Agilent

Agilent MassHunter GC/MS System

Quick Start Guide

Notices

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Safety Notices

CAUTION

A CAUTION notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a CAUTION notice until the indicated conditions are fully understood and met.

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A WARNING notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a WARNING notice until the indicated conditions are fully understood and met.

The Agilent GC/MS System

Below is a typical Gas Chromatograph and Mass Spectrometer (GC/MS) hardware configuration.

The Agilent MassHunter Software Suite

The MassHunter software suite offers dedicated software modules for compound quantitation and confirmation, target compound screening, degradant and unknowns identification, characterization of biomolecules, and protein and metabolite identification.

To open a module, select the corresponding desktop icon:


Data Acquisition


Quantitative Analysis


Qualitative Analysis


OpenLab Control Panel


Report Builder


Library Editor


Unknowns Analysis

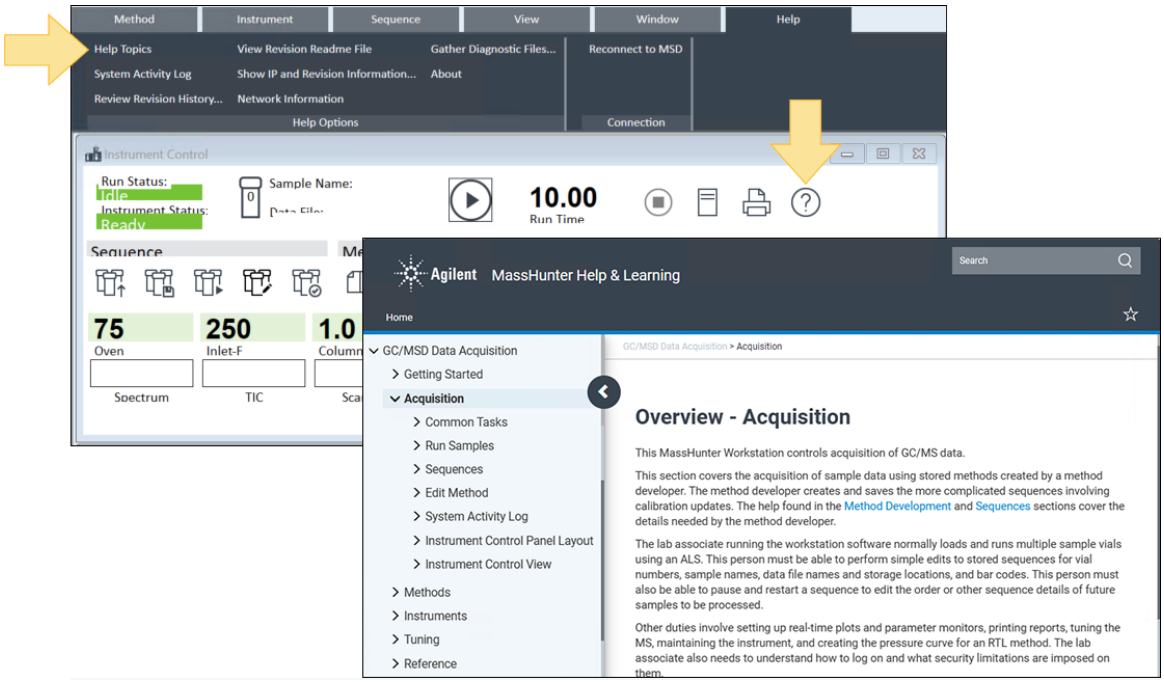
Parts Finder

MassHunter Online Help

An extensive library of software information and tutorials about instrument control, data acquisition, data analysis, methods, sequencing, tuning, troubleshooting, and how to use system commands and variables is available through the online
Help files.

To access the online Help from your MassHunter software, do one of the following:

- Press F1.
- Select the ⓘ Help icon.
- On the **Help** tab, select **Help Topics**.



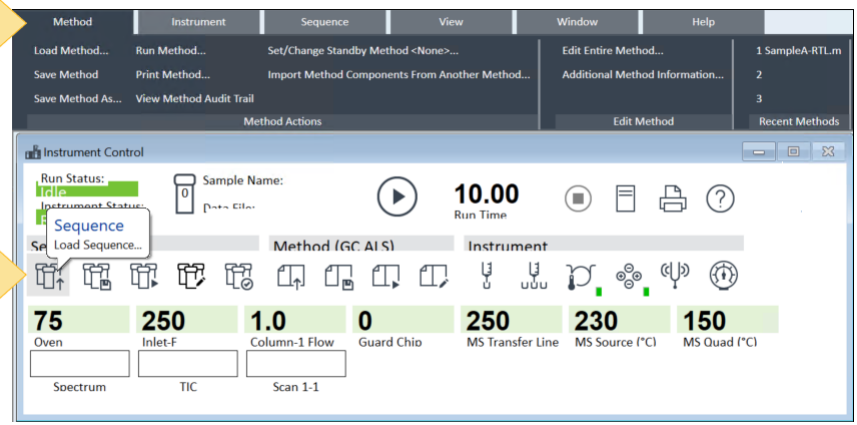
Data Acquisition Software

From MassHunter Data Acquisition, you can:

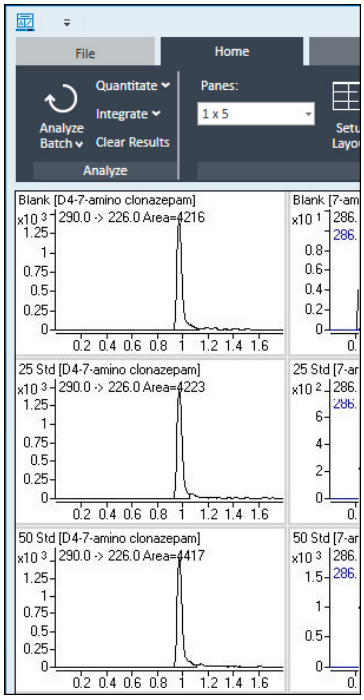
- Start and stop the instrument.
- Download instrument settings in real time.
- Load, edit, create, or run a method.
- Load, edit, create, check, or run a sequence.
- Evaluate the MS parameters.
- Autotune the MS parameters.
- Monitor the real-time conditions of the instrument parameters.
- View the instrument logs.
- View and print the real-time plot for chromatograms and instrument spectra.
- Select and label the total ion chromatograms (TIC) or extracted ion chromatograms (EIC) that you want to appear in the real-time plot.

Select a tab to view additional windows and options.

Hover over any icon or button to display a tooltip identifying what each tool can do.



Quantitative Analysis Software



The MassHunter Quantitative Analysis software will quantify very low amounts of sample.

From one screen in MassHunter Quantitative Analysis, you can:

- Import information directly from the acquisition method.
- Use the curve-fit assistant to test all fits and statistics on the calibration curve quality.
- Use the Compounds at a Glance feature to review all the chromatograms in your batch at once, side-by-side.
- Quickly scan the batch table and see your quality metrics such as high outliers (in red) or low outliers (in blue).

You may access familiarization guides for this software through the online Help.

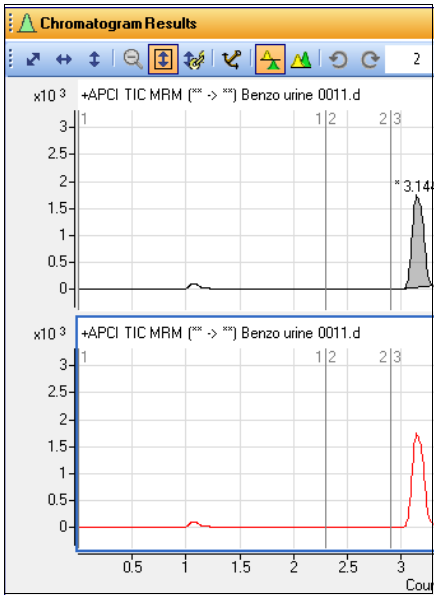
Press F1 to access context sensitive online Help.

Batch Table

Sample: 7-amino clonazepam Sample Type: <All>

7-amino c...	7-amino clonazepam Results						Qualifier...		D4-7-amino...	
Exp. Conc.	RT	Resp.	MI	Calc. Conc.	Final Conc.	Accuracy	Ratio	MI	RT	Resp.
25.0000	0.982	2400		29.0230	29.0230	116.1	79.1		0.974	4223
50.0000	0.982	5192		48.6966	48.6966	97.4	79.2		0.974	4417
125.0000	0.982	12941		111.0894	111.0894	88.9	85.4		0.973	4173
250.0000	0.984	28338		227.0264	227.0264	90.8	82.6		0.977	4243
500.0000	0.983	60068		534.1646	534.1646	106.8	74.5		0.975	3717
									0.972	4216
									0.976	4599
189.0000	0.982	17646		145.8304	145.8304	77.2	75.8		0.974	4228

Qualitative Analysis Software



The MassHunter Qualitative Analysis software uses advanced data mining and processing tools, including integrated deconvolution algorithms, to rapidly and accurately find all detectable compounds in your samples and easily confirm targets or identify unknowns.

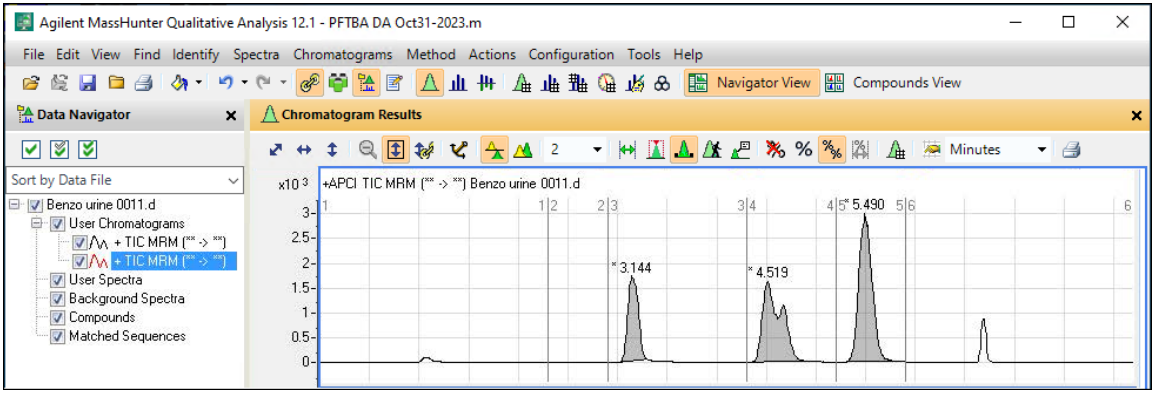
This software presents large amounts of data for review in one central location. From one screen, you can:

- Extract chromatograms
- View and extract peak spectra
- Subtract background
- Integrate the chromatogram
- Find compounds and generate formulas

You can also set up methods to automatically do the tasks in the above list, as well as others, when you open the data files.

You may access familiarization guides for this software through the online Help.

Press F1 to access context sensitive online Help.



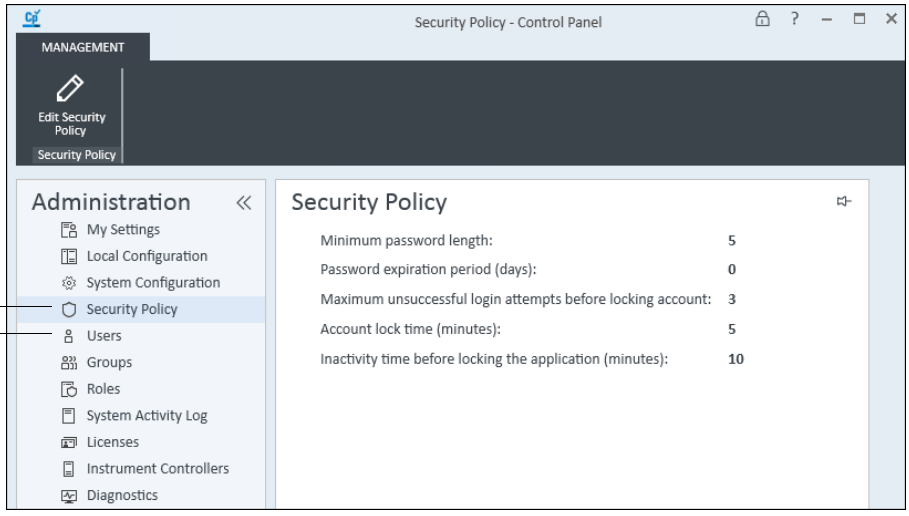
OpenLab Control Panel

The Control Panel is the administrative and management center of MassHunter, offering:

- Full instrument status information for your entire laboratory
- Central configuration and administration of users, instruments, and security settings
- Full system documentation and built-in reports.

Select **Security Policy** to set the login Security Policy and control your users' access to the system.

Select **Users** to add users to your system and set their privileges.



For details on the Control Panel features, press F1 to see the online Help.

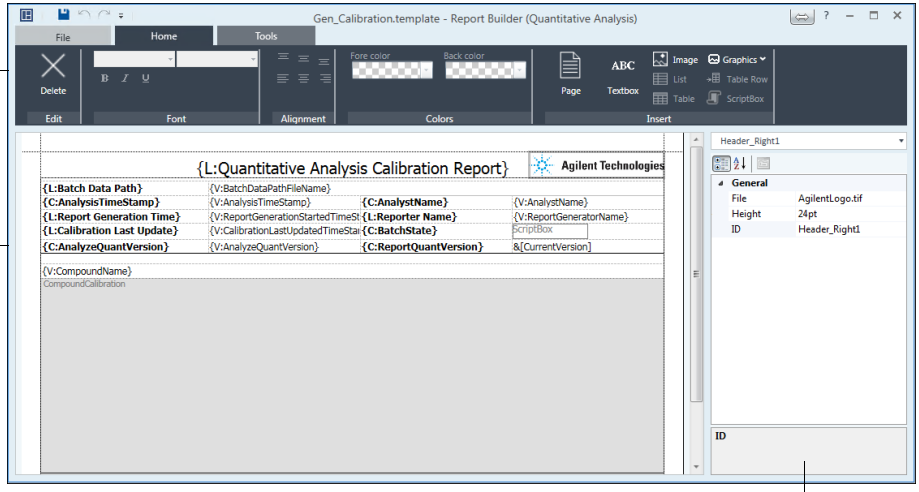
Report Builder

The Report Builder software is installed with MassHunter Quantitative Analysis. The software provides PDF templates for MassHunter Quantitative Analysis and MassHunter Unknowns Analysis. Each of these templates can be customized for your specific application in the Report Builder.

You may access familiarization guides for this software through online Help.

Use the toolbar on the **Home** tab to edit fonts, colors, and alignment and insert various elements into the template.

Use the editing window to preview the **report template**.



Use the **properties pane** to edit details for each element.

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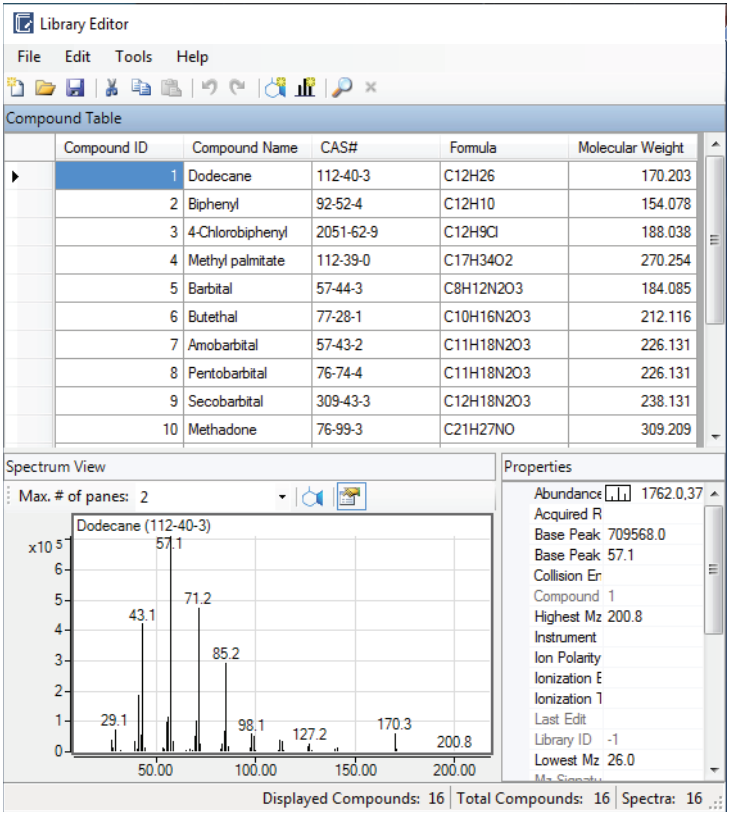
Library Editor Software

The MassHunter Library Editor software customizes libraries used to identify compounds and components in the MassHunter Qualitative and Quantitative Data Analysis software.

From one screen in MassHunter Library Editor, you can:

- Add compounds to a library
- Copy spectral data from your data analysis software to a library
- Add a structure to your custom library
- Import JCAMP files into a custom library
- Create a reference pattern library

You may access familiarization guides for this software through the online Help.



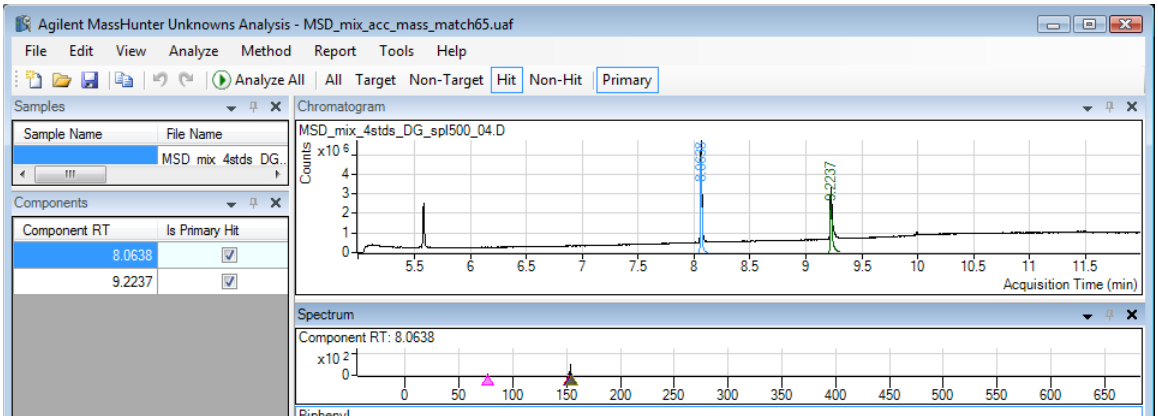
Unknowns Analysis Software

The MassHunter Unknowns Analysis software identifies compounds that may be present in a sample batch beyond those that were found in MassHunter Quantitative Analysis.

From one screen in MassHunter Unknowns Analysis, you can:

- Import data directly from MassHunter Quantitative Analysis.
- Use optimized deconvolution and library match algorithms to identify target and non-target hits.
- View chromatograms, component lists, spectrums, ion peaks, and molecular structures side-by-side.
- Easily review library match and peak shape metrics of unknowns components in table and spectrum formats.

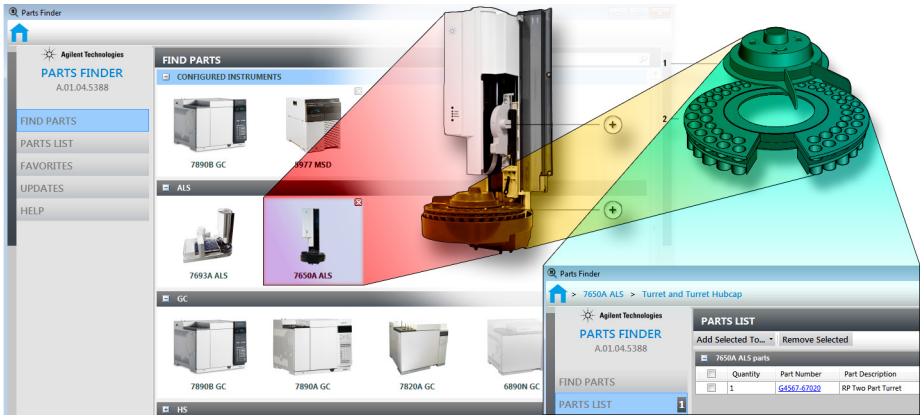
You may access familiarization guides for this software through the online Help.



Parts Finder Tool

Included with your system is the Agilent Parts Finder tool. This interactive software features an intuitive image-based search capability for quick identification of needed parts and supplies for your Agilent instruments.

Using Parts Finder, rather than thumbing through a paper catalog, you can select nested photos to quickly locate the parts that you need.



Parts Finder is installed on your PC along with MassHunter Workstation.

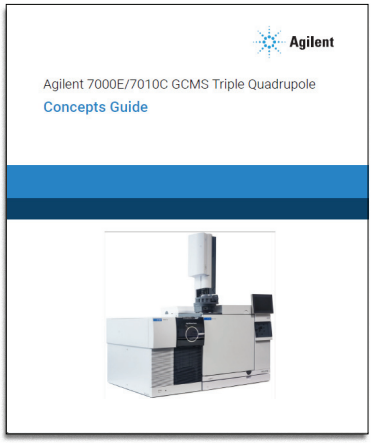
MS Hardware Library

Use the Agilent GC/MS Hardware User Information USB to install the full library of Learning Products with manuals (in PDF format) and videos (in MP4 format) that explain how to install, operate, maintain, and troubleshoot your system.

To install your MS Hardware Library, insert the memory stick into a USB port and follow the prompts. This can be installed by anyone who has authority to copy information onto the receiving computer.

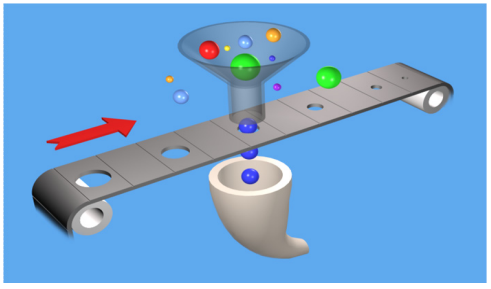
Once installed, an icon appears on your desktop for quick access to your material. To open a hardware library, select the desktop icon.

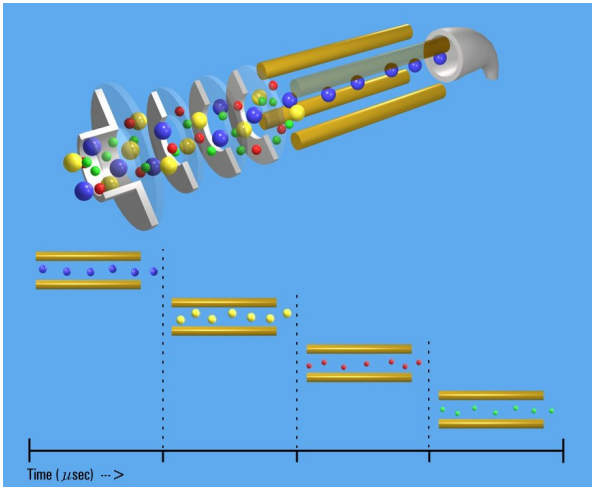
Concepts Guide



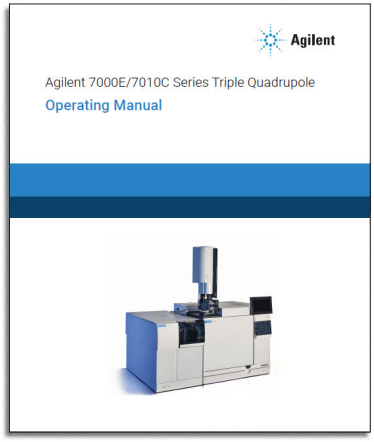
To learn how your Agilent GC/MS system works in conjunction with the MassHunter software, take a look at the concepts guide included with your Hardware Library. This document includes:

- Conceptual models
- Illustrations
- Screen captures
- An overview of how the mass spec works
- Concepts behind the design of MassHunter Data Acquisition
- The theory behind chemical ionization in GC/MS



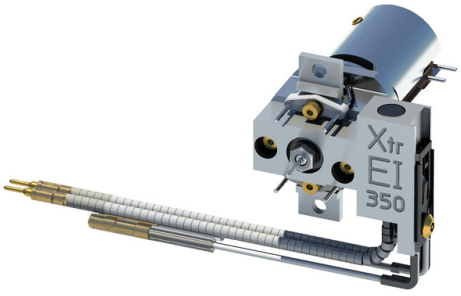


Operating Manual

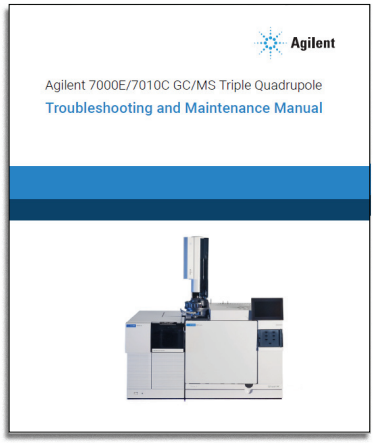


Your Agilent GC/MS system is extremely powerful and flexible. Refer to the operating manual included with your Hardware Library for extensive information on operating the instrument and performing routine maintenance on it. Included are step-by-step instructions and videos on installing GC columns, operating in electron impact (EI) mode, general maintenance procedures, and more.

Any topic with the camera icon is linked to a video. Watch these videos to learn more.

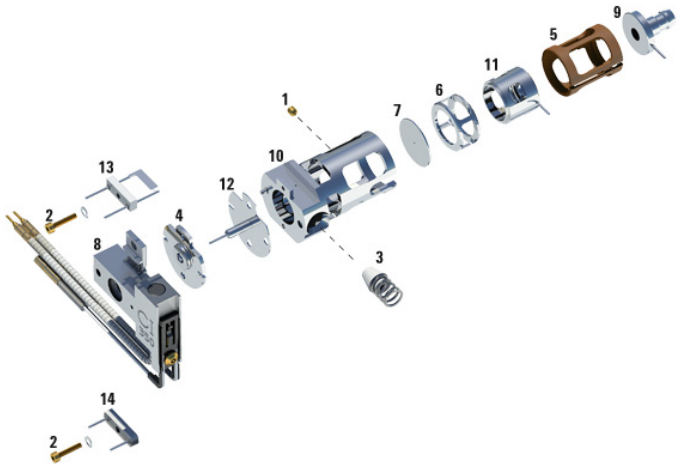


Troubleshooting and Maintenance Manual

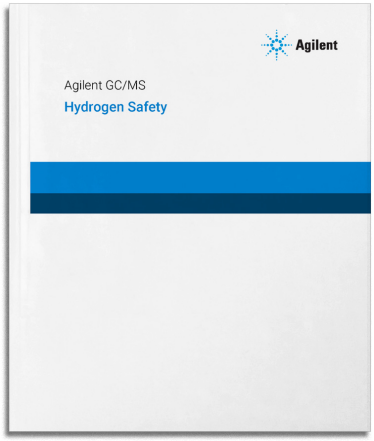


The troubleshooting and maintenance manual included in your Hardware Library includes step-by-step instructions along with videos, IPBs, and annotated high-resolution photos to help you identify the cause of problems in your system. Detailed procedures are also included for completing common maintenance tasks, sections on the components of the GC/MS vacuum system and analyzer system, and a listing of parts.

Any topic with the camera icon is linked to a video. Watch these videos to learn more.



Hydrogen Safety Manual

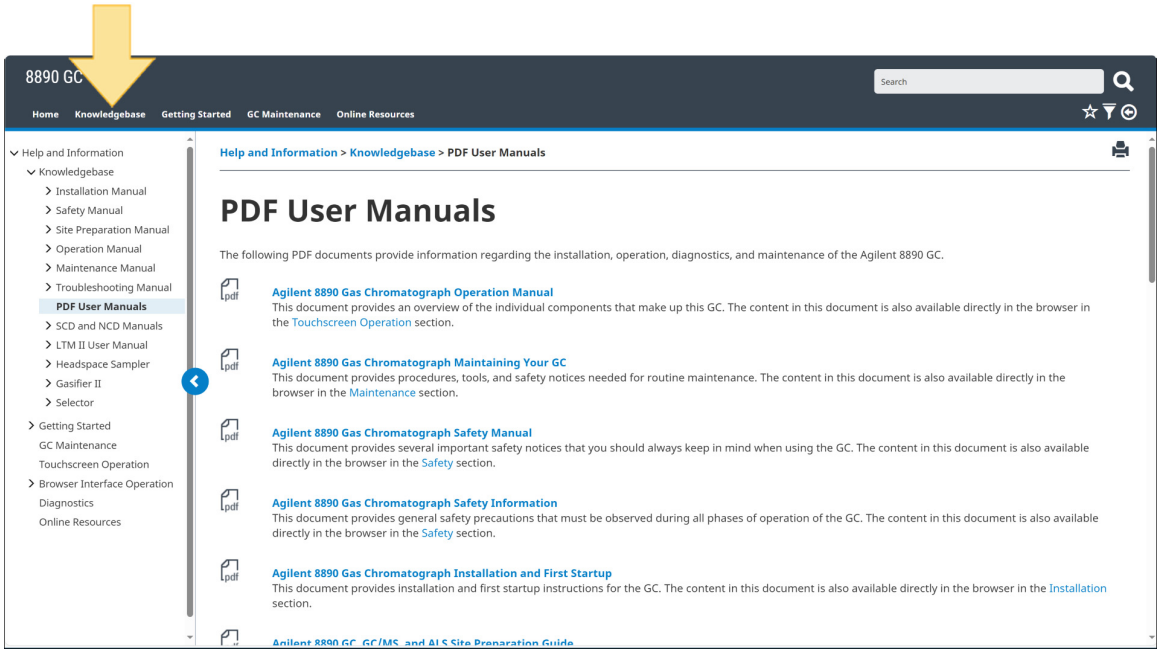


Hydrogen presents a number of dangers. Some are general, others are unique to GC or GC/MS operation. Review the hydrogen safety manual included in your Hardware Library for details on the use of hydrogen with the GC/MS.

GC Hardware Library

Additional information for your GC is also available.

1. Open a browser on a computer or other device that shares the same gateway as the GC.
2. Enter this URL: http://xxx.xxx.xxx.xxx/info, where xxx.xxx.xxx.xxx is the IP address or host name of the GC. For example, enter `http://10.1.1.101/info`.
3. When the GC Help & Information home screen opens, select **Knowledgebase**.



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