

# Agilent Dissolution Tester Driver



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# **Installation and Configuration**

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1 Installation and Configuration Introduction

# Introduction

The Agilent Dissolution Tester Driver software is an additional software module handled automatically by the UV-visible ChemStation's Dissolution Testing application.

The purpose of this module is the remote control of Agilent's dissolution apparatus as defined by the applications dissolution method.

The key parameter defining test conditions are part of a dissolution method and adjusted automatically by means of the driver module. During the dissolution experiment tester data like stirring speed and temperature can be tracked.

The schematic below indicates the data communication between the UV-visible ChemStation software and the Dissolution Tester Driver.



	are connected for multibath operation each tester requires an execution of its own instance. According to the testers attached, different tester driver can be applied for
1075	different models or tester brands. This manual only describes the Agilent tester driver software features. Compatible tester
NUTE	models are Agilent 708-DS, 709-DS, VK7000, VK7010 and VK 7020.
	Dependent on the interfacing approach using a single COM port per tester or using a daisy chained configuration, two different driver packages are offered.
NOTE	Please read "Connecting your tester to the PC" on page 9 first for deciding on the driver packing to be installed.

1 Installation and Configuration Site requirements

# Site requirements

An online dissolution system controlled by the UV-visible ChemStation's Dissolution testing software including the dissolution tester must be installed.

The PC must have a CD-ROM drive for the installation.

The driver software is supported on Windows XP, Windows VISTA and Windows 7 in their professional editions.

The PC must have a serial RS232 communication port for interfacing the tester. The interface cable (RS 232 Tester connection cable (single tester) (p/n 5075-0552)) has a 9 pin Sub-D male connector to the PC and a 25 pin Sub-D male connector to the tester.

NOTE

If no direct 9 pin RS232 connection is available, alternatively USB connections in combination with the Agilent converter interface (USB to Serial Adapter (p/n 8121-1013)) can be applied. For details of the installation of the converter interface see "Using the USB to Serial Adapter interface" on page 46.

# **Connecting your tester to the PC**

NOTE

### Configuration with a single tester

- **1** Setup and align your tester first. Make sure it is in an operable condition and connected to line power.
- 2 Switch the PC and the tester off.

# In case of a tester equipped with a water bath the heater can be left on. If the heater is switched off, please make sure you always switch on the heater before switching on the tester.

**3** Connect the serial cable provided to an available COM port of the PC with the 9 pin connector and the 25 pin connector to the tester's 25 pin input at the back of the tester head.



Figure 1 Single tester connection

### **Configurations with multiple testers**

In case of multiple testers different wiring can be applied.

The first approach is identical to the single tester connection. In this case a COM port for each tester must be available. If not sufficient COM ports are available, alternatively a USB to serial converter interface can be applied. This interface is required for each tester interfaced using a USB connection.



Figure 2 Multiple tester direct connection

The driver setup program for the approach with directly linked COM ports is on the root directory of the product CD-ROM.

NOTE



The alternate approach is using a daisy chained configuration. In this case multiple testers are sharing the same COM port.

Figure 3 Multiple tester daisy chained connection

NOTE

Use the driver setup program in the subdirectory Setup chained configuration of the product CD-ROM.

NOTE Make sure that all testers connected to the same COM port have a different ID.

**Connecting your tester to the PC** 

The cable (DB9/RJ11 adapter and cable kit (daisy chained testers) (p/n 5075-0260)) is connected to a COM port via the 9 pin sub D connector/RJ11 adapter to the PC. The RS 232 out (Tx) is connected to the RJ11 socket at the back of the first tester marked with the label RS 232 in.

The second tester is connected to the first using its RS232 out socket via the serial link cable (RJ11 link cable (daisy chained testers) (p/n 5075-0244)) wired to the second tester's RS232 in socket.

Additional testers are hooked up the same way using the last wired testers RS232 out connecting to their RS232 in port.

The last tester's RS232 out port is connected to the 9 pin sub D connector/adapter's RS232 in (Rx) connection using the cable (DB9/RJ11 adapter and cable kit (daisy chained testers) (p/n 5075-0260)).

NOTE

In this configuration all testers must be switched on for a proper operation!



# Installation of the tester driver software

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# Installation of the tester driver software

- 1 Log on to the PC of the target system with local administrator rights.
- **2** Insert the Dissolution Tester Driver Software CD and run one of the Setup.exe programs on the product CD-ROM according to your tester configuration.

Make sure you install only a single driver software on your PC!

NOTE

NOTE

If you get the warning dialog below, press **Run** to continue.



NOTE

If you get the request dialog below, press the Yes button.



**3** Select **OK** to continue.

Agilent Dissolution Apparatus	Bathdriver Setup
	Agilant Dissolution Apparates Balthdriver Setup
	Compared and the set of the

#### 2 Installation of the tester driver software

Installation of the tester driver software

**4** Use the **Change Directory** button if you want to change the installation path.

Write down your installation path; you need this information for the driver configuration.



- **5** Press the **Setup** icon to continue with the installation.
- **6** To use the proposed program group press **Continue**.

NOTE

NOTE

Alternatively select or enter your **Program Group** name and then press **Continue**.

🛃 Agilent Dissolution Apparatus Bathdriver - Choos 🔀				
Setup will add items to the group shown in the Program Group box. You can enter a new group name or select one from the Existing Groups list.				
Program Group: AGILENT Dissolution Bathdriver				
Accessories Administrative Tools Agilent AGILENT Dissolution Bathdriver				
eFax Messenger 4.4 Juniper Networks Mead & Company Microsoft Web Publishing Startup XMI. Notenad 2007				
<u>Continue</u> Cancel				

7 Click **OK** to finish with the setup.



#### NOTE

If you got the information during the setup that a component is newer than the one to be installed, please press Yes to keep the latest component.

An example of such a dialog is:

Version Conflict				
A file being copied is older than the file currently on your system. It is recommended that you keep your existing file.				
File name: 'C:\Windows\system32\MSSTDFMT.DLL'				
Description: 'Microsoft Standard Data Formating Object DLL				
Your version: '6.0.88.4'				
Do you want to keep this file?				
Yes         No to All				

#### NOTE

If an access violation occurs during the setup, click **Ignore** to continue.



#### 2 Installation of the tester driver software

Installation of the tester driver software

On the following dialog, click **Yes** to continue.



#### NOTE

If a registration error occurs during the setup, click Ignore to continue.

Agilent Dissolution Apparatus B	athdriver Setup		23
An error occurred w Files\Microsoft Shar	hile registering the file ed\DAO\DAO350.DLL	e 'C:\Program Files '	\Common
	Abort	Retry	Ignore

- 8 Continue with the configuration of your driver.
- **9** Configure your Agilent Dissolution Tester Driver Software in your UV-visible ChemStation Dissolution Application.

**NOTE** If your UV-visible ChemStation has the Security Pack for 21 CFR part 11 compliance installed, make sure you have manager rights for the session launch.

### **Single Bath Dissolution Testing Configuration**

- 1 Launch your UV-visible ChemStation in the online mode and switch to the **Dissolution Testing** mode.
- **2** Select the **Bath** command from the **Config** menu and enter the full qualified driver executable name,

C:\Program Files\Agilent\AgtBath.exe /com:1 /address:1 by default.

Enter command line of bath driver					
C:\Program Files\Agilent\	AgtBath.exe /com:1 /add	ress:1			
ОК	<u>C</u> ancel	Help			

3 Press **OK** to save your configuration.

NOTE

The entered configuration becomes active only after a new launch of the UV-visible ChemStation's Dissolution testing modes.

For launching the newly specified driver switch to Standard mode and back to Dissolution Testing.

### **Multibath Dissolution Testing Configuration**

- **1** Launch your UV-visible ChemStation in the online mode and switch to the Multibath Dissolution Testing mode.
- **2** Select the **Bath** command from the **Config** menu and enter the fully qualified driver executable names for all bath configured.
- **3** The configuration example below shows a multibath system configured for two baths using the direct serial communication ports COM1 and COM2.

NOTE

Both testers are using the default tester *Comm ID* of 1. No address conflict arises here as two different physical interfaces COM1 and COM2 are used.

NOTE

The tester configuration is not limited to Agilent tester driver software only. Mixed tester brands can be used by the ability of configuring different tester driver software.

Select active bat	hs and command lines
📝 Bath 1	C:\Chem32\BathDRV\AgtBath.exe /com:1 /address:1
🔽 Bath 2	C:\Chem32\BathDRV\AgtBath.exe /com:2 /address:1
📃 Bath 3	
📃 Bath 4	
<u> </u>	Cancel Help

**4** The configuration example below shows a multibath system configured for four baths using daisy chained connections on the serial communication port COM1.

Note the driver for daisy chained configurations must be installed.

NOTE

NOTE

All testers are sharing the serial port COM1. However, different tester *COMM IDs* 1...4 are applied.

Select active baths and command lines				
🗹 Bath 1	C:\Chem32\BathDRV\AgtBath.exe /com:1 /address:1			
📝 Bath 2	C:\Chem32\BathDRV\AgtBath.exe /com:1 /address:2			
📝 Bath 3	C:\Chem32\BathDRV\AgtBath.exe /com:1 /address:3			
📝 Bath 4	C:\Chem32\BathDRV\AgtBath.exe /com:1 /address:4			
	K <u>C</u> ancel <u>H</u> elp			

**5** Also other combinations of COM ports and addresses are supported. A two COM port setup with four testers is shown below.

Select active baths and command lines				
🔽 Bath 1	C:\Chem32\BathDRV\AgtBath.exe /com:4 /address:1			
📝 Bath 2	C:\Chem32\BathDRV\AgtBath.exe /com:4 /address:4			
🔽 Bath 3	C:\Chem32\BathDRV\AgtBath.exe /com:1 /address:1			
🔽 Bath 4	C:\Chem32\BathDRV\AgtBath.exe /com:1 /address:2			
4 <u>0</u>	<u>Cancel</u> <u>H</u> elp			

### Details of the command line entry

The command line is used for launching the dissolution tester communication software and passing required parameters to this application. The Agilent dissolution tester driver software is a standalone executable piece of software. It can be launched for multiple attached testers using different command line parameters.

By default two additional parameters are added by the UV-visible ChemStation's dissolution applications. The first is the DDE server name stated as */DDE:<DDE server name*>. The DDE server name is automatically generated by the operating system. The second is indicating the dissolution application mode. It is specified as */Mode:single* for the dissolution testing mode or */Mode:multi<ID*> where *<ID*> is the bath ID of the multibath dissolution testing mode.

These entries are not displayed with the bath driver configuration command line.

#### **Required Entries**

<Driver path name> The first entry in the command line dialog is the path name of the driver executable, C:\Program Files\Agilent\AgtBath.exe. Parameters can be added each separated by a blank.

For the Agilent Tester Driver Software two parameters are required.

- /com:<value> The com parameter defines the COM port applied for the serial communication to the tester attached. The parameter is preceded by the respective identifier /com: followed by the value for the port used. In this example the parameter /com:1 refers to COM1.
- /address:<value> The address parameter is the instrument's Comm ID on the serial communication line. This parameter can be changed on the local interface of the dissolution tester. The Comm ID parameter can be adjusted using the Instrument Settings dialog of the tester's Setup menu. The command line syntax of the identifier is /address:. In the above example a tester Comm ID of 1 is configured. The Comm ID 1 is default on the Agilent testers.

The above defined required parameter *com* and *address* can be specified in any sequence.

#### **Optional Command Line Parameter**

/log To diagnose the tester communication, the /log parameter can be applied. By means of this parameter a file with the sent and received commands is written.

Enter command line of bat	:h driver	
C:\Chem32\BathDRV\Agt	Bath.exe /com:4/addre	ess:1 /log
OK	Cancel	Help

NOTE

The logging should only be switched on temporarily for diagnostic purposes.

The log file is created on the root of the C drive or on the respective user 's virtual storage path with the name Agilent.log. In Windows 7 e.g. the admin user's log file can be found in the directory C:\Users\Admin\AppData\Local\VirtualStore.

Example of a communication log file.

ſ	🧾 ag	gilent.lo	ig - N	otepad					×
	<u>F</u> ile	<u>E</u> dit	F <u>o</u> rm	nat <u>V</u> iew	<u>H</u> el	2			
	12:9 12:9 12:9 12:9 12:9 12:9	0:27 0:27 0:27 0:27 0:28 0:28 0:28	PM PM PM PM PM PM	4/11/20 4/11/20 4/11/20 4/11/20 4/11/20 4/11/20 4/11/20	011: 011: 011: 011: 011: 011: 011: 011:	Agilent Dissolution Apparatus BathDriver (Ver. 1.09 / 25. Sending Command 0152930000 Received Response 5293DL0710C000 Sending Command 0154310000 Received Response 54310000 SendInstruction createxdt Temp Profile Time Temp SendInstruction Response Error	Feb.	2011)	•
	12:9 12:9 12:9	50:34 50:34 50:34	PM PM PM	4/11/20 4/11/20 4/11/20	011: 011: 011:	Received Instruction from ChemStation: get parameter SendInstruction getxdt BathParam.AutoProfileTime[value1] SendInstruction Response Error			
	12:9 12:9	50:34 50:34	PM PM	4/11/20 4/11/20	011: 011:	SendInstruction getxdt BathParam.Method[Value1] SendInstruction Response Error			
	12:9 12:9 12:9	0:34 0:34 0:34	PM PM PM	4/11/20 4/11/20 4/11/20	011: 011: 011:	Sending Command 0185100002 Received Response 85100002 SendInstruction getxdt BathParam.ProbeDown[Value1]			Ŧ
	•					III		F	

#### 2 Installation of the tester driver software

Installation of the tester driver software

/edit The command line parameter /edit allow changing tester set points interactively. By this means the bath temperature and stirring speed settings can be directly entered and set in the status window.

Status window with editing enabled on water bath thermostatted units:

Agilent Dissolution Apparatus bath control (Ver. 1.21)						
Status Device Identification Serial# DL0710C000 (Rev. 1.13)	Volume dependent Lifter down times					
Set Current	750ml 12 seconds					
Temperature 36.5 °C 37.0 °C 36.5	900ml 10 seconds					
Stirrer Speed 75.0 RPM 75.0 RPM	1000ml 9 seconds					
Control	Sensors					
Stirrer Probes Head	Sensor 1 36.9 °C					
On Off Up Up	Sensor 2 36.8 °C					
	Sensor 3 36.4 °C					
Heater	Sensor 4 36.9 °C					
On Off Down Down	Sensor 5 36.9 °C					
	Sensor 6 36.9 °C					
Handling of bath parameters	Sensor 7 36.9 °C					
✓ Change heater settings immediately	Sensor 8 37.0 °C					
Change stirrer settings immediately	End remote control of Bath					
Close						

Agilent Dissolution Apparatus bath contro	ol (Ver. 1.21)		
Status Device Identification Serial# DL1109C469 (Rev. 1.31)		Volume dependent Lifter de 500ml 15 se	own times
Set Current		750ml 12 s	econds
Temperature 36.0 °C 0.0	°C 36	900ml 10 St	econds
Stirrer Speed 75.0 RPM 50.0	ВРМ	1000ml 9 sa	econds
Control		Sensors	
Stirrer Probes	Head	Sensor 1 36.9	9 °C
On Off Up	Up	Sensor 2 36.9	9 °C
		Sensor 3 36.9	9 °C
	Stop	Sensor 4 36.9	9 °C
Down	Down	Sensor 5 36.9	)°C
		Sensor 6 36.9	)°C
Handling of bath parameters		Sensor 7 n/a	3°C
Change heater settings immediately		Sensor 8 n/a	3°C
Change stirrer settings immediately		End remote control o	f Bath
	Close	]	

Status window with editing enabled on direct vessel heating units during dissolution run:

#### 2 Installation of the tester driver software

Installation of the tester driver software

# **NOTE** Target settings for temperature and stirring speed can be entered using the entry fields adjacent to the current settings.

Target settings cannot be changed if the system is running a dissolution test. In this case all direct control buttons are deactivated.

According to the check marks in the **Handling of bath parameters** section, the new set points may or may not become active immediately.

The entered set points will appear with a short delay under the **Set** column. If the change immediately option is checked, the values in the **Current** column will approach the target set values. This process is fast for changes of the stirring speed but slow for temperature changes.

This is more for testing purposes rather than in actual runs. In typical operation these settings are provided by the method applied.



# **Using the driver features**

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Using the dissolution tester driver software in combination with an automated run \$33\$



# Using the driver features

The properly configured Agilent Tester Driver is launched automatically when entering an online session of the Agilent UV-visible ChemStation software's dissolution applications.

If the tester is up and running it will be set into remote operation mode. In addition you have access to the Dissolution Bath Status Window by means of the instrument menu.

#### NOTE

If the tester is wrongly configured or switched off, you will get the following warning dialog with the respective hint.



Press **OK** to close this dialog box.

After launching the Dissolution Bath Status by going to the **Instrument** menu and executing the Dissolution Bath Status a window similar to the one shown below will pop up.

Agilent Dissolution Apparatus bath control (Ver. 1.21)	
Status Device Identification	Volume dependent Lifter down times
Serial# DL0710C000 (Rev. 1.13)	500ml 15 seconds
Set Current	750ml 12 seconds
Temperature 37.0 °C 34.0 °C	900ml 10 seconds
Stirrer Speed 75.0 RPM 15.0 RPM	1000ml 9 seconds
Control	Sensors
Stirrer Probes Head	Sensor 1 n/a °C
On Off Up Up	Sensor 2 n/a°C
	Sensor 3 n/a °C
Heater	Sensor 4 n/a °C
On Off Down Down	Sensor 5 n/a °C
	Sensor 6 n/a °C
Handling of bath parameters	Sensor 7 n/a °C
Change heater settings immediately	Sensor8 n/a °C
Change stirrer settings immediately	End remote control of Bath
Close	

**Using the driver features** 

In case a 709-DS with direct vessel heating capability is connected, the status screen window looks similar like below with no buttons for a heater.

Agilent Dissolution Apparatus bath control (Ver. 1.21)	
Status Device Identification Serial# DL1109C469 (Rev. 1.31)	Volume dependent Lifter down times
Set Current	750ml 12 seconds
Temperature 37.3 °C 37.3 °C	900ml 10 seconds
Stirrer Speed 50.0 RPM 0.0 RPM	1000ml 9 seconds
Control	Sensors
Stirrer Probes Head	Sensor 1 n/a °C
On Off Up Up	Sensor 2 n/a °C
	Sensor 3 n/a °C
Stop	Sensor 4 n/a °C
Down Down	Sensor 5 n/a °C
	Sensor 6 n/a °C
Handling of bath parameters	Sensor 7 n/a °C
Change heater settings immediately	Sensor 8 n/a °C
Change stirrer settings immediately	End remote control of Bath
Close	

If the application is currently indicating its Ready status, the status window can be used executing the following operations using the **Control** group of the window.

Stirring can be switched on or off by means of the **On** and **Off** buttons underneath the **Stirrer** label.

In case of a tester with a water bath the heater can be switched on or off using the respective buttons adjacent to the **Heater** label.

NOTE	Make sure the heater is switched on. It has a separate power switch.
NOTE	The 709-DS with direct vessel heating capability has a separate power supply for heating. Make sure it is switched on.
	If the manifold for the probes is installed, the probes can be raised and lowered into the vessel.
	If temperature probes for the vessels are installed, individual readings are provided for the medium temperature in the vessel.
NOTE	The vessels must be filled with medium and the manifold must be in its down position. Be aware that the down position is a function of the vessel volume configured.
NOTE	Temperatures below 30 °C are not available. Instead "n/a" is displayed.
	A motorized head can be raised and lowered using the <b>Up</b> and <b>Down</b> buttons.
NOTE	Make sure nothing is in the way of the travelling head. Keep off the area between the vessel base and the head.
	The movement can be stopped immediately by means of the <b>Stop</b> button.
NOTE	For performing a dissolution test run the drive head must be in its down position.

The Dissolution Tester Driver software is automatically terminated, if the dissolution application is closed.

#### **3** Using the driver features

Using the driver features

# NOTE

If the dissolution tester is not accessible, the status window looks as indicated below. The example below is showing the status of a 709-DS.

- Status Device Identification Serial#		Volume dependent L	ifter down times seconds
Set Current		750ml 12	seconds
Temperature 37.3 °C 37.3 °C	:	900ml 10	seconds
Stirrer Speed 50.0 RPM 0.0 RF	РМ	1000ml 9	seconds
Control		Sensors	
Stirrer Probes	Head	Sensor 1	0.0 °C
On Off Up	Up	Sensor 2	0.0 °C
		Sensor 3	0.0 °C
	Stop	Sensor 4	0.0 °C
Down	Down	Sensor 5	0.0 °C
	2000	Sensor 6	0.0 °C
Handling of bath parameters		Sensor 7	0.0 °C
🔲 Change heater settings immediately		Sensor 8	0.0 °C
Change stirrer settings immediately		End remote co	ntrol of Bath

In the **Status** section of the window no serial number is indicated.

# Using the dissolution tester driver software in combination with an automated run

Most useful is the driver software in combination with an on-line sampling system. In such a case the tester conditions of the method can be automatically handled by the Agilent UV-visible ChemStation Dissolution software. In addition test relevant conditions like bath temperature, vessel temperatures and stirring speed can be monitored at an adjustable frequency.

The monitoring data are becoming part of a dissolution testing results file. This is very useful diagnostics information in case of unexpected results.

#### Using the driver features

Using the driver features



# Configuring a UV-visible ChemStation's dissolution testing method for tester control

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Using UV-visible ChemStation dissolution software to control the tester parameter \$38\$

Using UV-visible ChemStation dissolution software to control the 709-DS  $\,-40$ 



# Monitoring of tester data

In the UV-visible ChemStation's method setup enter the method menu's **Product, Bath and Info Method Parameters** tabbed dialog. Select the **Bath** tab and press the **Advanced...** button.

Agilent Dissolution Apparatus advanced parameters	×
Method type	
Paddle C Basket	
Probe handling	
<ul> <li>only down during</li> <li>C always down</li> <li>measurement</li> </ul>	
Auto Profile Parameter	
Time between value retrieving: 1 minutes	

In the **Probe handling** section select your method of applying the probes to the vessels. Here your decision might be impacted by the availability of the manifold and individual vessel temperature probes. If you want to assure getting temperature readings at the given **Auto Profile Parameter** frequency, you should select **always down** option.

NOTE	If the manifold is in its up position, n	no temperature readings are available.

#### NOTE

<b>NOTE</b> The bath temperature readings of the 709-DS are indicating the properly working temperature regulation on all configured vessels. The temperature reported here is target vessel temperature.
---

# **NOTE** Probes in the vessel have a potential impact on the dissolution process. They are interfering with the medium flow. For dissolution test result comparison mixed approaches should not be applied here.

For the frequency of the monitoring data you should take the amount of data into consideration. In particular on longer run times a frequency of 1 min can generate a lot of data. Usually temperature changes on bath and medium temperatures occur on a longer time scale. So in many cases a frequency of 10 min is appropriate.

# Using UV-visible ChemStation dissolution software to control the tester parameter

In the UV-visible ChemStation's method setup enter the method menu's **Product, Bath and Info Method Parameters** tabbed dialog. Select the **Options Info** tab and check **Bath parameters are controlled by ChemStation**.

Product, Bath and Info Method Parameters
Product Bath Options_Info
Prompt for information before run
Bath Parameters are controlled by Chemstation
Weight Units: mg
Volume Units: ml 👻
Method Information
Derault Method of Dissolution Testing

#### NOTE

This option links a UV-visible ChemStation method directly to the tester.

The parameter set on the bath section of the dissolution method setup will be send to the dissolution tester on closure of the dialog.

# Configuring a UV-visible ChemStation's dissolution testing method for tester control 4

Using UV-visible ChemStation dissolution software to control the tester parameter

NOTE

In case of a 709-DS heating is not initiated immediately.

Product, Bath and I	nfo Method Parameters		×
Product Bath	Options_Info		
			_
Bath S/N:		Last calibration date:	
Comment:			
Bath Type:	USP Apparatus 1	•	
Medium:		Evaporation: 0 ml/h	
	,	,	
Temperature:	37.0 °C	Limit: ± 0.5 °C	
Medium pH:	7	Limit: ± 0.05	
Initial Volume:	900 ml	Limit: ± 0 ml	
Stirrer Speed:	75 rpm	Limit: ± 3 rpm	
	,	, Advanced.	
		OK Cancel He	elp

In the above example the bath temperature of 37.0  $\,^{\circ}\mathrm{C}$  and the stirring speed of 75 rpm would be set.

NOTE

The limits specified above are automatically checked at dissolution measurement time points. In case of exceeding the limit, an entry to the run logbook is created automatically.

# Using UV-visible ChemStation dissolution software to control the 709-DS

The 709-DS applies direct vessel heating individually to each configured vessel. To prepare the 709-DS for a dissolution testing run, the medium in all vessels has to be heated up to the target temperature. In automated runs the UV-visible ChemStation's prerun table can be applied to assure proper medium temperature.

The following actions in the prerun sequence must be available. If additional actions in preparation of a dissolution test are required, those actions must be performed before the heating of the medium.

#### Configuring a UV-visible ChemStation's dissolution testing method for tester control 4

Using UV-visible ChemStation dissolution software to control the 709-DS

<u>I</u> nsert	Append Delete	<u>S</u> etup	Check	
#	Action	Parame	eters	
2	Lower Probes	Stirrer: 75 rpm, 1	emp: 37.0°C	

#### NOTE

After completion of the preheating cycle of the 709-DS the manifold is automatically lifted. If the **Probe handling** option **always down** is selected, the probes must be lowered by the **Lower Probes** action.

#### 4 Configuring a UV-visible ChemStation's dissolution testing method for tester control

Using UV-visible ChemStation dissolution software to control the 709-DS

	Bath1: Bath Parameter Setup	
	Bath: <u>Stirrer Speed:</u> 75 rpm <u>I</u> emperature: 37.0 °C	
	Options:	
	<u>D</u> K <u>Cancel</u> <u>H</u> elp	
DTE	The preheating cycle must be completed successfully for proper medium temperature the test. Therefore the option <b>Wait for Bath Ready</b> must be checked and a sufficient out specified.	durig time
DTE	In case of the 709-DS no further changes to the bath parameters are allowed during a running dissolution test.	1
DTE	The limit test on bath temperature does not apply here as all vessels have their dedic heaters. Here the individual temperatures must be checked.	ated

#### The details for the Bath Parameters setup are:

N

**NOTE** In case of probes control, please make sure lowering probes with sufficient time for moving down and temperature equilibration before the adjacent time point.

#### Example of the setup of time points and probes control:

Bath1: Dissolution Run Method Parameters						
PreBun Sea Dissolution Bun PostBun Sea						
110110		[ roomanood.]			1	
	Insert	Append Delete	<u>S</u> etup	Check		
	1					
	min	Action	Pa	rameters		
	0.0	Measure Vessels			▲	
	10.0	Lift Probes				
	58.0	Lower Probes				
	60.0	Measure Vessels				
	70.0	Lift Probes				
	118.0	Lower Probes				
	120.0	Measure Vessels				
	130.0	Lift Probes				
	358.0	Lower Probes				
	360.0	Measure Vessels				
	370.0	Lift Probes				
	718.0	Lower Probes				
	720.0	Measure Vessels				
	730.0	Lift Probes				
· · · · · · · · · · · · · · · · · · ·						
			OK	Cancel	Help	

The setup using 2 minutes time ahead assures the probes are down before the pump starts to draw the sample. However, pump times longer than 60 minutes may require an adjustment here. The sample transfer by means of the peristaltic pump always starts ahead of the next time point.

#### 4 Configuring a UV-visible ChemStation's dissolution testing method for tester control

Using UV-visible ChemStation dissolution software to control the 709-DS



# 5 Using the USB to Serial Adapter interface

Using the USB to Serial Adapter interface 46



# Using the USB to Serial Adapter interface

In case of multiple baths connected to a single PC or if no free COM port is available on your PC the USB to RS232 converter cable (USB to Serial Adapter  $(p/n \ 8121-1013))$  can be applied.

The converter interface ships with a driver CD-ROM. Please make sure installing this driver before you first connect the interface to your PC.

Instructions are with the User Guide shipping with the interface.

After plugging in the USB to Serial adapter cable, automatically a new com port will be assigned to it.

The Windows Device manger can be used for checking the device assignment as well as the proper installation. It should appear under the Ports (COM&LPT) section.

In the example below it appears as "Profilic USB-to-Serial Comm Port (COM4)".

#### Using the USB to Serial Adapter interface 5

Using the USB to Serial Adapter interface



#### NOTE

In case of problems with the driver provided, please go to the www.cablestogo.com web page for downloading and upgrading to the latest driver edition.

The configuration command line in the UV-visible ChemStation of the above example is:



#### 5 Using the USB to Serial Adapter interface

Using the USB to Serial Adapter interface



# Dissolution tester driver software removal

Dissolution tester driver software removal 50



6 Dissolution tester driver software removal Dissolution tester driver software removal

# **Dissolution tester driver software removal**

**1** In the **Control Panel** click on **Uninstall a program**.



- 📷 🕨 Control Panel 🕨 Programs 🕨 Programs and Features ▼ 4 Search Programs and Features م  $\mathbf{G}($ <u>File</u> <u>E</u>dit <u>V</u>iew Tools <u>H</u>elp Control Panel Home Uninstall or change a program View installed updates To uninstall a program, select it from the list and then click Uninstall, Change, or Repair. 🛞 Turn Windows features on or off Organize 🔻 Uninstall/Change ..... 2 Name Publisher Inst 1 12/: E 💋 Adobe Flash Player 10 ActiveX Adobe Systems Incorporated Adobe Reader 9.4.3 Adobe Systems Incorporated 3/2: Agilent Dissolution Apparatus Bathdriver 3/1 🔟 Agilent IO Libraries Suite 15.5 Agilent Technologies 1/1;🔟 Agilent LXI Mdns Responder Agilent Technologies 1/1: 🚸 Agilent OL ECM BPM Client Agilent Technologies 5/1; Agilent OL ECM BPM Client Hotfix33 Agilent Technologies 5/1: Agilent OL ECM BPM Client Hotfix39 Agilent Technologies 5/1: Aailent OL ECM Client Hotfix35 Aailent Technoloaies 5/1;
- 2 Double click on Agilent Dissolution Apparatus Bathdriver.

**3** Click **Yes** on the upcoming dialog.



4 Press **OK** to quit the removal program.



#### NOTE

Make sure to remove the bath configuration entries in your UV-visible ChemStation dissolution application.

#### **6** Dissolution tester driver software removal

Dissolution tester driver software removal





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# **Specifications**

The Agilent Dissolution Tester Driver software is a DDE linked communication software module using the RS232 interface to the Varian/VanKel/Agilent dissolution apparatus. It translates the UV-visible ChemStation commands for remote tester operation into the hardware specific tester commands. The two way communication is for sending data to the dissolution tester as well as for reading tester performance data like temperature and stirring speed.

Туре	Specification
Operating Systems	Windows XP SP3 professional Windows VISTA business SP1 Window 7 professional 32 bit
Application Software	UV-visible ChemStation General Purpose software G1115AA and UV-visible ChemStation Dissolution software G1118AA
Compatible Tester Models	Agilent 708-DS, 709-DS, VK7000, VK7010 and VK 7020
Interfacing	Access to a serial COM port must be available
Installation	Install script with configurable path for the program setup Local administrator rights are required for the setup
Removal	Via Control Panel 's software removal tool ChemStation configuration must be changed manually by removing the driver path information

#### Table 1Specifications





8 Parts and Supplies Parts and Supplies

# **Parts and Supplies**

p/n	Description
G7900-60002	Program CD-ROM
8121-1013	USB to Serial Adapter
5075-0552	RS 232 Tester connection cable (single tester)
5075-0260	DB9/RJ11 adapter and cable kit (daisy chained testers)
5075-0244	RJ11 link cable (daisy chained testers)

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# In This Book

This manual contains information on the Agilent 7900 Dissolution Tester Driver

The manual describes the following:

- Installation and Configuration
- Installation of the software
- Using the driver features
- Configuring a method for tester control
- Interfaces
- Software removal
- Specifications
- · Parts and Supply

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