

# Inject New Performance into Your Gas Chromatography

Agilent 7693A automatic liquid sampler





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## A Powerful Combination of Productivity and Flexibility

It should come as no surprise that GC and GC/MS precision begins with the autosampler. What *can* be surprising is what an autosampler can do for your analyses. With over 50 years of GC leadership, Agilent provides innovative autosampler capabilities that deliver useful performance enhancements.

The Agilent 7693A automatic liquid sampler harnesses the latest technology to bring you greater reliability, performance, and flexibility. It also provides sample preparation capabilities and a wide range of injection techniques for diverse samples.



Whether you have hundreds of samples to analyze or just a few, the Agilent 7693A automatic liquid sampler gives you best-in-class sample handling and injection capabilities.

## Enhanced performance and productivity

From small-volume injection, to large-volume injection, to multilayer sampling, the 7693A automatic liquid sampler can help you process samples more quickly—and get better data, too.

Agilent dual-simultaneous injection saves time by doubling your sample throughput. And our fast-injection technology minimizes needle discrimination and sample degradation. It also ensures the best possible peak shape, while maximizing the accuracy of your results.

## Unmatched flexibility

No built-in autosampler can match the flexibility of the 7693A. Its modular design works seamlessly with our 6890, 7820, 7890, 8860, 8890, and Intuvo 9000 GC systems.\*

What's more, the 7693A automatic liquid sampler adapts easily to your lab's changing needs. For example, you could start with a basic injector equipped with a 16-sample turret. Later, you could add a second injector, a 150-sample tray, and a vial heater/mixer/barcode reader.

## Maximum uptime

The self-aligning plug-and-play injector mounts in seconds without tools, and can easily be moved from one inlet to another—or transferred between GCs when workloads change. Lightweight and removable by design, the 7693A permits easy inlet maintenance.

In addition, greater solvent capacity (>20 mL), plus the ability to load up to 150 samples, means longer unattended operation. Solvent-saver mode will increase your capacity even more. And built-in Agilent reliability gives you the confidence to run the system day and night with minimal operator attention—and without calibration or adjustment.

\*Agilent 6890A/6890+/7820 systems require an optional controller.



## Sample capacity to meet any requirement

With its expanded 16-vial turret, the standard configuration of the 7693A provides up to eight hours of analysis. Need more capacity? The 150-vial tray is up to the task.

## Active gripper

Active grippers hold each vial by its sides for greater flexibility in handling a wider range of vials and caps. Sensors also detect whether or not a vial has been grasped.

## A choice of injection modes

Agilent fast injection enhances chromatographic results by ensuring minimal needle discrimination and sample decomposition. Plunger speed can be precisely regulated, enabling true optimization for large-volume injections or challenging applications.

## Heater/mixer/barcode reader

An optional heater/mixer/barcode reader and second injector can be used to prepare highly viscous or slightly soluble samples, as well as for dilutions, mixing, derivatizations, and barcoded sample tracking. All functions are controlled via easy-to-use software.

## Next sample overlap support

Decrease your analysis time and increase throughput by performing prerun rinses and picking up the next sample before the current run is complete.

## Modular design for easy service and support

Should service be required, repair options include returning the system to Agilent for quick exchange or repair. Onsite repair is also available, depending on your lab needs.



# The Better the Injection, the Better the Chromatography

Like its predecessor, the Agilent 7693A has been engineered for maximum performance and reliability while providing added flexibility to meet your lab's changing requirements.

Three modular sections suit your current—and evolving—needs





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### Heater/mixer/barcode reader

To give you even more sample handling capabilities, an optional module allows heating, mixing, and barcode reading of samples immediately before injection.

In addition, our new barcode label printing bundle lets you print easy-to-read barcode labels right from a spreadsheet or database. That means you can minimize typos and ensure accurate sample identification and tracking. The bundle comes complete with printer, software, templates, and labels.

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### Sample tray

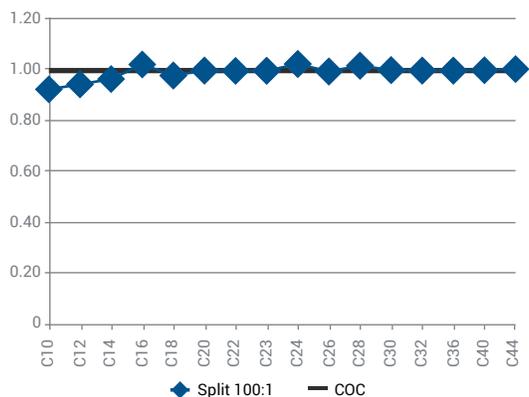
This unique vial handling system uses three separate 50-vial racks for a total capacity of 150 samples. A full tray heater/cooler is also available, along with a separately supplied recirculating temperature bath.

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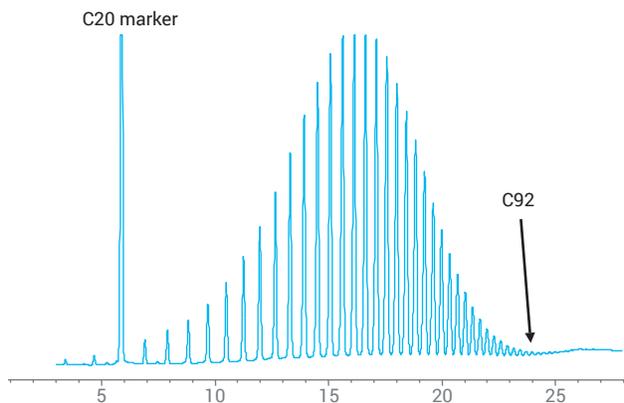
### Injection tower

Automate the analyses of up to 16 samples with a capacity for two solvent bottles and one waste bottle. When combined with the vial tray, the injection tower can hold 10 solvent vials and five waste vials. It also provides three sample vial transfer positions. So you get unprecedented sample handling flexibility.

## Exclusive Agilent fast injection—under 100 milliseconds



Agilent 100-millisecond injection eliminates a major source of sample discrimination and ensures that your injections are as representative of the sample as possible. Fast injection also simplifies quantitation by enabling the use of external standards.



Preparation and run of high-temperature SimDis calibration standard Polywax 655. The optional single-vial heater/mixer/barcode reader lets you automatically heat samples up to 80 °C and mix them before injection. So you can significantly improve high molecular weight performance and chromatographic results.

## Best-in-class precision

Carbon	Split Area % RSD	Splitless Area % RSD	On Column Area % RSD
10	0.20	0.26	0.33
12	0.20	0.27	0.36
14	0.20	0.27	0.40
16	0.21	0.30	0.41
18	0.23	0.28	0.27
20	0.25	0.28	0.41
22	0.28	0.28	0.41
24	0.30	0.28	0.42
32	0.39	0.30	0.41
36	0.29	0.35	0.41
40	0.34	0.27	0.42
44	0.27	0.33	0.42

Results of ten 1 µL injections.

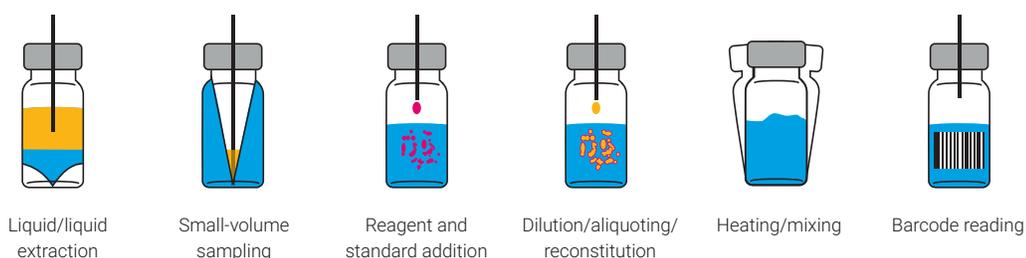
Whether you're detecting emerging contaminants in drinking water or testing drugs for purity, your results have to be precise and irrefutable. And the 7693A helps to ensure your best chromatography with advanced injection features.

- Multiple wash solvent capability for pre- and post-injection needle rinsing reduces sample carryover.
- Pre-injection sample pumps and pre-injection washes further reduce the possibility of carryover.
- Sample trays are mounted away from the GC oven to prevent exposure to high temperatures that could cause degradation or condensation in the sample vial.
- Single-stroke injection volume, as small as 0.01 µL and as large as 250 µL, lets you precisely match injections to your needs.
- Agilent syringes, engineered for longer plunger life, reduce carryover and increase accuracy over a wider range of injection volumes.
- Advanced automation capabilities eliminate sources of GC operator variability and human error to minimize rework.

# Pre-Injection Sample Handling Saves Steps, Boosts Productivity

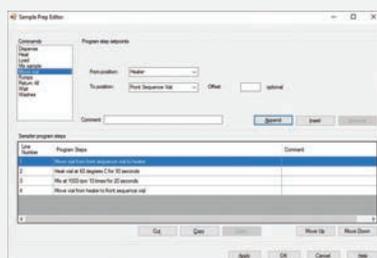
In addition to conventional and fast injection modes, the 7693A autosampler offers pre-injection sample handling that can enhance your lab's flexibility, productivity, and performance. Pre-injection sample handling saves time and resources by minimizing or eliminating separate sample preparation work. And that makes it ideal for routine sample handling in a wide range of industries and applications—including forensics, food, and environmental analysis.

What's more, a second injection tower, optional heater/mixer/barcode reader, and easy-to-use software let you optimize for performance, cost-efficiency, or unique analytical requirements. For example, you can automatically heat the sample vial, add a second solvent, mix, and inject into the system. Or, you can eliminate the need to add derivatization agents manually.



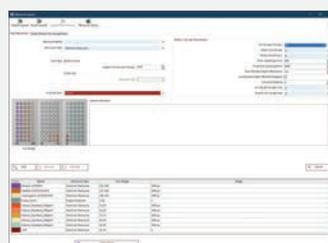
Extended options for sampling flexibility and automation. Variable needle depths allow you to sample anywhere within the vial, while optional sample handling capabilities further enhance your productivity.

## Two intuitive software options for sample handling



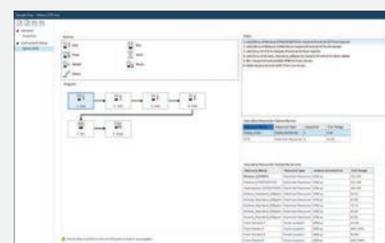
### Menu-driven sample preparation

The standard Agilent software utility, available with MassHunter and OpenLab EZChrom platforms, lets you take full advantage of advanced injection and sample handling capabilities. Intuitive dropdown menus and online assistance guide you through the process from start to finish.



### Easy SamplePrep software

This time-saving option, available with OpenLab CDS and OpenLab ChemStation, allows color-coded resource identification and tracking. Ask your Agilent representative for details.



Drag-and-drop simplicity: Easy SamplePrep software lets you create custom programs with basic steps such as add, mix, heat, and wait.



## Real Labs, Real Results

### Agilent vials, caps, and syringes ensure maximum uptime and peak performance

Our certified vials, caps, syringes, and other supplies are engineered to give you the consistent results you expect from Agilent instruments. They are designed to complement your Agilent 7693A automatic liquid sampler.

- Vials and caps are checked through our opto-electronic screening system—and those that are not within specs are rejected.
- Certified vials and caps are *guaranteed* to work on Agilent autosamplers. So you can avoid costly replacement of broken or misaligned vials that often result when using competitor vials.
- Choose from a selection of premium, high-purity septa, screw-cap vials, trays, labels, cold/hot trays, large-volume injection carriages, and electronic crimpers.
- We also offer premium syringes—available in a wide range of sizes, including 500  $\mu\text{L}$ —that increase service life, reduce carryover, and improve accuracy.

Learn how the correct vials, caps, and septa can improve lab productivity:

[www.agilent.com/chem/vials-productivity](http://www.agilent.com/chem/vials-productivity)

### Agilent GC supplies help keep routine maintenance routine

All capillary column ferrules, O-rings, and septa are packaged to remain clean and ready to use. A nonstick plasma coating on our premium inlet septa and precleaned O-rings simplifies maintenance and eliminates downtime caused by inlet surface residue. The coating also shortens bake-out times after preventive maintenance, so you can start running samples sooner.



The Agilent portable electronic crimper/decapper delivers tight, reproducible seals every time.



### **Agilent CrossLab services**

CrossLab is an Agilent capability that integrates services and consumables to support workflow success and important outcomes like improved productivity and operational efficiency. Through CrossLab, Agilent strives to provide insight in every interaction to help you achieve your goals. CrossLab offers method optimization, flexible service plans, and training for all skill levels. We have many other products and services to help you manage your instruments and your lab for best performance.

Learn more about Agilent CrossLab, and see examples of insight that leads to great outcomes, at [www.agilent.com/crosslab](http://www.agilent.com/crosslab)

Learn more:

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