

# Small Size, Big Impact

Agilent 8850 GC system





## Unleash the Power of Small

This single-channel GC withstands the toughest demands

Limited bench space. Sustainability goals and rising energy costs. Pressure to turn around more samples in less time. Faced with these challenges, it's more important than ever for your lab to maximize productivity, efficiency, and uptime. And the Agilent 8850 GC is designed and engineered to help you do just that.

This single-channel gas chromatograph is the smallest high-performance benchtop GC on the market, taking just half the bench space of traditional instruments. It combines powerful intelligence features with a compact footprint, while enabling even novice users to diagnose common problems and perform extended routine maintenance and troubleshooting. So, you can minimize downtime and maintain your reputation by providing on-time, dependable results.

What's more, the 8850 GC builds on the legacy of the Agilent 6850 GC and delivers the chromatographic performance and rugged reliability you expect from Agilent.

# Keep samples flowing through your lab by working smarter, not larger

**Compact size:** The 8850 GC has the same footprint as the Agilent 6850 GC, yet it delivers the same performance of the Agilent 8890 GC.

**Redundancy:** With a footprint about half that of an 8890 GC, you can have two methods running simultaneously without sacrificing valuable bench space.

**Easy transition from the 6850 GC:** The 8850 GC uses familiar consumables and software, minimizing method development, start-up, and training time.

**High performance:** Featuring the same electronic pneumatics control (EPC), inlets, and detectors found in the 8890 GC, the 8850 GC delivers the same unparalleled repeatability, precision, and sensitivity.

**Fast GC:** A small, precisely designed air-bath oven enables fast temperature ramps and short cool-down times.

**Energy efficiency:** Using up to 30% less power than other GCs, the 8850 helps your lab reduce energy costs and meet sustainability goals.



## Is sustainability a priority for your lab?

The 8850 GC uses less electricity and can help you conserve helium—a non-renewable resource—or switch to another carrier gas.

You can also use the Agilent Trade-In and Buyback Program to recycle your less efficient older GC for cash or credit on your 8850 GC purchase.

[Learn more](#)

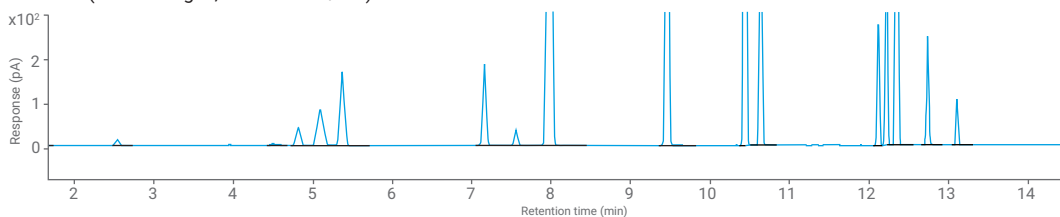
## Same results, half the space

The 8850 GC uses the same proven components as the Agilent 8890 GC. Both provide state-of-the-art performance for unsurpassed retention time and quantitation repeatability, as seen for similar Class 2A residual solvent applications below. Both data sets demonstrate a maximum area and RT precision of 3.45% and 0.033%, respectively.

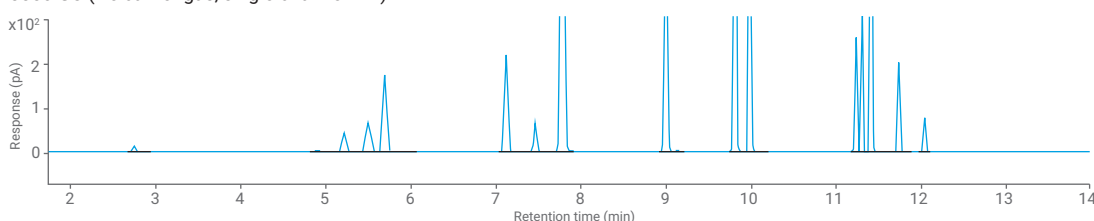
Despite different hardware configuration and oven programs, reliable and comparable data is collected across both instruments.



8890 GC (He carrier gas, dual-column/FID)



8850 GC (He carrier gas, single-channel FID)





## Huge benefits in a small package

The 8850 GC is equipped to make a big impact on productivity by increasing uptime, reducing sample turnaround time, and advancing your lab's reputation for providing reliable answers.

### At home on any bench

The 8850 GC is small enough, rugged enough, and simple enough to operate close to process areas, so you can monitor your production processes without interruption.

### Familiar consumables

The system uses the same consumables as the 8890 and 8860 GCs and is compatible with the same columns as the 6850 GC. A wide choice of 5" capillary and packed metal columns is available to suit your every application.

### Inlets and detectors for your analytical needs

Quality Agilent GC detectors and inlets provide the selectivity and sensitivity that your application requires. Analyze diverse samples with your choice of split/splitless, purged packed, or cool on-column inlets, as well as flame ionization (FID) and thermal conductivity (TCD) detectors.

### Full-function touch screen

The available touch screen provides a visual report of the system configuration, allowing you to update the active method, perform routine maintenance, and check GC instrument status.

### No-hassle maintenance

A unique top-opening lid lifts the column out of the oven, allowing convenient access to inlet and detector connections. Easy-open side panels let you reach key internal components when needed.



### Flexible sample introduction

Maximize your productivity with your choice of automated sample introduction options, including liquid and headspace autosamplers, as well as a liquid or gas sampling valve.

Agilent autosamplers eliminate manual errors and provide unmatched reproducibility during sample injection. With options for 16 or 50 liquid samples, or 12–120 headspace samples, there's an autosampler that will keep you on track and on time.



## Intelligent GC simplifies life inside and outside the lab

The 8850 GC is the newest addition to the family of intelligent GCs that simplify life inside and outside your lab. It monitors system health, alerts you to potential issues, and helps you solve problems. That means you can plan your work—including maintenance—rather than react to unexpected downtime.

### Know that your GC is ready to run before you begin

Initiate diagnostic tests at any time through the touch screen or browser interface.

### Keep your GC operating at its best

The 8850 GC continuously monitors setpoints and reference voltages. When issues are identified, an alert appears on both the touch screen and the browser interface.

### Maximize uptime

Automated diagnostics evaluate and provide feedback on instrument health. Guided maintenance helps even novice users perform tasks right the first time.

### Check on your instruments anytime, from anywhere

Now you don't have to be in your lab to make sure that things are running smoothly. With its intuitive browser interface, the 8850 GC lets you remotely view setup information, troubleshoot problems, check for leaks, pause and start sample runs, and manage method development.

### Access expertise across your organization

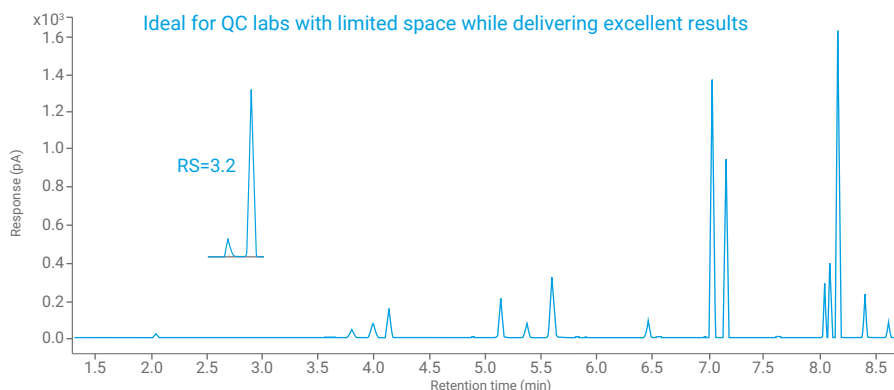
Remote connectivity enables troubleshooting from any location, expanding your pool of GC experts. When necessary, guided troubleshooting saves time by allowing users to provide information to specialists.

# More than a match for challenging applications

The performance of the 8850 GC meets your toughest requirements for accurate, precise, and consistent results.

## Pharmaceutical: Residual solvents

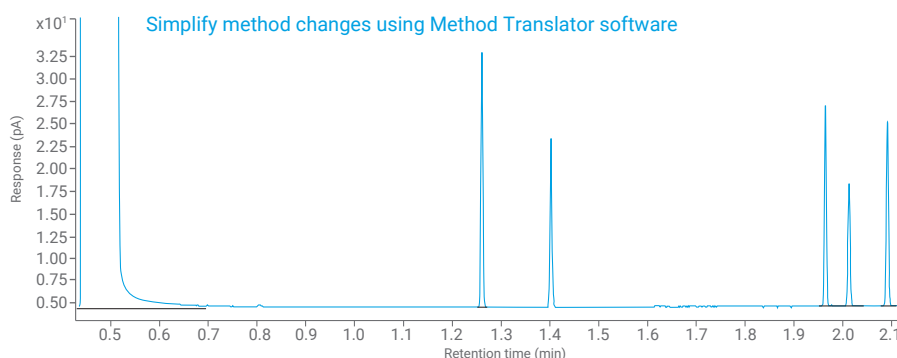
Solvents are used throughout production in the pharmaceutical industry. Products must be tested for these solvents for quality assurance, even at low concentrations. GC with headspace sampling is well suited to residual solvent analysis and is widely implemented within the pharmaceutical industry.



The 8850 GC with 8697 headspace sampler demonstrates excellent repeatability and precision for Class 2A residual solvent using hydrogen carrier gas. Inset shows resolution between acetonitrile and methylene chloride exceeds method requirements.

## Flavor and fragrance: Vanilla extracts

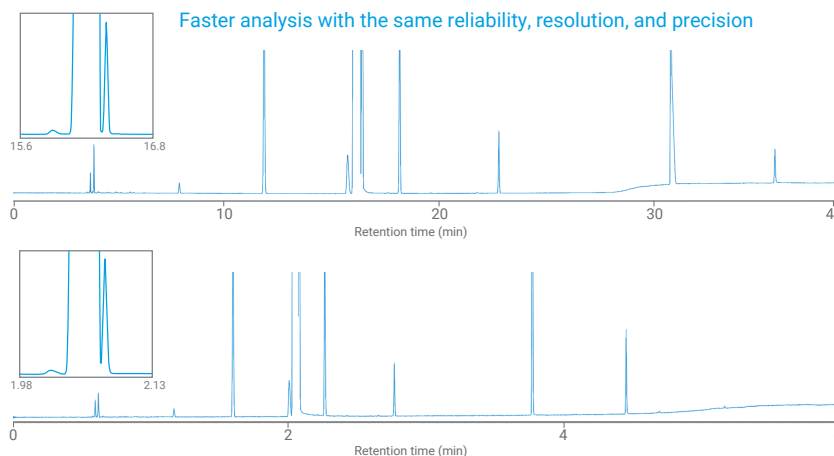
Quality control in the flavor and fragrance industries is typically performed using GC-FID. The profile obtained for a production sample of an essential oil, perfume, or fragrance oil is compared to a reference sample.



The 8850 GC can perform long detailed separations or rapid processing monitoring, accurately verifying both relative sample composition (area %) and the presence of impurities, to ensure the quality of your flavors and extracts, no matter your need.

## Energy and chemicals: Solvents by ASTM D7504

Monocyclic aromatic hydrocarbons are important commodity chemicals used to manufacture polymers. Method D7504 supports these specifications using gas chromatography to measure overall chemical purity and the content of key impurities.

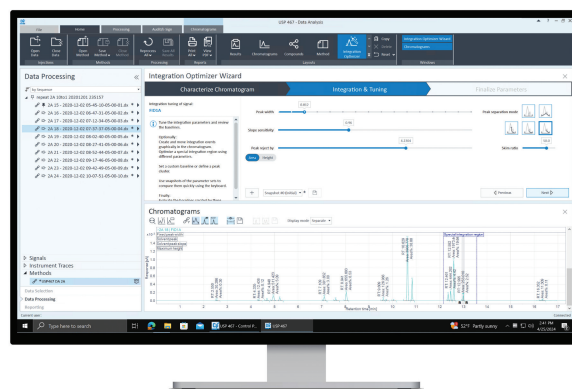


The 8850 GC offers the flexibility to run conventional methods using helium carrier gas (top) or fast methods using hydrogen carrier gas (bottom). Insets shows D7504 *p*-xylene and *m*-xylene resolution requirements are easily met using either approach.

## Intuitive software designed to enhance your 8850 GC experience

To maximize the potential of your 8850 GC, OpenLab software provides the best solution for QC environments. OpenLab CDS lets you maintain quality and reliability with role-based access controls and comprehensive audit trails. The integration optimizer provides a fast way to optimize integration parameters to improve the accuracy of results in real time.

Both OpenLab ChemStation and OpenLab EZChrom support the 8850 GC. The system is also compatible with third-party chromatography data systems.



## Handle the hassles of the helium shortage

### Helium conservation module

Minimize helium use with our optional helium conservation module. It automatically switches the carrier gas supply to nitrogen during GC idle time, keeping the flow path inert and the system at temperature during standby mode. Combine with Agilent Gas Saver to use even less helium.

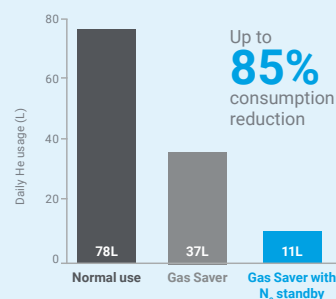
### Hydrogen sensor module for hydrogen carrier gas

The Agilent 8850 GC offers built-in hydrogen safety features. The optional hydrogen sensor module continuously checks for free hydrogen in the column oven. If a leak is detected, the instrument will perform a series of actions including venting, turning off the hydrogen gas supply, and shutting down thermal zones.

[Learn more](#) about conserving helium or converting to an alternative carrier gas.

### Minimizing helium usage

Comparison of helium consumption on a GC run cycle



[Calculate](#) your savings



# When you buy columns and supplies from Agilent, you're buying more than just products

Get your GC columns and supplies from one source—Agilent. You'll benefit from stringent Agilent quality-control specifications, enhancing the performance of your instrument.



## GC columns

Agilent J&W GC columns deliver the lowest bleed levels, highest inertness, and tightest column-to-column reproducibility. A wide choice of 5" capillary and packed metal columns is available to suit your every application.

[Learn more](#)



## Nonstick BTO inlet septa

Preconditioned, bleed temperature optimized (BTO) septa are designed to sustain inlet operating temperatures up to 400 °C without risk of flow path contamination. [Learn more](#)



## Ultra Inert gold plated GC inlet seal

Eliminate leaks at split/splitless injection ports, improving sensitivity and prolonging column life. [Learn more](#)



## Graphite/Vespel column ferrules

Combining the material properties of high-performance polyimide and graphite, these ferrules resist deformation and prohibit oxygen intrusion into the flow path. [Learn more](#)



## Ultra Inert fritted liner

These inert liners feature a proprietary deactivation process that eliminates potential active sites located throughout the interior of the liner. [Learn more](#)



## Gas Clean filter kit

Reduce column damage and sensitivity loss. Gas Clean filters ensure a contaminant-free gas line, and smart sensors alert you when filters are saturated and need replacing. [Learn more](#)



## ADM Flow Meter and electronic leak detector

Combines the two most critical GC flow path monitoring tasks into a single hand-held cartridge system. [Learn more](#)



## GC autosampler syringes

Durable syringes feature a specialized plunger head that aligns with the sampler's stroking mechanism to improve injection accuracy and improve plunger longevity. [Learn more](#)



## New to Agilent GCs? Transitioning from the 6850 GC? We're here to help you succeed.

When it comes to adding new instruments to the lab, no two experiences are quite the same. What's more, a shortage of time and staff can make it difficult to implement new technologies to their fullest potential.

Get on the fast track to better outcomes with Agilent CrossLab. CrossLab is an Agilent capability that integrates services and consumables to support workflow success, improve productivity, and enhance operational efficiency. We offer a wide range of products and services to help you manage your instruments and your lab operators for best performance.

Learn more about CrossLab at [www.agilent.com/crosslab](http://www.agilent.com/crosslab)



## Have questions? Get them answered at the Agilent Community.

The Agilent Community is the best place to collaborate with others about applications, discuss Agilent products, and find in-depth documents and videos. Members of the community have a genuine interest in Agilent products, keeping conversations relevant to you.

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