



GENERAL CHROMATOGRAPHY

Your Essential Resource for Supplies

The Measure of Confidence



Agilent Technologies

Agilent Syringes

With a broad selection of syringes for manual and auto injectors, Agilent has what you need for accurate and effective sampling.

Whether you need an autosampler or manual syringe, there are two keys to choosing the right syringe – identifying your sample type and establishing the smallest volume to be dispensed or injected. Agilent offers two varieties of syringes.

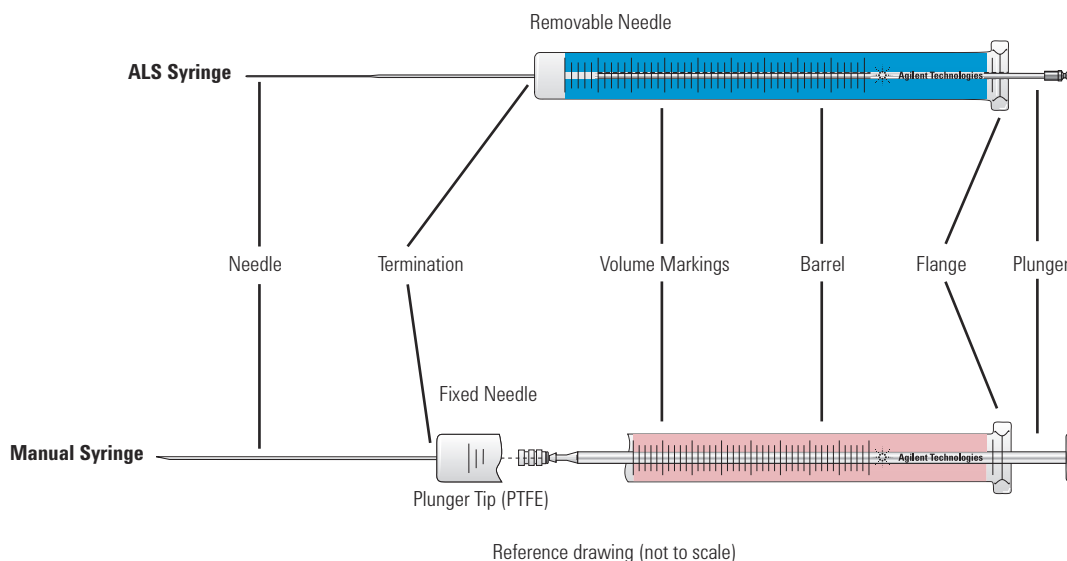
PTFE-Tipped Syringes for Gases and Liquids

PTFE-tipped syringes have a precision-machined plunger tip that forms a tight seal and enables the tip to wipe the barrel's interior free of sample during operation. This feature is particularly useful for viscous or heterogeneous samples, because it reduces deposits that can cause the plunger to freeze. Replacement plunger assemblies are available for most PTFE-tipped syringes.

Fitted Plunger Syringes for Liquids

Fitted plunger syringes feature a stainless steel plunger that is meticulously hand-fitted to its matching glass barrel, creating a liquid-tight seal. These syringes are ideal for homogenous samples that are not prone to precipitation or bonding with glass. **Note:** plungers cannot be interchanged or replaced if damaged.

Syringe Features



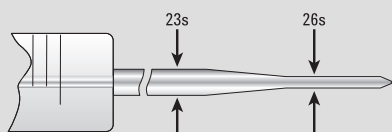
Needle Gauge

Needle gauge is the thickness of the needle. The gauge depends on the injector. When selecting a needle gauge, it is important to keep in mind the volume of the syringe and the dead volume of the needle. Refer to the chart below to choose a needle gauge with an appropriate dimension before selecting a needle.



Typical Needle Gauge Dimensions

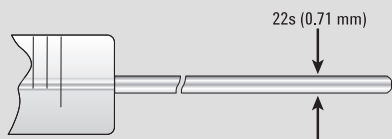
Gauge	OD		ID	
	mm	inches	mm	inches
22	0.71	0.028	0.41	0.016
23s	0.635	0.025	0.11	0.0045
25	0.50	0.020	0.20	0.008
26s	0.47	0.0184	0.11	0.0045



Tapered Dual Gauge 23-26 or 23s-26s (0.64-0.47 mm)

Durability of a 23-gauge

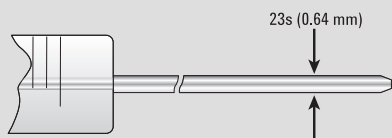
Versatility of a 26-gauge for split/splitless and on-column injection



Single Gauge 22 (0.71 mm)

HPLC valves

Pipetting liquids

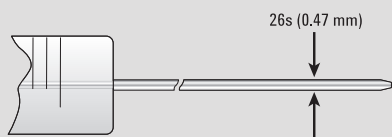


Single Gauge 23 or 23s (0.64 mm)

Merlin Microseal septa

Packed column injector ports

Split/splitless injector ports



Single Gauge 26 or 26s (0.47 mm)

Packed column injector ports

Split/splitless injector ports

Note: Needles with an 'S' following the gauge are more durable, with a thicker needle wall and smaller id bore.

Needle Termination

Needle terminations are available in fixed or removable, with various tip styles:

- **Fixed (cemented)** – Economical, reproducible injections for autosamplers
- **Removable needle** – One syringe fixed – many methods, simplicity of fixed needle, but needle can be replaced if damaged or clogged
- **Luer tip** – Easy, fast needle replacement, syringe filter or pump priming, Luer tip is ground glass suitable for mounting chromatographic or PTFE needles, syringes can be autoclaved (without plunger or needle)
- **Luer Lok** – Security of a locked needle, syringe filter or pump priming, PTFE, male Luer taper with nickel-plated brass locking hub for use with KEL-F or metal hub needles and universal connectors

Needle Tip Design



HP Tip
(also referred to as
Cone or Point Style AS)

Proprietary design required for Agilent autosamplers for optimal performance and reliability by reducing septum coring.



Bevel Tip
(Point Style 2, BV)

General purpose; excellent choice for transferring liquids from ampoules or vials. For manual GC injections, a beveled tip is preferred for optimum septum penetration and to prevent septum coring.



LC Tip
(Point Style 3)

For HPLC injections and sample pipetting, the blunt tip style 3 is preferred. The blunt tip has chamfered and polished edges that eliminate damage to the valve's rotor seal and stator face. This style can also be used for pipetting liquids.



Side Hole
(Point Style 5)

Recommended for thin gauged septa or large volume injections.

Autosampler Syringes

Premium autosampler syringes optimize system productivity and ensure precise sample handling

Agilent Blue Line Autosampler Syringes for 7693A ALS

Agilent blue line autosampler syringes are specifically designed to support the higher productivity features of the 7693A ALS, while increasing plunger life and reducing costly downtime. Backed by over 40 years of chromatography experience, these meticulously crafted syringes offer:

- Wider range of volumes including exclusive 250 and 500 μL syringes for sample enhancement with the new 7693A
- Precise match with your autosampler's stroking mechanism, resulting in more accurate volume delivered
- Smooth needle that reduces septum coring and keeps your system working at its full potential
- Choice of PTFE-tipped or metal fitted plunger to meet application needs
- Easy-open, environmentally friendly packaging
- Certified compliance with strict Agilent specifications



Blue line autosampler syringe shown in 7693A ALS, G4513-80204

TIPS & TOOLS

Order your free GC troubleshooting and GC column installation posters at www.agilent.com/chem/GCposteroffer



Blue Line Autosampler Syringes with Fitted Plungers

Fitted plunger syringes are recommended for homogeneous liquid samples. Each fitted syringe is individually matched with the plunger for precision injection. Plungers are not interchangeable or replaceable.



Blue line autosampler syringe, G4513-80205



Blue line autosampler syringe, G4513-80204

Blue Line Autosampler Syringes with Fitted Plungers

Volume (µL)	Description	Unit	Needle Gauge/Length (mm)/Tip	Part No.
1	Plunger in needle, fixed		23/42/cone tipped	G4513-80229
	Replacement needle/plunger			G4513-80240
2	Plunger in needle, fixed		23/42/cone tipped	G4513-80215
	Replacement needle/plunger			G4513-80239
5	Straight, fixed		23/42/HP	G4513-80213
	Straight, fixed	6/pk	23/42/HP	G4513-80205
	Straight, fixed		26s/42/HP	G4513-80226
	Straight, fixed	6/pk	26s/42/HP	G4513-80212
	Tapered, fixed		23-26s/42/HP	G4513-80206
	Tapered, fixed	6/pk	23-26s/42/HP	G4513-80201
	Straight, removable		23/42/HP	G4513-80234
	Replacement needle	3/pk	23/42/HP	G4513-80236
	Tapered, removable		23-26s/42/HP	G4513-80224
	Replacement needle	3/pk	23-26/42/HP	G4513-80225
10	Straight, fixed		23/42/HP	G4513-80209
	Straight, fixed	6/pk	23/42/HP	G4513-80202
	Straight, fixed		26s/42/HP	G4513-80216
	Straight, fixed	6/pk	26s/42/HP	G4513-80211
	Tapered, fixed		23-26s/42/HP	G4513-80204
	Tapered, fixed	6/pk	23-26s/42/HP	G4513-80200
	Straight, removable		23/42/HP	G4513-80235
	Replacement needle	3/pk	23/42/HP	G4513-80236
	Removable		23-26s/42/HP	G4513-80218
	Replacement needle	3/pk	23-26/42/HP	G4513-80225
25	Tapered, fixed		23-26/42/HP	G4513-80242
50	Tapered, fixed		23-26/42/HP	G4513-80244
100	Tapered, fixed		23-26/42/HP	G4513-80243

Blue Line Autosampler Syringes with PTFE-Tipped Plungers

Suitable for gas and liquid samples, the PTFE tip of the plunger creates a tight seal between the plunger and glass, helping to reduce carry-over and increase syringe lifetime. Replacement plungers are available.

Blue Line Autosampler Syringes with PTFE-Tipped Plungers

Volume (µL)	Description	Unit	Needle Gauge/ Length (mm)/Tip	Part No.
10	Straight, fixed		23/42/HP	G4513-80220
	Straight, fixed	6/pk	23/42/HP	G4513-80210
	Tapered, fixed		23-26/42/HP	G4513-80203*
	Replacement plunger for fixed needle			G4513-80227
	Tapered, fixed	6/pk	23-26s/42/HP	G4513-80208
	Straight, removable		23/42/HP	G4513-80219
	Replacement needle	3/pk	23/42/HP	G4513-80236
	Tapered, removable		23-26/42/HP	G4513-80233
	Replacement needle	3/pk	23-26/42/HP	G4513-80225
25	Straight, fixed		23/42/HP	G4513-80228
	Tapered, fixed		23-26/42/HP	G4513-80241
50	Straight, fixed		23/42/HP	G4513-80221
	Tapered, fixed		23-26/42/HP	G4513-80223
100	Tapered, Fixed		23-26s/42/HP	G4513-80222

*Included in 7693A shipments



Needles, replacement, G4513-80236

Advanced Sample Enhancement Autosampler Syringes with PTFE-Tipped Plungers

Used with the 7693A optional Enhanced Sample Handling Syringe Carriage, these syringes can eliminate analyst-to-analyst variability and reduce re-work in sample preparation, such as dilution and internal standard addition.

Advanced Sample Enhancement Autosampler Syringes with PTFE-Tipped Plungers

Volume (µL)	Description	Needle Gauge/ Length (mm)/Tip	Part No.
250	Fixed, advanced sample enhancement	23/42/HP	G4513-60560
500	Fixed, advanced sample enhancement	23/42/HP	G4513-60561



Blue line autosampler syringe,
G4513-60560

Gold Standard Autosampler Syringes

Use one needle and get the benefits of two. The upper portion of the tapered needle offers the strength of a 23-gauge needle, while the lower portion at 26s-gauge allows use with split/splitless or on-column injections with 0.53 mm id columns. All standard plungers are stainless steel.

Tapered Needle, 23-26s Gauge Autosampler Syringes

Volume (μL)	Description	Unit	Needle Gauge/Length (mm)/Tip	Part No.
5	Tapered, fixed		23-26s/42/HP	5181-1273
	Tapered, fixed	6/pk	23-26s/42/HP	5181-8810
	Tapered, removable		23-26s/42/HP	5182-0835
	Replacement needle for 5 μL syringe	3/pk		5182-0832
10	Tapered, fixed		23-26s/42/HP	5181-1267
	Tapered, fixed	6/pk	23-26s/42/HP	5181-3360
	Tapered, removable		23-26s/42/HP	5181-3321
	Replacement needle for 10 μL syringe	3/pk		5181-3319
	Tapered, fixed, PTFE-tipped plunger		23-26s/42/HP	5181-3354
	Tapered, fixed, PTFE-tipped plunger	6/pk	23-26s/42/HP	5181-3361
	Replacement plunger with PTFE tip for fixed needle 10 μL syringe			5181-3365
	Tapered, removable		23-26s/42/HP	5181-3356
	Replacement plunger with PTFE tip for removable needle 10 μL syringe			5181-3358
50	Tapered, fixed, PTFE-tipped plunger		23-26s/42/HP	5183-0314
100	Tapered, fixed, PTFE-tipped plunger		23-26s/42/HP	5183-2042



Straight Needle, 23 and 26s Gauge Autosampler Syringes

Volume (µL)	Description	Unit	Needle Gauge/Length (mm)/Tip	Part No.
1	Cone-tipped		23/42/HP	5188-5246
1	Replacement needle/plunger for 1.0 µL syringe		23/42/HP	5188-5370
0.5	Replacement needle/plunger for 0.5 µL syringe		23-26/42/HP	5190-3193
2	Cone-tipped		23/42/HP	5188-5247
	Replacement needle/plunger for 2.0 µL syringe		23/42/HP	5188-5371
5	Straight, fixed		26s/42/HP	9301-0891
	Straight, fixed	6/pk	26s/42/HP	5183-4728
	Straight, fixed		23/42/HP	9301-0892
	Straight, fixed	6/pk	23/42/HP	5182-0875
	Straight, removable		23/42/HP	5182-0834
	Replacement needle for 5 µL syringe	3/pk		5182-0830
10	Straight, fixed		26s/42/HP	9301-0714
	Straight, fixed	6/pk	26s/42/HP	5183-4729
	Straight, fixed		23/42/HP	9301-0713
	Straight, fixed	6/pk	23/42/HP	9301-0725
	Straight, fixed, PTFE-tipped plunger		23/42/HP	5181-8809
	Straight, fixed, PTFE-tipped plunger	6/pk	23/42/HP	5183-4730
	Replacement plunger for 10 µL fixed needle syringe			5181-8808
	Straight, removable		23/42/HP	5181-8806
	Straight, removable, PTFE-tipped plunger		23/42/HP	5181-8813
	Replacement needle for 10 µL syringe	3/pk		5181-8811
	Replacement plunger with PTFE tip for removable needle 10 µL syringe		5181-3358	
25	Straight, fixed, PTFE-tipped plunger		23/42/HP	5183-0316
50	Straight, fixed, PTFE-tipped plunger		23/42/HP	5183-0318
100	Straight, fixed, PTFE-tipped plunger		23/42/HP	5183-2058



Autosampler Syringes



7673/7683 On-Column Autosampler Syringes

Agilent 7673/7683 on-column syringes with needle diameter for columns ranging from 0.25 mm to 0.53 mm are specifically designed for the 7673/7683 Autosampler.

7673/7683 On-Column Autosampler Syringes

Volume (µL)	Description	Unit	Part No.
5	Removable needle, syringe only		5182-0836
	Stainless steel needle for 0.53 mm column	3/pk	5182-0832
	Stainless steel needle for 0.32 mm column	3/pk	5182-0831
	Stainless steel needle for 0.25 mm column	3/pk	5182-0833
	Plunger button	10/pk	5181-8866



HP 7670/71/72 Autosampler Syringes

This syringe has a long needle and regular plunger button for compatibility with HP 7670/71/72 autosamplers. Available with a fixed or removable needle.

HP 7670/71/72 Autosampler Syringes

Volume (µL)	Description	Needle	Part No.
1	Straight, removable	23/56/2	5182-9622
10	Straight, fixed	23/50/HP	5182-9734
	Straight, removable	23/50/HP	5182-9626
	Straight, fixed, PTFE-tipped plunger	23/50/HP	5182-9799

Autosampler syringe, 10 µL, straight, RN, 5182-9626









Manual Syringes

Agilent color-coded manual syringes allow you to determine syringe volume with one quick glance, so you can more efficiently perform manual dilution, extraction, and sample prep. They also give you the advantages of:

- Improved scale readability with a new vertical syringe scale orientation for more intuitive use
- A wide selection of volumes, making Agilent your "one-stop" resource for all of your sample manipulation needs
- Accuracy within $\pm 1\%$ of nominal volume, and precision within 1%, measured at 80% of total scale volume
- Earth-friendly cardboard and plastic packaging that could be recycled to help reduce landfill waste
- A Certificate of Conformance to ensure the highest quality construction and performance, available for viewing and printing anytime
- Lot-traceable for accurate identification

Of course, all Agilent syringes are backed by over 40 years of chromatography expertise, industry-leading technical support, and a 90-day warranty from the date of shipment.

Manual Syringes Color Code Chart

									
0.5 μL	1.0 μL	2.0 μL	5.0 μL	10 μL 1.0 mL	25 μL 2.5 mL	50 μL 5.0 mL	100 μL 10.0 mL	250 μL 25.0 mL	500 μL 50.0 mL



Manual syringe, 1.0 μ L, RN cone tip, 5190-1463

Manual Syringes with Fitted Plunger, Fixed and Removable Needle, 0.5 to 5 μ L

Volume (μ L)	Description	Unit	Needle	Part No.
0.5	Plunger in needle, removable		23/70 mm/cone tip	5190-0464
	Replacement needle and plunger kit for 0.5 μ L syringe			5190-1461
	Plunger in needle, removable		23/70 mm/bevel tip	5190-1460
	Replacement needle and plunger kit for 0.5 μ L syringe			5190-1462
1.0	Plunger in needle, removable		26/70 mm/cone tip	5190-1463
	Replacement needle and plunger kit for 1.0 μ L syringe			5190-1467
	Plunger in needle, removable		26/70 mm/bevel tip	5190-1466
	Replacement needle and plunger kit for 1.0 μ L syringe			5190-1470
	Plunger in needle, removable		23/70 mm/cone tip	5190-1464
	Replacement needle and plunger kit for 1.0 μ L syringe			5190-1468
	Plunger in needle, removable		23/70 mm/bevel tip	5190-1465
	Replacement needle and plunger kit for 1.0 μ L syringe			5190-1469
2.0	Plunger in needle, removable		23/70 mm/cone tip	5190-1471
	Replacement needle and plunger kit for 2.0 μ L syringe			5190-1473
	Plunger in needle, removable		26/70 mm/bevel tip	5190-1472
	Replacement needle and plunger kit for 2.0 μ L syringe			5190-1474
5.0	Plunger in needle, removable		23/70 mm/cone tip	5190-1475
	Replacement needle and plunger kit for 5.0 μ L syringe			5190-1477
	Plunger in needle, removable		23/70 mm/bevel tip	5190-1476
	Replacement needle and plunger kit for 5.0 μ L syringe			5190-1478
	Straight, fixed		26/50 mm/bevel tip	5190-1479
	Removable, with flexible plunger		26/50 mm/bevel tip	5190-1481
	Replacement needle for 5.0 μ L syringe	3/pk		5190-1482

Manual Syringes with Fitted Plunger, Fixed and Removable Needle, 10 to 500 µL

Volume (µL)	Description	Unit	Needle	Part No.
10	Fixed		26/50 mm/bevel tip	5190-1483
	Fixed	10/pk	26/50 mm/bevel tip	5190-1487
	Fixed, with flexible plunger		26/50 mm/bevel tip	5190-1488
	Fixed, with flexible plunger	6/pk	26/50 mm/bevel tip	5190-1489
25	Fixed		25/50 mm/bevel tip	5190-1493
	Removable		25/50 mm/bevel tip	5190-1495
	Replacement needle	3/pk		5190-1496
50	Fixed		25/50 mm/bevel tip	5190-1500
	Removable		25/50 mm/bevel tip	5190-1502
	Replacement needle	3/pk		5190-1496
100	Fixed		25/50 mm/bevel tip	5190-1507
	Removable		25/50 mm/bevel tip	5190-1509
	Replacement needle	3/pk		5190-1496
250	Fixed		25/50 mm/bevel tip	5190-1514
	Removable		25/50 mm/bevel tip	5190-1516
	Replacement needle	3/pk		5190-1496
500	Fixed		25/50 mm/bevel tip	5190-1521
	Removable		25/50 mm/bevel tip	5190-1524
	Replacement needle	3/pk		5190-1496



Manual syringe, 50 µL, FN bevel tip, 5190-1500



Manual Syringes with PTFE-Tipped Plunger, Removable Needle, 10 to 500 µL

Volume (µL)	Description	Unit	Needle	Part No.
10	Removable		25/50 mm/bevel tip	5190-1491
	Replacement needle	3/pk		5190-1496
	Replacement plunger with PTFE tip for 10 µL syringe			5190-1559
25	Removable		25/50 mm/bevel tip	5190-1498
	Replacement needle	3/pk		5190-1496
	Replacement plunger with PTFE tip for 25 µL syringe			5190-1560
50	Removable		25/50 mm/bevel tip	5190-1504
	Replacement needle	3/pk		5190-1496
	Replacement plunger with PTFE tip for 50 µL syringe			5190-1561
100	Removable		25/50 mm/bevel tip	5190-1511
	Replacement needle	3/pk		5190-1496
	Replacement plunger with PTFE tip for 100 µL syringe			5190-1562
250	Removable		25/50 mm/bevel tip	5190-1518
	Replacement needle	3/pk		5190-1496
	Replacement plunger with PTFE tip for 250 µL syringe			5190-1563
500	Removable		25/50 mm/bevel tip	5190-1525
	Replacement needle	3/pk		5190-1496
	Replacement plunger with PTFE tip for 500 µL syringe			5190-1564



Manual Syringes with PTFE-Tipped Plunger, Fixed Needle, 10 to 500 μ L

Volume (μ L)	Description	Needle	Part No.
10	Fixed	26/50 mm/bevel tip	5190-1490
	Replacement plunger with PTFE tip for 10 μ L syringe		5190-1558
25	Fixed	25/50 mm/bevel tip	5190-1497
	Replacement plunger with PTFE tip for 25 μ L syringe		5190-1560
50	Fixed	25/50 mm/bevel tip	5190-1503
	Replacement plunger with PTFE tip for 50 μ L syringe		5190-1561
100	Fixed	25/50 mm/bevel tip	5190-1510
	Replacement plunger with PTFE tip for 100 μ L syringe		5190-1562
250	Fixed	25/50 mm/bevel tip	5190-1517
	Replacement plunger with PTFE tip for 250 μ L syringe		5190-1563
500	Fixed	25/50 mm/bevel tip	5190-1523
	Replacement plunger with PTFE tip for 500 μ L syringe		5190-1564

Manual Syringes with PTFE-Tipped Plunger, Removable Needle, 1 mL to 10 mL

Volume (mL)	Description	Unit	Needle	Part No.
1.0	Removable		23/50 mm/bevel tip	5190-1529
	Replacement needle	3/pk		5190-1581
	Replacement plunger with PTFE tip for 1 mL syringes			5190-1565
2.5	Removable		23/50 mm/bevel tip	5190-1533
	Replacement needle	3/pk		5190-1581
	Replacement plunger with PTFE tip for 2.5 mL syringes			5190-1572
5.0	Removable		23/50 mm/bevel tip	5190-1537
	Replacement needle	3/pk		5190-1538
	Replacement plunger with PTFE tip for 5 mL syringes			5190-1573
10	Removable		23/50 mm/bevel tip	5190-1542
	Replacement needle	3/pk		5190-1538
	Replacement plunger with PTFE tip for 10 mL syringes			5190-1574



Manual syringe, 500 μ L, FN bevel tip, 5190-1523



Manual syringe, 1 mL, FN bevel tip, 5180-1528

Manual Syringes with PTFE-Tipped Plunger, Fixed Needle, 1 mL to 10 mL

Volume (mL)	Description	Needle	Part No.
1.0	Fixed	22/50 mm/bevel tip	5190-1528
	Replacement plunger with PTFE tip for 1 mL syringes		5190-1565
2.5	Fixed	22/50 mm/bevel tip	5190-1532
	Replacement plunger with PTFE tip for 2.5 mL syringes		5190-1572
5.0	Fixed	22/50 mm/bevel tip	5190-1536
	Replacement plunger with PTFE tip for 5 mL syringes		5190-1573
10	Fixed	22/50 mm/bevel tip	5190-1541
	Replacement plunger with PTFE tip for 10 mL syringes		5190-1574

Manual Syringe with PTFE-Tipped Plunger and Luer Lok, 50 to 500 µL

Volume (µL)	Description	Needle	Part No.
50	Luer Lok	Luer Lok/50 mm or 2 in	5190-1506
	Replacement plunger with PTFE tip for 50 µL syringe		5190-1561
100	Luer Lok	Luer Lok/50 mm or 2 in	5190-1513
	Replacement plunger with PTFE tip for 100 µL syringe		5190-1562
250	Luer Lok	Luer Lok/50 mm or 2 in	5190-1519
	Replacement plunger with PTFE tip for 250 µL syringe		5190-1563
500	Luer Lok	Luer Lok/50 mm or 2 in	5190-1527
	Replacement plunger with PTFE tip for 500 µL syringe		5190-1564



Manual Syringe with PTFE-Tipped Plunger and Luer Lok, 1 to 50 mL

Volume (mL)	Description	Needle	Part No.
1.0	Luer Lok	Luer Lok/50 mm or 2 in	5190-1530
	Luer Lok valve	Luer Lok valve/50 mm or 2 in	5190-1531
	Replacement plunger with PTFE tip for 1 mL syringes		5190-1565
2.5	Luer Lok	Luer Lok/50 mm or 2 in	5190-1534
	Luer Lok valve	Luer Lok valve/50 mm or 2 in	5190-1535
	Replacement plunger with PTFE tip for 2.5 mL syringes		5190-1572
5.0	Luer Lok	Luer Lok/50 mm or 2 in	5190-1539
	Luer Lok valve	Luer Lok valve/50 mm or 2 in	5190-1540
	Replacement plunger with PTFE tip for 5 mL syringes		5190-1573
10	Luer Lok	Luer Lok/50 mm or 2 in	5190-1457
	Luer Lok valve	Luer Lok valve/50 mm or 2 in	5190-1543
	Replacement plunger with PTFE tip for 10 mL syringes		5190-1574
25	Luer Lok	Luer Lok/50 mm or 2 in	5190-1544
	Replacement plunger with PTFE tip for 25 mL syringe		5190-1575
	Luer Lok valve	Luer Lok valve/50 mm or 2 in	5190-1545
	Replacement plunger with PTFE tip for 25 mL syringe		5190-1576
50	Luer Lok	Luer Lok/50 mm or 2 in	5190-1546
	Luer Lok valve	Luer Lok valve/50 mm or 2 in	5190-1547
	Replacement plunger with PTFE tip for 50 mL syringes		5190-1577



Luer Lok valve, 5190-1531



Luer Lok, 5190-1534



Luer Lok valve, 5190-1543

Luer Lok and Luer Lok Valve Needles

Description	Unit	Needle	Part No.
Luer Lok needle	3/pk	23/50/bevel tip	5190-1548
Luer Lok needle	3/pk	23/50/sidehole tip	5190-1549
Luer Lok needle	3/pk	22/51/LC tip	5190-1550



Syringe, 100 µL FN LC tip, 5190-1508

LC Manual Syringes with Fitted Plungers

Volume (µL)	Description	Unit	Needle	Part No.
5	Fixed		22 gauge/2 in/LC tip	5190-1480
10	Fixed		22 gauge/2 in/LC tip	5190-1484
	Removable		22 gauge/2 in/LC tip	5190-1485
	Replacement needle for 10 µL syringe	3/pk		5190-1486
25	Fixed		22 gauge/2 in/LC tip	5190-1494
50	Fixed		22 gauge/2 in/LC tip	5190-1501
100	Fixed		22 gauge/2 in/LC tip	5190-1508
250	Fixed		22 gauge/2 in/LC tip	5190-1515
500	Fixed		22 gauge/2 in/LC tip	5190-1522

LC Manual Syringes with PTFE-Tipped Plungers

Volume (µL)	Description	Unit	Needle	Part No.
10	Removable		22 gauge/2 in/LC tip	5190-1492
	Replacement needle for 10 µL syringe	3/pk		5190-1486
	Replacement plunger with PTFE tip for 10 µL syringe			5190-1558
25	Removable		22 gauge/2 in/LC tip	5190-1499
	Replacement needle	3/pk		5190-1571
	Replacement plunger with PTFE tip for 25 µL syringe			5190-1560
50	Removable		22 gauge/2 in/LC tip	5190-1505
	Replacement needle	3/pk		5190-1571
	Replacement plunger with PTFE tip for 50 µL syringe			5190-1561
100	Removable		22 gauge/2 in/LC tip	5190-1512
	Replacement needle	3/pk		5190-1571
	Replacement plunger with PTFE tip for 100 µL syringe			5190-1562
250	Removable		22 gauge/2 in/LC tip	5190-1520
	Replacement needle	3/pk		5190-1571
500	Removable		22 gauge/2 in/LC tip	5190-1526
	Replacement needle	3/pk		5190-1571
	Replacement plunger with PTFE tip for 500 µL syringe			5190-1564

Agilent CrossLab Syringes

CrossLab GC Autosampler Syringes

With a broad selection of syringes for auto injection, CrossLab autosampler syringes provide what you need for accurate and effective sampling. CrossLab syringes meet all fit, form, and function criteria for specific autosampler models. Agilent delivers more value in every autosampler syringe:

- Lot number printed directly on the barrel with a corresponding Certificate of Conformance
- Illuminating backing strip, for effortless viewing of the volume scale
- Environmentally friendly packaging and improved design that reduces waste
- Individually packaged for contaminant-free use right out of the box

Typical Needle Gauge Dimensions

Gauge	OD		ID	
	mm	inches	mm	inches
23	0.64	0.0248	0.11	0.0043
25	0.50	0.0197	0.20	0.0079
26	0.47	0.0184	0.11	0.0043



Autosampler syringe, 10 µL fixed needle, 8010-0351



Autosampler syringe, 5 µL, fixed needle, 8003-0001



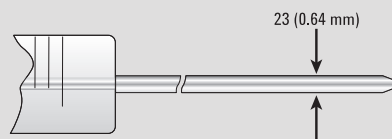
Autosampler syringe, 5 µL, gas tight, fixed needle, 8003-0002

TIPS & TOOLS

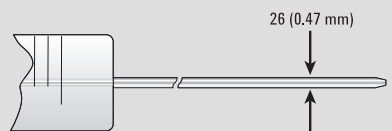
Replace syringe if dirt is noticeable, syringe cannot be cleaned or plunger doesn't slide easily.
Replace needle if septa wear is abnormal or needle is clogged.



Needle Gauge



Single Gauge 23 (0.64 mm)
Packed column injector ports
Split/splitless injector ports



Single Gauge 26 (0.47 mm)
Packed column injector ports
Split/splitless injector ports

Needle Termination

Needle terminations are available in fixed or removable, with various tip styles.

Fixed (cemented)

- Economical, reproducible injections for autosamplers
- Preferred for applications requiring trace level samples
- Recommended for use where probability of needle bending is minimal
- Can be heated up to 70 °C

Removable needle

- Versatile option for injections
- Needle can be replaced if damaged or clogged
- Allows needle to be changed for different applications
- Can be heated up to 120 °C

TIPS & TOOLS



Follow manufacturer's recommendation for syringe cleaning and regularly inspect syringe barrel for sample build-up and needle tip for wear.



Autosampler Syringes for Bruker/Varian GC Systems, 1/pk

Model	Volume (µL)	Description	Needle Gauge/Length (mm)/Tip	Agilent CrossLab Syringe Part No.	Similar to Bruker/Varian Syringe Part No.	Agilent CrossLab Replacement Needle Part No.	Agilent CrossLab Replacement Plunger Part No.
CP8400 CP8410 CP9010 CP9050 AS200 AS2000 AS3000 AS800 TriPlus	10	Fixed needle	23/50/cone tip	8010-0351	SG002981		
CP8400 CP8410 CP9010 CP9050	10	Fixed needle	26/50/bevel tip	8004-0001			
CP8400 CP8410 CP9010 CP9050	10	Removable needle	26/50/cone tip	8004-0003	SG002982	8004-0004, 2/pk	
8035 8100 8200	10	Fixed needle, gas tight	26/53/side hole tip	8004-0002			8004-0007
	10	Removable needle, gas tight	25/53/side hole tip	8004-0005		8004-0006, 2/pk	8004-0007
CP8400 CP8410 CP9010 CP9050	10	Replacement needle		8004-0004			
8035 8100 8200	10	Replacement needle		8004-0006			
8035 8100 8200	10	Replacement plunger		8004-0007			

The cross references to the original equipment manufacturer (OEM) part numbers listed here serve as a recommendation that the Agilent CrossLab products are viable alternatives to OEM products. CrossLab products are compatible with the corresponding OEM instruments, although in some cases, the CrossLab products may have slightly different designs as compared to the OEM counterparts.



Autosampler Syringes for PerkinElmer GC Systems, 1/pk

Model	Volume (µL)	Description	Needle Gauge/ Length (mm)/ Tip	Agilent CrossLab Syringe Part No.	Similar to PerkinElmer Syringe Part No.	Agilent CrossLab Replacement Needle and Plunger Repair Kit Part No.	Similar to PerkinElmer Replacement Needle and Plunger Repair Kit Part No.
Autosystem Autosystem XL Clarus	0.5	Removable needle	23/70/cone tip	8003-0005	N6101252	8003-0006	N6101469
		Removable needle	26/70/bevelled cone tip	8003-0007		8003-0008	
	5	Fixed needle	23/70/cone tip	8003-0001	N6101251		
		Fixed needle, gas tight	23/70/cone tip	8003-0002	N6101390		
		Fixed needle	26/70/cone tip	8003-0003	N6101380		
	50	Fixed needle	23/70/cone tip	8003-0004	N6101760		
		Replacement needle and plunger repair kit		8003-0006	N6101469		
		Replacement needle and plunger repair kit		8003-0008			

The cross references to the original equipment manufacturer (OEM) part numbers listed here serve as a recommendation that the Agilent CrossLab products are viable alternatives to OEM products. CrossLab products are compatible with the corresponding OEM instruments, although in some cases, the CrossLab products may have slightly different designs as compared to the OEM counterparts.

Autosampler Syringes for Shimadzu GC Systems, 1/pk

Model	Volume (µL)	Description	Needle Gauge/Length (mm)/Tip	Agilent CrossLab Syringe Part No.	Similar to Shimadzu Syringe Part No.	Agilent CrossLab Replacement Needle Part No.	Similar to Shimadzu Replacement Needle Part No.
AOC-14	5	Fixed needle	23/42/cone tip	8001-0001			
AOC-17	10	Removable needle	23/42/cone tip	8001-0004	220-90282-20	8001-0005, 2/pk	220-90281-20
AOC-20		Removable needle	26/42/cone tip	8001-0006	220-90282-21	8001-0007, 2/pk	220-90281-21
	50	Fixed needle	23/42/cone tip	8001-0002	221-45243-00		
	250	Fixed needle, gas tight	23/42/cone tip	8001-0003	221-45244-00		

Autosampler Syringes for Shimadzu HPLC Systems, 1/pk

Model	Volume (µL)	Description	Needle Gauge/Length (mm)/Tip	Agilent CrossLab Syringe Part No.	Similar to Shimadzu Syringe Part No.	Agilent CrossLab Replacement Needle Part No.	Similar to Shimadzu Replacement Needle Part No.
SIL-10A SIL-10Ai	500	Chem (1/4-28 UNF screw threads), gas tight		8001-0401	228-25237-04		
	2.5	Chem (1/4-28 UNF screw threads), gas tight		8001-0402	228-25237-06		
	2.5	1/4-28 screw threads, gas tight with bracket		8001-0404	228-28128-91		

The cross references to the original equipment manufacturer (OEM) part numbers listed here serve as a recommendation that the Agilent CrossLab products are viable alternatives to OEM products. CrossLab products are compatible with the corresponding OEM instruments, although in some cases, the CrossLab products may have slightly different designs as compared to the OEM counterparts.



Autosampler Syringes for Thermo GC Systems, 1/pk

Model	Volume (µL)	Description	Needle Gauge/Length (mm)/Tip	Agilent CrossLab Syringe Part No.	Similar to Thermo Scientific Syringe Part No.	Agilent CrossLab Replacement Needle or Plunger Part No.	Similar to Thermo Scientific Replacement Needle or Plunger Part No.
AS3000 TriPlus	0.5	Plunger-in-needle	23/50/cone tip	8010-0355	36504045	8010-0367*	
TriPlus	5	Fixed needle	26/50/cone tip	8010-0353	36504047		
CP8400 CP8410 CP9010 CP9050 AS200 AS2000 AS3000 AS800 TriPlus	10	Fixed needle	23/50/cone tip	8010-0351	36520060		
AOC-14 AOC-17 AOC-20	10	Fixed needle	26/50/cone tip	8010-0352	365D3711		
AS200 AS2000 AS3000 AS800 TriPlus	10	Fixed needle	25/50/cone tip	8002-0003	36500525		
AS2000 TriPlus	10	Fixed needle	23/80/cone tip	8002-0002	36520061		
AS2000 TriPlus	10	Fixed needle	26/80/cone tip	8002-0001	36502019		
AS200 AS2000 AS800 TriPlus	100	Fixed needle, gas tight	23/50/cone tip	8010-0354		8010-0368**	
AS2000 TriPlus	100	Removable needle, gas tight	23/50/side hole tip	8002-0004	36520050	8002-0005***	36540040

*Needle and plunger repair kit

**Replacement plunger

***Replacement needle

The cross references to the original equipment manufacturer (OEM) part numbers listed here serve as a recommendation that the Agilent CrossLab products are viable alternatives to OEM products. CrossLab products are compatible with the corresponding OEM instruments, although in some cases, the CrossLab products may have slightly different designs as compared to the OEM counterparts.



Needle and plunger repair kit, 8010-0367



Replacement plunger, 8010-0368

CrossLab Supplies for CTC Analytics GC Autosamplers

Agilent's CrossLab portfolio includes a variety of syringes compatible with CTC Analytics GC PAL and CombiPAL systems.

- Syringe capacities from 0.5 μ L to 2.5 mL
- Fixed and removable needles
- Several needle tip styles to suit your application requirements
- High temperature syringes for headspace application with temperatures up to 150 °C
- PTFE plunger seal option for smooth, leak-free operation
- Syringe specifications are matched to CTC holders to ensure proper fit and reliable functioning



Autosampler Syringes for CTC CombiPAL and GC PAL, 1/pk

Volume (μ L)	Description	Needle Gauge/Length (mm)/Tip	Agilent CrossLab Syringe Part No.	Agilent CrossLab Replacement Needle or Plunger Part No.
0.5	Plunger-in-needle	23/50/cone tip	8010-0355	8010-0367*
5	Fixed needle	23/50/cone tip	8010-0356	
	Fixed needle	26/50/cone tip	8010-0353	
10	Fixed needle	23/50/cone tip	8010-0351	
	Fixed needle	25/50/cone tip	8002-0003	
	Fixed needle	26/50/cone tip	8010-0352	
	Fixed needle, gas tight	26/50/cone tip	8010-0357	8010-0359**
	Fixed needle	26/50/bevel tip	8010-0358	
25	Fixed needle	26/50/cone tip	8010-0360	
100	Fixed needle, gas tight	23/50/cone tip	8010-0354	
	Removable needle, gas tight	23/50/side hole tip	8002-0004	8002-0005***
	Fixed needle	26/50/cone tip	8010-0361	
250	Fixed needle, gas tight	26/50/cone tip	8010-0362	

Volume (mL)	Description	Needle Gauge/Length (mm)/Tip	Agilent CrossLab Syringe Part No.	Agilent CrossLab Replacement Plunger Part No.
1	Fixed needle, gas tight, headspace	23/56/side hole tip	8010-0363	8010-0365
2.5	Fixed needle, gas tight, headspace	23/56/side hole tip	8010-0364	8010-0366

*Needle and plunger repair kit

**Replacement plunger

***Replacement needle

The cross references to the original equipment manufacturer (OEM) part numbers listed here serve as a recommendation that the Agilent CrossLab products are viable alternatives to OEM products. CrossLab products are compatible with the corresponding OEM instruments, although in some cases, the CrossLab products may have slightly different designs as compared to the OEM counterparts.



Autosampler syringe, 10 μ L fixed needle, 8010-0351

Autosampler Syringes for Dionex LC Systems, 1/pk

Model	Volume (µL)	Description	Needle Gauge/ Length (mm)/ Tip	Similar to Dionex Syringe Part No.	Agilent CrossLab Syringe	Agilent CrossLab Replacement Needle	Agilent CrossLab Replacement Plunger
WPS-3000SL	25	Chem (1/4-28 UNF screw threads), gas tight		6822.0001	8002-0405		
	250	Chem (1/4-28 UNF screw threads), gas tight		6822.0003	8002-0407		
ASI-100	100	Removable needle, gas tight	22/51/3 22s/51/3	5805.2920	8002-0401*	8002-0413, 6/pk 8002-0412, 6/pk	8002-0402
	1,000	Removable needle, gas tight	22/51/3 22s/51/3	5805.2940	8002-0403*	8002-0414, 6/pk 8002-0415, 6/pk	8002-0406
	2,500	Removable needle, gas tight	22/51/3 22s/51/3	5805.2950	8002-0404*	8002-0414, 6/pk 8002-0415, 6/pk	8002-0408

*Needles are sold separately

The cross references to the original equipment manufacturer (OEM) part numbers listed here serve as a recommendation that the Agilent CrossLab products are viable alternatives to OEM products. CrossLab products are compatible with the corresponding OEM instruments, although in some cases, the CrossLab products may have slightly different designs as compared to the OEM counterparts.



Chem (1/4-28 UNF screw threads), gas tight, 8002-0405



Removable needle, gas tight, 8002-0401

Autosampler Syringes for Waters LC Systems, 1/pk

Model	Volume (µL)	Description	Needle Gauge/ Length (mm)/ Tip	Agilent CrossLab Syringe Part No.	Similar to Waters Syringe Part No.	Agilent CrossLab Replacement Needle or Plunger Part No.
2777 Compact Sample Manager	1	Fixed needle, gas tight	22/51/3	8010-0443	430000867	8010-0455
2777 Sample Manager	2.5	Fixed needle, gas tight	22/51/3	8010-0444	430000868	8010-0448
	10	Fixed needle	22s/51/3	8010-0445	430000859	
	25	Fixed needle, gas tight	22s/51/3	8010-0441	430000861	
	100	Fixed needle, gas tight	22s/51/3	8010-0442*	430000864	
		Fixed needle, gas tight	22/51/3	8010-0446*	430000863	
	250	Fixed needle, gas tight	22/51/3	8010-0467	430000865	
	500	Fixed needle, gas tight	22/51/3	8010-0468	430000866	8010-0460, 10/pk**
510 HPLC Pump	10000	Luer Lock	No needle	8005-0414	WAT025559	
515 HPLC Pump						
600 MultiSolvent Delivery System						
CapLC System						
CapLC XE System						
600 MultiSolvent Delivery System	25	Removable needle, gas tight	22s/51/3	8005-0416	WAT033381	
Rheodyne Injector	100	Removable needle, gas tight	22s/51/3	8005-0417	WAT033383	8005-0418, 6/pk
2690 Separations Module	25	Chem (1/4-28 UNF screw threads), gas tight	No needle	8005-0420	WAT077343	
2690D Dissolution Separations Module						
2695 Separations Module	250	Chem (1/4-28 screw threads UNF), gas tight	No needle	8005-0419	WAT073109	
2695D Dissolution Separations Module						
2790 Separations Module						
2795 Separations Module						
LC Module 1						
717/717plus Autosampler						

*Barrel od is 6.7 mm. All other 10, 25, and, 100 µL syringes have 7.9 mm od.

**Replacement plunger

The cross references to the original equipment manufacturer (OEM) part numbers listed here serve as a recommendation that the Agilent CrossLab products are viable alternatives to OEM products. CrossLab products are compatible with the corresponding OEM instruments, although in some cases, the CrossLab products may have slightly different designs as compared to the OEM counterparts.



Autosampler syringe, Luer Lock, 8005-0414



Autosampler syringe, gas tight, 8005-0417

CTC Autosampler Supplies

To better serve Agilent instrument users who choose CTC Analytics autosamplers for high-throughput and flexible sample introduction, Agilent has partnered with CTC to provide a fully integrated system, including CTC approved consumables.

Agilent's portfolio includes a variety of vials, caps, syringes, and well plates compatible with the CTC Analytics HTC PAL, GC PAL, and CombiPAL systems.



CombiPAL and GC PAL Liquid Injection Syringes

A key feature of CTC's GC PAL and CombiPAL is the ability to inject a wide range of sample volumes, up to 500 µL for LVI applications. The following fixed needle syringes are recommended by CTC to sustain high reproducibility and accuracy.



CTC syringes



Fixed needle, G6500-80120

CombiPAL and GC PAL Liquid Injection Syringes

Volume (µL)	Description	Unit	Needle	Part No.
1.2	Fixed needle		26/51/AS	G6500-80113
5	Fixed needle		26/51/AS	G6500-80114
	Removable needle for Cool On-Column (COC)		26/51/AS	5190-3984
	Replacement removable needle for Cool On-Column (COC)	3/pk		5190-3985
10	Fixed needle		26/51/2	G6500-80115
			26s/51/AS	G6500-80116
	Fixed needle, Merlin & PTV		23s/51/AS	5188-6596
25	Fixed needle		26/51/AS	G6500-80117
	Replacement plunger	10/pk		G4200-80104
100	Fixed needle		26/51/AS	G6500-80118
	Replacement plunger	10/pk		G4200-80105
250	Fixed needle		26/51/AS	G6500-80119
	Replacement plunger	10/pk		G4200-80102
500	Fixed needle		26/51/AS	G6500-80120
	Replacement plunger			G4200-80106

TIPS & TOOLS



For vials and caps that work seamlessly with your CTC Analytics PAL Autosamplers, see our complete Vials and Closures section, turn to page 27.

CombiPAL Headspace Supplies

Our fixed needle headspace syringes feature a sideport needle for gas flushing, in conformance with strict CTC standards. Use with Agilent's Merlin Microseal to minimize instrument downtime and to prevent lost or compromised data caused by septum leaks and liner contamination.

CombiPAL Headspace Syringes

Volume (mL)	Description	Gauge	Part No.
1	Fixed needle	23	G6500-80107
	Replacement plunger		G4200-80101
2.5	Fixed needle	23	G6500-80109
	Replacement plunger		G4200-80107
5	Fixed needle	23	G6500-80111
	Replacement plunger		G4200-80108

CombiPAL Headspace Supplies

Description	Part No.
Liner, inlet for SPME, deactivated	5188-6471
Liner, Ultra Inert for SPME, straight	5190-4048



Headspace Vials



Fixed needle, G6500-80109

HTS and HTC PAL Liquid Injection Crimp Top Micro Vials and Caps

HTS and HTC PAL high-throughput LC injection systems are configured to cope with today's high-throughput LC/MS demands. Agilent offers a selection of crimp top micro vials designed specifically for HTS and HTC PAL systems.

HTS and HTC PAL Liquid Injection Crimp Top Micro Vials and Caps

Description	Unit	Part No.
0.8 mL, amber glass, flat bottom	1000/pk	5183-4487
0.1 mL, clear glass, tapered bottom	500/pk	5180-0844
0.3 mL, clear glass, round bottom	500/pk	5180-0841
0.7 mL, amber glass, round bottom	500/pk	5180-0805
0.5 mL, amber glass, conical bottom	500/pk	5180-0806
Micro Caps		
Crimp caps with PTFE/silicone septa	500/pk	5180-0842