	24681

8mm Starburst Plugs sold separately.

8 mm Starburst Plugs for Shell Vials, 1.0 mL WISP 96 Style, 8 x 40 mm

Description	Color	Material	200-pk.	1,000-pk.
Starburst Snap Plugs for Shell Vials	Clear	Polyethylene	21769	21770
Starburst Snap Plugs for Shell Vials, Conical	Clear	Polyethylene	21771	21772
Starburst Snap Plugs for Shell Vials, Silicone-Lined	Clear	Polyethylene	21773	21774



24662

24664

24678



24680



21769



21773



18 mm Screw-Thread Headspace Vials



23090

23094



20 mm Headspace Crimp-Top Vials



21761



22835



22441



22443

NEW!

Headspace Screw-Thread Vials (18 mm)

Description	Volume	Color	Dimensions	100-pk.	1,000-pk.
Headspace Vial	10 mL	Clear	22 x 45 mm	23084	23085
Headspace Vial	10 mL	Amber	22 x 45 mm	23088	23089
Headspace Vial	20 mL	Clear	22 x 75 mm	23082	23083
Headspace Vial	20 mL	Amber	22 x 75 mm	23086	23087

Caps not included.

Magnetic Screw-Thread Caps (18 mm)

Description	Septa Material	100-pk.	1,000-pk.
Magnetic Caps and Septa	PTFE/Silicone	23090	23091
Magnetic Caps and Septa	PTFE/Silicone for SPME	23092	23093
Magnetic Caps and Septa	PTFE/Red Chlorobutyl	23094	23095

Headspace Crimp Vials (20 mm)

Description	Volume	Color	Dimensions	100-pk.	1,000-pk.
Headspace Vial	6 mL	Clear	22 x 38 mm	21166	21167
Headspace Vial, Flat Bottom	10 mL	Clear	23 x 48 mm	24683	24684
Headspace Vial, Rounded Bottom	10 mL	Clear	23 x 48 mm	21164	21165
Headspace Vial, Flat Bottom	20 mL	Clear	23 x 75 mm	24685	24686
Headspace Vial, Rounded Bottom	20 mL	Clear	23 x 75 mm	21162	21163
Headspace Vial	27 mL	Clear	30 x 60 mm	21160	21161

Vial to instrument compatibility are designated in instrument reference chart.

Aluminum Seals w/Septa (20 mm, preassembled)

Description	Seal Color	Septa Material	100-pk.	1,000-pk.
Seals w/Septa	Silver	PTFE/Gray Butyl Rubber	21761	21762
Seals w/Septa	Silver	PTFE/Silicone	21763	21764
Pressure Release Seals w/Septa	Silver	PTFE/Gray Butyl Rubber	21765	21766
Pressure Release Seals w/Septa	Silver	PTFE/Silicone	21767	21768

Magnetic Seals w/Septa (20 mm, preassembled)

Description	Seal Color	Septa Material	100-pk.	1,000-pk.
Magnetic Seals w/Septa, with 5 mm Hole	Gold	PTFE/Silicone	22833	22834
Magnetic Seals w/Septa, with 8 mm Hole	Gold	PTFE/Silicone	22831	22832
Magnetic Seals w/Septa, with 8 mm Hole	Gold	PTFE/Butyl	22835	22836
BiMetal Magnetic Seals w/Septa, with 8 mm Hole	Red/Silver	PTFE/Silicone	22441	22442
BiMetal Magnetic Seals w/Septa, with 8 mm Hole	Blue/Silver	PTFE/Silicone	22443	22444

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

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

- Elongated neck allows for consistent, reliable autosampler pick up.
- 9 mm opening is ideal for sampling and pipette use.

Description	Volume	Color	Material	100-pk.	1,000-pk.
Versa Vial	2.0 mL	Clear	Glass	22701	22702
Versa Vial	2.0 mL	Amber	Glass	22697	22698
Versa Vial w/Graduated Marking Spot	2.0 mL	Clear	Glass	22703	22704
Versa Vial w/Graduated Marking Spot	2.0 mL	Amber	Glass	22699	22700



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

Description	Volume	Color	Material	100-pk.	1,000-pk.
Versa Vial	1.5 mL	Clear	Polypropylene	22705	22706

also available
Versa Vial™ Inserts
See [page 337](#).



Versa Vial™ Plugs (12 mm)

Description	Color	Plug Material	100-pk.	1,000-pk.
Versa Vial Plug	Green	Polyethylene	22713	22714
Versa Vial Plug	Grey	Chlorobutyl/Siliconized	22715	22716
Versa Vial Plug	White	PTFE/Silicone	22717	22718
Versa Vial Plug	White	PTFE/Silicone Plug w/Slit*	22719	22720

*Eliminates needle damage to plug.



Precleaned Volatile Organic Analyte (VOA) Sampling Vials

- Container, liner, and closure cleaned, assembled, and lot traceable.
- Open top caps.
- PTFE faced 0.125" silicone septa.
- Cleaned to U.S. EPA Protocol B specifications.

Description	Volume	Color	Material	Screw-Thread Size	qty.	cat. #
Precleaned VOA Vials	20 mL	Clear	Glass	24 mm/400	72-pk.	21798
Precleaned VOA Vials	20 mL	Amber	Glass	24 mm/400	72-pk.	21799
Precleaned VOA Vials	40 mL	Clear	Glass	24 mm/400	72-pk.	21796
Precleaned VOA Vials	40 mL	Amber	Glass	24 mm/400	72-pk.	21797
Collection Vials for ASE 200	60 mL	Clear	Glass	24 mm/400	72-pk.	26121
Collection Vials for ASE 200	60 mL	Amber	Glass	24 mm/400	72-pk.	26122
Replacement Septa, 24 mm x 0.125"			PTFE-lined silicone		100-pk.	24694



Filter Vials, Sampling Valves for Vials



Simply squeeze particulates and contaminants out of your sample!

Thomson SINGLE StEP™ Filter Vials

Save time and reduce waste—these eco-friendly vials replace syringe filtration and eliminate the need for separate vials, caps, syringes, and filters. Remove contaminants and particulates from your LC samples with just a single squeeze!

- Fast and easy to use—only hand depression force is required.
- Compatible with both UHPLC and standard HPLC autosamplers.
- Pre-slit caps are color coded for easy identification of membrane and porosity.
- Low dead volume unit contains rugged polypropylene insert with 450 µL loading capacity.



Porosity	Color	qty.	cat.#
Nylon			
0.2 µm	black cap	200-pk.	23950
0.2 µm	black cap	500-pk.	23951
0.45 µm	pink cap	200-pk.	23952
0.45 µm	pink cap	500-pk.	23953
PES (polyethersulfone)			
0.2 µm	grey cap	200-pk.	23962
0.2 µm	grey cap	500-pk.	23963
0.45 µm	orange cap	200-pk.	23964
0.45 µm	orange cap	500-pk.	23965
PTFE (polytetrafluoroethylene)			
0.2 µm	green cap	200-pk.	23954
0.2 µm	green cap	500-pk.	23955
0.45 µm	blue cap	200-pk.	23956
0.45 µm	blue cap	500-pk.	23957
PVDF (polyvinylidene difluoride)			
0.2 µm	red cap	200-pk.	23958
0.2 µm	red cap	500-pk.	23959
0.45 µm	yellow cap	200-pk.	23960
0.45 µm	yellow cap	500-pk.	23961

Patent No. 7,790,117



Mininert® Precision Sampling Valves for Vials

Mininert® valves are very convenient for repetitive sampling and limit content exposure to the silicon septum. Models are available for screw-cap and crimp-top vials. The crimp-top valve for 20 mm ID glassware slides into the neck of the vial. Turn the threaded flange to secure a tight fit.

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

Electronic Rechargeable Crimpers and Decappers

- Easy to use; comfortable grip.
- Hundreds of operations from one charge.
- Adjustable crimping force.
- New battery allows for faster charge cycle.
- All kits include a universal plug set for the battery charger.
- For 11 mm and 20 mm caps.
- One-year warranty.

The redesigned electronic crimpers and decappers have a rechargeable 6.4 volt battery installed. The larger battery allows for quick, powerful operation and a faster charge cycle, minimizing downtime. Charging the battery takes thirty minutes to two hours. The universal plug set includes U.S., European, UK, and Australian plug clips.

Description	Size	qty.	cat.#
Electronic Crimper	11 mm	kit	22358
Electronic Crimper	20 mm	kit	22359
Electronic Decapper	11 mm	kit	22360
Electronic Decapper	20 mm	kit	22361
Replacement Battery for Electronic Crimpers and Decappers		ea.	22362



Universal plug set for battery charger included in all kits.

Easy Grip Manual Crimpers and Decappers

Our new Easy Grip crimpers and decappers feature tough, light, glass-filled plastic bodies with curved handles that improve hand comfort during use. The bottom-pull handle allows for a steadier hold than top-push handles. An easily viewed adjustment knob is located at the head of the product. The clearly shown + and – symbols, along with directional arrows, simplify adjusting the intensity of the crimp/decap needed. The knob is also designed to indicate when the crimp setting has been reached, when it fully contacts the body of the product.

Description	Size	qty.	cat.#
Crimper	11 mm	ea.	23396
Decapper	11 mm	ea.	23397
Crimper	20 mm	ea.	23398
Decapper	20 mm	ea.	23399



Safer than removing caps with pliers, knives, or screwdriver blades!

Syringes

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did you know?

Syringes and needles manufactured by Hamilton Company and SGE are intended for scientific research and laboratory use only and are not intended for human *in vivo* use.

also available

We can supply many additional sizes. Call us if you don't see exactly what you need.

Syringe Basics

Needle Gauge Chart

Gauge	Nominal OD		Nominal ID	
26s	0.019 in.	0.47 mm	0.0050 in.	0.13 mm
26	0.018 in.	0.46 mm	0.0102 in.	0.26 mm
25	0.021 in.	0.51 mm	0.0102 in.	0.26 mm
23s	0.025 in.	0.64 mm	0.0060 in.	0.15 mm
23	0.025 in.	0.64 mm	0.0132 in.	0.34 mm
22s	0.028 in.	0.72 mm	0.0060 in.	0.15 mm
22	0.028 in.	0.72 mm	0.0162 in.	0.41 mm

s (after gauge) = smaller ID with thicker walls

Guide to Needle Termination Codes

Hamilton:

(N) Cemented Needle
(RN) Removable Needle
(ASN) Autosampler Cemented Needle
(ASRN) Autosampler Removable Needle
(TLL) PTFE Luer Lock
(KH) Knurled Hub
(LT) Luer Tip
(LTN) Luer Tip Cemented Needle

SGE:

(F) Fixed Needle
(R) Removable Needle
(LL) Luer Lock
(LT) Luer Tip

Needle Point Style

Restek offers several different point styles on syringe and needle products. Choose one based on your application.



Point Style 2, BV: beveled needle tip. Recommended for optimum septum penetration and prevention of septum coring.



Point Style 3, LC: square/blunt needle tip. For use with HPLC injection valves and for sample pipetting.



Point Style 5, S/Hole, Bevel: conical needle with side hole. Liquid samples are filled and dispensed through the side hole.



Point Style H, Dome: domed needle tip with side hole. Liquid samples are filled and dispensed through the side hole. The solid tip minimizes septum damage.



Point Style Agilent, Cone, AS: special conical style needle point used exclusively on syringes for autosamplers.

Syringe Termination Types

From cemented to removable needles and from PTFE luer lock to special syringe fittings, syringe barrel terminations create the interface between a syringe and its mating connection. For your reference, we describe the most common Hamilton/SGE terminations below.



N, Cemented Needle / F, Fixed:

Needle cemented into the glass syringe barrel at a point corresponding to the zero graduation mark. Not autoclavable.



KH, Knurled Hub / R, Removable:

Used on 7000 series Hamilton syringes, exclusively. Knurled hub enables 6,000 psig maximum injection pressures and the attachment of a spacer for repeatable-depth injections. Autoclavable when disassembled.



RN, Removable Needle / R, Removable:

Needle seats precisely to the zero graduation mark of the syringe. Allows the use of different specification needles on the same syringe barrel. Autoclavable when disassembled.



TLL, PTFE Luer Lock / LL, Luer Lock / LT, Luer Tip:

Male luer taper with nickel-plated brass hub accepts and locks into place luer hub needles and connectors. Autoclavable when disassembled.

NORM-JECT® Plastic Syringes

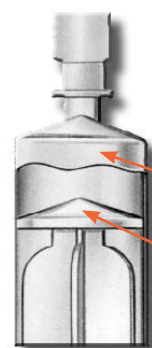
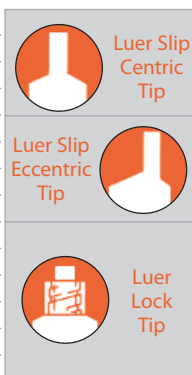
NORM-JECT® syringes are latex-free, contain no rubber, no silicone oil, styrene or DEHP, and are DNA-free. These syringes are the choice for any situation needing an inert, nonreactive syringe. Because of their composition, they are ideal for chromatography and many other laboratory procedures. They are more chemically resistant than rubber-tipped syringes and are manufactured from only laboratory grade polypropylene and polyethylene. These unique plastic syringes have a positive safety stop to prevent accidental spills. NORM-JECT® syringes are individually sterile strip packed.



Description	qty.	cat.#
1 mL Luer Slip Tuberculin ¹	100-pk.	22766
3 mL Luer Slip Centric Tip	100-pk.	22767
5 mL Luer Slip Centric Tip ²	100-pk.	22768
10 mL Luer Slip Eccentric Tip ²	100-pk.	22769
20 mL Luer Slip Eccentric Tip ²	100-pk.	22770
30 mL Luer Slip Eccentric Tip	50-pk.	22771
50 mL Luer Slip Eccentric Tip ²	30-pk.	22772
3 mL Luer Lock Tip	100-pk.	22773
5 mL Luer Lock Tip ²	100-pk.	22774
10 mL Luer Lock Tip ²	100-pk.	22775
20 mL Luer Lock Tip ²	100-pk.	22776
30 mL Luer Lock Tip	50-pk.	22777
50 mL Luer Lock Tip ²	30-pk.	22778

¹Dose saver design with low dead space plug on the piston to minimize waste.

²The 5 mL has graduations to 6 mL, 10 mL has graduations to 12 mL, 20 mL has graduations to 24 mL, and 50 mL has graduations to 60 mL.



Great for use with Restek syringe filters!
See page 386.

Barrel - Polypropylene

Plunger - Polyethylene



20167



24785

Standard Microliter Syringes for Agilent 7673, 7683, 7693A, and 6850 Autosamplers

- Hamilton and SGE syringes are designed and tested to meet critical autosampler performance needs.
- Needle point styles are designed to withstand multiple, rapid injections through a septum.

Hamilton

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	Hamilton Model	cat.#	qty.	Restek cat.#
0.5 µL	ASRN	23s	1.71"	Agilent	7000.5	86276	ea.	24895
0.5 µL	ASRN	26s	1.71"	Agilent	7000.5	86274	ea.	21221
5 µL	ASRN	23s	1.71"	Agilent	75	87957	ea.	20172
5 µL	ASN	23s	1.71"	Agilent	75	87987	ea.	20168
5 µL	ASN	23s	1.71"	Agilent	75	87990	6-pk.	20170
5 µL	ASN	26s	1.71"	Agilent	75	87988	ea.	24592
5 µL	ASN	26s	1.71"	Agilent	75	87989	6-pk.	21230
5 µL	ASRN	23s-26s	1.71"	Agilent	75	87959	ea.	21223
5 µL	ASN	23s-26s	1.71"	Agilent	75	87993	ea.	24593
5 µL	ASN	23s-26s	1.71"	Agilent	75	87994	6-pk.	24594
10 µL	ASRN	23s	1.71"	Agilent	701	80357	ea.	20171
10 µL	ASN	23s	1.71"	Agilent	701	80387	ea.	20167
10 µL	ASN	23s	1.71"	Agilent	701	80390	6-pk.	20169
10 µL	ASRN	26s	1.71"	Agilent	701	80358	ea.	24597
10 µL	ASN	26s	1.71"	Agilent	701	80388	ea.	24595
10 µL	ASN	26s	1.71"	Agilent	701	80389	6-pk.	24599
10 µL	ASRN	23s-26s	1.71"	Agilent	701	80359	ea.	24598
10 µL	ASN	23s-26s	1.71"	Agilent	701	80393	ea.	24596
10 µL	ASN	23s-26s	1.71"	Agilent	701	80391	6-pk.	24600

SGE

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	SGE Model	cat.#	qty.	Restek cat.#
0.5 µL	R	23	42 mm	Cone	0.5BR-HP-0.63	000410	ea.	24791
0.5 µL	R	26	42 mm	Cone	0.5BR-HP-0.47	000400	ea.	24790
5 µL	R	23	42 mm	Cone	5R-HP-0.63	001815	ea.	24793
5 µL	F	23	42 mm	Cone	5F-HP-0.63	001810	ea.	24781
5 µL	F	23	42 mm	Cone	SK-5F-HP-0.63	001814	6-pk.	24783
5 µL	F	26	42 mm	Cone	5F-HP-0.47	001800	ea.	24780
5 µL	F	26	42 mm	Cone	SK-5F-HP-0.47	001804	6-pk.	24782
5 µL	R	23-26s	42 mm	Cone	5R-HP-0.63/0.47	001825	ea.	21211
5 µL	F	23-26s	42 mm	Cone	5F-HP-0.63/0.47	001821	ea.	21210
5 µL	F	23-26s	42 mm	Cone	SK-5F-HP-0.63/0.47	001822	6-pk.	21214
10 µL	R	23	42 mm	Cone	10R-HP-0.63	002815	ea.	24795
10 µL	F	23	42 mm	Cone	10F-HP-0.63	002810	ea.	24785
10 µL	F	23	42 mm	Cone	SK-10F-HP-0.63	002814	6-pk.	24787
10 µL	R	26	42 mm	Cone	10R-HP-0.47	002805	ea.	24794
10 µL	F	26	42 mm	Cone	10F-HP-0.47	002800	ea.	24784
10 µL	F	26	42 mm	Cone	SK-10F-HP-0.47	002804	6-pk.	24786
10 µL	R	23-26s	42 mm	Cone	10R-HP-0.63/0.47	002825	ea.	21213
10 µL	F	23-26s	42 mm	Cone	10F-HP-0.63/0.47	002821	ea.	21212
10 µL	F	23-26s	42 mm	Cone	SK-10F-HP-0.63/0.47	002822	6-pk.	21215
Large Volume								
25 µL	R	23	42 mm	Cone	25R-HP-0.63	003665	ea.	24798
50 µL	R	23	42 mm	Cone	50R-HP-0.63	004665	ea.	24799
100 µL	R	23	42 mm	Cone	100R-HP-0.63	005665	ea.	24800
250 µL	R	23	42 mm	Cone	250R-HP-0.63	006665	ea.	24801

Gas-Tight PTFE-Tipped Syringes for Agilent 7673, 7683, 7693A, and 6850 Autosamplers

Hamilton

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	Hamilton Model	cat.#	qty.	Restek cat.#
10 µL	ASN	23s	1.71"	Agilent	1701	80080	ea.	24894
10 µL	ASRN	23s	1.71"	Agilent	1701	80087	ea.	21224
10 µL	ASRN	26s	1.71"	Agilent	1701	80088	ea.	21228
10 µL	ASRN	23s-26s	1.71"	Agilent	1701	80089	ea.	21229

SGE

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	SGE Model	cat.#	qty.	Restek cat.#
10 µL	F	23	42 mm	Cone	10F-HP-GT-0.63	002812	ea.	24789
10 µL	R	23	42 mm	Cone	10R-HP-GT-0.63	002818	ea.	24797
10 µL	R	23-26	42 mm	Cone	10R-HP-GT-0.63/0.47	002829	ea.	21220

Replacement Needles for Agilent 7673, 7683, 7693A, and 6850 Autosampler Syringes

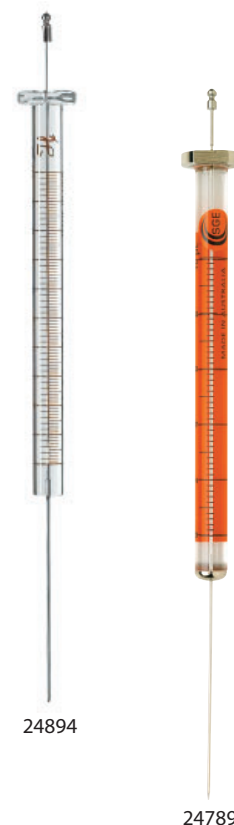
Hamilton

Syringe Volume	Needle Gauge	Needle Length	Point Style	Hamilton cat.#	qty.	Restek cat.#
5-10 µL	23s	1.71"	Agilent	7786-01	6-pk.	20164
5-10 µL	26s	1.71"	Agilent	7786-02	6-pk.	20165
5-10 µL	23s-26s	1.71"	Agilent	7785-01	6-pk.	20166

SGE

Syringe Volume	Needle Gauge	Needle Length	Point Style	SGE cat.#	qty.	Restek cat.#
0.5 µL	23	42 mm	Cone	033715	ea.	24821
0.5 µL	26	42 mm	Cone	033708	ea.	24820
5 µL	23	42 mm	Cone	036720	2-pk.	24823
10 µL	23	42 mm	Cone	037717	2-pk.	24825
10 µL	26	42 mm	Cone	037715	2-pk.	24824
25-250 µL	23	42 mm	Cone	038717	2-pk.	24826

Do not reuse PTFE washers.



Guide to Needle Termination Codes

Hamilton:

(N) Cemented Needle
(RN) Removable Needle
(ASN) Autosampler Cemented Needle
(ASRN) Autosampler Removable Needle
(TLL) PTFE Luer Lock
(KH) Knurled Hub
(LT) Luer Tip
(LTN) Luer Tip Cemented Needle

SGE:

(F) Fixed Needle
(R) Removable Needle
(LL) Luer Lock
(LT) Luer Tip



Replacement Plunger Assembly, PTFE-Tipped

for Agilent 7673, 7683, 7693A, and 6850 Autosampler Syringes

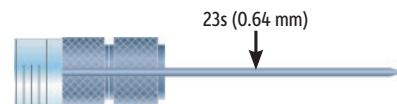
SGE

Syringe Volume	Needle Term.	SGE cat.#	qty.	Restek cat.#
10 µL	F	031808	2-pk.	21218
10 µL	R	031809	2-pk.	21284

Needle Gauge for Agilent 7673, 7683, 7693A, and 6850 Syringes

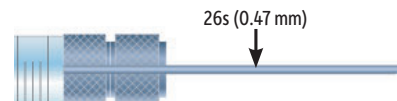
Single Gauge Needle (23s)

- The most popular gauge for Agilent 7673.
- Best for Merlin Microseal septum and standard septum-equipped GCs.
- Packed column injection ports.
- Split/splitless injection ports.



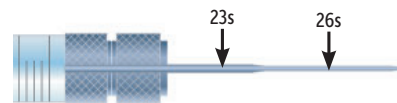
Single Gauge Needle (26s)

- On-column injection ports.
- Split/splitless injection ports.



23s-26s—Dual Gauge (tapered)

- Durability of a 23s gauge needle.
- Ability of a 26s gauge needle to perform split/splitless and on-column injections.



Cross-Reference for Agilent Syringes

Similar to Agilent Part #	Restek Part #	Description	Page
5181-1267	21212, 24596	10 µL Standard Syringe, Fixed Needle, 23-26 Gauge	350
5181-1273	21210, 24593	5 µL Standard Syringe, Fixed Needle, 23-26 Gauge	350
5181-3319	20166	Needle for 10 µL Standard Syringe, 23-26 Gauge	351
5181-3321	21213, 24598	10 µL Standard Syringe, Removable Needle, 23-26 Gauge	350
5181-3356	21218	Replacement PTFE-Tipped Plunger for 10 µL Fixed Needle Syringe	352
5181-3358	24919	PTFE-Tipped Plunger for 10 µL Standard Syringe, Removable Needle	365
5181-3360	21215, 24600	10 µL Standard Syringe, Fixed Needle, 23-26 Gauge (6-pk.)	350
5181-3365	21218	PTFE-Tipped Plunger for 10 µL Standard Syringe, Fixed Needle	352
5181-8809	24894, 24789	10 µL Gas-tight Syringe, Fixed Needle, 23 Gauge	351
5181-8811	20164, 24825	Needle for 10 µL Gas-tight Syringe, 23 Gauge	351
5181-8813	21224, 24797	10 µL Gas-tight Syringe, Removable Needle, 23 Gauge	351
5182-0830	24821	Needle for 0.5 µL Standard Syringe, 23 Gauge	351
5182-0832	20166	Needle for 5-10 µL Autosampler Syringe, 23-26 Gauge	351
5182-0834	20172, 24793	5 µL Standard Syringe, Removable Needle, 23 Gauge	350
5182-0835	21223, 21211	5 µL Standard Syringe, Removable Needle, 23-26 Gauge	350
5182-0875	20170, 24783	5 µL Standard Syringe, Fixed Needle, 23 Gauge (6-pk.)	350
9301-0713	20167, 24785	10 µL Standard Syringe, Fixed Needle, 23 Gauge	350
9301-0714	24595, 24784	10 µL Standard Syringe, Fixed Needle, 26 Gauge	350
9301-0725	20169, 24787	10 µL Standard Syringe, Fixed Needle, 23 Gauge (6-pk.)	350
9301-0891	24592, 24780	5 µL Standard Syringe, Fixed Needle, 26 Gauge	350
9301-0892	20168, 24781	5 µL Standard Syringe, Fixed Needle, 23 Gauge	350

Merlin MicroShot™ Injector

- NIST traceability assures accurate injections.
- Fixed volume reduces sampling error.
- Saves time—no need to transfer to autosampler vials.
- Prevents bent syringe plungers.
- Five injection volumes available.*

Increase the accuracy and reproducibility of manual injections with the Merlin MicroShot™ injector. This new injector is calibrated to NIST reference standards to assure accurate and traceable displacement. Precise repeated injections of the preset volume can be made using a standard autosampler syringe with less variation than when injecting by hand. The trigger mechanism provides rapid sample delivery, which reduces needle residence time in the injection port and minimizes potential sample discrimination.

The Merlin MicroShot™ injector allows convenient sampling from a wide variety of containers, so you can save time by eliminating the need to transfer aliquots into autosampler vials. The design of this unit also includes a plunger support, which protects the syringe plunger and prevents it from bending.

Fits Agilent-style (ball-end plunger) autosampler syringes with either fixed or removable, 23- or 26-gauge needles.

Description	Merlin cat.#	qty.	Restek cat.#
0.1 µL injection volume	701-01	ea.	22226
0.2 µL injection volume	701-02	ea.	22227
0.5 µL injection volume	701-05	ea.	22228
1.0 µL injection volume	701-10	ea.	22229
2.0 µL injection volume	701-20	ea.	22230

*Syringe not included. Requires Agilent-style (ball-end plunger) autosampler syringe.



22226



Sky®
Inlet Liners

True Blue Performance

Exceptionally inert, Sky® inlet liners with **state-of-the-art deactivation** improve trace level analysis.

See **page 179–184.**

www.restek.com/sky





Autosampler Syringes for Bruker/Varian 8000 Series GCs

- Hamilton and SGE syringes are designed and tested to meet critical autosampler performance needs.
- Needle point styles are designed to withstand multiple, rapid injections through a septum.

Hamilton

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	Hamilton Model	cat.#	qty.	Restek cat.#
Bruker/Varian 8100/8200 Syringes								
10 µL	RN	26s	1.99"	5	701 Varian	202880	ea.	24956

SGE

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	SGE Model	cat.#	qty.	Restek cat.#
Bruker/Varian 8035, 8100, & 8200 Syringes								
10 µL*	F	25	53 mm	S/Hole	10F-VA8X-11	002923	ea.	24851
10 µL*	R	25	53 mm	S/Hole	10R-VA8X-II	002924	ea.	24852
100 µL	R	25	53 mm	S/Hole	100R-VA8X	005921	ea.	24853

Bruker/Varian CP 8400, CP8410 Syringes

10 µL	F	26	50 mm	Cone	10F-C/F-5/0.47C	002980	ea.	24922
10 µL	F	26	50 mm	Bevel	10F-VA8400-5/0.47	002950	ea.	21202

*Gas-tights yringe.



Replacement Needles

for Bruker/Varian 8000 Series Autosampler Syringes

SGE

Syringe Volume	Needle Gauge	Needle Length	Point Style	SGE cat.#	qty.	Restek cat.#
10 µL	23	53 mm	S/Hole	037779	2-pk.	24857
10 µL*	25	53 mm	S/Hole	037780	ea.	24858
10 µL**	25	53 mm	S/Hole	037777	ea.	24854
10 µL	25	53 mm	2	037776	2-pk.	24855

*Straight needle shaft, 0.20 mm ID needle, for use with viscous samples.

**Tapered needle shaft, 0.12 mm ID needle.

High Dynamic (HD) Headspace Syringes for CTC CombiPAL Autosamplers

- High Dynamic (HD) plunger optimized for higher throughput in the headspace technique.
- Excellent performance over a large range of temperatures and temperature gradients.
- Increased lifetime, as compared to traditional headspace syringes.
- Increased accuracy and reproducibility of headspace GC analysis.

Hamilton

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	Hamilton		qty.	Restek cat.#
					Model	cat.#		
1.0 mL	N	23	2"/51 mm	5	1001	203082	ea.	26552
2.5 mL	N	23	2"/51 mm	5	1002	203084	ea.	26553
5.0 mL	N	23	2"/51 mm	5	1005	203086	ea.	26554
1.0 mL	N	26	2"/51 mm	5	1001	203141	ea.	26555
2.5 mL	N	26	2"/51 mm	5	1002	203181	ea.	26556
5.0 mL	N	26	2"/51 mm	5	1005	203182	ea.	26557

Replacement Plungers

for HD-Type CTC CombiPAL AS Syringes

Hamilton

Volume	Hamilton		qty.	Restek cat.#
	Model	cat.#		
1.0 mL	1001	207114	ea.	26558
2.5 mL	1002	207115	ea.	26559
5.0 mL	1005	207116	ea.	26560



26554



26560

Guide to Needle Termination Codes

Hamilton:

(N) Cemented Needle
(RN) Removable Needle
(ASN) Autosampler Cemented Needle
(ASRN) Autosampler Removable Needle
(TLL) PTFE Luer Lock
(KH) Knurled Hub
(LT) Luer Tip
(LTN) Luer Tip Cemented Needle

SGE:

(F) Fixed Needle
(R) Removable Needle
(LL) Luer Lock
(LT) Luer Tip



22757



24922

Autosampler Syringes for CTC GCs

- Hamilton and SGE syringes are designed and tested to meet critical autosampler performance needs.
- Needle point styles are designed to withstand multiple, rapid injections through a septum.

Hamilton

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	Hamilton Model	cat.#	qty.	Restek cat.#
1.2 µL	N	26	2"/51 mm	AS	7701.2N	203185	ea.	22755
5 µL	N	26s	2"/51 mm	AS	75N	203189	ea.	22756
10 µL	N	23s	2"/51 mm	AS	701N	203361	ea.	22757
10 µL	N	23s-26s	2"/51 mm	AS	701N	203362	ea.	22758
10 µL	N	23s	2"/51 mm	2	701N	203363	ea.	22759
10 µL	N	26s	2"/51 mm	2	701N Slim Line	203072	ea.	22760
10 µL	N	26s	2"/51 mm	AS	701N	203205	ea.	22761
10 µL	N	26s	2"/51 mm	2	701N	203269	6-pk.	22762
25 µL*	N	26s	2"/51 mm	AS	1702N	203043	ea.	22763
25 µL*	N	26s	2"/51 mm	AS	1702N Slim Line**	203074	ea.	22764
100 µL*	N	26s	2"/51 mm	AS	1710N Slim Line**	203076	ea.	22765

Due to collar design, Hamilton syringes may not work with older generation LEAP autosamplers.

*Gas-tight syringe.

**Barrel OD = 6.7 mm; all other 25 µL and 100 µL syringes have a 7.9 mm barrel OD.

SGE

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	SGE Model	cat.#	qty.	Restek cat.#
0.5 µL	R	23	50 mm	Cone	0.5BNR-C/F-0.63	000492	ea.	24928
0.5 µL	R	26	50 mm	Cone	0.5BNR-C/F-0.47	000490	ea.	24926
5 µL	F	23	50 mm	Cone	5F-C/F-5/0.63	001981	ea.	24921
5 µL	F	26	50 mm	Cone	5F-C/F-5/0.47	001982	ea.	24920
10 µL	F	23	50 mm	Cone	10F-VA8400-5/0.63C	002951	ea.	24923
10 µL	R	23	50 mm	Cone	10R-C/F-0.63	002984	ea.	24932
10 µL	F	26	50 mm	Cone	10F-BT-5/0.47C	0029801	ea.	24922
10 µL	F	26	50 mm	Cone	5K-10F-BT-5/0.47C	0029861	6-pk.	24925
10 µL	R	26	50 mm	Cone	10R-VA8400-5/0-0.47C	002952	ea.	24930
10 µL*	F	23	50 mm	Cone	10F-C/T-GT-5/0.63C	0029871	ea.	22749
25 µL	F	26	50 mm	Cone	25F-C/T-5/0.47C	003980	ea.	22750
25 µL*	F	23	50 mm	Cone	25F-C/T-GT-5/0.63C	0039871	ea.	22751
100 µL*	F	23	50 mm	Cone	100F-C/T-GT-5/0.63C	005335	ea.	22753
100 µL*	R	26	50 mm	Cone	100R-C/T-GT-5/0.47C	005333	ea.	22754

*Gas-tight syringe.



24933

Replacement Needles

for CTC Autosampler Syringes

SGE

Syringe Volume	Needle Gauge	Needle Length	Point Style	SGE cat.#	qty.	Restek cat.#
0.5 µL	23	50 mm	Cone	033772	ea.	24929
10 µL	23	50 mm	Cone	037787	2-pk.	24933

Autosampler Syringes for PerkinElmer Autosystem and Clarus 500 GCs

- Hamilton and SGE syringes are designed and tested to meet critical autosampler performance needs.
- Needle point styles are designed to withstand multiple, rapid injections through a septum.

Hamilton

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	Hamilton Model	cat.#	qty.	Restek cat.#
5 µL	ASN	23	2.756"	3	75ASN/PE	88035	ea.	24953
5 µL	ASN	26	2.756"	3	75ASN/PE	88040	ea.	24952

SGE

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	SGE Model	cat.#	qty.	Restek cat.#
0.5 µL	R	23	70 mm	Cone	0.5BR-PE-0.63	000478	ea.	24811
0.5 µL	R	26	70 mm	Cone	0.5BR-PE-0.47	000475	ea.	24810
5 µL	F	23	70 mm	Cone	5F-PE-0.63	001954	ea.	24813
5 µL*	F	23	70 mm	Cone	5F-PE-GT-0.63	001957	ea.	24815
5 µL	F	26	70 mm	Cone	5F-PE-0.47	001953	ea.	24812
5 µL*	F	26	70 mm	Cone	5F-PE-GT-0.47	001955	ea.	24814
50 µL	F	23	70 mm	Cone	50F-PE-0.63	004670	ea.	24816

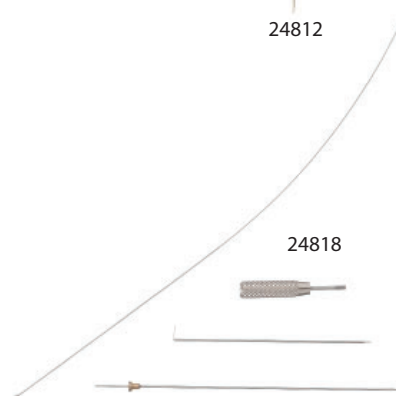
*Gas-tight.

Replacement Needle and Plunger Kit

for PerkinElmer Autosampler Syringes

SGE

Syringe Volume	Needle Gauge	Needle Length	Point Style	SGE cat.#	qty.	Restek cat.#
0.5 µL	23	70 mm	Cone	033765	kit	24818
0.5 µL	26	70 mm	Cone	033750	kit	24817



Guide to Needle Termination Codes

Hamilton:

(N) Cemented Needle
(RN) Removable Needle
(ASN) Autosampler Cemented Needle
(ASRN) Autosampler Removable Needle
(TLL) PTFE Luer Lock
(KH) Knurled Hub
(LT) Luer Tip
(LTN) Luer Tip Cemented Needle

SGE:

(F) Fixed Needle
(R) Removable Needle
(LL) Luer Lock
(LT) Luer Tip



24530



24843

Autosampler Syringes for Shimadzu GCs

- Hamilton and SGE syringes are designed and tested to meet critical autosampler performance needs.
- Needle point styles are designed to withstand multiple, rapid injections through a septum.

Hamilton

for Shimadzu AOC 9 GCs

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	Hamilton Model	cat.#	qty.	Restek cat.#
5 µL	RN	26s	2"/51 mm	2	75RN	87930	ea.	24617
5 µL	N	26s	2"/51 mm	2	75N	87900	ea.	24938
10 µL	RN	26s	2"/51 mm	2	701RN	80330	ea.	24530

SGE

for Shimadzu AOC 14, 17, 20, and 20i GCs

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	SGE Model	cat.#	qty.	Restek cat.#
0.5 µL	R	23	42 mm	Cone	0.5BR-S-0.63	000445	ea.	24841
0.5 µL	R	26	42 mm	Cone	0.5BR-S-0.47	000440	ea.	24840
5 µL	F	23	42 mm	Cone	5F-S-0.63	001988	ea.	24843
5 µL	F	26	42 mm	Cone	5F-S-0.47	001987	ea.	24842
10 µL	R	23	42 mm	Cone	10R-S-0.63	002898	ea.	24845
10 µL*	R	23	42 mm	Cone	10R-S-GT-0.63	002902	ea.	24846
10 µL	R	26	42 mm	Cone	10R-S-0.47	002897	ea.	24844

*Gas-tights yringe.



24749

Replacement Needles

for Shimadzu Autosampler Syringes

SGE

Syringe Volume	Needle Gauge	Needle Length	Point Style	SGE cat.#	qty.	Restek cat.#
0.5 µL	23	42 mm	Cone	033745	ea.	24747
0.5 µL	26	42 mm	Cone	033738	ea.	24746
10 µL	23	42 mm	Cone	037747	2-pk.	24749
10 µL	26	42 mm	Cone	037745	2-pk.	24748

Guide to Needle Termination Codes

Hamilton:

(N) Cemented Needle
(RN) Removable Needle
(ASN) Autosampler Cemented Needle
(ASRN) Autosampler Removable Needle
(TLL) PTFE Luer Lock
(KH) Knurled Hub
(LT) Luer Tip
(LTN) Luer Tip Cemented Needle

SGE:

(F) Fixed Needle
(R) Removable Needle
(LL) Luer Lock
(LT) Luer Tip

Autosampler Syringes for Thermo Scientific GCs

- Hamilton and SGE syringes are designed and tested to meet critical autosampler performance needs.
- Needle point styles are designed to withstand multiple, rapid injections through a septum.

Hamilton

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	Hamilton Model	cat.#	qty.	Restek cat.#
10 µL	N	25s	2"	2	701SN	80320	ea.	24961
10 µL	N	26s	3.15"	AS	701SN	80318	ea.	24962

SGE

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	SGE Model	cat.#	qty.	Restek cat.#
0.5 µL	R	23	50 mm	Cone	0.5BNR-C/F-0.63	000492	ea.	24928
0.5 µL	R	26	50 mm	Cone	0.5BNR-C/F-0.47	000490	ea.	24926
10 µL	F	23	50 mm	Cone	10F-VA8400-5/0.63C	002951	ea.	24923
10 µL	R	23	50 mm	Cone	10R-C/F-0.63	002984	ea.	24932
10 µL	F	26	50 mm	Cone	10F-BT-5/0.47C	0029801	ea.	24922
10 µL	F	26	50 mm	Cone	5K-10F-BT-5/0.47C	0029861	6-pk.	24925
10 µL	R	26	50 mm	Cone	10R-VA8400-5/0-0.47C	002952	ea.	24930
10 µL	F	26	80 mm	Cone	10F-C/F-8/0.47C	002992	ea.	24924
10 µL	R	26	80 mm	Cone	10R-C/F-8/0-0.47C	002993	ea.	24934



24962



24924

Replacement Needles

for Thermo Scientific Autosampler Syringes

SGE

Syringe Volume	Needle Gauge	Needle Length	Point Style	SGE cat.#	qty.	Restek cat.#
0.5 µL	26	50 mm	Cone	033770	ea.	24927
0.5 µL	23	50 mm	Cone	033772	ea.	24929
10 µL	26	80 mm	Cone	031535	3-pk.	24935
10 µL	23	50 mm	Cone	037787	2-pk.	24933

instrument reference

Autosampler Syringes for Thermo Scientific GCs

Autosampler syringes for TriPlus, AS3000, AS2000, AS200/800 GCs. The following autosamplers are compatible with the respective SGE and Hamilton syringes. For further information or questions, contact your Restek sales representative or technical service.

SGE Syringes

TriPlus	AS3000	AS2000	AS200/800	Restek cat.#	Page
•	•			24928	356, 359
•	•			24926	356, 359
•	•	•	•	24923	356, 359
•	•	•	•	24932	356, 359
•	•	•		24924	359
•	•	•	•	24934	359
•	•	•	•	24922	356, 359
•	•	•		24930	356, 359

Replacement Needles for SGE Syringes for Thermo Scientific GCs

TriPlus	AS3000	AS2000	AS200/800	Restek cat.#	Page
•	•			24929	356, 359
•	•			24927	359
•	•	•	•	24933	356, 359
•	•	•	•	24935	359

Hamilton Syringes

TriPlus	AS3000	AS2000	AS200/800	Restek cat.#	Page
			•	24962	359



23909



23928

NEW!

Syringes for Thermo Scientific RSH Autosampler

SGE

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	SGE Model	cat.#	qty.	Restek cat.#
5 µL	F	23	57 mm	Cone	5F-RSH-5.7/0.63C	001861	ea.	23908
5 µL	F	23	85 mm	Cone	5F-RSH-8.5/0.63C	001863	ea.	23909
5 µL	F	26	57 mm	Cone	5F-RSH-5.7/0.47C	001865	ea.	23910
5 µL	F	26	85 mm	Cone	5F-RSH-8.5/0.47C	001867	ea.	23911
5 µL	R	23	57 mm	Cone	5R-RSH-5.7/0.63C	001871	ea.	23912
5 µL	R	23	85 mm	Cone	5R-RSH-8.5/0.63C	001873	ea.	23913
5 µL	R	26	57 mm	Cone	5R-RSH-5.7/0.47C	001875	ea.	23914
5 µL	R	26	85 mm	Cone	5R-RSH-8.5/0.47C	001877	ea.	23915
10 µL	F	23	57 mm	Cone	10F-RSH-5.7/0.63C	002861	ea.	23916
10 µL *	F	23	57 mm	Cone	10F-RSH-GT-5.7/0.63C	002862	ea.	23917
10 µL	F	23	85 mm	Cone	10F-RSH-8.5/0.63C	002863	ea.	23918
10 µL *	F	23	85 mm	Cone	10F-RSH-GT-8.5/0.63C	002864	ea.	23919
10 µL	F	26	57 mm	Cone	10F-RSH-5.7/0.47C	002865	ea.	23920
10 µL *	F	26	57 mm	Cone	10F-RSH-GT-5.7/0.47C	002866	ea.	23921
10 µL	F	26	85 mm	Cone	10F-RSH-8.5/0.47C	002867	ea.	23922
10 µL *	F	26	85 mm	Cone	10F-RSH-GT-8.5/0.47C	002868	ea.	23923
10 µL	R	23	57 mm	Cone	10R-RSH-5.7/0.63C	002871	ea.	23924
10 µL *	R	23	57 mm	Cone	10R-RSH-GT-5.7/0.63C	002872	ea.	23925
10 µL	R	23	85 mm	Cone	10R-RSH-8.5/0.63C	002873	ea.	23926
10 µL *	R	23	85 mm	Cone	10R-RSH-GT-8.5/0.63C	002874	ea.	23927
10 µL	R	26	57 mm	Cone	10R-RSH-5.7/0.47C	002875	ea.	23928
10 µL *	R	26	57 mm	Cone	10R-RSH-GT-5.7/0.47C	002876	ea.	23929
10 µL	R	26	85 mm	Cone	10R-RSH-8.5/0.47C	002877	ea.	23930
10 µL *	R	26	85 mm	Cone	10R-RSH-GT-8.5/0.47C	002878	ea.	23931
25 µL *	F	26	57 mm	Cone	25F-RSH-GT-5.7/0.47C 2	003866	ea.	23932
50 µL *	F	26	57 mm	Cone	50F-RSH-GT-5.7/0.47C	004866	ea.	23933
100 µL *	F	26	57 mm	Cone	100F-RSH-GT-5.7/0.47(0.11)C	005866	ea.	23934
250 µL *	F	26	57 mm	Cone	250F-RSH-GT-5.7/0.47C	006866	ea.	23935

*Gas-tight syringe.

Replacement Needles for Thermo Scientific RSH Autosampler Syringes

SGE

Syringe Volume	Needle Gauge	Needle Length	Point Style	SGE Model	cat.#	qty.	Restek cat.#
5 µL	23	57 mm	Cone	N5-RSH-5.7/0.63C 2-pk	036871	2-pk	23942
5 µL	23	85 mm	Cone	N5-RSH-8.5/0.63C 2-pk	036873	2-pk	23943
5 µL	26	57 mm	Cone	N5-RSH-5.7/0.47C 2-pk	036875	2-pk	23944
5 µL	26	85 mm	Cone	N5-RSH-8.5/0.47C 2-pk	036877	2-pk	23945
10 µL	23	57 mm	Cone	N10-RSH-5.7/0.63C 2-pk	037871	2-pk	23946
10 µL	23	85 mm	Cone	N10-RSH-8.5/0.63C 2-pk	037873	2-pk	23947
10 µL	26	57 mm	Cone	N10-RSH-5.7/0.47C 2-pk	037875	2-pk	23948
10 µL	26	85 mm	Cone	N10-RSH-8.5/0.47C 2-pk	037877	2-pk	23949

NEW!

23945

Replacement Plungers for Thermo Scientific RSH Autosampler Syringes

SGE

Syringe Volume	Needle Term.	SGE Model	cat.#	qty.	Restek cat.#
10 µL	F	P10F-RSH-GT	032810	ea.	23936
10 µL	R	P10R-RSH-GT	032811	ea.	23937
25 µL	F	P25F-RSH-GT	032815	ea.	23938
50 µL	F	P50F-RSH-GT	032821	ea.	23939
100 µL	F	P100F-RSH-GT	032825	ea.	23940
250 µL	F	P250F-RSH-GT	032831	ea.	23941

Note: Compatible with Thermo Scientific gas-tight syringes only.

NEW!

Manual Microliter Syringes

- Economical.
- Available with cemented needles (N/F) or removable needles (RN/R).
- Each syringe plunger and barrel assembly is manufactured as one working unit; components are not interchangeable or individually replaceable.

Hamilton 700 Series

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	Hamilton Model	cat.#	qty.	Restek cat.#
5 µL	N	26s	2"/51 mm	2	75N	87900	ea.	24938
5 µL	RN	26s	2"/51 mm	2	75RN	87930	ea.	24617
10 µL	N	26s	2"/51 mm	2	701N	80300	ea.	20174
10 µL	N	26s	2"/51 mm	2	701N	80366	6-pk.	20175
10 µL	RN	26s	2"/51 mm	2	701RN	80330	ea.	24530
25 µL	N	22s	2"/51 mm	2	702N	80400	ea.	24531
10 µL	N	26s	2"/51 mm	5	701NPT5	80339	ea.	24967
25 µL*	RN	22s	2"/51 mm	2	702RN	80430	ea.	24532
50 µL	N	22s	2"/51 mm	2	705N	80500	ea.	24533
50 µL*	RN	22s	2"/51 mm	2	705RN	80530	ea.	24534
100 µL	N	22s	2"/51 mm	2	710N	80600	ea.	24535
100 µL*	RN	22s	2"/51 mm	2	710RN	80630	ea.	24536
250 µL	N	22s	2"/51 mm	2	725N	80700	ea.	24537
250 µL*	RN	22s	2"/51 mm	2	725RN	80730	ea.	24538
500 µL	N	22	2"/51 mm	2	750N	80800	ea.	24539
500 µL*	RN	22	2"/51 mm	2	750RN	80830	ea.	24540

*Replacement RN/R needles available. See page 365.

SGE

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	SGE Model	cat.#	qty.	Restek cat.#
5 µL	F	26	50 mm	2	5F**	001000	ea.	24700
5 µL*	R	26	50 mm	2	5R**	001050	ea.	24701
10 µL	F	26	50 mm	2	10F**	002000	ea.	24702
10 µL	F	26	50 mm	2	SK-10F**	002030	6-pk.	24715
10 µL*	R	26	50 mm	2	10R**	002050	ea.	24703
10 µL*	R	26	50 mm	2	SK-10R**	002080	6-pk.	24716
25 µL	F	25	50 mm	2	25F	003000	ea.	24704
25 µL*	R	25	50 mm	2	25R	003050	ea.	24705
50 µL	F	25	50 mm	2	50F	004000	ea.	24706
50 µL*	R	25	50 mm	2	50R	004050	ea.	24707
100 µL	F	25	50 mm	2	100F	005000	ea.	24708
100 µL*	R	25	50 mm	2	100R	005050	ea.	24709
250 µL	F	25	50 mm	2	250F	006000	ea.	24710
250 µL*	R	25	50 mm	2	250R	006050	ea.	24711
500 µL	F	25	50 mm	2	500F	007000	ea.	24712
500 µL*	R	25	50 mm	2	500R	007050	ea.	24713

*Replacement RN/R needles available. See page 365.

**With plunger protection.



24532



24703

Guide to Needle Termination Codes

Hamilton:

(N) Cemented Needle
(RN) Removable Needle
(ASN) Autosampler Cemented Needle
(ASRN) Autosampler Removable Needle
(TLL) PTFE Luer Lock
(KH) Knurled Hub
(LT) Luer Tip
(LTN) Luer Tip Cemented Needle

SGE:

(F) Fixed Needle
(R) Removable Needle
(LL) Luer Lock
(LT) Luer Tip



24723



24542



24769

Superflex Flexible Plunger Microliter Syringes

- The Superflex syringe features a super-elastic plunger that returns to its original shape if twisted or bent.

SGE

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	SGE Model	SGE cat.#	qty.	Restek cat.#
5 µL	F	26	50 mm	2	5FX	001100	ea.	24720
5 µL	R	26	50 mm	2	5RX	001150	ea.	24721
10 µL	F	26	50 mm	2	10FX	002100	ea.	24722
10 µL	F	26	50 mm	2	SK-10FX	002130	6-pk.	24718
10 µL	R	26	50 mm	2	10RX	002150	ea.	24723
10 µL*	R	26	50 mm	2	SK-10RX	002180	6-pk.	24719

Reinforced Plunger Microliter Syringes

- Reinforcing extends the life of fragile, small diameter plungers.
- Economical because of longer life—even in rugged applications.
- Hand-lapped plunger ensures a perfect seal with the barrel.

Hamilton

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	Hamilton Model	Hamilton cat.#	qty.	Restek cat.#
5 µL	N	26s	2"/51 mm	2	95	87920	ea.	24541
5 µL*	RN	26s	2"/51 mm	2	95	87925	ea.	24542
10 µL	N	26s	2"/51 mm	2	901	80360	ea.	24543
10 µL*	RN	26s	2"/51 mm	2	901	80370	ea.	24544

*Replacement RN/R needles available. See page 365.

SGE

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	SGE Model	SGE cat.#	qty.	Restek cat.#
5 µL	F	26	50 mm	2	5F-GP	001400	ea.	24769
5 µL*	R	26	50 mm	2	5R-GP	001450	ea.	24766
10 µL	F	26	50 mm	2	10F-GP	002400	ea.	24767
10 µL*	R	26	50 mm	2	10R-GP	002450	ea.	24768

*Replacement RN/R needles available. See page 365.

Micro-Volume, Positive Displacement Syringes

- Sample is contained in the needle with full plunger displacement, ensuring no dead volume.
- High precision and accuracy down to 0.1 µL.
- Seal between the plunger and the needle can be tightened for high-pressure injection.
- Replaceable needle/plunger kits and barrels (available on request).

Hamilton

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	Hamilton Model	cat.#	qty.	Restek cat.#
0.5 µL	KH	25	2.75"/70 mm	2	7000.5	86259	ea.	24545
0.5 µL	KH	25	2.75"/70 mm	3	7000.5	86250	ea.	24546
1.0 µL	KH	22s	2.75"/70 mm	2	7101	86211	ea.	24549
1.0 µL	KH	25s	2.75"/70 mm	2	7001	80135	ea.	24547
1.0 µL	KH	25s	2.75"/70 mm	3	7001	80100	ea.	24548
2.0 µL	KH	25	2.75"/70 mm	2	7002	88411	ea.	24551
5.0 µL	KH	24	2.75"/70 mm	2	7105	88011	ea.	24555
5.0 µL	KH	24	2.75"/70 mm	3	7105	88000	ea.	24556

SGE

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	SGE Model	cat.#	qty.	Restek cat.#
0.5 µL	R	23	70 mm	2	0.5BR-7BV	000311	ea.	24771
0.5 µL	R	23	70 mm	Cone	0.5BR-7	000310	ea.	24772
0.5 µL	R	26	70 mm	Cone	0.5BR-OC-7/0.47*	000376	ea.	24770
1.0 µL	R	23	70 mm	2	1BR-7BV	000506	ea.	24775
1.0 µL	R	23	70 mm	Cone	1BR-7	000505	ea.	24774
1.0 µL	R	23	50 mm	Cone	1BR-5	000500	ea.	24773
1.0 µL	R	26	70 mm	Cone	1BR-7/0.47*	000570	ea.	24776
5.0 µL	R	23	70 mm	2	5BR-7BV	000803	ea.	24779
5.0 µL	R	23	70 mm	Cone	5BR-7	000802	ea.	24778
5.0 µL	R	23	50 mm	Cone	5BR-5	000800	ea.	24777

*70 mm needle length, 0.47 mm OD, on-column syringe.

Replacement Plunger-in-Needle Kits

- Kits are supplied with both a plunger and a needle.
- Plunger and needle must be replaced together.

SGE

Volume	Needle Gauge	Needle Length	Point Style	SGE Model	cat.#	For Syringe cat.#	qty.	Restek cat.#
0.5 µL	23	70 mm	2	NP0.5B-7BV	033060	24771	kit	24831
0.5 µL	23	70 mm	Cone	NP0.5B-7C	033057	24772	kit	24830
0.5 µL	26	70 mm	Cone	NP0.5B-OC-7	033630	24770	kit	24832
1.0 µL	23	70 mm	2	NP1B-7BV	034060	24775	kit	24835
1.0 µL	23	70 mm	Cone	NP1B-7C	034057	24774	kit	24834
1.0 µL	23	50 mm	Cone	NP1B-5C	034055	24773	kit	24833
1.0 µL	26	70 mm	Cone	NP1B-OC-7/0.47	034610	24776	kit	24836
5.0 µL	23	70 mm	2	NP5B-7BV	035058	24779	kit	24839
5.0 µL	23	70 mm	Cone	NP5B-7C	035057	24778	kit	24838
5.0 µL	23	50 mm	Cone	NP5B-5C	035055	24777	kit	24837



Guide to Needle Termination Codes

Hamilton:

(N) Cemented Needle
(RN) Removable Needle
(ASN) Autosampler Cemented Needle
(ASRN) Autosampler Removable Needle
(TLL) PTFE Luer Lock
(KH) Knurled Hub
(LT) Luer Tip
(LTN) Luer Tip Cemented Needle

SGE:

(F) Fixed Needle
(R) Removable Needle
(LL) Luer Lock
(LT) Luer Tip



24558



24727

PTFE Tip, Gas-Tight Syringes

- Suitable for gases or liquids.
- High accuracy of dispensed volumes.
- Interchangeable barrels, plungers, and tips extend performance and increase cost-effectiveness.

Hamilton

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	Hamilton Model	cat.#	qty.	Restek cat.#
10 µL	N	26s	2"/51 mm	2	1701	80000	ea.	24557
10 µL	RN	26s	2"/51 mm	2	1701	80030	ea.	24558
25 µL	N	22s	2"/51 mm	2	1702	80200	ea.	24559
25 µL	RN	22s	2"/51 mm	2	1702	80230	ea.	24560
50 µL	N	22s	2"/51 mm	2	1705	80900	ea.	24561
50 µL	RN	22s	2"/51 mm	2	1705	80930	ea.	24562
100 µL	N	22s	2"/51 mm	2	1710	81000	ea.	24563
100 µL	RN	22s	2"/51 mm	2	1710	81030	ea.	24564
250 µL	N	22s	2"/51 mm	2	1725	81100	ea.	24567
250 µL	RN	22s	2"/51 mm	2	1725	81130	ea.	24568
500 µL	LTN	22	2"/51 mm	2	1750	81217	ea.	24571
500 µL	RN	22	2"/51 mm	2	1750	81230	ea.	24572
1 mL	LTN	22	2"/51 mm	2	1001	81317	ea.	24575
1 mL	RN	22	2"/51 mm	2	1001	81330	ea.	24576
1 mL	TLL	*		w/out slots	1001	81320	ea.	24578
2.5 mL	TLL	*		w/out slots	1002	81420	ea.	24584
2.5 mL	RN	22	2"/51 mm	2	1002	81430	ea.	24582
2.5 mL	N	22	2"/51 mm	2	1002	81417	ea.	24581
5 mL	TLL	*		w/out slots	1005	81520	ea.	20178
10 mL	TLL	*		w/out slots	1010	81620	ea.	20179
25 mL	TLL	*		w/out slots	1025	82520	ea.	24591
50 mL	TLL	*		w/out slots	1050	85020	ea.	24717
100 mL	TLL	*		w/out slots	1100	86020	ea.	24724

*Needles sold separately. See page 365.

SGE

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	SGE Model	cat.#	qty.	Restek cat.#
10 µL	F	26	50 mm	2	10F-GT	002200	ea.	24725
10 µL	R	26	50 mm	2	10R-GT	002250	ea.	24726
25 µL	F	25	50 mm	2	25F-GT	003200	ea.	24727
25 µL	R	25	50 mm	2	25R-GT	003250	ea.	24728
50 µL	F	25	50 mm	2	50F-GT	004200	ea.	24729
50 µL	R	25	50 mm	2	50R-GT	004250	ea.	24730
100 µL	F	25	50 mm	2	100F-GT	005200	ea.	24734
100 µL	R	25	50 mm	2	100R-GT	005250	ea.	24735
100 µL	LL	*			100F-LL-GT	005230	ea.	24737
250 µL	F	25	50 mm	2	250F-GT	006200	ea.	24738
250 µL	R	25	50 mm	2	250R-GT	006250	ea.	24739
250 µL	LL	*			250F-LL-GT	006230	ea.	24741
500 µL	F	25	50 mm	2	500F-GT	007200	ea.	24742
500 µL	R	25	50 mm	2	500R-GT	007250	ea.	24743
1 mL	R	23	50 mm	2	1MR-GT	008100	ea.	24750
1 mL	LL	*			1MDF-LL-GT	008025	ea.	24752
2.5 mL	LL	*			2.5MDF-LL-GT	008425	ea.	24755
5 mL	LL	*			5MDR-LL-GT	008760	ea.	24757
10 mL	LL	*			10MDR-LL-GT	008960	ea.	24759
25 mL	LL	*			25MDR-LL-GT	009462	ea.	24760
50 mL	LL	*			50MR-LL-GT	009660	ea.	24761
100 mL	LL	*			100MR-LL-GT	009760	ea.	24762

*Needles sold separately. See page 365.



24761

PTFE Tip, Gas-Tight Syringe Replacement Needles for Removable Needle Syringes

Materials: stainless steel needle, nickel-plated brass hub.

Hamilton

Syringe Volume	Needle Gauge	Needle Length	Point Style	Hamilton cat.#	qty.	Restek cat.#
5–100 µL	26s	2"	2	7758-02	6-pk.	24939
5–100 µL	22s	2"	2	7758-03	6-pk.	24940
250 µL–10 mL	22	2"	2	7779-01	6-pk.	24942
250 µL–10 mL	26s	2"	2	7779-02	6-pk.	24943
250 µL–10 mL	22s	2"	2	7779-03	6-pk.	24944

SGE

Syringe Volume	Needle Gauge	Needle Length	Point Style	SGE cat.#	qty.	Restek cat.#
5 µL	26	50 mm	2	036110	5-pk.	24802
10 µL	23	50 mm	2	037111	5-pk.	24804
10 µL	26	50 mm	2	037110	5-pk.	24803
25–500 µL	23	50 mm	2	038111	5-pk.	24806
25–500 µL	25	50 mm	2	038110	5-pk.	24805
1–2.5 mL	23	50 mm	2	039110	5-pk.	24807

Replacement Plunger Assembly, PTFE-Tipped

for Agilent 7673, 7683, 7693A, and 6850 Autosampler Syringes

Hamilton

Syringe Volume	Needle Term.	Hamilton cat.#	qty.	Restek cat.#
10 µL	N, RN, LT/LTN	13205	ea.	24919

Gas-Tight Syringe Replacement Needles for Luer Lock Syringes

Hamilton

Hub Material	Needle Gauge	Needle Length	Point Style	Hamilton cat.#	qty.	Restek cat.#
metal	26s	2"/51 mm	2	90053	6-pk.	20133
metal	25s	1.97"	3	90049*	6-pk.	24605
metal	22s	2"/51 mm	2	90051	6-pk.	24606
Kel-F (PTFE tip)	26s	2"/51 mm	2	90153	6-pk.	24607
Kel-F (PTFE tip)	25s	1.97"	3	90149*	6-pk.	24608
Kel-F (PTFE tip)	22s	2"/51 mm	2	90151	6-pk.	24609

*For Waters U6K injection valve.

SGE

Hub Material	Needle Gauge	Needle Length	Point Style	SGE cat.#	qty.	Restek cat.#
metal	23	50 mm	2	039802	5-pk.	24763
metal	18	50 mm	2	039842	5-pk.	24764
metal	22	2"/51 mm	3	039895**	2-pk.	24765

**For Rheodyne/Valco valves.





24881



24887

SGE Gas-Tight Syringes with Shut-off Valves

- Ideal for sample storage and transportation.
- Push-pull shut-off valve.

SGE

Syringe Fitted with Removable Needle and Valve

Volume	Model	SGE cat.#	qty.	Restek cat.#
50 µL	50R-V-GT	004279	ea.	24880
100 µL	100R-V-GT	005279	ea.	24881
250 µL	250R-V-GT	006279	ea.	24882
500 µL	500R-V-GT	007279	ea.	24883
1 mL	1MDR-V-GT	008110	ea.	24884
2.5 mL	2.5MDR-V-GT	008510	ea.	24885

SGE

Syringe Fitted with Luer Lock Valve*

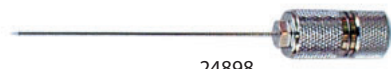
Volume	Model	SGE cat.#	qty.	Restek cat.#
1 mL	1MR-VLL-GT	008160	ea.	24886
2.5 mL	2.5MDR-VLL-GT	008560	ea.	24887
5 mL	5MDR-VLLMA-GT	008770	ea.	24888
10 mL	10MDR-VLLMA-GT	008970	ea.	24889
25 mL	25MDR-VLLMA-GT	009472	ea.	24890
50 mL	50MR-VLLMA-GT	009670	ea.	24891
100 mL	100MR-VLLMA-GT	009770	ea.	24892

*Order needles separately.

Replacement Needles for Gas-Tight Syringes with Shut-off Valves

SGE

Model V Syringe Valve: fits any SGE removable needle syringe, 25 µL-2.5 mL



24898

Syringe Volume	Needle Gauge	Needle Length	Point Style	Model	SGE cat.#	qty.	Restek cat.#
25 µL-2.5 mL	23	50 mm	Cone	V	031905	ea.	24898

SGE

Luer Lock Needles



24763

Syringe Volume	Needle Gauge	Needle Length	Point Style	Model	SGE cat.#	qty.	Restek cat.#
1 mL-100 mL	23	50 mm	2	NLL-5/23	039802	5-pk.	24763
1 mL-100 mL	18	50 mm	2	NLL-5/18	039842	5-pk.	24764
1 mL-100 mL	22	2"/51 mm	3	NLL-LC	039895**	2-pk.	24765

**Fits Rheodyne & Valco injection valves.

Economical Hamilton Syringe Guide*

- Prevents syringe plunger from bending.
- Adjustable stop prevents plunger damage.
- Easily installed.
- Used with syringe series 700/1700/1000.



24616

Syringe Volume	Hamilton cat.#	qty.	Restek cat.#
25-500 µL	14906	ea.	24615
5-10 µL	14806	ea.	24616

*Syringe not included.

Gas-Tight Syringes for Rheodyne® & Valco® Valves

- PTFE-tipped plungers.
- Removable needles.
- Replaceable syringe barrels, plungers, and plunger tips.

Hamilton

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	Hamilton Model	Hamilton cat.#	qty.	Restek cat.#
10 µL	RN	26s	2"/51 mm	3	1701	80065	ea.	21260
25 µL	RN	22s	2"/51 mm	3	1702	80265	ea.	21261
50 µL	RN	22s	2"/51 mm	3	1705	80965	ea.	21262
100 µL	RN	22s	2"/51 mm	3	1710	81065	ea.	21263
250 µL	RN	22s	2"/51 mm	3	1725	81165	ea.	21264

SGE

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	SGE Model	SGE cat.#	qty.	Restek cat.#
10 µL	R	22	2"	3	10R-GT-LC	002313	ea.	24866
25 µL	R	22	2"	3	25R-GT-LC	003312	ea.	24867
50 µL	R	22	2"	3	50R-GT-LC	004312	ea.	24868
100 µL	R	22	2"	3	100R-GT-LC	005312	ea.	24869
250 µL	R	22	2"	3	250R-GT-LC	006312	ea.	24870
500 µL	R	22	2"	3	500R-GT-LC	007312	ea.	24871

Replacement Needles for Gas-Tight Syringes for Rheodyne® & Valco® Valves

Hamilton

Syringe Volume	Needle Gauge	Needle Length	Point Style	Hamilton cat.#	qty.	Restek cat.#
5–100 µL	22s	2"	3	7770-01	6-pk.	24941
250 µL–10 mL	22	2"	3	7780-04	6-pk.	24945

SGE

Syringe Volume	Needle Gauge	Needle Length	Point Style	SGE cat.#	qty.	Restek cat.#
10 µL	22	2"	3	037250	5-pk.	24808
25–500 µL	22	2"	3	038250	5-pk.	24809

For complete loop-fill, the syringe capacity should be >2X the loop volume.



21260



24868



24941



24808



High-purity VOC single-stage regulator is described on page 425 of the Air Sampling Products section.

A-2 Luer Gas-Tight Syringes*

- For use with VOA-CYL 4 standards.
- Push-style on-off button valve.

Use to withdraw a gas sample from a high-pressure cylinder through a high-purity VOC single-stage regulator after attaching the appropriate adaptor to the regulator. Use with luer syringe needles listed.

Description	qty.	cat.#
100 µL Luer Syringe	ea.	20162
500 µL Luer Syringe	ea.	20163

*Restek's A-2 syringes have a luer tip.

Replacement Needles for A-2 Luer Gas-Tight Syringes

Description	Needle Gauge	Size	qty.	cat.#
Luer Syringe Needles for 100 µL A2 Gas-Tight Syringes	22	0.028" OD x 0.006" ID x 2"	3-pk.	22783
Luer Syringe Needles for 500 µL A2 Gas-Tight Syringes	22	0.028" OD x 0.012" ID x 2"	3-pk.	22784



Heavy Duty Purge & Trap Syringe Dynatech Precision Sampling

- Heavy-duty glass barrel with metal front and rear flanges.
- PTFE luer lock tip.
- Can fill and empty sparge tubes.
- Sample-Lok valve accepts standard luer lock needles.
- Suitable for purge & trap applications.

Syringe	2 mL		5 mL		10 mL	
	cat.#		cat.#		cat.#	
without Sample-Lok	21205		21206		21209	
with Sample-Lok			21208		21207	



Luer Lock Valve Adaptors

Use a luer lock valve adaptor to connect a luer lock fitting to a Rheodyne® or Valco® valve.

Description	SGE cat. #	qty.	Restek cat.#
Luer Lock Valve Adaptors	200010	2-pk.	21283

Jumbo Syringe

Clear acrylic syringes, ideal for holding and dispensing large volumes of gas. An adjustable plunger on the O-ring ensures that the syringe is gas-tight over a long period of time. The central port is supplied with a luer lock fitting; the secondary port is supplied with a septum nut. This enables access to the gas sample for adding standards or removing a subsample. The plunger stem is detachable, making sample storage easy.

Volume	Model	SGE cat.#	qty.	Restek cat.#
500 mL	500MAR-LL-GT	009910	ea.	21275
1,000 mL	1000MAR-LL-GT	009920	ea.	21276
2,000 mL	2000MAR-LL-GT	009930	ea.	21277



21276

Syringe O-Rings

Syringe Volume	SGE cat.#	qty.	Restek cat.#
500 mL	032527	ea.	21278
1,000 mL	032532	ea.	21279



21279



21278

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Economical Microliter Liquid-Type Syringes for Rheodyne® & Valco® Valves

- Cemented/fixed needles.
- Plungers and barrels are not interchangeable or replaceable.

Hamilton

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	Hamilton Model	Hamilton cat.#	qty.	Restek cat.#
10 µL	N	22s	2"	3	701	80365	ea.	21250
25 µL	N	22s	2"	3	702	80465	ea.	21251
50 µL	N	22s	2"	3	705	80565	ea.	21252
100 µL	N	22s	2"	3	710	80665	ea.	21253
250 µL	N	22s	2"	3	725	80765	ea.	21254

SGE

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	SGE Model	SGE cat.#	qty.	Restek cat.#
10 µL	F	22	2"	3	10F-LC	002301	ea.	24860
25 µL	F	22	2"	3	25F-LC	003300	ea.	24861
50 µL	F	22	2"	3	50F-LC	004300	ea.	24862
100 µL	F	22	2"	3	100F-LC	005300	ea.	24863
250 µL	F	22	2"	3	250F-LC	006300	ea.	24864
500 µL	F	22	2"	3	500F-LC	007300	ea.	24865

Priming Syringes for Waters 6000, 6000A, 501, 510, 590, 610 and 610E HPLC Pumps

- Designed for maximum safety with metal flange and luer lock (LL) hub.
- PTFE-tipped plunger.

Hamilton

Volume	Needle Term.	Hamilton Model	Hamilton cat.#	Pressure Tested to	qty.	Restek cat.#
10 mL	TLL	1010W	81610	700 psig	ea.	21265

SGE

Volume	Needle Term.	SGE Model	SGE cat.#	Pressure Tested to	qty.	Restek cat.#
10 mL	LL	10MDR-LL-GT	008960	100 psig	ea.	24759

*Needles sold separately.

Syringes for Waters U6K Valves

- Reinforced plungers.
- Removable needles.
- Replaceable plunger/barrel assemblies.
- Barrel stop prevents plunger blowout.

Hamilton

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	Hamilton Model	Hamilton cat.#	qty.	Restek cat.#
10 µL	RN	25s	1.97"	3	801	84815	ea.	21255
25 µL	RN	25s	1.97"	3	802	84816	ea.	21256
50 µL	RN	25s	1.97"	3	805	84817	ea.	21257
100 µL	RN	25s	1.97"	3	810	84818	ea.	21258
250 µL	RN	25s	1.97"	3	825	84819	ea.	21259

Replacement Needles for Syringes for Waters U6K Valves

Hamilton

Syringe Volume	Needle Gauge	Needle Length	Point Style	Hamilton cat.#	qty.	Restek cat.#
10–100 µL	25s	1.97"	3	8647-01	6-pk.	21270
250 µL–10 mL	25s	1.97"	3	8648-01	6-pk.	21271



Syringes for LC Autosamplers

SGE
for Hitachi LC Autosamplers

Volume	SGE Model	cat.#	qty.	Restek cat.#
500 µL, M10 X1 Thread	500C-HITACH1	007660	ea.	22292



22292

SGE
for PerkinElmer LC Autosamplers

Volume	SGE Model	cat.#	qty.	Restek cat.#
100 µL, 1/4-28 UNF Thread	100D-CX-GT	005990	ea.	22296
250 µL, 1/4-28 UNF Thread	250D-CX-GT	006995	ea.	22297
500 µL, 1/4-28 UNF Thread	500D-CX-GT	007995	ea.	22298
1 mL, 1/4-28 UNF Thread	1MD-C-GT	008185	ea.	22299



22297

Syringes for Waters WISP LC Autosamplers

PTFE-tipped plungers

Hamilton

Volume	Hamilton Model	cat.#	qty.	Restek cat.#
25 µL, 1/4-28 UNF Thread	1702	80020	ea.	24528
250 µL, 1/4-28 UNF Thread	1725	80024	ea.	24529



24528

SGE

Volume	SGE Model	cat.#	qty.	Restek cat.#
25 µL, 1/4-28 UNF Thread	25D-WISP	003990	ea.	22293
250 µL, 1/4-28 UNF Thread	250D-WISP	006690	ea.	22294



22294

Syringes for CTC LC Autosamplers

Hamilton

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	Hamilton Model	cat.#	qty.	Restek cat.#
10 µL	N	22s	2"/51 mm	3	701N	203073	ea.	22743
25 µL	N	22s	2"/51 mm	3	1702N	203075	ea.	22744
100 µL	N	22s	2"/51 mm	3	1710N Slim Line*	203077	ea.	22745
100 µL	N	22	2"/51 mm	3	1710N	203235	ea.	22746
250 µL	N	22	2"/51 mm	3	1725N	203079	ea.	22747
500 µL	N	22	2"/51 mm	3	1750N	203349	ea.	22748

*Barrel OD = 6.7 mm; all other 25 µL and 100 µL syringes have a 7.9 mm barrel OD.



22746

SGE

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	SGE Model	cat.#	qty.	Restek cat.#
10 µL	F	22s	2"/51 mm	LC	10F-CTC-LC	002710	ea.	22737
100 µL*	R	22s	2"/51 mm	LC	100R-C/T-GT-LC	005330	ea.	22741
500 µL*	F	22s	2"/51 mm	LC	500F-CTC-GT-LC(0.41)	007720	ea.	22742

*Gas-tight syringe.



22741