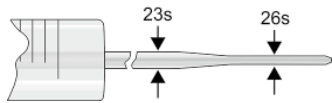


Technical Syringe Information

23s-26s Dual Gauge Tapered Needle



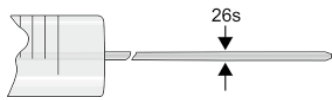
- ⇒ Split/splitless or on-column injections
- ⇒ Versatility without sacrificing durability
- ⇒ More solid needle than regular 26s
- ⇒ Minimizes septum abrasion

23s Gauge Needle



- ⇒ Most durable needle
- ⇒ Merlin Microseal™ and standard septum injections
- ⇒ Packed column injections
- ⇒ Split/splitless injections

26s Gauge Needle



- ⇒ Fine gauge offers versatility
- ⇒ On-column injections
- ⇒ Split/splitless injections

Gauge Index Table

Gauge	Nominal O.D. mm*	Nominal O.D. mm*	Wall Thickness mm*	Volume µL/Inch
26s	0.474	0.127	0.35	0.322
26	0.464	0.260	0.20	1.349
25s	0.515	0.153	0.36	0.464
25	0.515	0.260	0.25	1.349
24	0.566	0.311	0.25	1.930
23s	0.642	0.116	0.53	0.268
23	0.642	0.337	0.30	2.266
22s	0.718	0.168	0.55	0.563
22	0.718	0.413	0.30	3.403
21	0.819	0.514	0.30	5.271
20	0.908	0.603	0.30	7.255
19	1.067	0.686	0.38	9.389

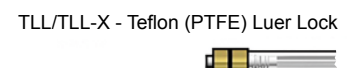
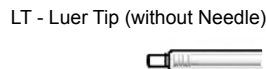
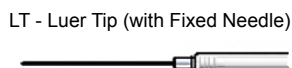
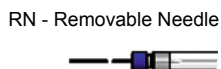
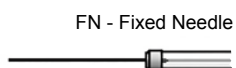
*mm are nominal

Plunger Tips

- PE-HD - with better durability than virginal PTFE when working with saline solution
- PTFE - gas tight sealing of the plunger tip, for most solvents and chemicals
- PTFE NUB - PTFE compound with highest durability and chemical resistant combined with low electrostatic effects
- SS-Gold coated * - Gold coated stainless steel, developed for use with aggressive solvents (e.g. strong acids)

*regular SS plunger syringes are available as gold coated version on request

Syringe Terminations



Needle Tip Styles

Tip Style	Diagram	Description	SGE	Hamilton
Tip Style AS and c		Special conical needle recommended for septum penetration (Autosampler Type).	1	AS
Tip Style a		Beveled needle is recommended for life science applications.	2	4
Tip Style b		Blunt needle for use with HPLC Injection valves and for sample pipetting.	3	3
Tip Style d		Conical needle with side port is recommended for penetration of septa, thin-gauged vinyls and plastics without coring (Headspace GC).	5	5

Agilent GC Autosampler Syringes



Part No.	Volume	Plunger Type	Qty.	Needle	OD (Gauge)
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Microsyringes 0.5µl-1µl - Point Style AS, Needle Length 42mm - Removable Needle

SET-3030151	0.5µl	SS (In Needle)	ea.	RN	0.64mm (23s)
SET-3030152	1µl	SS (In Needle)	ea.	RN	0.64mm (23s)

Microsyringes 5µl-100µl - Point Style AS, Needle Length 42 - Fixed Needle

SET-3030128	5µl	SS	ea.	FN	0.64mm (23s)
SET-3030133	5µl	SS	pk.6	FN	0.64mm (23s)
SET-3030127	5µl	SS	ea.	FN	0.64-0.47mm (23s-26s)
SET-3030132	5µl	SS	pk.6	FN	0.64-0.47mm (23s-26s)
SET-3030126	5µl	SS	ea.	FN	0.47mm (26s)
SET-3030131	5µl	SS	pk.6	FN	0.47mm (26s)
SET-3030136	10µl	SS	ea.	FN	0.64mm (23s)
SET-3030141	10µl	SS	pk.6	FN	0.64mm (23s)
SET-3030135	10µl	SS	ea.	FN	0.64-0.47mm (23s-26s)
SET-3030140	10µl	SS	pk.6	FN	0.64-0.47mm (23s-26s)
SET-3030134	10µl	SS	ea.	FN	0.47mm (26s)
SET-3030139	10µl	SS	pk.6	FN	0.47mm (26s)
SET-3030163	10µl	PTFE	ea.	FN	0.47mm (26s)
SET-3030167	10µl	PTFE	pk.6	FN	0.47mm (26s)
SET-3030164	10µl	PTFE	ea.	FN	0.64-0.47mm (23s-26s)
SET-3030168	10µl	PTFE	pk.6	FN	0.64-0.47mm (23s-26s)
SET-3030169	25µl	PTFE	ea.	FN	0.64mm (23s)
SET-3030170	50µl	PTFE	ea.	FN	0.64mm (23s)
SET-3030171	100µl	PTFE	ea.	FN	0.64mm (23s)
SET-3030174	25µl	PTFE	ea.	FN	0.64-0.47mm (23s-26s)
SET-3030175	50µl	PTFE	ea.	FN	0.64-0.47mm (23s-26s)
SET-3030176	100µl	PTFE	ea.	FN	0.64-0.47mm (23s-26s)

Microsyringes 5µl-10µl - Point Style AS, Needle Length 42mm - Removable Needle

SET-3030129	5µl	SS	ea.	RN	0.47mm (26s)
SET-3030130	5µl	SS	ea.	RN	0.64-0.47mm (23s-26s)
SET-3030138	10µl	SS	ea.	RN	0.64mm (23s)
SET-3030137	10µl	SS	ea.	RN	0.64-0.47mm (23s-26s)
SET-3030166	10µl	PTFE	ea.	RN	0.64mm (23s)
SET-3030165	10µl	PTFE	ea.	RN	0.64-0.47mm (23s-26s)

L-MARK® CTC PAL 2 LC Autosampler Syringes



Part No.	Volume	Plunger Type	Qty.	Needle	OD (Gauge)
Microsyringes 10µl-5ml - Point Style b, Needle Length 51mm - Type LC					
SET-LMK.2106424	10µl	SS	ea.	FN	0.72mm (G22s)
SET-LMK.2606416	10µl	PTFE	ea.	FN	0.72mm (G22s) with knop
SET-LMK.2620517	25µl	PTFE	ea.	FN	0.72mm (G22s)
SET-LMK.2620517-2P	25µl	PTFE	pk.2	FN	0.72mm (G22s)
SET-LMK.2620517-6P	25µl	PTFE	pk.6	FN	0.72mm (G22s)
SET-LMK.2620615	50µl	PTFE	ea.	FN	0.72mm (G22)
SET-LMK.2620615-2P	50µl	PTFE	pk.2	FN	0.72mm (G22)
SET-LMK.2620615-6P	50µl	PTFE	pk.6	FN	0.72mm (G22)
SET-LMK.2620719	100µl	PTFE	ea.	FN	0.72mm (G22s)
SET-LMK.2620719-2P	100µl	PTFE	pk.2	FN	0.72mm (G22s)
SET-LMK.2620719-6P	100µl	PTFE	pk.6	FN	0.72mm (G22s)
SET-LMK.2620721	100µl	PTFE	ea.	FN	0.72mm (G22)
SET-LMK.2620721-2P	100µl	PTFE	pk.2	FN	0.72mm (G22)
SET-LMK.2620721-6P	100µl	PTFE	pk.6	FN	0.72mm (G22)
SET-LMK.2620821	250µl	PTFE	ea.	FN	0.72mm (G22s)
SET-LMK.2620908	500µl	PTFE	ea.	FN ¹⁾	0.72mm (G22)
SET-LMK.2620011	1ml	PTFE LT	ea.	FN ²⁾	0.72mm (G22)
SET-LMK.2620054	5ml	PTFE LT	ea.	FN ²⁾	1.1mm (G19)

1) Needle Length 56mm

2) Needle Length 57mm

L-MARK® CTC Combi PAL GC Autosampler Syringes

Microsyringes 1.2µl-500µl - Point Style AS, Needle Length 51mm - Type GC

SET-LMK.2220001	1.2µl	SS	ea.	FN	0.48mm (G26P)
SET-LMK.2220001-6P	1.2µl	SS	pk.6	FN	0.48mm (G26P)
SET-LMK.2106303	5µl	SS	ea.	FN	0.64mm (G23s)
SET-LMK.2106302	5µl	SS	ea.	FN	0.47mm (G26s)
SET-LMK.2106403	10µl	SS	ea.	FN	0.64mm (G23s)
SET-LMK.2106426	10µl	SS	ea.	FN	0.64-0.47mm (23s-26s)
SET-LMK.2106416	10µl	SS	ea.	FN	0.47mm (G26s)
SET-LMK.2106416-2P	10µl	SS	pk.2	FN	0.47mm (G26s)
SET-LMK.2106416-6P	10µl	SS	pk.6	FN	0.47mm (G26s)
SET-LMK.2606407	10µl	PTFE	ea.	FN	0.47mm (G26s)
SET-LMK.2606403	10µl	PTFE	ea.	FN	0.64mm (G23s)
SET-LMK.2620706	100µl	PTFE	ea.	FN	0.47mm (G26s)
SET-LMK.2620706-2P	100µl	PTFE	pk.2	FN	0.47mm (G26s)
SET-LMK.2620706-6P	100µl	PTFE	pk.6	FN	0.47mm (G26s)
SET-LMK.2620803	250µl	PTFE	ea.	FN	0.47mm (G26)
SET-LMK.2620903	500µl	PTFE	ea.	FN	0.47mm (G26)

L-MARK® CTC PAL 3/RTC Autosampler Syringes



made
 in
 Germany

Part No.	Volume	Plunger Type	Qty.	Needle	OD (Gauge)
Microsyringes 10µl-1ml - Point Style AS, Needle Length 57mm - Type GC					
SET-LMK.2116405	10µl	SS D7	ea.	FN	0.64mm (23s)
SET-LMK.2116404	10µl	SS D7	ea.	FN	0.47mm (26s)
SET-LMK.2116406	10µl	SS D7	ea.	FN ¹⁾	0.47mm (26s)
SET-LMK.2616405	10µl	PTFE D7	ea.	FN	0.64mm (23s)
SET-LMK.2616404	10µl	PTFE D7	ea.	FN	0.47mm (26s)
SET-LMK.2616703	100µl	PTFE D7	ea.	FN	0.47mm (26s)
SET-LMK.2616803	250µl	PTFE	ea.	FN	0.47mm (26s)
SET-LMK.2616804	250µl	PTFE	ea.	FN ¹⁾	0.47mm (26s)
SET-LMK.2616003	1ml	PTFE	ea.	FN	0.64mm (23s)

¹⁾ Needle Length 85mm

Microsyringes 10µl-1ml - Point Style b, Needle Length 57mm - Type LC

SET-LMK.2616422	10µl	PTFE	ea.	FN	0.72mm (G22s)
SET-LMK.2616502C	25µl	PTFE	ea.	FN	0.72mm (G22s) coated ²⁾
SET-LMK.2616702C	100µl	PTFE	ea.	FN	0.72mm (G22s) coated ²⁾
SET-LMK.2616704C	100µl	PTFE	ea.	FN	0.72mm (G22) coated ²⁾
SET-LMK.2616822	250µl	PTFE	ea.	FN	0.72mm (G22s)
SET-LMK.2616922	500µl	PTFE	ea.	FN	0.72mm (G22s)
SET-LMK.2616012	1ml	PTFE	ea.	FN	0.72mm (G22s)

²⁾ hydrophobic, oleophobic coated syringe needle

Spark Holland Autosampler Syringes

The Spark Holland Autosampler Syringes work with the following manufacturers autosamplers:

- Spark Holland Midas, Triathlon, Endurance and Alias
 - Antec AS 100 and AS 110
 - Dionex ESA Model 542, 540 and 540MT
- Beckmann Coulter 508
 - Grace/Alltech Model 580
 - Agilent Pro Star

Part No.	Volume	Plunger Type	Qty.	Syringe Termination
SET-3010083	25µl	PTFE	ea.	1/4"-28 UNF
SET-3010084	50µl	PTFE	ea.	1/4"-28 UNF
SET-3010085	100µl	PTFE	ea.	1/4"-28 UNF
SET-3010086	250µl	PTFE	ea.	1/4"-28 UNF
SET-3010087	500µl	PTFE	ea.	1/4"-28 UNF
SET-3010088	1ml	PTFE	ea.	1/4"-28 UNF
SET-3010089	2.5ml	PTFE	ea.	1/4"-28 UNF