

Syringe Selection Guide

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Manufacturer	Type	Description	
<i>Hamilton® Syringes</i>			
	Series 600	General purpose, 2.5µL to 5µL	338
	Series 700	General purpose, 5µL to 500µL	338
	Series 900	Economical syringe with reinforced plunger, 5µL to 10µL	338
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	Series 1000	Gas and liquid tight, 1mL to 100mL	339
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	Series 1700	Gas and liquid tight, 10µL to 500µL	340
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	Super Gas	Gas tight, large volume acrylic, 500mL to 2000mL	340
	SampleLock™	1000 and 1700 Series syringes with twist valve to lock sample in	341
	Autosampler	700 and 1700 Series syringes compatible with many popular autosamplers	341
<i>VICI®-Precision Syringes</i>			
	Series A	Gas tight with a twist valve for sample storage, 100µL to 10mL	343
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<i>SGE® Syringes</i>			
	Standard	General purpose, 5µL and 10µL	344
	Plunger Protection	General purpose with reinforced plunger, 5µL and 10µL	344
	Superflex™	General purpose with flexible plunger, 5µL and 10µL	344
	Factory Calibrated	NIST and NBS traceable, 5µL to 500µL	344
	Guided Plunger	Extended barrel and reinforced plunger, 5µL and 10µL	344
	Gas Tight	Gas and liquid tight, 10µL to 100mL	345
	Autosampler	Syringes compatible with many popular autosamplers	345
	Microvolume	Plunger-in-needle, gas and liquid tight, 0.5µL to 5µL	346
	On-Column	On-column capillary GC injection, 0.5µL to 10µL	346
<i>Popper Syringes</i>			
	Standard Glass	General purpose, 2mL to 50mL	347

tech tips

Tips for Syringe Use and Care

Cleaning Needles—If your syringe needle becomes clogged, do not force liquid or compressed air through the syringe. Excessive pressure can cause the glass barrel of the syringe to split. To properly clean the needle, remove the plunger from the syringe. Use cleaning wires to dislodge any foreign material or residue build-up, and rinse the syringe thoroughly with deionized water or acetone. Grace offers a variety of syringe care products to help you maintain the performance of your syringe on page 347.

Sterilizing Syringes—Chemical sterilizers are the best means for sterilizing your syringe. Be sure to thoroughly rinse your syringe after sterilization to remove all traces of the chemical solution. In general, autoclaving your syringe is not recommended. Stainless steel expands faster than the glass upon heating. Heating a syringe with a cemented, stainless steel needle may cause the glass barrel to split. Heating a syringe with cemented steel hubs may result in adhesive deterioration and leakage.

Syringe Lubrication—A clean syringe does not require any lubricating grease. Grease may cause a variety of problems such as sample cross contamination, seizing of the plunger in the barrel, and barrel damage or breakage.



Hamilton® Selection Guide

Syringe Terminations

N—Cemented (fixed) Needle, up to 250µL

N and LTN syringes have needles cemented into the glass syringe barrel. Do not heat to more than 50°C, do not autoclave, do not use with halogenated solvents such as methylene chloride. Choose a cemented needle if you want reproducible injections at an economical price.



4790

LTN—Cemented (fixed) Needle with Luer Tip, 500µL and larger



4792

LT—Luer Tip

Ground glass male luer tip accepts most hypodermic needles. Use Kel-F® hubs and connectors for a tight, leak-free seal. Choose LT syringes if you want an autoclavable syringe with easy, fast needle replacement.



4791

KH—Knurled Hub

Metal knurled hub with removable needle, exclusive to 7000 Series syringes. It creates a leak-free seal between the barrel and the needle and can be tightened to compensate for wear. Autoclavable when disassembled.



4793

RN—Removable Needle

Choose removable needles to easily replace bent or clogged needles or use different types of needles with the same syringe barrel. Autoclavable when disassembled.



4794

TLL—PTFE Luer Lock

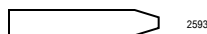
Male luer taper with nickel-plated brass hub that accepts and locks luer hub needles and connectors. Autoclavable when disassembled. Choose TLL syringes for fast needle replacement with a locking needle connection.



4795

Point Styles

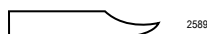
Point Style AS:



2593

Special conical needle designed to withstand the demands of multiple injections; exclusively used on autosampler syringes.

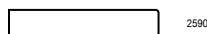
Point Style 2:



2589

Beveled non-coring needle recommended for septum penetration; only needle gauges 26s–22 are recommended for optimum GC septum penetration.

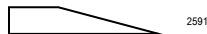
Point Style 3:



2590

Blunt needle for use with HPLC injection valves and for sample pipetting.

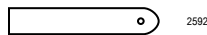
Point Style 4:



2591

10–12° beveled needle recommended for life science applications.

Point Style 5:



2592

Conical needle with side port for penetration of septa, thin-gauged vinyls and plastics without coring; minimizes septum damage.

Syringe Solution Reference Chart

Hamilton has designed many unique syringes to address specific problems. Use the chart below to select the right syringe for the job.

Syringe Problems and Solutions		
Problem	Syringe Solution	Hamilton® Series
Bending Plungers	Use reinforced plunger syringes	600, 800, 900, 1800
	Use a Chaney adapter or syringe guide	700, 800, 900, 1000, 1700, 1800, 7000
Breaking Syringe Barrels	Use replaceable barrel syringes	800, 1000, 1700, 1800, 7000
Bending Needles	Use removable needle syringes	600, 700, 800, 900, 1000, 1700, 1800, 7000
Syringe Balance	Use syringe with handles	800, 900, 1800
Plungers Pulling or Blowing-out of Syringe Barrel	Use pull or blow-out prevention syringes	800, 1800
Plungers Slide Too Easily	Use adjustable plunger drag syringes	800, 1800

Hamilton® Syringes

700 Series MICROLITER™ Syringes

General Purpose Syringe, 5µL to 500µL



- Plungers are not interchangeable or replaceable
- Accurate to 1% of the syringe volume

Hamilton® 700 Series Syringes

Model	Volume	Gauge	Pt. Style	Repl. Needle	Qty.	Part No.
<i>Cemented Needle Syringes (N), 2" Needle Length</i>						
75	5µL	26s	2	None	ea	87900
	5µL	26s	3	None	ea	87919
701	10µL	26s	2	None	ea	80300
	10µL	26s	3	None	ea	803830
702	10µL	26s	5	None	ea	80339
	25µL	22s	2	None	ea	80400
705	25µL	22s	3	None	ea	80465
	25µL	22s	5	None	ea	80439
	50µL	22s	2	None	ea	80500
710	50µL	22s	3	None	ea	80565
	50µL	22s	5	None	ea	80539
	100µL	22s	2	None	ea	80600
725	100µL	22s	3	None	ea	80665
	100µL	22s	5	None	ea	80639
	250µL	22s	2	None	ea	80700
750	250µL	22s	3	None	ea	80765
	250µL	22s	5	None	ea	80739
	500µL	22	2	None	ea	80800
750	500µL	22	3	None	ea	80865
	500µL	22	5	None	ea	80839
<i>Removable Needle Syringes (RN), 2" Needle Length</i>						
75	5µL	26s	2	7758-02	ea	87930
701	10µL	26s	2	7758-02	ea	803300
702	25µL	22s	2	7758-03	ea	80430
705	50µL	22s	2	7758-03	ea	80530
710	100µL	22s	2	7758-03	ea	80630
725	250µL	22s	2	7779-03	ea	80730
750	500µL	22	2	7779-01	ea	808301
<i>Luer Tip Syringes (LT)</i>						
701	10µL	—	—	*	ea	80301
702	25µL	—	—	*	ea	80401
705	50µL	—	—	*	ea	80501
710	100µL	—	—	*	ea	80601
725	250µL	—	—	*	ea	80701
750	500µL	—	—	*	ea	808011
<i>For Rheodyne®, Valco® VISF-2, Beckman®/Altex and SSI, 2" Needle Length, Fixed Needle</i>						
701	10µL	22s	3	None	ea	80365
702	25µL	22s	3	None	ea	80465
705	50µL	22s	3	None	ea	80565
710	100µL	22s	3	None	ea	80665
725	250µL	22	3	None	ea	80765
750	500µL	22	3	None	ea	80865

*Order needles separately, see page 342.

Save Money on Model 701 with Multi-Packs

- Economical—syringes cost less in six packs
- Easy identification—six numbered dots provide quick syringe identification



Hamilton® 700 Series Six-packs (2" Needle Length)

Model	Volume	Gauge	Pt. Style	Repl. Needle	Qty.	Part No.
<i>Cemented Needle Syringes (N), 2" Needle Length</i>						
701N	10µL	26s	2	None	6	80366
701N	10µL	26s	2	None	12	803662
701RN	10µL	26s	2	7758-02	6	80336

Guide

Plunger Guides reduce the expense of replacing or repairing syringes with bent plungers. They are especially useful on syringes with small diameter plungers.



Chaney Adapter

Chaney Adapters ensure consistent sample delivery. You will know the sample size is right every time.



Guides and Chaney Adapters

Description	Part No.
Guide for 701	14806
Guide for 702–750, 7000	14906
Chaney Adapter for 701, 75	147000
Chaney Adapter for 702–750 and 7000	14725

900 Series MICROLITER™ Syringes

- Low price with a reinforced construction



Hamilton® 900 Series Syringes

Model	Volume	Gauge	Pt. Style	Repl. Needle	Part No.
<i>Cemented Needle Syringes (N), 2" Needle Length</i>					
95	5µL	26s	2	None	87920
901	10µL	26s	2	None	803600
<i>Removable Needle Syringes (RN), 2" Needle Length</i>					
95	5µL	26s	2	7758-02	87925
901	10µL	26s	2	7758-02	803700

600 Series MICROLITER™ Syringes

- Suitable for Rheodyne®, Beckman®/Altex, and Valco® VISF-2



Hamilton® 600 Series Syringes

Model	Volume	Gauge	Pt. Style	Repl. Needle	Part No.
<i>Removable Needle Syringes (RN), 2" Needle Length</i>					
62	2.5µL	22s	3	7770-01	87942
65	5µL	22s	3	7770-01	87943

best value

Hamilton® Syringes

800 Series MICROLITER™ Syringes

- General purpose syringe
- Extended handle simplifies sampling from test tubes or long-necked flasks



4805

Hamilton® 800 Series Syringes

Model	Volume	Gauge	Pt. Style	Repl. Needle	Part No.
<i>Cemented Needle Syringes (N), 2" Needle Length</i>					
85	5µL	26s	2	None	84850
801	10µL	26s	2	None	84852
802	25µL	22s	2	None	84854
805	50µL	22s	2	None	84856
810	100µL	22s	2	None	84858
<i>Removable Needle Syringes (RN), 2" Needle Length</i>					
85	5µL	26s	2	7758-02	84851
801	10µL	26s	2	7758-02	84853
802	25µL	22s	2	7758-03	84855
805	50µL	22s	2	7758-03	84857
810	100µL	22s	2	7758-03	84859
825	250µL	22s	2	7758-03	84861
<i>Removable Needle Syringes (RNW) For Waters® U6K Injection Valve, 1.97" Needle Length</i>					
801	10µL	25s	3	80426	84815
802	25µL	25s	3	80426	84816
805	50µL	25s	3	80426	84817
810	100µL	25s	3	80426	84818
825	250µL	25s	3	80726	84819

7000 Series MODIFIED MICROLITER™ Syringes

Plunger-in-Needle Design, 0.5µL to 5µL

- No dead volume
- Replaceable barrels and plunger wires
- Not recommended for viscous samples



4803



Hamilton® 7000 Series Syringes

Model	Volume	Gauge	Pt. Style	Repl. Needle	Part No.
<i>Knurled Hub Syringes (KH), 2.75" Needle Length</i>					
7000.5	0.5µL	25	2	17887	86259
	0.5µL	25	3	17187	86250
7000.50C*	0.5µL	32	3	86258	86257
7001	1µL	25s	2	17886	80135
	1µL	25s	3	17188	80100
7101	1µL	22s	2	17890	86211
	1µL	22s	3	17190	86200
7002	2µL	25	2	17891	88411
	2µL	25	3	17191	88400
7102	2µL	23	2	17892	88511
	2µL	23	3	17192	88500
7105	5µL	24	2	17893	88011
	5µL	24	3	17193	88000

*Needle length = 3.94" (2cm).

Guides and Chaney Adapters

Syringe Model	Part No.
Guide Assembly for 7000 Series	14906
Chaney Adapter for 7000 Series	14725

1000 Series GASTIGHT™ Syringes

Gas and Liquid Tight, 1mL to 100mL

- PTFE-tipped plungers
- Replaceable barrels and plungers



4809

Hamilton® 1000 Series Syringes

Model	Volume	Gauge	Pt. Style	Repl. Needle	Part No.
<i>Removable Needle Syringes (RN), 2" Needle Length</i>					
1001	1.0mL	22	2	7779-01	81330
1002	2.5mL	22	2	7779-01	81430
1005	5.0mL	22	2	7779-01	81530
1010	10.0mL	22	2	7779-01	81630
<i>Luer Tip Syringes (LT), 2" Needle Length</i>					
1001	1.0mL	—	—	**	81301
1002	2.5mL	—	—	**	81401
1005	5.0mL	—	—	**	81501
1010	10.0mL	—	—	**	81601
<i>Luer Tip w/Cemented Needle Syringes (LTN), 2" Needle Length</i>					
1001	1.0mL	22	2	None	81317
	1.0mL	22	5	None	81343
1002	2.5mL	22	2	None	81417
	2.5mL	22	5	None	81443
1005	5.0mL	22	2	None	81517
	5.0mL	22	5	None	81543
1010	10.0mL	22	2	None	81617
	10.0mL	22	5	None	81643
<i>PTFE Luer Lock Syringes (TLL), 2" Needle Length</i>					
1001	1.0mL	—	—	**	81320
1002	2.5mL	—	—	**	81420
1005	5.0mL	—	—	**	81520
1010	10.0mL	—	—	**	81620
1025	25.0mL	—	—	**	82520
1050	50.0mL	—	—	**	85020
1100	100.0mL	—	—	**	86020
<i>Removable Needle Syringes, 0.75" Needle Length For Valco® (VISF-1) Injection Valves—Black</i>					
1001	1mL	22	3	76515	81331
1002	2.5mL	22	3	76515	81431
1005	5mL	22	3	76515	81531
1010	10mL	22	3	76515	81631
<i>For Rheodyne®, Valco® (VISF-2), Beckman®/Altex, and SSI—Black</i>					
1001	1mL	22	3	7780-04	81365
<i>Luer Tip w/Cemented Needle Syringes (LTN), 2" Needle Length For Rheodyne®, Valco® (VISF-2), Beckman®/Altex, and Black SSI</i>					
1001	1.0mL	22	3	None	81316
1002	2.5mL	22	3	None	81416
1005	5.0mL	22	3	None	81516
1010	10.0mL	22	3	None	81616

**Order needles separately, see page 342.

Hamilton® Syringes

1700 Series GASTIGHT™ Syringes

Gas and Liquid Tight, 10µL to 500µL

- PTFE-tipped plungers
- Replaceable barrels and plungers



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Hamilton® 1700 Series GASTIGHT™ Syringes

Model	Volume	Gauge	Pt. Style	Repl. Needle	Part No.
<i>Cemented Needle Syringes (N), 2" Needle Length</i>					
1701	10µL	26s	2	None	80000
	10µL	26s	3	None	800750
	10µL	26	3	None	800850
	10µL	26	5	None	80039
1702	25µL	22s	2	None	80200
	25µL	22s	3	None	802750
	25µL	22s	5	None	80239
	25µL	22	3	None	80285
1705	50µL	22s	2	None	80900
	50µL	22s	3	None	80975
	50µL	22s	5	None	80939
	50µL	22	3	None	80985
1710	100µL	22s	2	None	81000
	100µL	22s	3	None	81075
	100µL	22s	5	None	81039
	100µL	22	3	None	81085
1725	250µL	22s	2	None	81100
	250µL	22s	3	None	81175
	250µL	22s	5	None	81139
	250µL	22	3	None	81185
<i>Removable Needle Syringes (RN), 2" Needle Length</i>					
1701	10µL	26s	2	7758-02	800300
1702	25µL	22s	2	7758-03	80230
1705	50µL	22s	2	7758-03	80930
1710	100µL	22s	2	7758-03	81030
1725	250µL	22s	2	7779-03	81130
1750	500µL	22	2	7779-01	81230
<i>Luer Tip Syringes (LT)</i>					
1701	10µL	—	—	*	80001
1702	25µL	—	—	*	80201
1705	50µL	—	—	*	80901
1710	100µL	—	—	*	81001
1725	250µL	—	—	*	81101
1750	500µL	—	—	*	81201
<i>Luer Tip with Cemented Needle Syringes (LTN), 2" Needle Length</i>					
1750	500µL	22	2	None	81217
	500µL	22	3	None	81216
	500µL	22	5	None	81243
<i>PTFE Luer Lock Syringes (TLL) / Without Slots</i>					
1705	50µL	—	—	*	80920
1710	100µL	—	—	*	81020
1725	250µL	—	—	*	81120
1750	500µL	—	—	*	81220

*Order needles separately, see page 342.

Hamilton® 1700 Series GASTIGHT™ Syringes

Model	Volume	Gauge	Pt. Style	Repl. Needle	Part No.
<i>Removable Needle Syringes</i>					
<i>For Waters® U6K Injection Valve (RNW), 1.97" Needle Length</i>					
1702	25µL	25s	3	80426	80238
1705	50µL	25s	3	80426	80938
1710	100µL	25s	3	80426	81038
1725	250µL	25s	3	80726	81138
<i>For Rheodyne®, Valco® VISF-2, Beckman®/Altex, SSI (RNR), 2" Needle Length</i>					
1701	10µL	22s	3	7770-01	80065
1702	25µL	22s	3	7770-01	80265

Hamilton® 1700 Series GASTIGHT™ Syringes (continued)

Model	Volume	Gauge	Pt. Style	Repl. Needle	Part No.
<i>For Rheodyne®, Valco® VISF-2, Beckman®/Altex, SSI (RNR), 2" Needle Length (continued)</i>					
1705	50µL	22s	3	7770-01	80965
1710	100µL	22s	3	7770-01	81065
1725	250µL	22	3	7780-04	81165
1750	500µL	22	3	7780-04	81265
<i>For Valco® VISF-1 (RNCP), 0.75" Needle Length</i>					
1702	25µL	22s	3	76517	80231
1705	50µL	22s	3	76517	80931
1710	100µL	22s	3	76517	81031
1725	250µL	22s	3	76517	81131
1750	500µL	22	3	76515	81231

1800 Series GASTIGHT™ Syringes

Gas and Liquid Tight with Reinforced Plunger, 10µL to 250µL

- Similar to the 1700 Series but with a reinforced, protected plunger
- PTFE-tipped plungers
- Replaceable barrels and plungers



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Hamilton® 1800 Series Syringes and Accessories

Model	Volume	Gauge	Pt. Style	Repl. Needle	Part No.
<i>Cemented Needle Syringes (N), 2" Needle Length</i>					
1801	10µL	26s	2	None	84875
1802	25µL	22s	2	None	84878
1805	50µL	22s	2	None	84881
1810	100µL	22s	2	None	84884
1825	250µL	22s	2	None	84887
<i>Removable Needle Syringes (RN), 2" Needle Length</i>					
1801	10µL	26s	2	7758-02	84877
1802	25µL	22s	2	7758-03	84880
1805	50µL	22s	2	7758-03	84883
1810	100µL	22s	2	7758-03	84886
1825	250µL	22s	2	7779-03	84889
<i>Removable Needle Syringes (RNW)</i>					
<i>For Waters® U6K Injection Valve, 1.97" Needle Length</i>					
1802	25µL	25s	3	80426	84980
1805	50µL	25s	3	80426	84983
1810	100µL	25s	3	80426	84986
1825	250µL	25s	3	80726	84989
<i>Hamilton Accessories</i>					
Chaney Adapter for 801-825, 1801-1825					32146

Super Gas Syringes

Gas Tight, Large Volume Syringes, 500mL to 2000mL

- Ideal for air and gas sampling
- Graduated every 20mL
- Acrylic barrels with PTFE-coated aluminum pistons



4783

Hamilton® Super Gas Syringes

Model	Volume	Part No.
<i>Syringe with PTFE Luer Lock (TLL)</i>		
S-0500	0.5 Liter	86311
S-1000	1.0 Liter	86312
S-1500	1.5 Liter	86313
S-2000	2.0 Liter	86314

Hamilton® Syringes

Autosampler Syringes

For the Agilent 7673 and 7683 Autosamplers

- Standard needle length is 1.71"

Syringes for the Agilent 7673 and 7683 Autosamplers

Model	Volume	Gauge	Pt. Style	Qty.	Part No.	
<i>Cemented Needle Syringes (ASN)</i>						
75	5µL	23s	AS	ea	87987	
	5µL	23s	AS	6	87990	
	5µL	23s	2	ea	87991	
	5µL	26s	AS	ea	87988	
	5µL	26s	AS	6	87989	
	5µL	26s	2	ea	87992	
	5µL	23s-26s	AS	ea	87993	
	5µL	23s-26s	AS	6	87994	
	701	10µL	23s	AS	ea	803871
		10µL	23s	AS	6	803901
10µL		23s	2	ea	80398	
10µL		26s	AS	ea	803881	
10µL		26s	AS	6	803891	
10µL		26s	2	ea	80399	
10µL		23s-26s	AS	ea	80393	
10µL		23s-26s	AS	6	803911	
<i>Removable Needle Syringes (ASRN)</i>						
75		5µL	23s	AS	ea	87957
	5µL	26s	AS	ea	87958	
	5µL	23s-26s	AS	ea	87959	
701	10µL	23s	AS	ea	80357	
	10µL	26s	AS	ea	80358	
	10µL	23s-26s	AS	ea	80359	
<i>Cemented Needle GASTIGHT™ Syringes (ASN)</i>						
175	5µL	23s	AS	ea	800741	
	5µL	23s	AS	6	80090	
	5µL	23s-26s	AS	ea	800761	
	5µL	23s-26s	AS	6	80092	
	10µL	23s	AS	ea	800801	
1701	10µL	23s	AS	6	80094	
	10µL	23s-26s	AS	ea	800791	
	10µL	23s-26s	AS	6	80096	
	<i>Removable Needle GASTIGHT™ Syringes (ASRN)</i>					
175	5µL	23s-26s	AS	ea	80086	
1701	10µL	23s	AS	ea	80087	
	10µL	23s-26s	AS	ea	80089	

Replacement Needles for Agilent Autosamplers

- For 5 and 10µL syringes

Agilent Autosampler Replacement Needles

Gauge	Needle Length	Pt. Style	Qty.	Part No.
23s-26s	1.71"	AS	6	7785-01
23s	1.71"	AS	6	7786-01
26s	1.71"	AS	6	7786-02

For the Waters® WISP™ Autosampler

Syringes for the Waters® WISP™ Autosampler

Model	Volume	Part No.
GASTIGHT™ Syringes with PTFE-Tipped Plungers		
1725 WISP™	250µL	80024

more info

See page 195 for Hamilton® TLC Syringes.

For the Agilent 7670, 7671, and 7672 Autosamplers

Syringes for Agilent 7670, 7671, 7672 Autosamplers

Model	Volume	Gauge	Pt. Style	Qty.	Part No.
<i>Cemented Needle Syringes (N), 2" Needle</i>					
701N	10µL	26s	2	ea	80300
	10µL	26s	2	6	80366
<i>Removable Needle Syringes (RN), 2" Needle</i>					
701	10µL	26s	2	ea	80338
<i>Cemented Needle with PTFE-Tipped Plungers (N), 2" Needle</i>					
1701	10µL	26s	2	ea	80000
<i>Removable Needle with PTFE-Tipped Plungers (RN), 2" Needle</i>					
1701	10µL	26s	2	ea	800110

For the PerkinElmer® Autosystem

Syringes for the PerkinElmer® Autosystem

Model	Volume	Needle o.d.	Needle Lgth.	Pt. Style	Part No.
<i>Cemented Needle Syringes (ASN/PE)</i>					
75	5µL	0.47mm	2.756"	3	880401
	5µL	0.63mm	2.756"	3	880351

SampleLock™ Syringes

- 1000 and 1700 Series syringes with twist valve



Hamilton® SampleLock™ Syringes

Model	Volume	Gauge	Pt. Style	Repl. Needle	Part No.
<i>SampleLock™ Syringes, 2" Needle Length</i>					
1705	50µL	22s	2	7779-03	80956
1710	100µL	22s	2	7779-03	81056
1725	250µL	22s	2	7779-03	81156
1750	500µL	22	2	7779-01	812560
1001	1mL	22	2	7779-01	81356
1002	2.5mL	22	2	7779-01	81456
1005	5mL	22	2	7779-01	81556
1010	10mL	22	2	7779-01	81656
1025	25mL	22	2	7779-01	863260
1050	50mL	22	2	7779-01	863360
1100	100mL	22	2	7779-01	86346

Valves and Adapters



Valves and Adapters

Description	Qty.	Part No.
<i>Sampling Valve</i>		
Inert Gas Sampling Valve		86580
<i>Luer Adapters</i>		
Female Luer to Removable Needle Hub		35081
Male Luer to Removable Needle Hub		35080
Male Luer Lock to Removable Needle Hub		35083
<i>Septum Adapter</i>		
Septum Adapter (TLL), Includes 12 Septa	ea	313350
Replacement Septa, 7mm	12	75810

Hamilton® Needles

RN Replacement Needle Packs

- For syringes designated "RN"
- Needle length is 2"

RN Replacement Needles

Gauge	Pt. Style	Qty.	5-100µL Part No.	250µL-10mL Part No.
<i>RN Needles for 5µL — 100µL Syringes</i>				
22	2	6	7758-01	7779-01
22	3*	6	7770-02	7780-04
22	5	6	7784-06	7784-04
22s	2	6	7758-03	7779-03
22s	3*	6	7770-01	7780-03
22s	5	6	7784-05	7784-03
26	2	6	7758-04	7779-04
26	3	6	7768-02	7780-02
26	5	6	7784-08	7784-02
26s	2	6	7758-02	7779-02
26s	3	6	7768-01	7780-01
26s	5	6	7784-07	7784-01

*Compatible with Rheodyne® Valves.

Replacement Needles for HPLC Syringes

HPLC Replacement Needles

Gauge	Length	Pt. Style	For Valve	Qty.	Part No.
<i>RN Needles for 5µL — 100µL Syringes</i>					
22s	0.75"	3**	Valco®	6	7787-01
22s	2"	3*	Rheodyne®	6	7770-01
25s	1.97"	3***	Waters®	6	8647-01
<i>RN Needles for 250µL — 10mL Syringes</i>					
22	0.75"	3**	Valco®	6	7787-02
22	2"	3*	Rheodyne®	6	7780-04
22s	0.75"	3**	Valco®	3	76518
22s	2"	3*	Rheodyne®	6	7780-03
25s	1.97"	3***	Waters®	6	8648-01

CTFE Luer Hub Needles

22	2"	3*	Rheodyne®	6	90536
22s	2"	3*	Rheodyne®	6	90534

*Compatible with Rheodyne®, Beckman®/Altex, SSI, and Valco® Model VISF-2 Valves;

Compatible with Valco® Valves; *Compatible with Waters® Valves.

tech tip

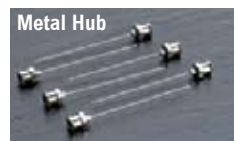
Needle Gauge vs. o.d.-i.d.

Gauge	o.d.		i.d.	
33	0.008"	0.2032mm	0.004"	0.1016mm
32	0.009"	0.2286mm	0.004"	0.1016mm
31	0.010"	0.2540mm	0.005"	0.1270mm
30	0.012"	0.3048mm	0.006"	0.1524mm
29	0.013"	0.3302mm	0.007"	0.1778mm
28	0.014"	0.3556mm	0.005"	0.1270mm
27	0.016"	0.4064mm	0.008"	0.2032mm
26s	0.0185"	0.4699mm	0.0045"	0.1143mm
26	0.018"	0.4572mm	0.010"	0.2540mm
25	0.020"	0.5080mm	0.010"	0.2540mm
24	0.022"	0.5588mm	0.012"	0.3048mm
23	0.025"	0.6350mm	0.013"	0.3302mm
22	0.028"	0.7112mm	0.016"	0.4064mm
22s	0.028"	0.7112mm	0.006"	0.1524mm
21	0.032"	0.8128mm	0.020"	0.5080mm
20	0.035"	0.8890mm	0.023"	0.5842mm
19	0.042"	1.0668mm	0.027"	0.6858mm
18	0.049"	1.2446mm	0.033"	0.8382mm
17	0.058"	1.4732mm	0.042"	1.0668mm
16	0.065"	1.6510mm	0.047"	1.1938mm
15	0.077"	1.9558mm	0.054"	1.3716mm

syringes

Standard Luer Hub Needles

- Will fit any luer or luer lock hub
- Needle length is 2"
- All needles are 304 SS



4797



4798

Standard Luer Hub Needles

Needle			Metal Hub	Kel-F® Hub
Gauge	Pt. Style	Qty.	Part No.	Part No.
16	2	6	N-716	KF-716
16	3	6	91016	90516
16	5	6	7729-12	7746-01
17	2	6	N-717	KF-717
17	3	6	910170	90517
17	5	6	7729-11	7746-02
18	2	6	N-718	KF-718
18	3	6	910180	90535
18	5	6	7729-10	7746-03
20	2	6	N-720	KF-720
20	3	6	910200	905200
20	5	6	7729-09	7746-04
21	2	6	N-721	KF-721
21	3	6	910210	90521
21	5	6	7729-08	7746-05
22	2	6	N-722	KF-722
22	3*	6	91022	90536
22	5	6	7729-07	7746-06
22s	2	6	N-722s	KF-722s
22s	3*	6	910380	90534
22s	5	6	7729-02	7746-11
23	2	6	—	KF-723
23	3	6	910230	90523
23	5	6	7729-06	7746-07
24	2	6	N-724	KF-724
24	3	6	91024	90524
24	5	6	7729-05	7746-08
25	2	6	N-725	KF-725
25	3	6	910250	90525
25	5	6	7729-04	7746-09
26	2	6	N-726	KF-726
26	3	6	91026	90533
26	5	6	7729-03	7746-10
26s	2	6	N-726s	KF-726s
26s	5	6	7729-01	7746-12

*Compatible with Rheodyne® Valves.

Metal Luer Needles

- Economical



5048

Metal Luer Needles

Description	Gauge	Length	Qty.	Part No.
<i>Beveled Point</i>				
Metal Luer	18	1.5"	12	90096
Metal Luer	22	1.5"	12	90100

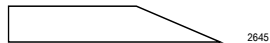
more info

For more replacement parts for Hamilton® Syringes, please visit our website.

VICI® Precision Syringes

Point Styles

Point Style 2



Gas Syringe Features					
Series	Pressure Rating	Removable Needle	Luer Needle	Valve Type	Plunger Stop
A	250psig	X		Twist-Lock	X
A-2	250psig	X	X	Push-Button	X

Series A Syringes

Gas Tight with a Twist Valve, 100µL to 10mL

- PTFE-tipped plunger and needle seal
- Twist valve stores sample in barrel



5041

Series A Syringes

Volume	Ndl. o.d.	Pt. Style	Repl. Needle	Part. No.
<i>Removable Needle Syringes, 2.25" Needle Length</i>				
100µL	0.029"	2	913050	010025
250µL	0.029"	2	913050	010031
500µL	0.029"	2	913050	010032
1mL	0.029"	2	913050	010033
2mL	0.029"	2	913050	010034
5mL	0.029"	2	913050	010035
10mL	0.029"	2	913050	010036

Series A-2 Syringes

Gas Tight with a Push Valve, 25µL to 10mL

- PTFE-tipped plunger and needle seal
- Push-button valve stores sample in barrel



5040



Series A-2 Syringes

Volume	Needle o.d.	Pt. Style	Repl. Needle	Part. No.
<i>Removable Needle Syringes, 2" Needle Length</i>				
25µL	0.028"	2	943050	050023
50µL	0.028"	2	943050	050024
100µL	0.028"	2	943050	050025
250µL	0.029"	2	943051	050031
500µL	0.029"	2	943051	050032
1mL	0.029"	2	943051	050033
2mL	0.029"	2	943051	050034
5mL	0.029"	2	943051	050035
10mL	0.029"	2	943051	050036
<i>Luer Syringes— Needle Supplied, 2" Needle Length</i>				
25µL	0.028"	2	943060	16014
50µL	0.028"	2	943060	16016
100µL	0.028"	2	943060	16018
250µL	0.028"	2	943061	16023
500µL	0.028"	2	943061	16025
1mL	0.028"	2	943061	16027
2mL	0.028"	2	943061	16029
5mL	0.028"	2	943061	16032
10mL	0.028"	2	943061	16034

VICI® Precision Replacement Parts

Replacement Plunger Tips and Needles

Replacement PTFE Plunger Tips

Description	Part No.
<i>For Series A and A-2 Syringes</i>	
100µL	16192
250µL	16194
500µL	013932
1mL	013933
2mL	013934
5mL	013935
10mL	013936

Replacement Needles 3/pk

Fit Models	Ndl. o.d.	Ndl. i.d.	Ndl. Lgth.	Pt. Style	Part. No.
<i>Removable Needles</i>					
A	0.029"	0.012"	2.25"	2	913050
	0.029"	0.012"	2.25"	3	913052
A-2	0.028"	0.005"	2"	2	943050
	0.029"	0.012"	2"	2	943051
	0.029"	0.012"	2"	3	943052
<i>Luer Needles</i>					
A-2	0.028"	0.006"	2"	2	943060
	0.028"	0.016"	2"	2	943061
	0.028"	0.016"	2"	3	943062

Mininert® Syringe Valves

- Add storage capability to standard syringes



5045

Mininert® Valves

Description	Part No.
To Fit Any Standard Luer Tip Syringes	654051

more info

For our full VICI® Precision offering, including replacement parts and other syringes not listed here, visit the product portion of our website.

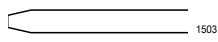
technical assistance

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

SGE® Syringes

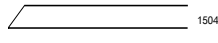
Point Styles

Point Style 1



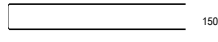
#1 Cone Needle Tip – Designed for autosamplers. Recommended for use with pre-drilled septa.

Point Style 2



#2 20° Bevel Needle Tip – Standard general purpose needle.

Point Style 3



#3 HPLC Needle Tip – 90° square cut with chamfered and polished edges. Use with HPLC valves.

Plunger Protection Syringes

General Purpose Syringes with Reinforced Plunger, 5µL and 10µL

- Includes certificate of conformance to NIST

SGE® Plunger Protection Syringes

Volume	Gauge	Length	Pt. Style	Repl. Needle	Qty.	Part No.
<i>Fixed Needle Syringes</i>						
5µL	26	5cm	2	None	ea	85184
10µL	26	5cm	2	None	ea	85056
10µL	26	5cm	2	None	6	85190
10µL	26	5cm	2	None	10	85400
<i>Removable Needle Syringes</i>						
5µL	26	5cm	2	85272	ea	85186
10µL	26	5cm	2	85294	ea	85050
10µL	26	5cm	2	85294	6	85194

Standard Syringes

General Purpose Syringes, 5µL and 10µL

- Includes certificate of conformance to NIST

SGE® Standard Syringes

Volume	Gauge	Length	Pt. Style	Repl. Needle	Qty.	Part No.
<i>Fixed Needle Syringes for Use with Merlin Microseal®</i>						
5µL	23	4.2cm	1	None	ea	85005
10µL	23	4.2cm	1	None	ea	85003
<i>Fixed Needle Syringes</i>						
25µL	25	5cm	2	None	ea	85058
50µL	25	5cm	2	None	ea	85002
100µL	25	5cm	2	None	ea	85012
250µL	25	5cm	2	None	ea	85060
500µL	25	5cm	2	None	ea	85062
<i>Removable Needle Syringes</i>						
25µL	25	5cm	2	85274	ea	85164
50µL	25	5cm	2	85274	ea	85008
100µL	25	5cm	2	85274	ea	85006
250µL	25	5cm	2	85274	ea	85052
500µL	25	5cm	2	85274	ea	85054

more info

For our full SGE® offering, visit the product portion of our website.

SuperfleX™ Syringes

Syringes with Flexible Plungers, 5µL and 10µL

- Includes plunger protection guide



4913

SGE® SuperfleX™ Syringes

Volume	Gauge	Length	Pt. Style	Repl. Needle	Qty.	Part No.
<i>Fixed Needle Syringes</i>						
5µL	26	5cm	2	None	ea	85196
10µL	26	5cm	2	None	ea	85206
10µL	26	5cm	2	None	6	85208
10µL	26	7cm	2	None	ea	85185
<i>Removable Needle Syringes</i>						
5µL	26	5cm	2	85272	ea	85200
10µL	26	5cm	2	85294	ea	85210
10µL	26	5cm	2	85294	6	85212

NIST Syringes

NIST and NBS Traceable, 5µL to 500µL

- Includes certificate of calibration



4905

SGE® Factory Calibrated Syringes

Volume	Gauge	Length	Pt. Style	Repl. Needle	Part No.
<i>Fixed Needle Syringes with Repeating Adapter</i>					
5µL	26	5cm	2	None	85015
10µL	26	5cm	2	None	85017
25µL	22	5cm	3	None	85023
50µL	25	5cm	2	None	85025
100µL	25	5cm	2	None	85027

Guided Plunger Syringes

Extended Barrel Syringes, 5µL and 10µL

- Reinforced plunger



4901

SGE® Guided Plunger Syringes

Volume	Gauge	Length	Pt. Style	Repl. Needle	Part No.
<i>Fixed Needle Syringes</i>					
5µL	26	5cm	2	None	85022
10µL	26	5cm	2	None	85038
<i>Removable Needle Syringes</i>					
5µL	26	5cm	2	85272	85016
10µL	26	5cm	2	85294	85018
10µL	26	7cm	2	85163	85159

SGE® Syringes

Gas Tight Syringes

Gas and Liquid Tight,
10µL to 100mL

- Replaceable PTFE-tipped plunger



SGE® Gas Tight Syringes (Needles sold separately, see page 346)

Volume	Needle o.d.	Length	Pt. Style	Part No.
<i>Fixed Luer Lock</i>				
50µL	—	—	—	85357
100µL	—	—	—	85359
250µL	—	—	—	85361
500µL	—	—	—	85363
1mL	—	—	—	85080
2.5mL	—	—	—	85123
<i>Removable Luer Lock</i>				
5mL	—	—	—	85088
10mL	—	—	—	85092
25mL	—	—	—	85125
50mL	—	—	—	85096
100mL	—	—	—	85098
<i>Luer Lock with Valve</i>				
1mL	—	—	—	85127
2.5mL	—	—	—	85131
5mL	—	—	—	85133
10mL	—	—	—	85135
20mL	—	—	—	85137
50mL	—	—	—	85139
100mL	—	—	—	85143

SGE® Gas Tight Syringes, Needles included

Volume	Gauge	Length	Pt. Style	Repl. Needle	Part No.
<i>Fixed Needle</i>					
10µL	26	5cm	2	None	85064
10µL	26	7cm	2	None	85066
25µL	25	5cm	2	None	85321
50µL	25	5cm	2	None	85323
100µL	25	5cm	2	None	85325
250µL	25	5cm	2	None	85327
500µL	25	5cm	2	None	85329
<i>Removable Needle</i>					
10µL	26	5cm	2	85294	85004
25µL	25	5cm	2	85274	85331
50µL	25	5cm	2	85274	85070
100µL	25	5cm	2	85274	85072
250µL	25	5cm	2	85274	85074
500µL	25	5cm	2	85274	85076
1mL	23	5cm	2	85276	85078
2.5mL	23	5cm	2	85276	85117
5mL	23	5cm	2	85278	85086
10mL	23	5cm	2	85278	85090

Repeating Adapters

- Preset to any desired volume



SGE® Repeating Adapters

Description	Part No.
RA-6 for 0.5, 5, 10µL Syringes	85263
RA-8 for 25-500µL Syringes	85265

Autosampler Syringes



SGE® Autosampler Syringes

Volume	Gauge	Pt. Style	Repl. Needle	Qty.	Part No.
<i>for Agilent 7673 Autosamplers</i>					
<i>Fixed Needle</i>					
5µL	23	1	None	ea	85014
5µL	23	1	None	6	85140
5µL	26	1	None	ea	85136
5µL	26	1	None	6	85138
10µL	23	1	None	ea	85144
10µL	23	1	None	6	85036
10µL	26	1	None	ea	85142
10µL	26	1	None	6	85034
<i>Removable Needle</i>					
0.5µL	23	1	85292	ea	85134
0.5µL	26	1	85262	ea	85132
5µL	23	1	85298	ea	85248
5µL	26	1	85296	ea	85394
10µL	23	1	85302	ea	85148
10µL	26	1	85300	ea	85146
25µL	23	1	85040	ea	85047
50µL	23	1	85040	ea	85416
<i>for PerkinElmer® Autosystem</i>					
<i>Fixed Needle</i>					
5µL	23	1	None	ea	85069
5µL	26	1	None	ea	85067
50µL	23	1	None	ea	85419
<i>Gas Tight Fixed Needle</i>					
5µL	23	1	None	ea	85160
5µL	26	1	None	ea	85158
<i>Removable Needle</i>					
0.5µL	23	1	85308	ea	85156
0.5µL	26	1	85306	ea	85154
<i>for Shimadzu® Autosamplers</i>					
<i>Models AOC14 and 17—Removable Needle</i>					
0.5µL	26	1	85312	ea	85166
10µL	26	1	85316	ea	85172
<i>for Varian® Autosamplers</i>					
<i>Model 8000—Removable Needle</i>					
10µL	25	5	85167	ea	85176
<i>Models 8035, 8100, 8200—Removable Needle</i>					
10µL	25	5	85173	ea	85180
<i>for CTC/Fisons AS200 and AS800 Autosamplers</i>					
<i>Fixed Needle (50mm)</i>					
10µL	26	1	None	ea	85297
25µL	26	1	None	ea	85401
<i>Fixed Needle (80mm)</i>					
10µL	26	1	None	ea	85398
<i>Gas Tight Fixed Needle (50mm)</i>					
10µL	23	1	None	ea	85399
25µL	23	1	None	ea	85402

SGE® Syringes

Micro Syringes

- Plunger-in-needle, 0.5µL to 5µL
- Liquid and gas tight to 650 atmospheres*

SGE® Microvolume Syringes

Volume	Gauge	Length	Pt. Style	Repl. Needle/Plunger	Part No.
<i>Standard Barrel—8mm o.d.</i>					
0.5µL	23	7cm	1	85266	85028
0.5µL	23	7cm	2	85235	85209
0.5µL	26	7cm	1	85237	85039
1µL	23	5cm	1	85268	85000
1µL	23	7cm	1	85284	85030
1µL	23	7cm	2	85243	85211
1µL	26	7cm	1	85245	85213
5µL	23	5cm	1	85247	85215
5µL	23	7cm	1	85270	85032
5µL	23	7cm	2	85253	85217
<i>Standard Barrel with Repeating Adapter</i>					
0.5µL	23	7cm	1	85266	85219
1µL	23	5cm	1	85268	85223
1µL	23	7cm	1	85284	85225
1µL	26	7cm	1	85245	85227
5µL	23	5cm	1	85247	85229
5µL	23	7cm	1	85270	85231

*Use a repeating adapter to prevent plunger blow-out at elevated pressures.

HPLC Syringes

- Syringes and needles sold separately



SGE® HPLC Syringes

Volume	Gauge	Length	Pt. Style	Part No.
<i>Luer Lock Syringes</i>				
1mL	—	—	—	85080
2.5mL	—	—	—	85123
5mL	—	—	—	85088
10mL	—	—	—	85092
25mL	—	—	—	85125
<i>HPLC Injector Specific Luer Lock Needles (2/pk)</i>				
For Rheodyne®/Valco®	22	2"	3	85151
For Waters® U6K	24	1.97"	3	85153

On-Column Syringes

- 0.5µL to 10µL



SGE® On-Column Syringes

Volume	Needle o.d.	Length	Repl. Needle	Part No.
<i>On-Column Syringes, Fused Silica Needles</i>				
5µL	0.17mm	10cm	85365	85382
10µL	0.17mm	10cm	85367	85384
<i>For 0.53mm i.d. Capillary Column, Stainless Steel Needles</i>				
0.5µL	0.47mm	7cm	85237	85039
1µL	0.47mm	7cm	85245	85213

SGE® Accessories

Syringe Valves



Model VLL — Connect to any SGE® removable needle syringe 25µL–2.5mL. Luer lock fitting cone with Kel-F® core.

Model VLLMA — Designed specifically for the SGE® larger capacity luer lock syringes 5mL–100mL.

Model SLLV — Can be fitted to any luer lock or luer tip syringe or device.

SGE® Retro-Fit Syringe Valves, Use Luer Hub Needles

Description	Part No.
Model VLL	85043
Model VLLMA	85049
Model SVLL	85055

Replacement Needles

SGE® Replacement Needles

SGE No.	o.d.	Needle Length	Style	Qty.	Part No.
<i>For 5µL Syringes</i>					
036110	0.47mm	5cm	2	5	85272
036710	0.47mm	4.2cm	1	2	85296
036720	0.63mm	4.2cm	1	2	85298
<i>For 10µL Syringes</i>					
037011	0.63mm	5cm	1	2	85364
037110	0.47mm	5cm	2	5	85294
037715	0.47mm	4.2cm	1	2	85300
037736	0.47mm	5cm	1	2	85197
037745	0.47mm	5cm	1	2	85316
037747	0.63mm	5cm	1	2	85334
037785	0.47mm	5cm	1	2	85317
<i>For 25–500µL Syringes</i>					
038110	0.5mm	5cm	2	5	85274
038250	0.028"	2"	3	5	85332
038260	0.5mm	5cm	3	5	85338
038810	0.63mm	5cm	1	ea	85377
<i>For 1–2.5mL Syringes</i>					
039110	0.63mm	5cm	2	5	85276
<i>For 5–10mL Syringes</i>					
031516	0.63mm	5cm	2	5	85278
<i>For Luer Lock and Luer Tip Syringes</i>					
039802	0.63mm	5cm	2	5	85287
039803	0.63mm	5cm	5	2	85145
039822	1.07mm	5cm	2	5	85289
039823	1.07mm	5cm	5	2	85147
039862	1.67mm	5cm	2	5	85149
039895	0.028"	2"	3	2	85151
039897	0.5mm	5cm	3	2	85153
<i>On-Column Needles</i>					
036675	0.23mm	7.5cm	1	2	85369
036625	0.17mm	11cm	1	2	85373

Popper Glass Syringes

- All-glass plunger and barrel
- Corrosion and heat resistant
- Flat flanges prevent rolling
- Needles sold separately



5046

Interchangeable Glass Syringes

Description	Qty.	Part No.
<i>Glass Male Luer Tip</i>		
2cc Volume	ea	3663
5cc Volume	ea	3972
10cc Volume	ea	3979
20cc Volume	ea	3984
30cc Volume	ea	3989
50cc Volume	ea	3991
<i>Metal Male Luer Lock</i>		
2cc Volume	ea	3393
5cc Volume	ea	3394
10cc Volume	ea	3395
20cc Volume	ea	3396
30cc Volume	ea	3369
50cc Volume	ea	3397



5047

Serial Numbered Glass Syringes

Description	Qty.	Part No.
<i>Glass Male Luer Tip</i>		
2cc Volume	ea	4687
5cc Volume	ea	4691
10cc Volume	ea	4693
20cc Volume	ea	4697
50cc Volume	ea	4707
100cc Volume	ea	4709
<i>Metal Male Luer Lock</i>		
1cc Volume	ea	4694
2cc Volume	ea	4696
5cc Volume	ea	4706
10cc Volume	ea	4708
20cc Volume	ea	4710
50cc Volume	ea	4714



4798

more info

Use needles on page 342 with Popper Syringes.

Syringe Accessories

Redi-Cut Fine Wires

- Rust-proof stainless steel



4670

Redi-Cut Fine Wires and Handle

Description	Part No.
Redi-Cut Fine Wires, 10 each of diameters 0.003", 0.005", 0.010", 0.020"	4046
Handle	8184

Syringe Cleaning Solutions

- Syringe Kleen removes metal deposits from metal plungers
- SK-2 soaking solution for hard-to-remove silicones and organic residues



4671

Cleaning Solutions

Description	Part No.
Syringe Kleen, 8oz	2030
Syringe Kleen, 4 Bottles/pk	20304
SK-2, 8oz	2040
SK-2, 6 Bottles/pk	20406

Needle Sharpener

- Protect GC septa by sharpening needle in groove



4674

Needle Sharpener

Description	Part No.
Needle Sharpener	2033

Plastic Syringes

- Use luer hub needles—sold separately (refer to page 342)



4675

Plastic Syringes

Description	Qty.	Part No.
<i>Plastic Syringes with a Luer Tip</i>		
1mL Syringe	12	44701100
5mL Syringe	12	447012
20mL Syringe	2	447018