

Raising the Bar for Instrument Intelligence

Agilent 8697 headspace samplers



Intelligent Sampling That Simplifies Life in the Lab

Based on the flagship Agilent 8890 GC and 7697A headspace sampler, the Agilent 8697 headspace samplers are the first with integrated GC communication. That means you can manage your gas chromatography workflows from a single interface—and spend more time on what matters.

Guided instrument troubleshooting and repair

8697 headspace samplers integrate with your GC to provide automated diagnostics and a free library of visual walkthroughs for dozens of troubleshooting and maintenance tasks. And it's all easily accessible from the user-friendly touch screen.

Performance tracking that helps prevent sample loss

The system automatically warns you before sequences are ruined by poor chromatographic performance. You can also use the Agilent peak evaluation feature to chart tailing, retention, and separation to your specifications. (See publication [5994-5353EN](#) for details.)

Full system logs, all in one place

Integrated instrumentation logs record each event on the sampler, instrument, and detector. What's more, you can easily download logs to track use, or send logs to Agilent customer support for troubleshooting.

Designed with the Agilent commitment to reliability and performance

Featuring an inert sample pathway, the 8697 headspace samplers give you consistent, repeatable GC results with no analyte loss or degradation. Advanced hardware features, such as the microchannel-based EPC module with atmospheric pressure compensation and valve-based sampling, deliver unprecedented precision and performance.



Integrated intelligence enables the 8697 headspace samplers to deliver simplicity and productivity.

Integrated Intelligence

The 8697 headspace samplers communicate directly with Agilent 8890, 8860, and Intuvo 9000 gas chromatographs, enabling full visibility into flow path status. Touch screen and browser Interfaces consolidate this information for guided diagnostics, troubleshooting, and error detection.

Integrated intelligence also allows your GC and headspace sampler to work better together for optimized sequence throughput. If a GC run needs more time to complete, the sampler will automatically wait before injecting the next sample.

Be confident with reliable Agilent design

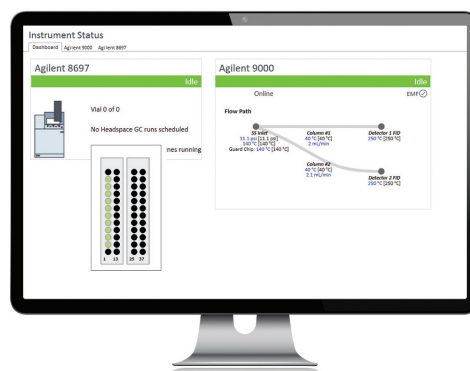
Each vial undergoes an automatic leak test during pressurization—without time-consuming calibration. So you can be confident that every sample is properly capped.

Method development and conversion tools eliminate trial and error

These headspace samplers feature three method development software wizards that enable you to:

- Convert existing valve-and-loop or pressure-balanced headspace methods to Agilent methods without tedious rework.
- Create headspace methods based on your specific application.

Once you have your method, the parameter increment function lets you easily optimize vial equilibration time, oven temperature, and vial shaking.



The Agilent OpenLab dashboard gives you at-a-glance information for each vial: run status, sample type, sequence actions performed, and which vials are in the oven.

Intuitive GC touch screen interface

Gives you real-time access to instrument status and information.

Home screen

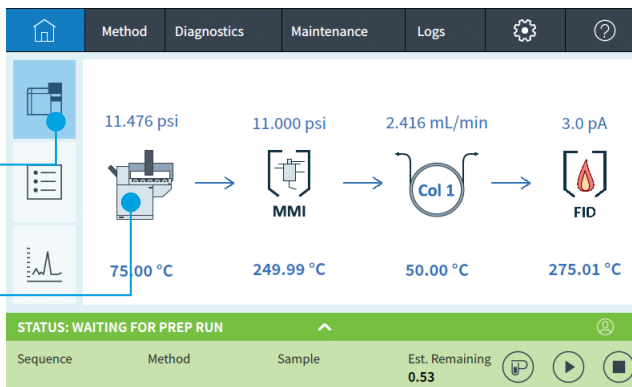
Provides at-a-glance updates on the system configuration and flow path.

Instrument actuals screen

Allows you to customize and identify frequently used setpoints for quick accessibility.

8697 headspace sampler-XL tray

Monitor headspace pressure, temperature, and status at a glance.



First-Class Precision, Reliability, and Ease of Use

With thoughtfully developed technology and powerful software, Agilent 8697 headspace samplers are packed with the latest productivity-boosting features. They are ideal for labs needing high throughput and performance.



1 Proven sample flow path

Both 8697 headspace samplers feature the same isolated carrier flow path as the 7697A headspace sampler so you can safely vent your vials.

2 Improved transfer line

- Easier installation. A captive septum retainer nut and improved inlet bracket simplify installation and provide the ruggedness your lab needs day to day.
- More robust. A clever new endcap protects the fused silica when the transfer line is not installed on the GC.
- Streamlined maintenance. Improved transfer line septum means fused silica can now be trimmed without replacing the septum.

3 Advanced sample preparation

- Maximum throughput. Optimized sample overlap lets you simultaneously heat and shake up to 12 vials.
- Remarkable sampling flexibility. Both the 8697 and 8697-XL tray support 10-, 20-, or 22-mL vials with no limitations on running mixed vial sizes.

4 Designed with sample handling in mind

- The capacity you need. 8697 headspace sampler with up to 48 vials and 8697-XL tray with up to 120 vials.
- Uninterrupted throughput. Removable sample racks can be exchanged while the headspace sampler is operating, so you can add samples until your whole job is done.
- Easier sample preparation. The sampler is designed with room to load, cap, and crimp vials in the rack for simplified day-to-day operations.
- Streamlined sample tracking. Optional barcode reader supports your lab's digital transformation.
- Convenient tool access. The headspace tools that you need now have a dedicated storage location.

5 Know where you are

A smart park button and tray rack LEDs show you the state the headspace is in.

6 Integrated GC communication

Easily view status details on the GC touch screen and browser interface.



The Agilent Intuvo 9000 GC pairs with the 8697 headspace sampler for a very small footprint.



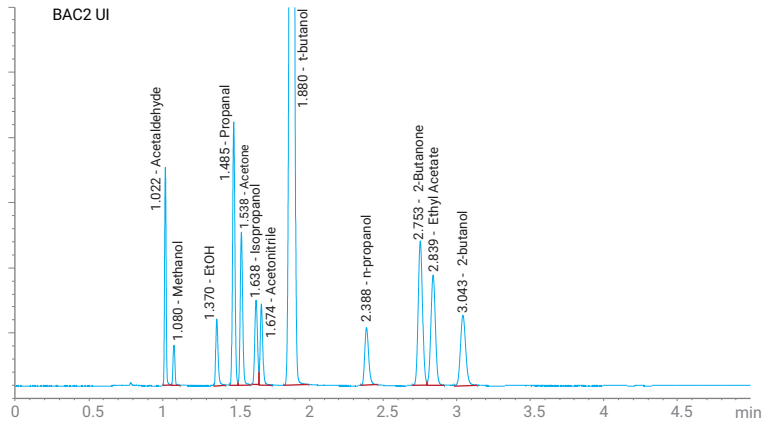
The Agilent 8890 GC pairs with the 8697 headspace sampler-XL tray to provide the utmost flexibility for labs with the most demanding needs.

The Data You Need for Your Critical Applications

Forensics

Reliably determine ethanol levels in blood samples

Dirty matrices like blood and biological samples are perfect for headspace analysis, because you can keep your GC clean without extensive sample preparation. With the 8697 headspace samplers, you can reliably separate ethanol from common interferences—and maintain the chain of custody using the optional barcode reader.

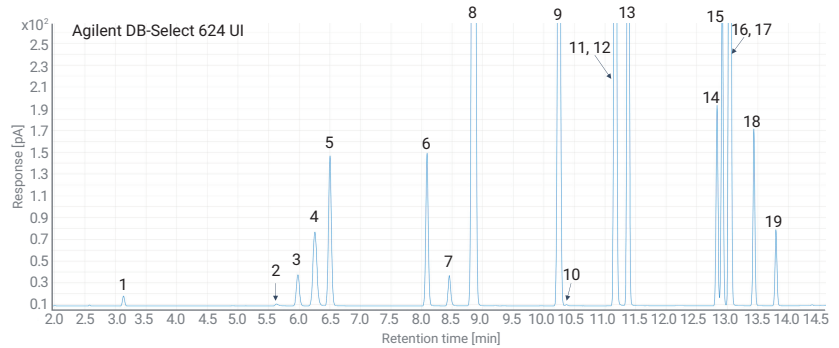


FID chromatogram of the Agilent blood alcohol checkout mix (p/n 5190-9765) demonstrating transfer and resolution of all 12 components. The sample was prepared by combining 50 μL of the mix with 450 μL of 0.1% (v/v) t-butanol in water in a 20-mL headspace vial.

Pharmaceutical

Streamline your residual solvent workflow

With the 8697 headspace samplers, you can use the same method parameters as you would with the 7697A. So, you can transfer residual solvent methods (such as USP <467>) with no method development.

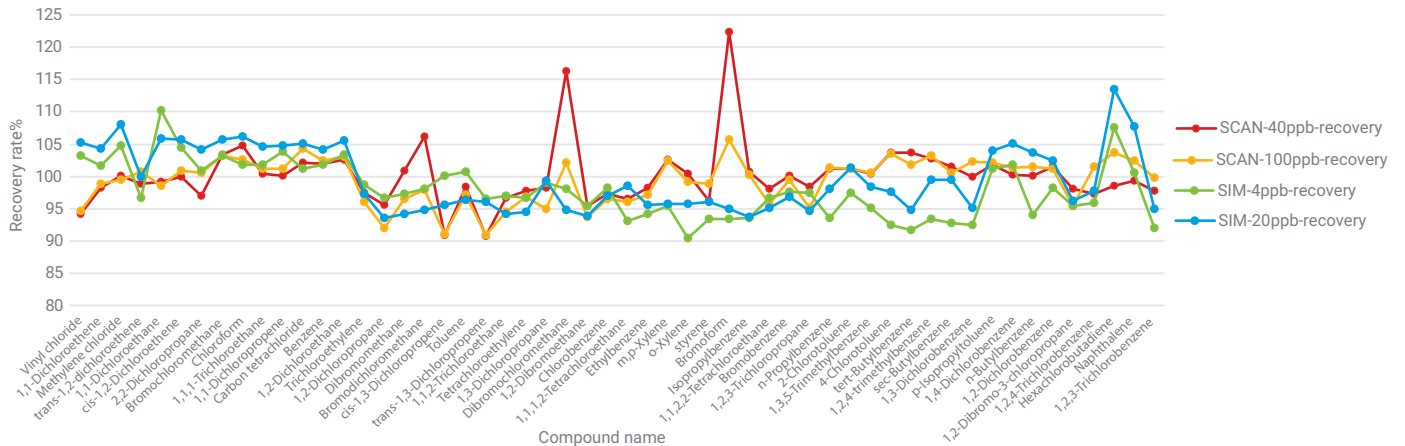


Flame ionization detector chromatogram for Class 2A solvents following USP <467>.

- | | | | |
|-----------------------------|---------------------------|-------------------|--------------|
| 1. Methanol | 6. cis-1,2-Dichloroethene | 11. MIBK/CPME | 16. o-Xylene |
| 2. Acetonitrile | 7. Tetrahydrofuran | 12. Toluene | 17. p-Xylene |
| 3. Methylene chloride | 8. Cyclohexane | 13. Chlorobenzene | 18. o-Xylene |
| 4. tert-Butyl alcohol | 9. Methylcyclohexane | 14. Ethylbenzene | 19. Cumene |
| 5. trans-1,2-Dichloroethene | 10. 1,4-Dioxane | 15. m/p-Xylene | |

Environmental

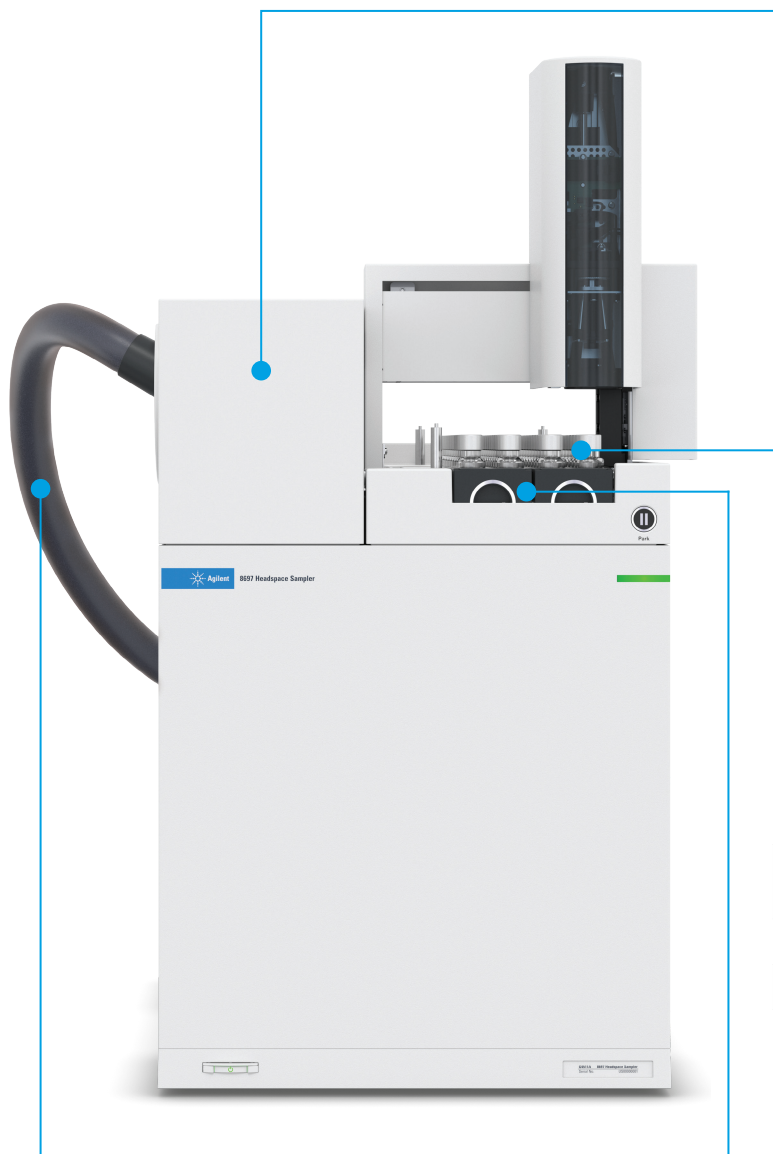
Accurately detect volatile organic compounds



SCAN method recovery rate: 90.8% to 122.3% for 40 $\mu\text{g/L}$; 90.9 to 105.7% for 100 $\mu\text{g/L}$ SIM method recovery rate: 90.5% to 110.3% for 4 $\mu\text{g/L}$; 93.6% to 113.5% for 20 $\mu\text{g/L}$. Recovery performance is comparable with the reference results in HJ810-2016 method.

Quality Consumables for Maximum Uptime

Agilent consumables for the 8697 headspace sampler will meet even the toughest application demands. Designed with the Agilent quality you expect, optimize your instrument's performance, and maximize your system's uptime.



Sample loops and probe

Description	Part Number
Sample loop, 0.025 mL	G4556-80101
Sample loop, 0.05 mL	G4556-80102
Sample loop, 0.10 mL	G4556-80103
Sample loop, 0.50 mL	G4556-80105
Sample loop, 1.00 mL (most common)	G4556-80106
Sample loop, 2.00 mL	G4556-80107
Sample loop, 3.00 mL	G4556-80108
Sample loop, 1.0 mL (certified)	G4556-80126
Sample loop, 3.0 mL (certified)	G4556-80128
Sample probe (deactivated)	G4556-63825

Crimper and decapper

Description	Part Number
A-Line electronic crimper (20 mm)	5191-5615
A-Line electronic decapper (20 mm)	5191-5613



Transfer line components

Description	Part Number
Transfer line septum retainer nut	G3452-60835
Transfer line septa	5183-4801
Fused silica transfer lines (deactivated, 5 m)	
(250 µm)	160-2255-5
(320 µm)	160-2325-5
(450 µm)	160-2455-5
(530 µm)	160-2535-5

Vials and racks

Description	Part Number
Flat bottom HS vials, certified, 20 mL, 100PK	5182-0837
HS crimp cap, PTFE/Si septum, certified, 20 mm, 100PK	5183-4477
Chiller vial rack set (8697 XL)	G4512-67402
Standard vial rack set (8697 XL)	G4512-67940
Standard vial rack set (8697)	G4511-68940
Vial rack labels (8697)	G4556-90500

Put Our Insight to Work for You

CrossLab is an Agilent capability that integrates services and consumables to support workflow success, improve productivity, and enhance operational efficiency. In every interaction, we strive to provide insight that helps you achieve your goals.

Learn more about CrossLab at www.agilent.com/crosslab



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© Agilent Technologies, Inc. 2023
Published in the USA, September 19, 2023
5994-2962EN

