



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	Hamilton 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	SGE 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	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	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	F	23-26	42 mm	Cone	10F-HP-0.63/0.47	002821	ea.	21212
10 µL	F	23-26	42 mm	Cone	SK-10F-HP-0.63/0.47	002822	6-pk.	21215
<b>Large Volume</b>								
50 µL	R	23	42 mm	Cone	50R-HP-0.63	004665	ea.	24799

## Gas-Tight PTFE-Tipped Syringes

for Agilent 7673, 7683, 7693A, and 6850 Autosamplers

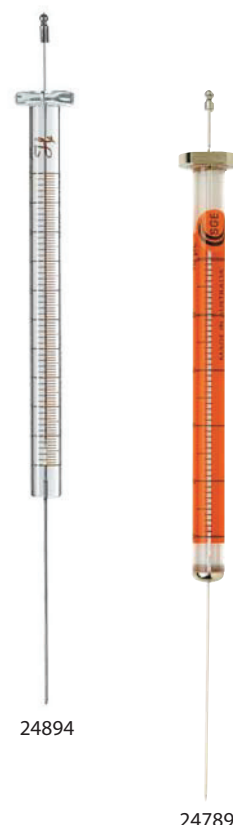
Hamilton

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	F	23-26	42 mm	Cone	10F-AG-GT-0.63/0.47C	002826	ea.	22256
10 µL	R	23-26	42 mm	Cone	10R-HP-GT-0.63/0.47	002829	ea.	21220

NEW!



24894

24789

## 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.

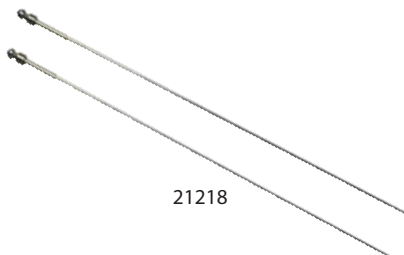
### Guide to Needle Termination Codes

#### 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

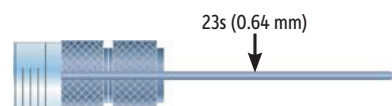
SGE

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

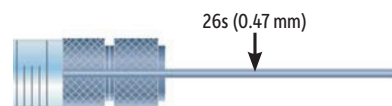
#### Single Gauge Needle (23s)

- 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.



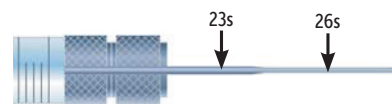
#### Single Gauge Needle (26s)

- 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.



Precision in all we do ensures quality for you.

### 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	374
5181-1273	21210, 24593	5 µL Standard Syringe, Fixed Needle, 23-26 Gauge	374
5181-3319	20166	Needle for 10 µL Standard Syringe, 23-26 Gauge	375
5181-3321	24598	10 µL Standard Syringe, Removable Needle, 23-26 Gauge	374
5181-3358	24919	PTFE-Tipped Plunger for 10 µL Standard Syringe, Removable Needle	390
5181-3360	21215, 24600	10 µL Standard Syringe, Fixed Needle, 23-26 Gauge (6-pk.)	374
5181-3365	21218	PTFE-Tipped Plunger for 10 µL Standard Syringe, Fixed Needle	376
5181-8809	24894, 24789	10 µL Gas-tight Syringe, Fixed Needle, 23 Gauge	375
5181-8811	20164, 24825	Needle for 10 µL Gas-tight Syringe, 23 Gauge	375
5181-8813	21224	10 µL Gas-tight Syringe, Removable Needle, 23 Gauge	375
5182-0830	24821	Needle for 0.5 µL Standard Syringe, 23 Gauge	375
5182-0832	20166	Needle for 5-10 µL Autosampler Syringe, 23-26 Gauge	375
5182-0834	20172	5 µL Standard Syringe, Removable Needle, 23 Gauge	374
5182-0835	21223	5 µL Standard Syringe, Removable Needle, 23-26 Gauge	374
5182-0875	20170, 24783	5 µL Standard Syringe, Fixed Needle, 23 Gauge (6-pk.)	374
9301-0713	20167, 24785	10 µL Standard Syringe, Fixed Needle, 23 Gauge	374
9301-0714	24595, 24784	10 µL Standard Syringe, Fixed Needle, 26 Gauge	374
9301-0725	20169, 24787	10 µL Standard Syringe, Fixed Needle, 23 Gauge (6-pk.)	374
9301-0891	24592, 24780	5 µL Standard Syringe, Fixed Needle, 26 Gauge	374
9301-0892	20168, 24781	5 µL Standard Syringe, Fixed Needle, 23 Gauge	374

### 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.



22226

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.



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