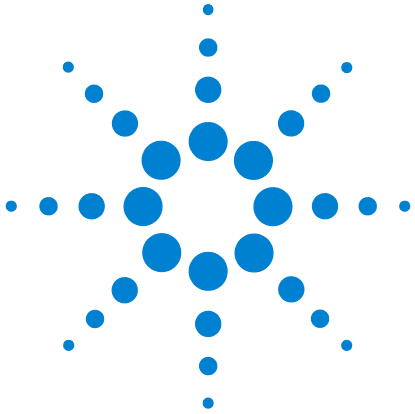

Agilent 7697A Headspace Sampler

Software Familiarization

Agilent Technologies

Notices

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CAUTION

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WARNING

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.

Getting Familiar with the Agilent Integrated Headspace Software

Introduction

This guide describes how to begin using the Agilent 7697A 111-Vial Headspace Sampler (HS) with the Agilent Integrated Headspace Software.

This guide assumes some familiarity with the Agilent 7890A Gas Chromatograph (GC) (Figure 1) and the Agilent GC ChemStation software. Refer to the GC and Agilent GC ChemStation software user documentation for details.

Figure 1 The Agilent 7890A GC–7697A 111-Vial HS system with 7693A ALS and the 7000 GC/MS Triple Quad

The Agilent GC ChemStation data system is used as an example in this guide. Use with other data systems is similar.

Before You Begin

This guide assumes the use of an Agilent 7890A GC–7697A 111-Vial HS system. In addition, this guide assumes that:

- The Agilent Integrated Headspace Software is installed and configured.
- The latest version of the Agilent GC ChemStation software is installed and configured.
- The 7890A GC–7697A 111-Vial HS system is configured as **Instrument 1**.
- The GC and HS currently have no error conditions.
- All gases are plumbed and turned on.
- Your GC/HS system is configured for GC carrier gas control.
- You have a 1-mL sample loop installed in your HS.
- You are using 20-mL sample vials.

Getting Started

Starting Up the GC, HS, and Computer

If not already running, start up the GC, HS, and computer in the following order:

1. Turn on the GC.
2. Turn on the HS.
3. Turn on all gases and set to the proper source pressures. For details refer to the user documentation provided with your instruments.
4. Check for any error messages on the GC and HS displays. If any problems exist, resolve them. For details refer to the user documentation provided with your instruments.
5. Turn on the Agilent data system computer.

Starting an Online Instrument Session

Start an online instrument session. For Agilent GC ChemStation, select **Start > All Programs > Agilent ChemStation > Instrument 1 Online** (Figure 2).

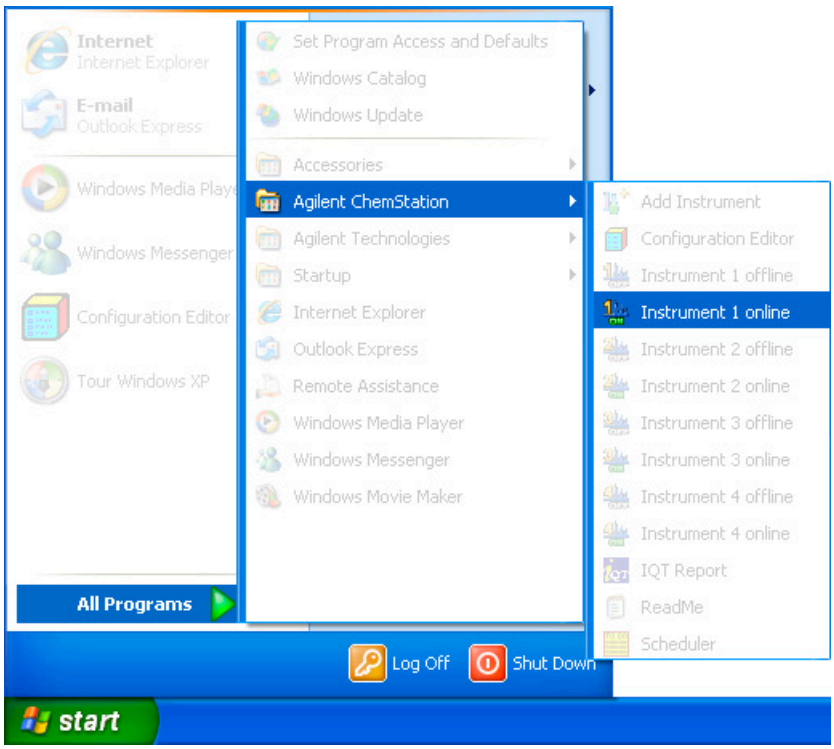


Figure 2 Starting an online instrument session

An **Instrument Configuration** dialog window appears (Figure 3). If you select **Yes**, the instrument configuration opens. If you select **No**, the dialog window closes and the instrument session begins. To hide this dialog window at future online instrument session startups, select **Suppress this message**.

In this example, select **No** to close the dialog window and start the online instrument session.

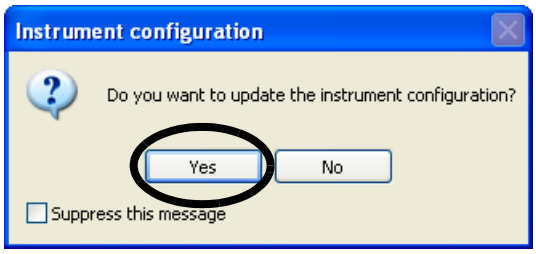


Figure 3 Instrument configuration

Instrument Configuration

Instrument Configuration

Instrument Configuration

1 To access **Instrument Configuration**, select **View > Full Menu** in the data system's top menu (Figure 4). This allows access to special menu items in the data system.

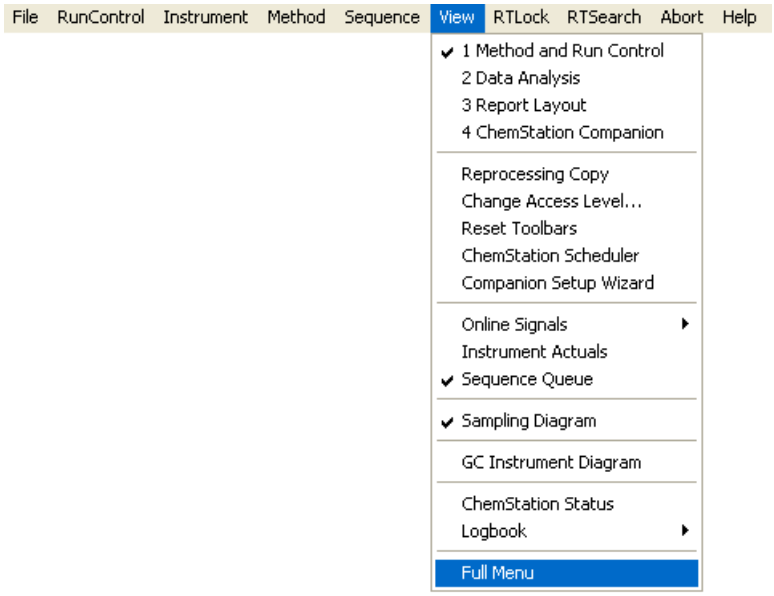


Figure 4 Viewing the Full Menu in Agilent GC ChemStation

2 Select **Instrument > Instrument Configuration...** from the data system's top menu (Figure 5).

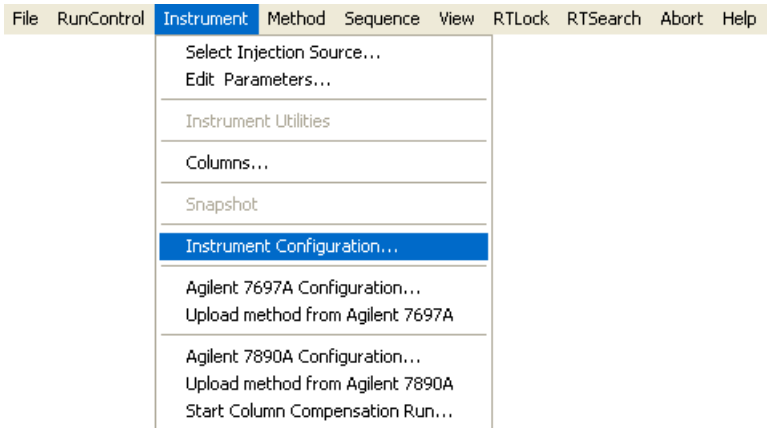


Figure 5 Accessing Instrument Configuration

3 Use **Instrument Configuration** to configure your HS (Figure 6). Select **Configure...** to view configuration parameters and licensing information for the selected instrument. Refer to the software help for more information.

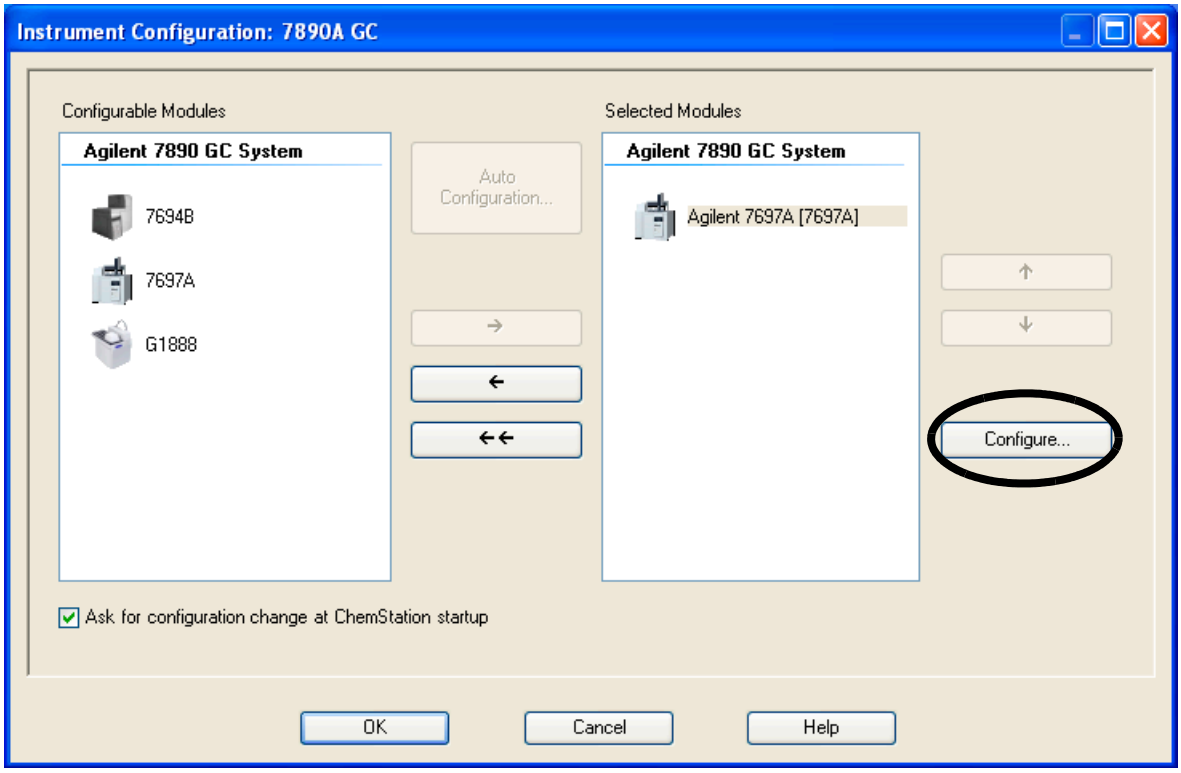


Figure 6 Instrument Configuration

Agilent 7697A Configuration

1 To access the **Agilent 7697A Configuration**, select **Instrument > Agilent 7697A Configuration...** from the data system's top menu (Figure 7).

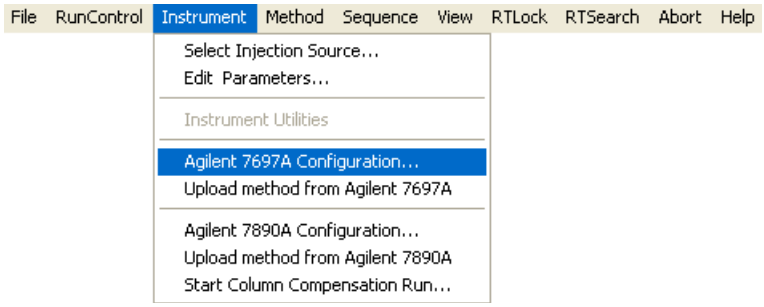


Figure 7 Selecting the Agilent 7697A Configuration

2 Select the **Connection** tab (Figure 8) to access instrument connection information, license keys, and system version information.

Version Information contains information to provide to a support engineer during a support call.

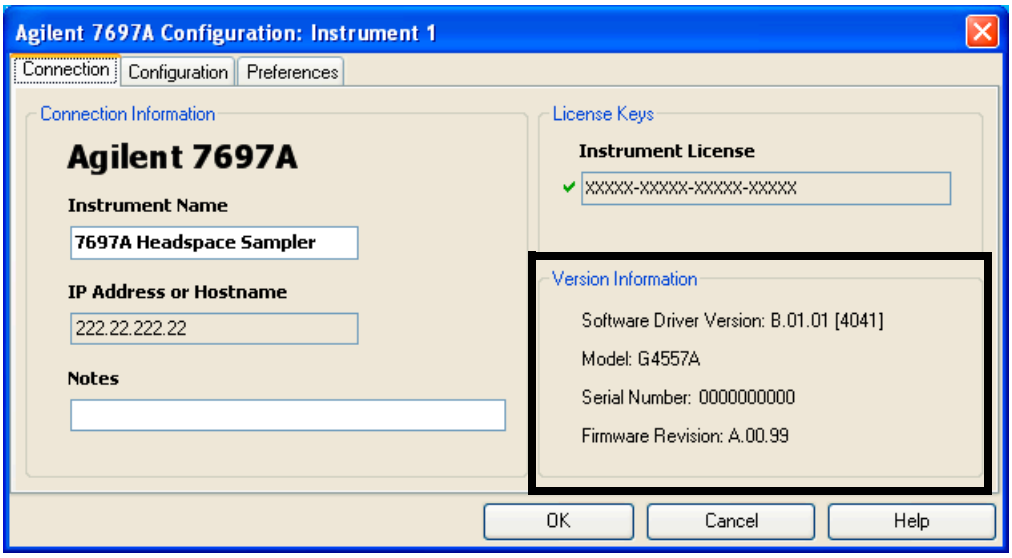


Figure 8 Setting HS connection information

3 Select **Configuration > Instrument and System** (Figure 9) to configure the instrument settings and to select your desired system carrier gas configuration.

Select **Upload Config from Instrument** to view your current instrument configuration. This overwrites any unsaved configuration changes made to the software.

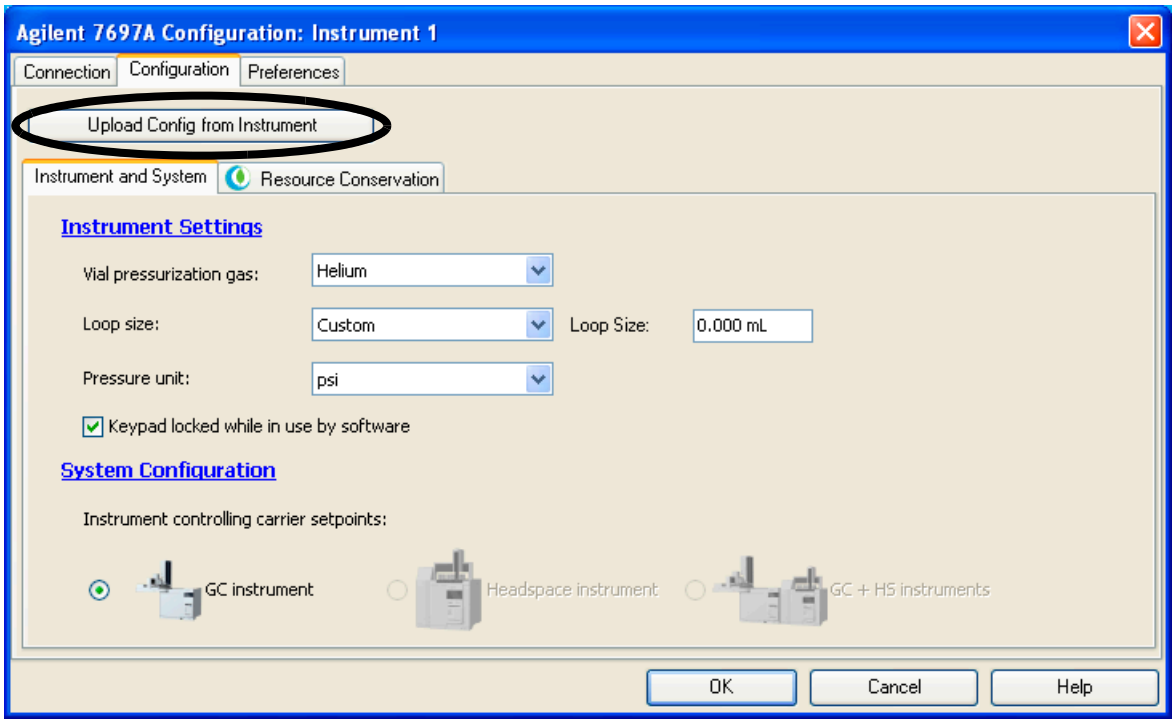


Figure 9 Setting instrument and system information

4 Select **Configuration > Resource Conservation** (Figure 10) to configure gas and instrument schedules that can help conserve resources during laboratory downtime.

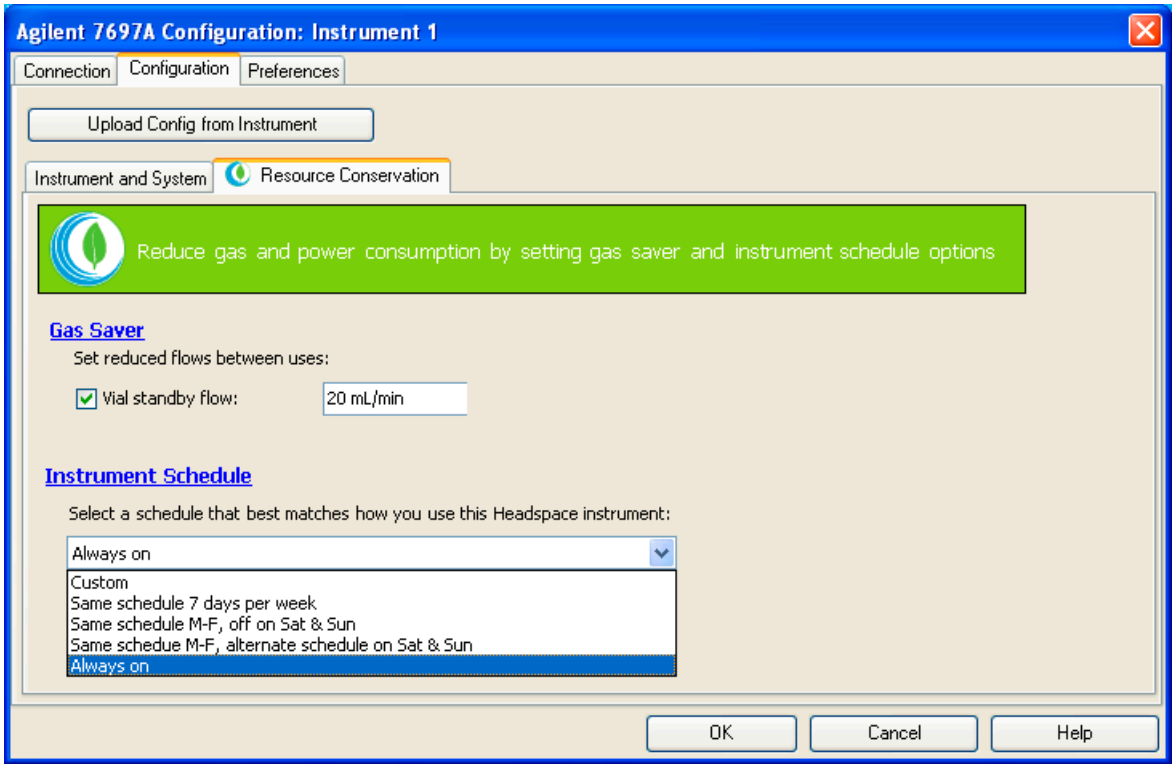


Figure 10 Setting resource conservation parameters

5 Select the **Preferences** tab (Figure 11) to configure the Method Editor and Instrument Actuals preferences.

Select **Show method time line** to display the method editor time line (as shown in Figure 21).

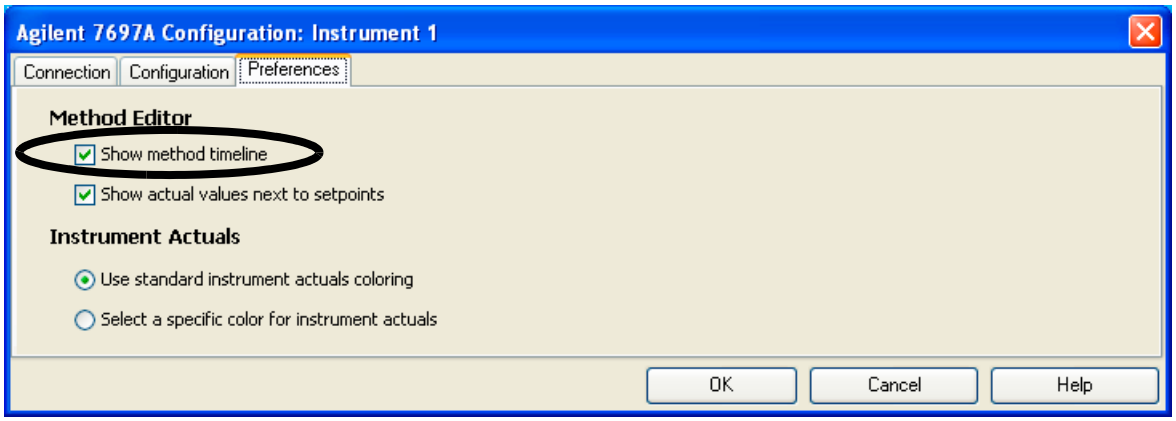


Figure 11 Setting the Method Editor and Instrument Actuals preferences

Creating a New Method

Creating a New Method

Creating a New Method

1 Open the **Method Editor**. Select **Instrument > Edit Parameters...** (Figure 12).

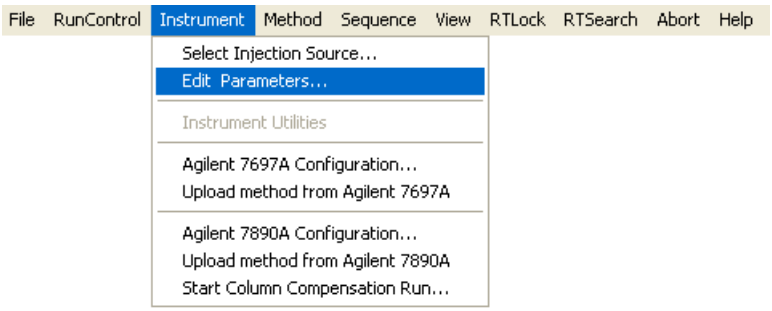


Figure 12 Opening the Method Editor

2 The Method Editor opens (Figure 13). Select the **Agilent 7697A** tab to open the method parameters for the 7697A Headspace Sampler.

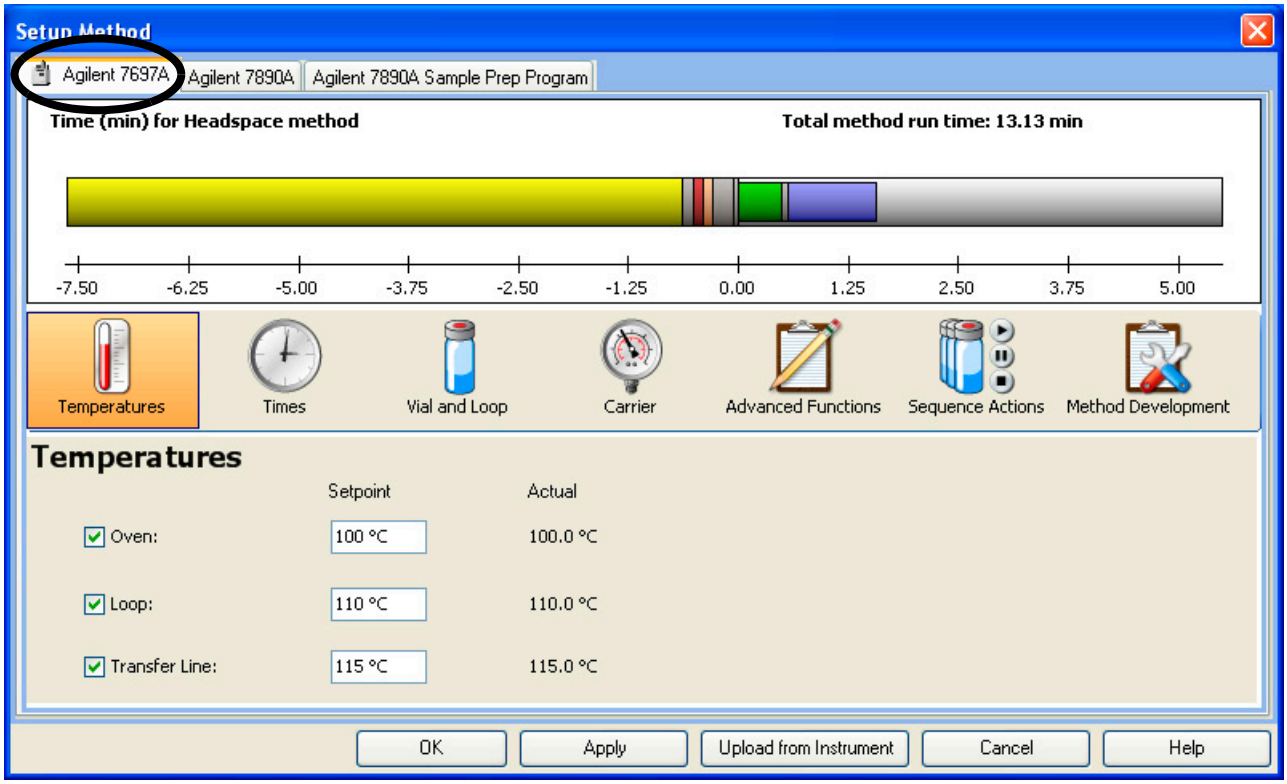


Figure 13 The Agilent 7697A Method Editor

3 Select the **Temperatures** icon and set the parameters shown in Figure 14.

Be sure to select **Oven**, **Loop**, and **Transfer Line** to enable the temperature zone for each item.

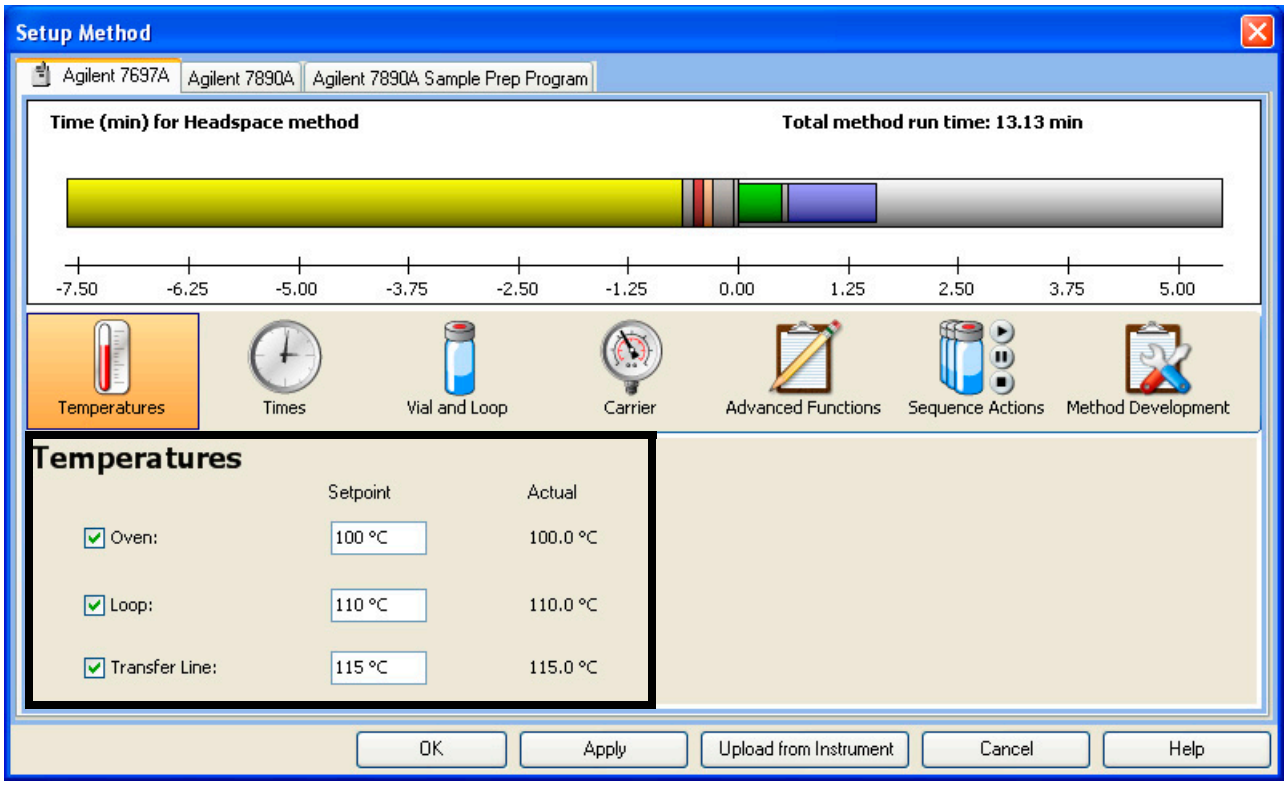


Figure 14 Setting the temperature parameters

4 Select the **Times** icon and set the parameters shown in Figure 15.

Note that the colored boxes below correspond to sections of the time line. Click a colored box to change its color in the time line.

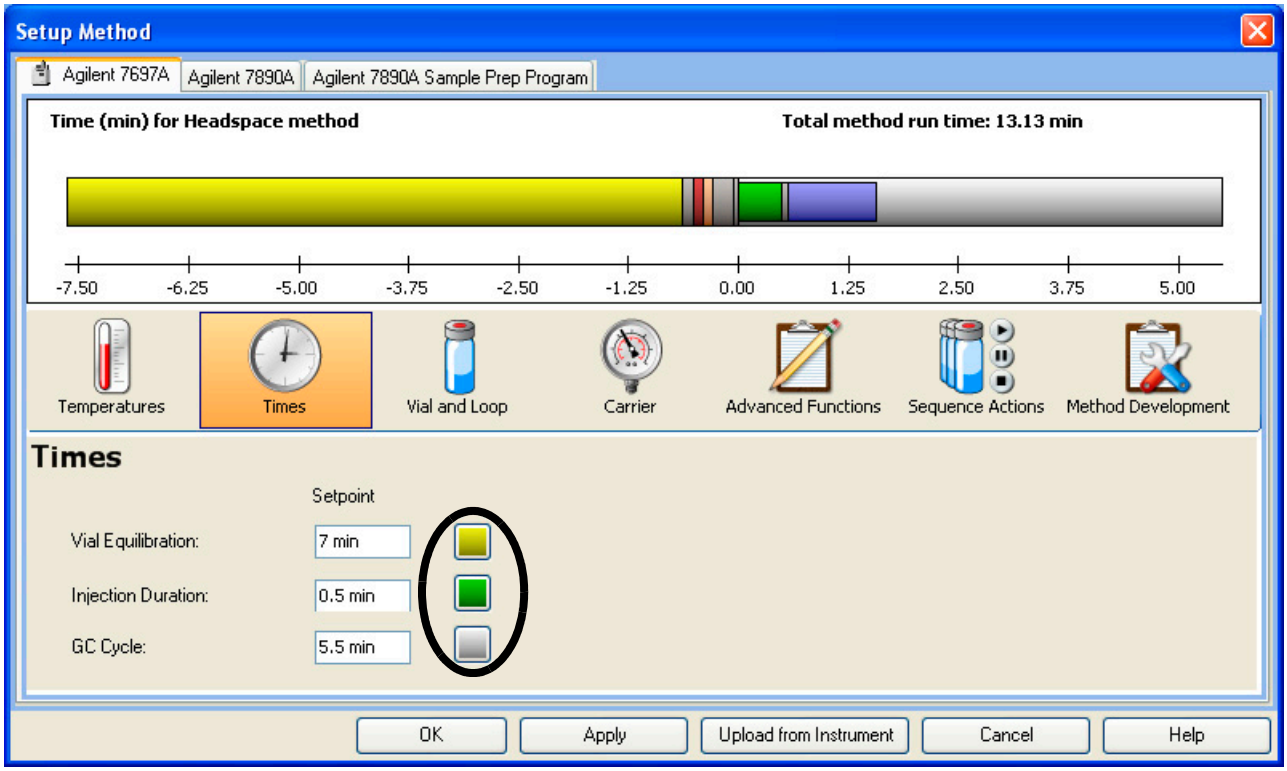


Figure 15 Setting the time parameters

5 Select the **Vial and Loop** icon and set the parameters shown in Figure 16.

For this example, select **Custom** as the **Vial Fill Mode** type, and select **Flow to Pressure**. Select **Default** as the **Loop Fill** mode, which is sufficient for many analyses.

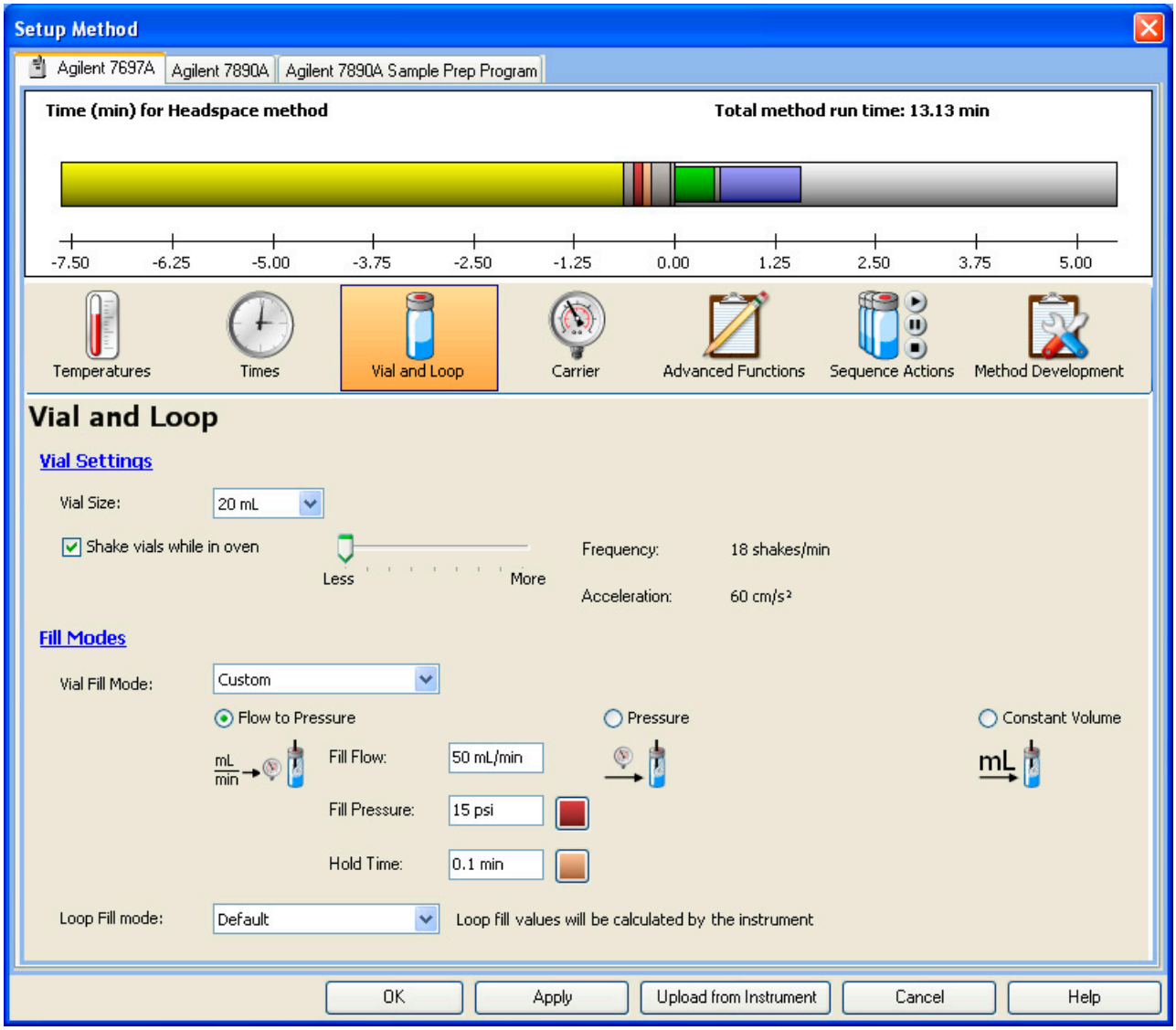


Figure 16 Setting the vial and loop parameters

6 Select the **Carrier** icon. In this example, the GC controls the carrier flow, as shown in Figure 17. If you have the optional EPC module installed with your HS system, the HS carrier control parameters appear here.

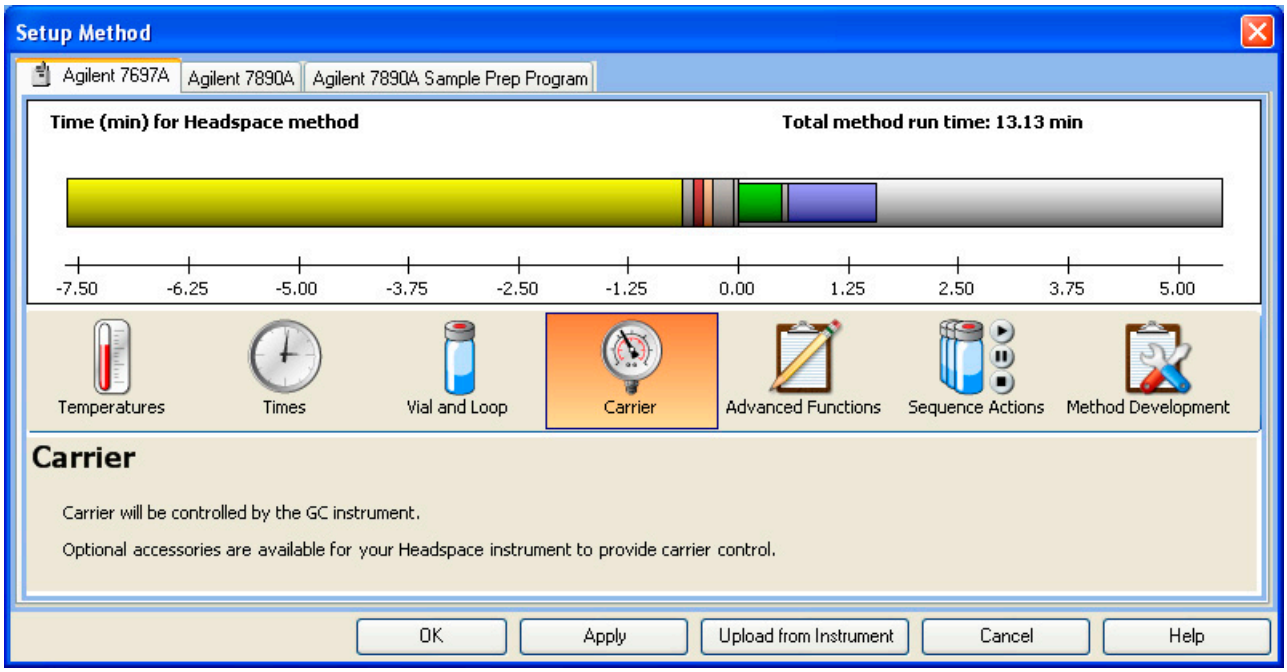


Figure 17 Setting the carrier parameters

7 Select the **Advanced Functions** icon and set the parameters shown in Figure 18.

The bar code reader settings shown in Figure 18 only appear if your HS has a bar code reader installed.

Click the blue heading hyperlinks to view pop-up textual explanations of the feature.

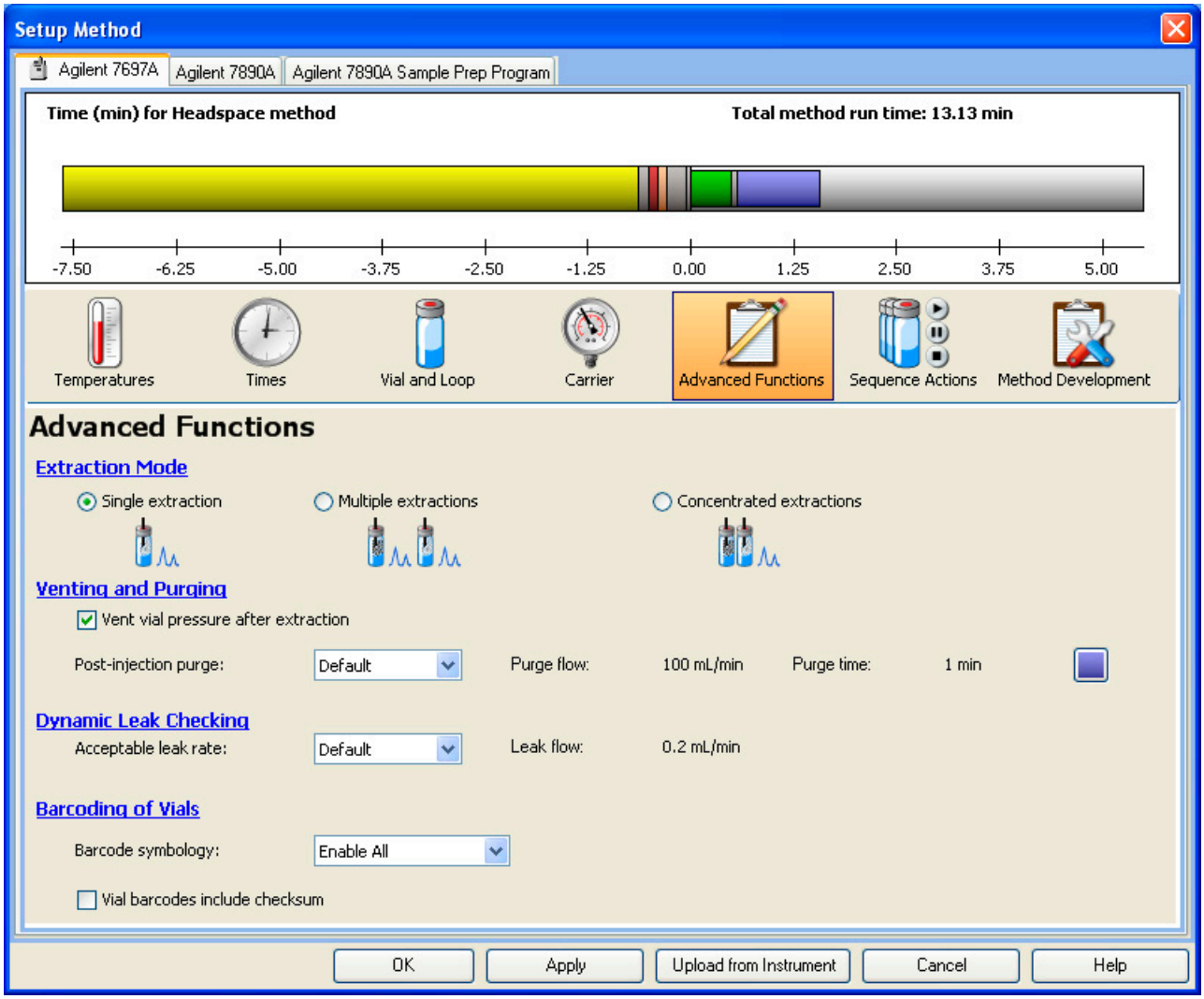


Figure 18 Setting the advanced functions

8 Select the **Sequence Actions** icon and set the parameters shown in Figure 19.

This panel provides logical control over HS errors that can occur when handling sample vials for a run or a sequence of runs. Refer to the user documentation and software help for information.

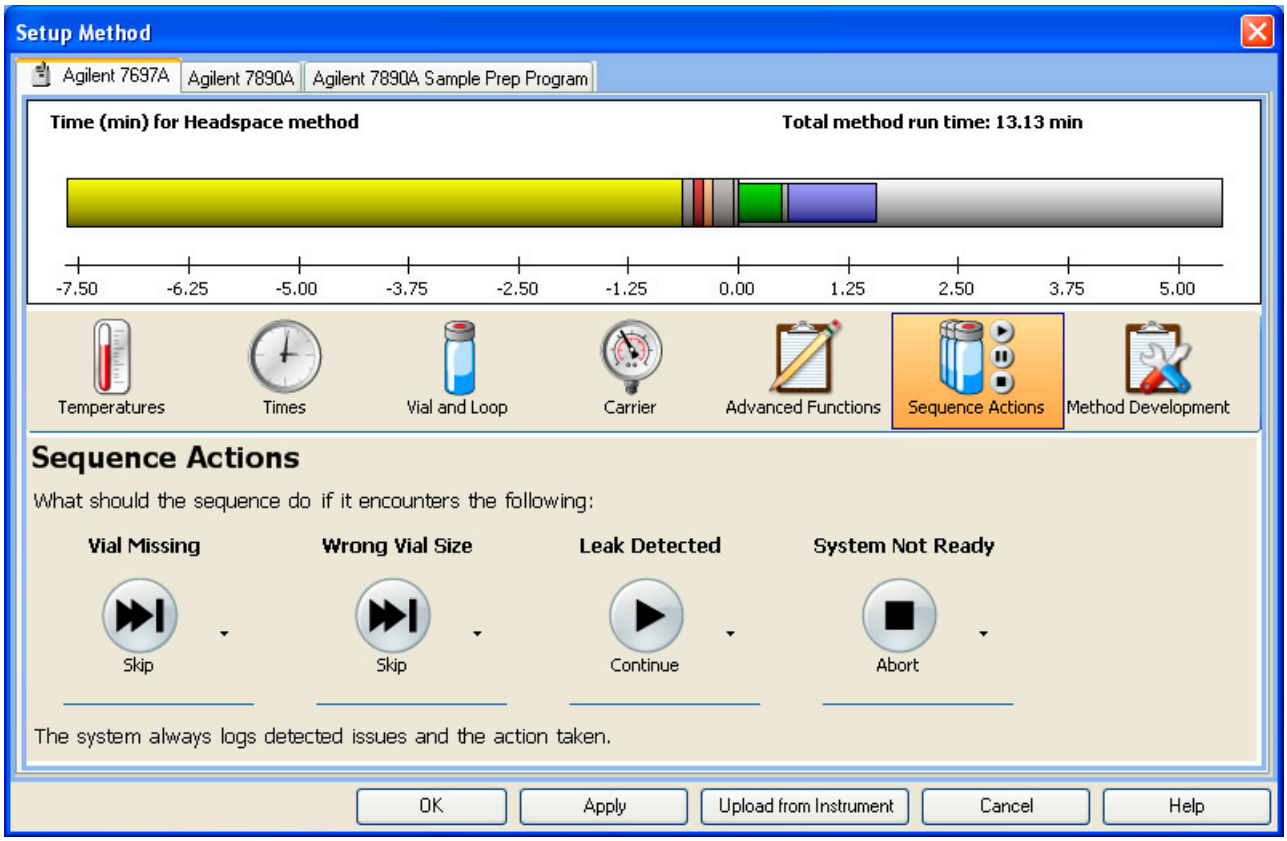


Figure 19 Setting the sequence actions

9 Use **Method Development** (Figure 20) when developing new methods. Wizards are provided here to help convert existing methods. Refer to the software help for more information.

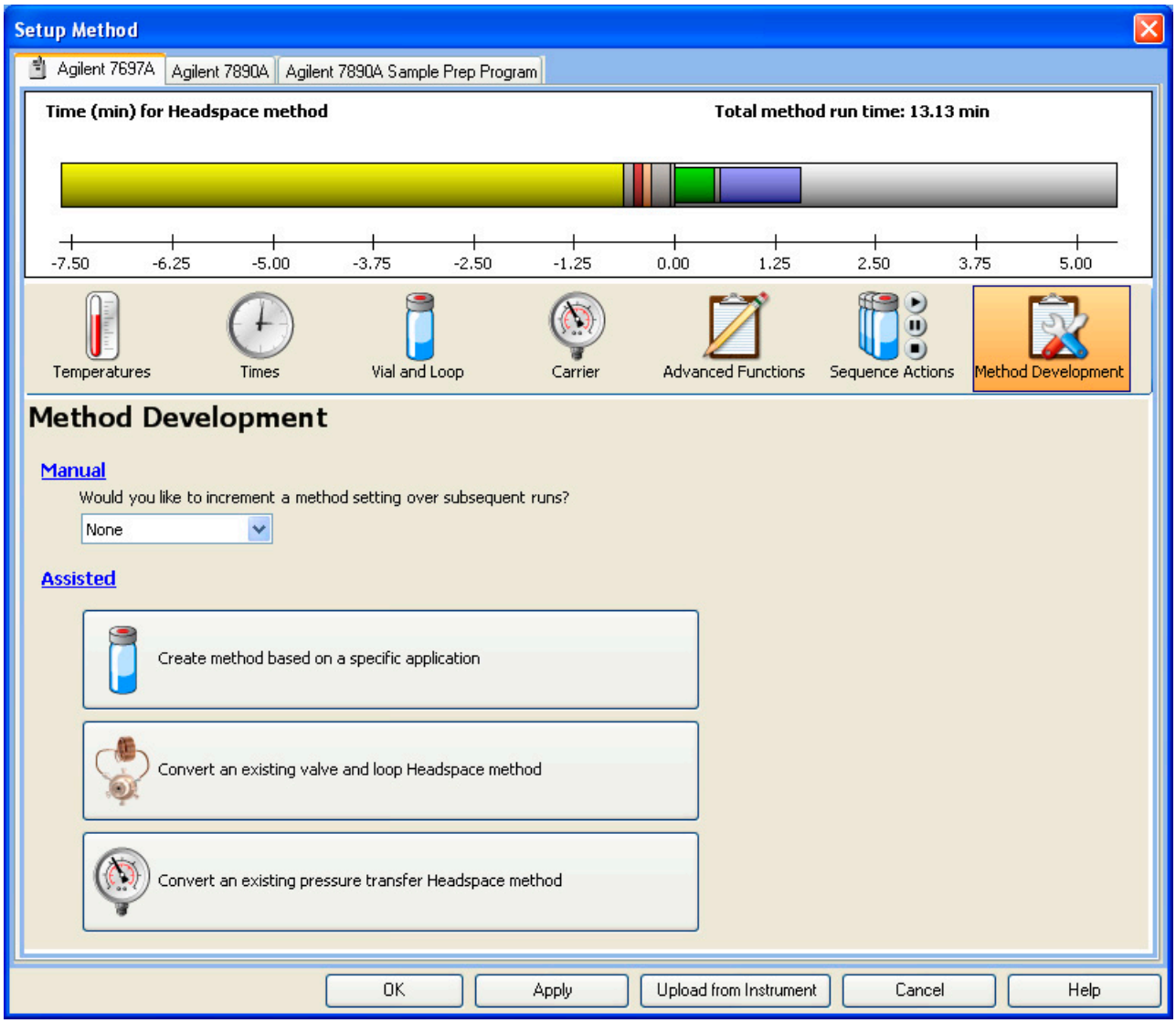


Figure 20 Setting the Method Development parameters

10 View the time line at the top of each **Method Editor** panel for a graphical display of HS method parameters and GC cycle times for a single vial (Figure 21).

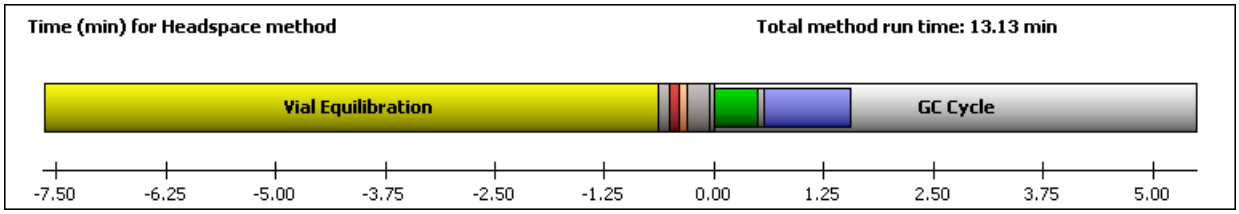


Figure 21 The method time line

Saving the New Method

Basic method edits are complete. To save your new method, select **Method > Save Method As...** (Figure 22) and enter a new name for the method (Figure 23). When saving a method, you are saving parameters for all instruments connected to your GC-HS system.

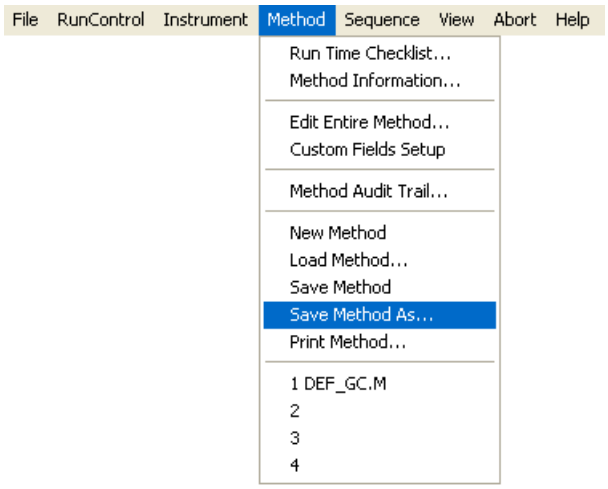


Figure 22 Accessing Save Method as...

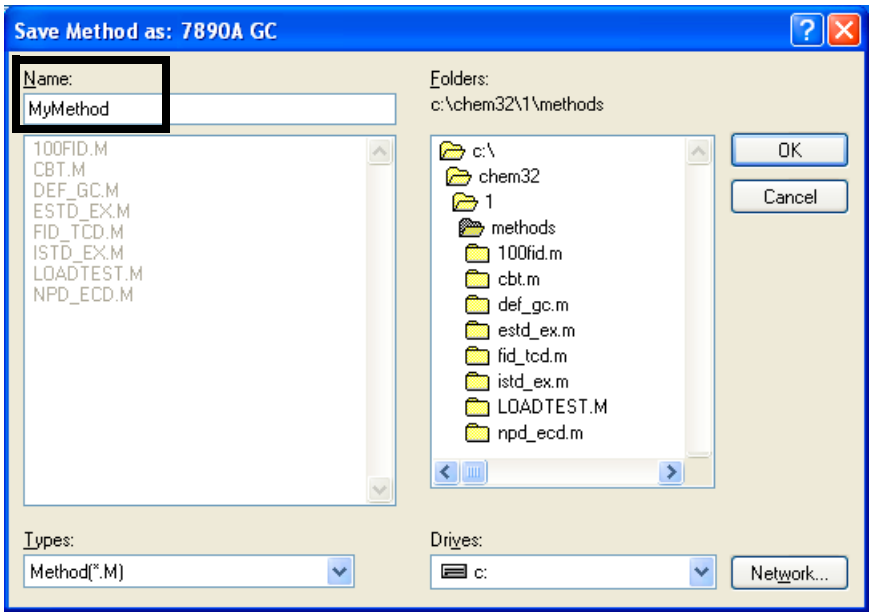


Figure 23 Saving your method with a new method name

Additional Features of the Agilent Integrated Headspace Software

Instrument Actuals

1 To view **Instrument Actuals** for the GC and HS, select **View > Instrument Actuals** from the data system top menu (Figure 24).

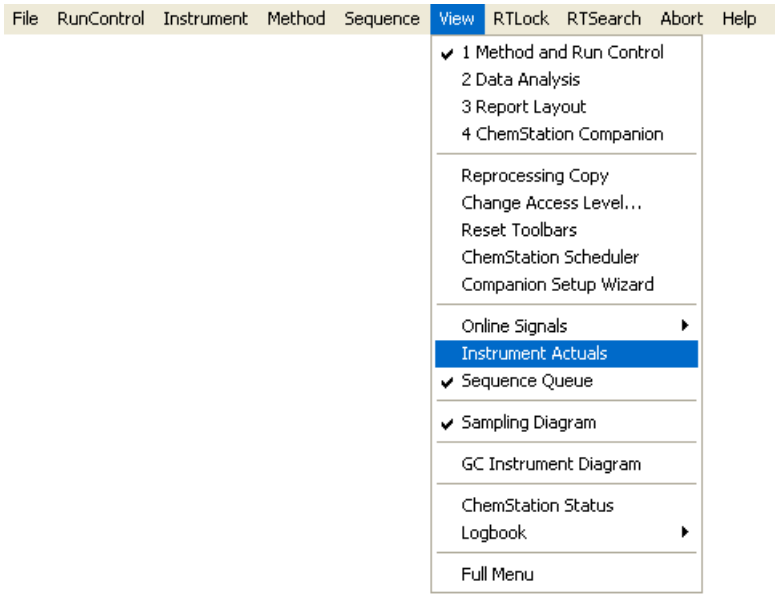


Figure 24 Accessing Instrument Actuals

The **Instrument Actuals** window opens (Figure 25).

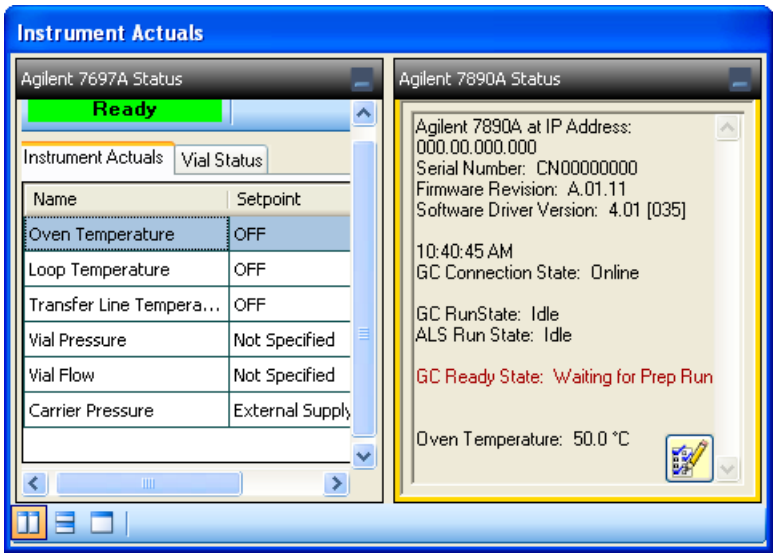


Figure 25 Instrument Actuals

2 To view the full Agilent 7697A **Instrument Actuals** panel, hide the **Agilent 7890A Status** panel by clicking the minimize icon in the top-right corner (Figure 26).

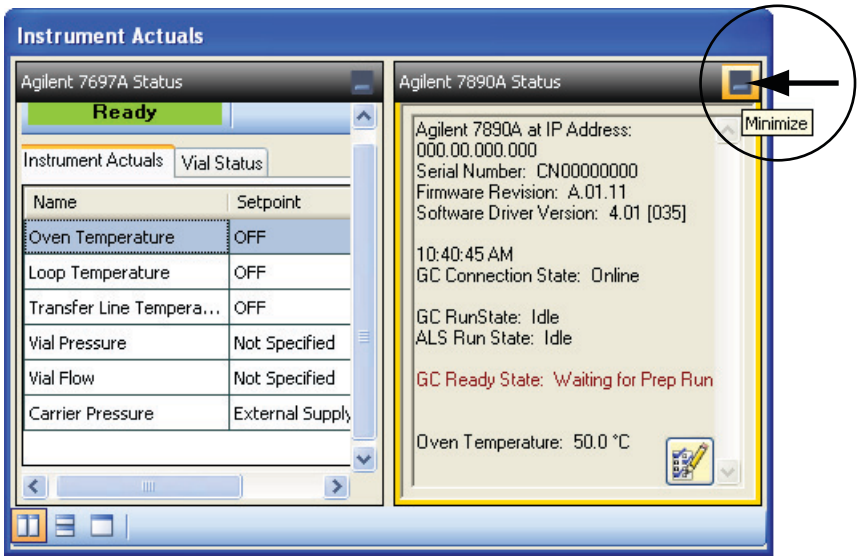


Figure 26 Minimizing Agilent 7890A Status panel

The **Agilent 7697A Status > Instrument Actuals** panel displays (Figure 27).

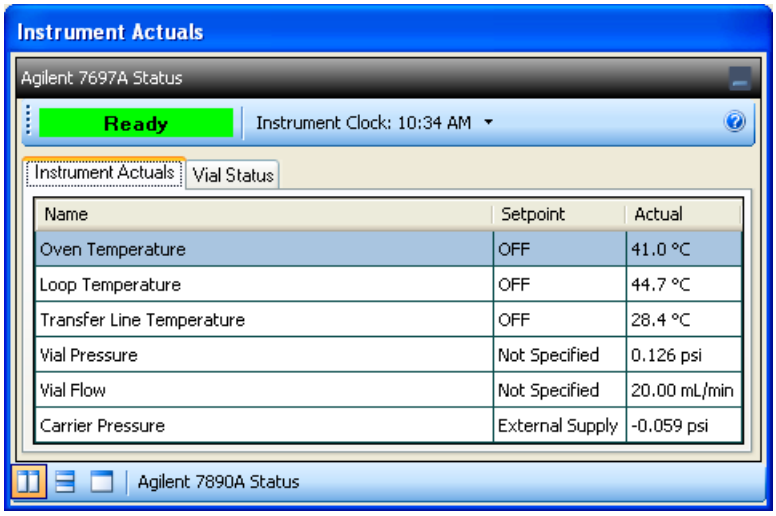


Figure 27 The Agilent 7697A Status > Instrument Actuals panel

3 To view the **Agilent 7697A Status > Vial Status** panel, select the **Vial Status** tab (Figure 28).

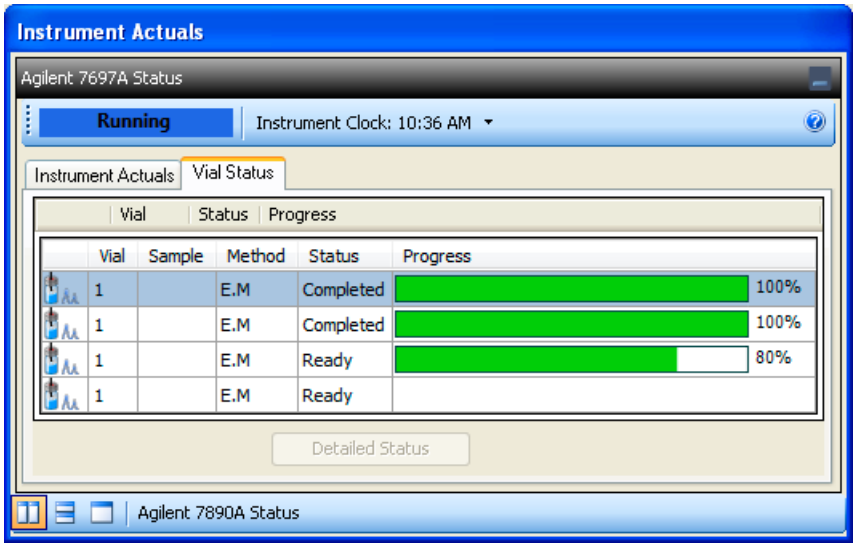


Figure 28 The Agilent 7697A Status > Vial Status panel

Sampling Diagram

To view the **Sampling Diagram**, select **View > Sampling Diagram** from the data system top menu (Figure 29).

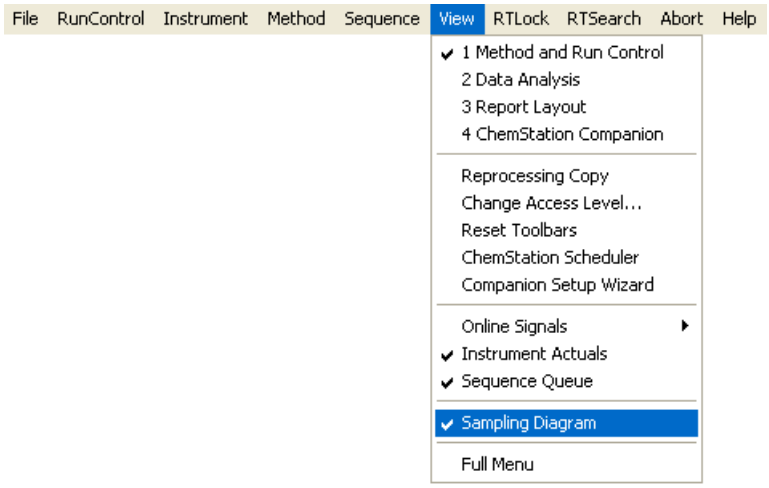


Figure 29 Accessing the Agilent 7697A Sampling Diagram

The **Sampling Diagram** appears (Figure 30).

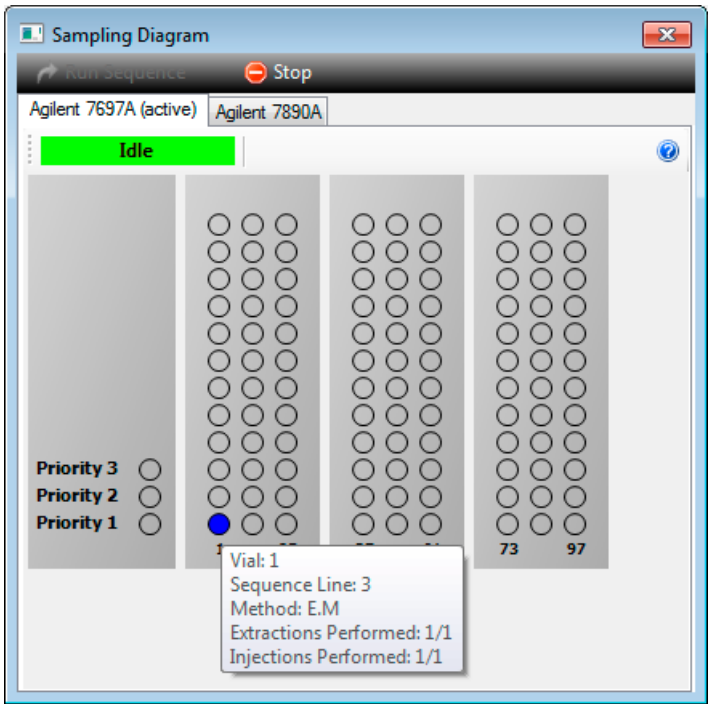


Figure 30 The Agilent 7697A Sampling Diagram

Sequence Logbook

To access the **Sequence Logbook** in the Agilent GC ChemStation, select **View > Logbook > Current Logbook** (Figure 31).

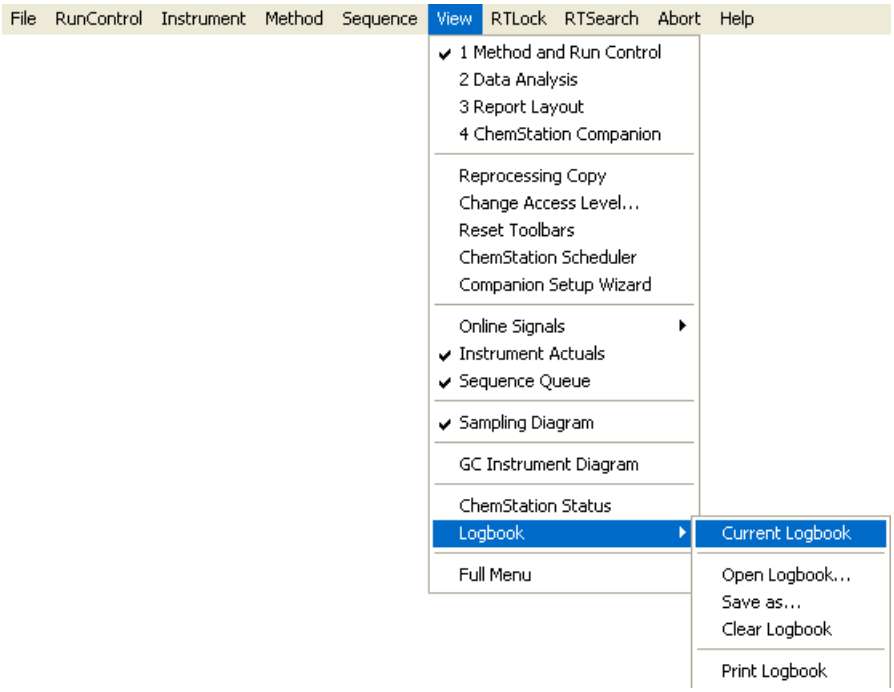
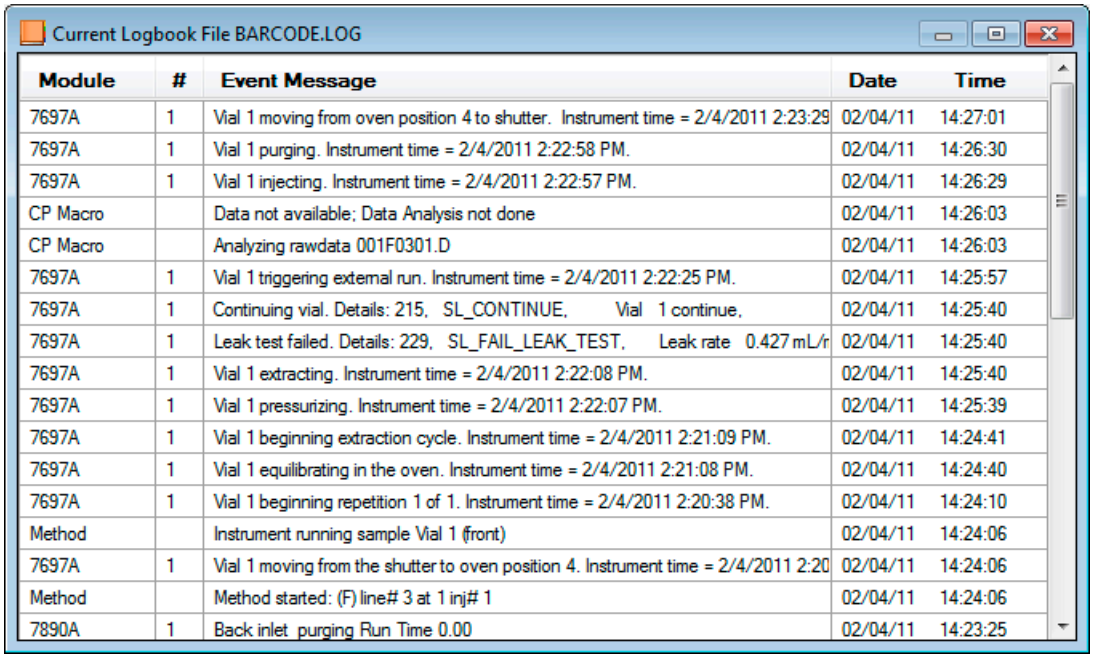


Figure 31 Accessing the current Sequence Logbook file in Agilent GC ChemStation

The **Sequence Logbook** displays the current sequence log file. This file indicates what has happened during the running of a sequence. It is useful for identifying when errors occurred if the sequence is running unattended or overnight (Figure 32).

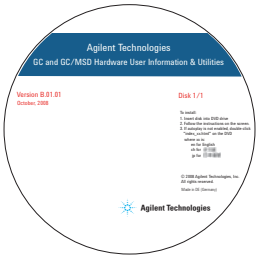


Module	#	Event Message	Date	Time
7697A	1	Vial 1 moving from oven position 4 to shutter. Instrument time = 2/4/2011 2:23:29	02/04/11	14:27:01
7697A	1	Vial 1 purging. Instrument time = 2/4/2011 2:22:58 PM.	02/04/11	14:26:30
7697A	1	Vial 1 injecting. Instrument time = 2/4/2011 2:22:57 PM.	02/04/11	14:26:29
CP Macro		Data not available; Data Analysis not done	02/04/11	14:26:03
CP Macro		Analyzing rawdata 001F0301.D	02/04/11	14:26:03
7697A	1	Vial 1 triggering external run. Instrument time = 2/4/2011 2:22:25 PM.	02/04/11	14:25:57
7697A	1	Continuing vial. Details: 215, SL_CONTINUE, Vial 1 continue,	02/04/11	14:25:40
7697A	1	Leak test failed. Details: 229, SL_FAIL_LEAK_TEST, Leak rate 0.427 mL/r	02/04/11	14:25:40
7697A	1	Vial 1 extracting. Instrument time = 2/4/2011 2:22:08 PM.	02/04/11	14:25:40
7697A	1	Vial 1 pressurizing. Instrument time = 2/4/2011 2:22:07 PM.	02/04/11	14:25:39
7697A	1	Vial 1 beginning extraction cycle. Instrument time = 2/4/2011 2:21:09 PM.	02/04/11	14:24:41
7697A	1	Vial 1 equilibrating in the oven. Instrument time = 2/4/2011 2:21:08 PM.	02/04/11	14:24:40
7697A	1	Vial 1 beginning repetition 1 of 1. Instrument time = 2/4/2011 2:20:38 PM.	02/04/11	14:24:10
Method		Instrument running sample Vial 1 (front)	02/04/11	14:24:06
7697A	1	Vial 1 moving from the shutter to oven position 4. Instrument time = 2/4/2011 2:20	02/04/11	14:24:06
Method		Method started: (F) line# 3 at 1 inj# 1	02/04/11	14:24:06
7890A	1	Back inlet purging Run Time 0.00	02/04/11	14:23:25

Figure 32 The Sequence Logbook file

Where to Find Information

Agilent GC and GC/MS Hardware User Information & Utilities DVD



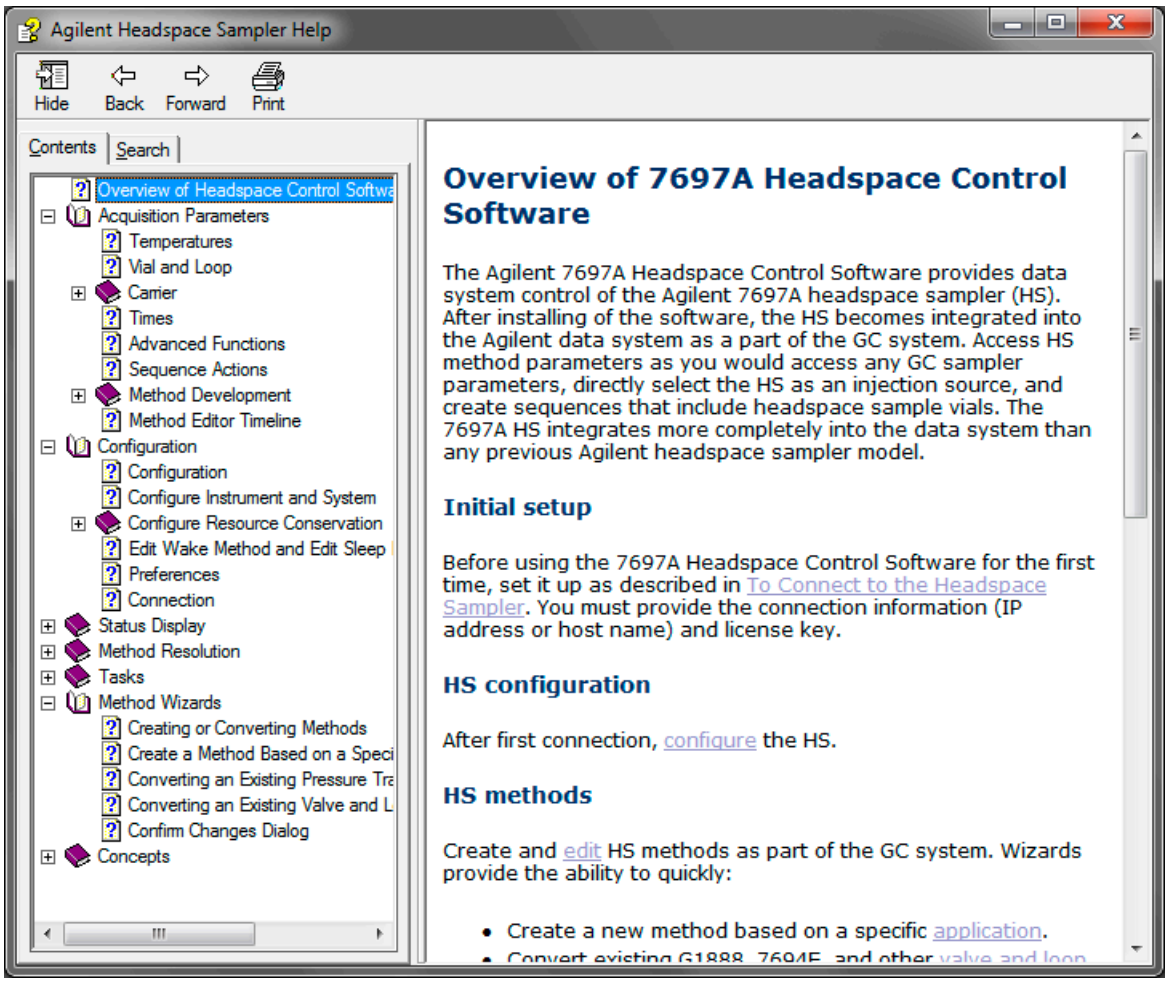
In addition to this guide, Agilent provides several learning products that document how to install, operate, maintain, and troubleshoot the Agilent 7697A Headspace Sampler. This information can be found on the *Agilent GC and GC/MS Hardware User Information & Utilities DVD* that ships with your instrument.

The *Agilent GC and GC/MS Hardware User Information & Utilities DVD* provides an extensive collection of online help, videos, and books for current Agilent gas chromatographs, mass selective detectors, and samplers. Included are localized versions of the information you need most, such as:

- Site Preparation information
- Installation and First Startup information
- Getting Started information
- Safety and Regulatory information
- Operation information
- Advanced Operation information
- Troubleshooting information
- Maintenance information

Online Help System

The Agilent Integrated Headspace Software includes an extensive online help system with detailed information and common tasks on how to use the software.



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