

## Autosampler Supplies for Agilent GC and HPLC Systems with CTC Autosamplers

Proven reliability that complements  
Agilent instruments – the most reliable  
in the industry.

A wide selection to suit your  
high-throughput applications.

Now conveniently available from  
one company – Agilent.

**Our measure is your success.**

## Agilent is your one-stop shop for CTC-approved supplies.

In the past, if you used a CTC autosampler with your Agilent GC or LC system, you would have to order supplies separately – which meant searching through multiple catalogs and completing multiple purchase orders.

Agilent now offers a portfolio of CTC-recommended supplies for your GC PAL, CombiPAL, HTS PAL, and HTC PAL autosamplers.

You can now order supplies for your CTC autosampler at the same time you order your Agilent columns and accessories and know that every vial, syringe, and accessory that touches your Agilent analytical systems meets Agilent's uncompromising standards.

So you can count on Agilent – a company with over 40 years of chromatography experience – for the CTC-recommended supplies you need to ensure precise sample handling, optimize system productivity, and get the results you need.



### HTS and HTC PAL for 1100 and 1200 Series HPLCs GC and CombiPAL for 7890 and 6890 Series GCs

CTC Autosamplers feature robotic arms for transporting samples in vessels such as micro, 2, 10, or 20 mL Headspace vials, and well plates. Samples are introduced using specially designed syringes or sample loops.

## CTC Analytics PAL Autosampler Supplies

They may be small... but they have a BIG effect on your productivity and results.

Vials, caps, syringes, and other accessories are the least expensive components of your LC or GC system; however, they can contribute to huge problems such as injector damage, evaporative loss, ghost peaks, and analyte degradation.

Agilent understands how critical these parts are to your results – which is why all supplies designed for use with CTC autosamplers must meet the most stringent standards and specifications.

\*Now, Agilent offers you a complete selection of vials, caps, syringes, well plates, and more – all approved by CTC to work with their HTS PAL, HTC PAL, GC PAL, and CombiPAL systems.

So you can spend less time ordering supplies and more time focusing on method development and analysis.



Discover the convenience of ordering your CTC-recommended supplies from Agilent.

Visit [www.agilent.com/chem/store](http://www.agilent.com/chem/store), or call toll free: 1 800 227 9770, option 1 (in the US and Canada).





## Choose CombiPAL and GC PAL liquid injection vials and caps for flexibility and high throughput.

These micro and 2 mL vials and caps are designed to work seamlessly with CombiPAL and GC PAL magnetic needle guides and bar code readers. They also offer superior maneuverability, so your most complex runs will proceed successfully.

The following chart features our most popular part numbers:

### CombiPAL and GC PAL Liquid Injection Vials and Caps

Description	Unit	Part No.
<b>2 mL vials</b>		
Crimp top vial, wide opening, clear	100/pk	5181-3375
Crimp top vial, wide opening, amber, write-on spot	100/pk	5181-3376
Crimp top vial, wide opening, clear, write-on spot	1000/cs	5183-4492
Crimp top vial, wide opening, amber, write-on spot	1000/cs	5183-4493
Screw top vial, wide opening, clear	100/pk	5182-0714
Crimp/snap top vial, wide opening, clear	100/pk	5182-0544
<b>2 mL caps</b>		
Crimp cap, 11 mm magnetic	100/pk	5188-5386
Screw cap, PTFE/silicone septa	100/pk	5182-0720
Snap cap, blue polyethylene, PTFE/silicone septa	100/pk	5182-0541
<b>Micro vials</b>		
Crimp top vial, 0.8 mL, amber glass, flat bottom	1000/pk	5183-4487
Crimp top vial, 0.1 mL, clear, tapered	500/pk	5180-0844
Crimp top vial, 0.3 mL, clear, round	500/pk	5180-0841
Crimp top vial, 0.7 mL, amber, round	500/pk	5180-0805
Crimp top vial, 0.5 mL, amber, conical	500/pk	5180-0806
<b>Micro caps</b>		
Crimp caps with PTFE/silicone septa	500/pk	5180-0842



## CombiPAL and GC PAL liquid injection syringes: recommended by CTC to sustain high reproducibility and accuracy.

A key feature of CTC's **GC PAL** and **CombiPAL** systems is the ability to inject a wide range of sample volumes – up to **500 µL** for LVI applications. To help you take full advantage of this flexibility, Agilent offers a wide range of C-type syringes – from 1.2 µL through 500 µL – to accommodate fast and large-volume injections. Each C-type syringe is subjected to stringent quality control procedures to make sure it meets the highest levels of precision and accuracy.

### CombiPAL and GC PAL Liquid Injection Syringes

Volume (µL)	Description	Unit	Gauge	Needle	Part No.
1.2	Fixed needle		26	26/51/AS	G6500-80113
5	Fixed needle		26	26/51/AS	G6500-80114
10	Fixed needle		26	26/51/2	G6500-80115
			26	26/51/AS	G6500-80116
	Replacement plunger	10/pk			G4200-80105
	Fixed needle		23	23S/51/AS	5188-6596
25	Fixed needle		26	26/51/AS	G6500-80117
		Replacement plunger	10/pk		G4200-80104
100	Fixed needle		26	26/51/AS	G6500-80118
250	Fixed needle		26	26/51/AS	G6500-80119
		Replacement plunger	10/pk		G4200-80102
500	Fixed needle		26	26/51/AS	G6500-80120
		Replacement plunger			G4200-80106



## CombiPAL headspace supplies help protect the integrity of your data.

**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	26	G6500-80111
	Replacement plunger		G4200-80108

**CTC recommends screw-top vials and caps for the tightest seal and the most reproducible headspace results**, and the precision-thread vials and caps listed below are an excellent choice for dependability and ease of use. They are ideal for applications in the environmental, food and beverage, industrial hygiene, drug analysis, and clinical chemistry industries.

### CombiPAL Headspace Supplies

Description	Part No.
10 mL, screw top clear vial, 100/pk	5188-5392
20 mL, screw top clear vial, 100/pk	5188-2753
10 mL, screw top amber vial, 100/pk	5188-6538
20 mL, screw top amber vial, 100/pk	5188-6537
UltraClean 18 mm magnetic screw cap with silicone/PTFE septa, 100/pk	5188-2759
Liner, inlet for SPME, deactivated	5188-6471



HTS and HTC PAL liquid injection vials and caps are designed to withstand the challenges of increased sample throughput.

HTS and HTC PAL high-throughput LC injection systems are configured to cope with today's high-throughput LC/MS demands. And Agilent brings you a wide choice of well plates, vials and caps that are engineered to work with these injectors, providing the flexibility you need.



The following chart features our most popular part numbers:

## HTS and HTC PAL Liquid Injection Vials and Caps

Description	Unit	Part No.
<b>2 mL vials</b>		
Screw top vial, wide opening, clear	100/pk	5182-0714
Screw top vial, polypropylene, with 0.2 mL integrated glass insert	100/pk	5188-5390
Crimp top vial, wide opening, clear	100/pk	5181-3375
Crimp/snap top vial, clear, write-on spot	100/pk	5182-0546
<b>2 mL caps</b>		
Screw cap, PTFE/silicone septa	100/pk	5182-0720
Screw cap, pre-slit PTFE/silicone septa	100/pk	5183-2076
Crimp cap, silver aluminum, PTFE/silicone septa	100/pk	5182-0552
Snap cap, blue polyethylene, PTFE/silicone septa	100/pk	5182-0541
<b>Micro vials</b>		
Crimp top vial, 0.8 mL, amber glass, flat bottom	1000/pk	5183-4487
Crimp top vial, 0.1 mL, clear, tapered	500/pk	5180-0844
Crimp top vial, 0.3 mL, clear, round	500/pk	5180-0841
Crimp top vial, 0.7 mL, amber, round	500/pk	5180-0805
Crimp top vial, 0.5 mL, amber, conical	500/pk	5180-0806
<b>Micro caps</b>		
Crimp caps with PTFE/silicone septa	500/pk	5180-0842





## HTS and HTC PAL liquid injection X-type syringes last up to 10 times longer than standard syringes.

Designed specifically for CTC autosamplers, these X-type syringes feature zero carryover and a long-lasting plunger for applications that demand precision and productivity. They are strongly recommended for high-throughput applications.

Agilent offers a wide selection of fixed-needle, 22-gauge, Pointstyle 3 syringes to accommodate a variety of applications.

### HTS and HTC PAL Liquid Injection Syringes

Volume (µL)	Description	Unit	Gauge	Needle	Part No.
25	X-type Fixed Needle		22	22S/51/3	G4200-80117
	Replacement plunger for X-type syringe	3/pk			G4200-80112
50	X-type Fixed Needle		22		5188-6485
	Replacement plunger for X-type syringe	3/pk			5188-5395
100	X-type Fixed Needle, fast aspiration and eject		22	22/51/3	G4200-80118
	X-type Fixed Needle, low dead volume		22	22S/51/3	G4200-80119
	Replacement plunger for X-type syringe	3/pk			G4200-80111
10	Fixed Needle		22	22S/51/3	G4200-80113
	Replacement plunger	10/pk			G4200-80103
25	Fixed Needle		22	22S/51/3	G4200-80114
	Replacement plunger	10/pk			G4200-80104
100	Fixed Needle		22	22/51/3	G4200-80115
	Fixed Needle		22	22S/51/3	G4200-80116
	Replacement plunger	10/pk			G4200-80105
250	Fixed Needle		22	22/51/3	G6500-80102
	Replacement plunger	10/pk			G4200-80102
500	Fixed Needle		22	22/51/3	G6500-80103
1000	Fixed Needle		22	22/51/3	G6500-80104
2500	Fixed Needle		22	22/51/3	G6500-80105
5000	Fixed Needle			22/51/3	G6500-80106
500	Replacement plunger				G4200-80106
1000	Replacement plunger				G4200-80101
2500	Replacement plunger				G4200-80107
5000	Replacement plunger				G4200-80108



From biological samples to high pressure chromatography, you can trust your results to our HTS and HTC PAL liquid injection valve loops and needle seals.

Whether your HTS or HTC PAL autosampler uses the NEW Agilent proprietary Rheodyne high-pressure 600-bar injection valve or Valco Cheminert injection valves, Agilent can help you find a sample loop to meet your most challenging applications – including:

- **Rheodyne 600 bar injection valve loops**, which include high-pressure Swagelok fittings.
- **Cheminert metal loops**, which feature two 1/16 in. stainless steel nuts and two stainless steel ferrules.
- **Cheminert PEEK loops**, which include two PEEK nuts and two PEEK ferrules.

### HTS and HTC PAL Liquid Injection Valve Loops and Needle Seals

Description	Part No.	Description	Part No.
<b>Rheodyne 600 bar Valve Supplies</b>			
Stainless Steel Loops: Supplied with Swagelok fittings required for high pressure			
5 µl	5188-6486	50 µl	5188-6489
10 µl	5188-6487	100 µl	5188-6490
20 µl	5188-6488		
Stator, Rheodyne 600 bar			5188-6491
RheBuild Kit, 600 bar, includes Rotor Seal and 3/32 hex wrench			5188-6492
Needle Seals, Rheodyne valve, 600 bar, 10/pk			5188-6478
<b>Cheminert Valve Supplies</b>			
PEEK Loops: Include two PEEK nuts and two PEEK ferrules			
2 µl	5188-6469	10 µl	5188-6467
5 µl	5188-6470	20 µl	5188-6468
Metal Loops: Include two 1/16 in. stainless steel nuts and two stainless steel ferrules			
2 µl	5188-6457	500 µl	5188-6463
10 µl	5188-6458	1000 µl	5188-6464
50 µl	5188-6460	2000 µl	5188-6465
100 µl	5188-6461	5000 µl	5188-6466
250 µl	5188-6462		
PEEK Needle Seal, Valco, 22 gauge, 10/pk			5188-6476
Teflon Needle Seal, Valco, 22 gauge, 10/pk			5188-6477





Ensure a lifetime of performance with these general CTC autosampler supplies – now available through Agilent.

Agilent now offers a broad selection of CTC-recommended sampling trays, well plates, and sampling accessories – including high-throughput micro vial sample trays and 96- or 384-well plates and closures. So now you can order your CTC supplies from Agilent, along with your columns and other accessories.

### CTC Autosampler General Supplies

Description	Part No.
Sample tray, 200 vials, 0.7 or 1 mL	G6500-80100
Sample tray, 98 2 mL or 78 1 mL vials	G6500-80101
Sample tray, 32 10 or 20 mL vials	G6500-80121
Sample tray, for PAL stack	G6500-80122
96 Well plates, 0.5 mL, polypropylene	5042-1386
96 Deep well plates, 1 mL, polypropylene	5042-6454
384 Well plates, 90 µL, polypropylene	5042-1388
Closing mats for 96 well plates, silicone	5042-1389
Well plate foil cutter, max 22 gauge needle	5188-6479
Replacement standard wash kit	5188-6597

Don't forget to order your Agilent-engineered columns along with your CTC supplies.

From low-level detection to high-throughput applications, you can rely on Agilent Columns. Together with our CTC-recommended autosampler supplies, Agilent columns help preserve the integrity of your results – while helping your system work to its full potential.

**Agilent J&W Capillary GC Columns:**  
The industry's best low-bleed columns for sensitivity, precision, and performance.

- A broad range of low-bleed standard and stationary phases.
- Superior inertness and high temperature limits.
- Consistent retention, narrow peaks, and improved resolution of closely eluting peaks.

In addition, all columns meet Agilent's uncompromising standards, so you can achieve reliable qualitative and quantitative results – even for your most challenging compounds.



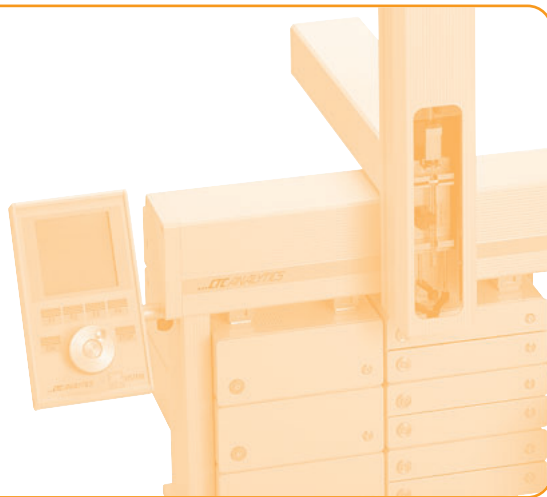
ZORBAX Rapid Resolution  
High Throughput (RRHT) 1.8  $\mu\text{m}$  columns:  
The perfect choice for your HTS and HTC PAL  
high-throughput LC injection systems.

- Process samples up to 20 times faster than conventional HPLC, when teamed with Agilent's 1200 Series Rapid Resolution LC System.
- Reduce your analysis time by up to 95% without compromising resolution.
- Easily scale and reliably transfer conventional LC methods without re-validation.
- Analyze complex separations on shorter columns.
- Identify highly sensitive compounds through LC/MS – with less co-elution.

Recently, we expanded our portfolio to give you over 120 column choices – including lengths from 15 mm-150 mm, IDs from 2.1 mm-4.6 mm, and 12 ZORBAX bonded phases, plus bare silica. So you can achieve optimal results under varying temperatures, pressures, and pH ranges.

Stock up now, so you never run out  
of the columns you need.

Visit [www.agilent.com/chem/store](http://www.agilent.com/chem/store),  
or call toll free: 1 800 227 9770,  
option 1 (in the US and Canada).



## When you choose CTC-recommended supplies from Agilent, you get more than just dependable products.

You also get...

- Over 40 years of chromatography expertise.
- Unmatched technical support – on the Web, by phone or in person.
- A 90-day warranty from the date of shipment.

For more information about CTC autosamplers or Agilent products and services:

Visit our Web site: [www.agilent.com/chem](http://www.agilent.com/chem)

Contact your local Agilent Representative

Contact your Agilent Authorized Distributor

In the U.S. and Canada, call **1-800-227-9770**

Sales – Option 1, then 1

Technical Support – Option 4, then 2

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