DataApex
Clarity™
CHROMATOGRAPHY SOFTWARE

AGILENT ICF FOR LC

Clarity Control Module ENG

Code/Rev.: M155/100A
Date: 2024-11-13

DataApex Ltd.
Petrzilkova 2583/13
158 00 Prague 5
Czech Republic

Phone: +420 251 013 400
clarity@dataapex.com
www.dataapex.com

Author: MP

Contents

1 Agilent ICF for LC **1**
2 Requirements **2**
2.1 Software requirements 2
2.2 Hardware requirements 2
3 Installation procedure **3**
3.1 Installing Correct Version of Agilent ICF 3
3.2 LAN card setting 4
3.2.1 Default settings 5
3.2.2 Stored Settings 6
3.2.3 Bootp Settings 7
3.2.4 DHCP Server 7
3.3 Description of LAN connector 8
3.4 Wiring 8
3.5 Clarity Configuration 9
3.6 Installation Qualification of Agilent ICF 12
4 Using the Agilent ICF **14**
4.1 Agilent ICF Setup 14
4.2 Method Setup 17
4.2.1 Method Setup - AS 18
4.2.2 Method Setup - LC 19
4.2.3 Method Setup - Acquisition 20
4.2.4 Method Setup - PDA 21
4.2.5 Method Setup - FC 22
4.2.6 Method Setup - Advanced 24
4.3 Device Monitor 25
4.4 Select Vial Location 27
5 Troubleshooting **28**
5.1 Specific Problems 29

To facilitate the orientation in the **Agilent ICF for LC** manual and **Clarity** chromatography station, different fonts are used throughout the manual. Meanings of these fonts are:

Open File (italics) describes the commands and names of fields in **Clarity**, parameters that can be entered into them or a window or dialog name.
WORK1 (capitals) indicates the name of the file and/or directory.
ACTIVE (capital italics) marks the state of the station or its part.
Chromatogram (blue underlined) marks clickable links referring to related chapters.

The bold text is sometimes also used for important parts of the text and the name of the **Clarity** station. Moreover, some sections are written in format other than normal text. These sections are formatted as follows:

Note: Notifies the reader of relevant information.

Caution: Warns the user of possibly dangerous or very important information.

Marks the problem statement or trouble question.

Description: Presents more detailed information on the problem, describes its causes, etc.

Solution: Marks the response to the question, presents a procedure how to remove it.

1 Agilent ICF for LC

This manual describes the use of the **Agilent ICF for LC** (Instrument Control Framework) with the **Clarity** software ver. **8.1 and later**. The list of ICF versions **Clarity** comes with is available on www.dataapex.com website on ICF control product page.

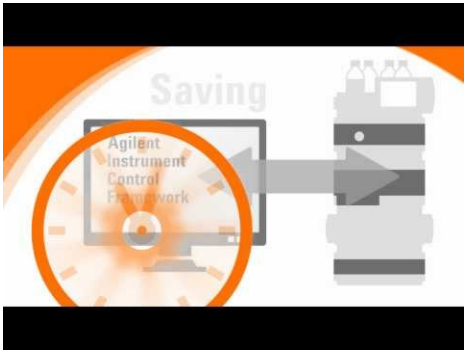


Fig. 1: Agilent ICF

The **Clarity** chromatography station enables to control various laboratory equipment from **Agilent** using the **Agilent ICF for LC**. It is library developed by **Agilent** which can be run within the **Clarity** Chromatography Station environment. This manual describes the basic use within the **Clarity**.

Thus the **Agilent ICF** dialogs and setup windows are displayed within **Clarity**, the manuals are supplied by the Agilent company both for the instrument and the configuration dialogs of the **ICF**. For the detailed help of the respective controlled instruments and functions of the **Agilent ICF** dialogs, press the *Help* or *F1* button in the displayed dialogs. Remember, that some of the dialogs loaded into the Method Setup window are also part of the **Agilent ICF** library and pressing the F1 key also displays the Agilent ICF for LC **Help** which is not created by **DataApex Ltd.**.

For complete list of controlled instruments by the **Agilent ICF** library, see the **Clarity** Controls web-page: www.dataapex.com/controls.

2 Requirements

2.1 Software requirements

Agilent ICF for LC requires **Microsoft .NET version 4.8** or higher for correct installation and operation. This version of .NET is already installed on majority of PCs, nonetheless you will be notified during the installation if your PC is missing it - then follow the instructions there. For complete list of .NET requirements, see the .NET Framework System Requirements on Microsoft web page.

Supported operating systems:

- **Windows 10 (64 bit)**
- **Windows 11 (64 bit)**

Caution: ELSD driver 1.8 requires Microsoft .NET 3.5.

Note: Before installing **Clarity**, it is recommended that your **Windows** is updated to the latest version.

2.2 Hardware requirements

- The same version of firmware must be installed on all Agilent instruments you want to control by Agilent ICF for LC.
- Version of firmware must be compatible with the Agilent ICF installed with Clarity.
- Minimum firmware version of the modules must be **A06.5x** or higher, recommended firmware is **A07.01** or higher.
- LAN interface installed on PC is required.

For complete list of supported Windows OS, instrument firmware and Agilent ICF for LC, see the Specifications - Agilent Instrument Control Framework (ICF) on Agilent webpage.

Caution: Before you start **Clarity**, ensure there is not any other application or the **Agilent Handheld Controller** active and controlling the **Agilent** instruments.

3 Installation procedure

Agilent ICF for LC is not part of the Clarity **Typical** installation. To install it, select the **Full** installation or the **Agilent ICF for LC** in *the Choose Components* dialog during the installation of Clarity.

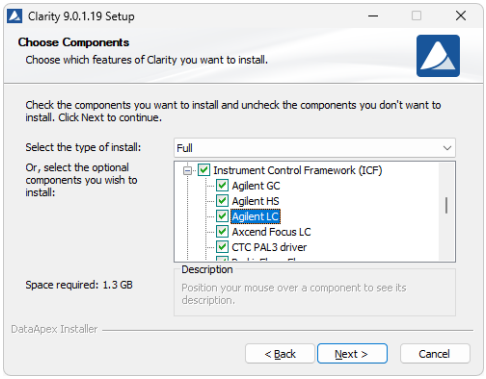


Fig. 2: Custom installation of Clarity

3.1 Installing Correct Version of Agilent ICF

Clarity expects a specific version of Agilent ICF. Because other programs may also be using Agilent ICF, it is possible they've installed a different version than is supported by Clarity. In that case in the installation you will be prompted to reinstall it in order to install correct version. Going forward with this step is crucial for correct functionality of Clarity and Agilent ICF.

This situation may also occur during Clarity update when the new version contains updated ICF version.

Note: This reinstallation of Agilent ICF may cause that other programs using it, may not function properly.

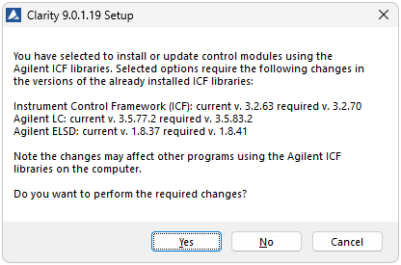


Fig. 3: Installing correct version of Agilent ICF

3.2 LAN card setting

Instruments from **Agilent 1100** series requires to purchase the LAN card since they don't have it preinstalled. In case of **Agilent 1200** series, the system contains preinstalled LAN card and the user needs to configure the TCP/IP network parameters only.

In case you purchased the LAN card separately, there are 3 LAN cards types available from Agilent:

- **G1369A** (Part number G1369-60001): introduced 10/2003.
- **G1369B** (Part number G1369-60002): introduced 03/2010, same features as G1369A, replaces G1369A, backward compatible.
- **G1369C** (Part number G1369-60012): introduced 04/2011, same features as G1369B plus support of “DHCP”, replaces G1369A/B, backward compatible.

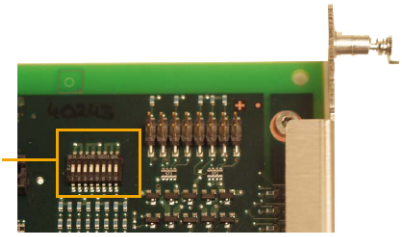
They have different DIP switches setting, so it is necessary to follow the description respective to proper type.

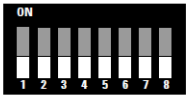
Detailed description of the possible LAN interface card settings can be found in the **Agilent G1369A LAN Interface User Manual** (Agilent P/N G1369-90000), **Agilent G1369B LAN Interface User Manual** (Agilent P/N G1369-90001) or **Agilent G1369C LAN Interface User Manual** (Agilent P/N G1369-90002).

To operate properly in a network environment, the LAN Interface must be configured with valid TCP/IP network parameters. These parameters are:

- IP address
- Subnet Mask
- Default Gateway

There are several different Init modes for setting the IP address of the **Agilent 1100/1200** systems selectable by dip switch settings on the LAN communication board.





SW 4	SW 5	SW 6	SW 7	SW 8	Init Mode
OFF	OFF	OFF	OFF	OFF	Bootp
OFF	OFF	ON	OFF	OFF	Bootp & Store
OFF	ON	OFF	OFF	OFF	Using Stored
OFF	ON	ON	OFF	OFF	Using Default
ON	OFF	OFF	OFF	OFF	DHCP

Fig. 4: LAN card DIP Switches

Compared to the **G1369A** LAN Card, SW 7 and SW 8 must be always in OFF position on the **G1369B/C** LAN Card, otherwise the selected modes are not working.

3.2.1 Default settings

- The factory set "*Using Default*" option (*SW5 ON* and *SW6 ON*) uses fixed IP address **192.168.254.11**. In case the 1100 is connected directly to PC, it is the recommended setting.
- For the LAN card in the PC use TCP/IP settings with a fixed IP address, for example:
    - IP address: 192.168.254.10
    - Subnet mask: 255.255.255.0

Note: The last IP address section should be different from the Agilent 1100/1200 IP address.

- When connected to a network, the address above should be assigned to the 1100 system (contact your LAN administrator).

3.2.2 Stored Settings

- When this address could not be used due to network constraints, it can be changed from the default settings by following procedure:
- Use the *Run* command from the Windows *Start* menu. Run the CMD.EXE with following commands:

Note: It is necessary to have Telnet client enabled. The status of Telnet client can be modified in the *Windows* settings.

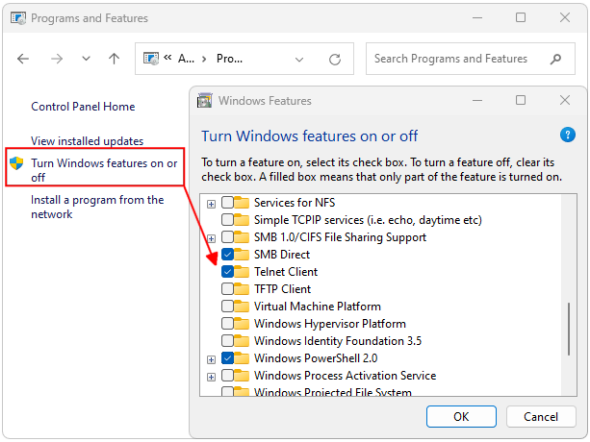
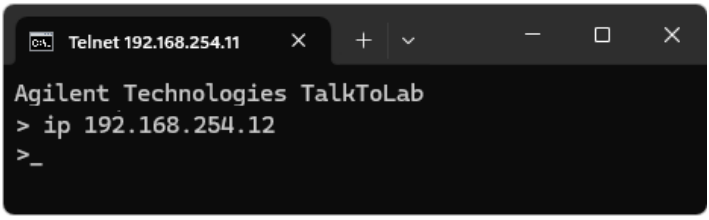


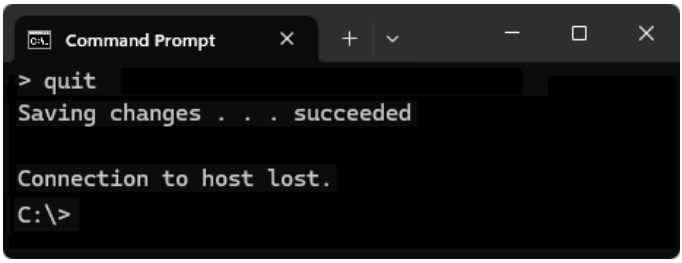
Fig. 5: Windows 11 - Telnet client

- telnet 192.168.254.11 (default or stored address)

- IP 192.168.254.12 (desired IP address)



- Quit



- After this switch off the **Agilent 1100** and change the dip switch settings on the LAN card to "*Using Stored*" (*SW5 ON* and *SW6 OFF*).

Note: The stored address can be also changed using the **Handheld Controller** (G1323A/B).

3.2.3 Bootp Settings

The **Chemstation** usually uses the **bootp server** to assign an IP address to the **Agilent 1100** instruments. The DIP switches on the LAN card are *SW5 OFF* and *SW6 ON* or *OFF* in such case. Set the appropriate IP address according to the bootp manager settings in **Clarity Agilent ICF** configuration too.

3.2.4 DHCP Server

When the initialization mode "DHCP" is selected, the card tries to download the parameters from a DHCP Server. The parameters obtained become the active parameters immediately. Beside requesting the network parameters, the card also submits its hostname to the DHCP Server. The hostname equals the MAC address of the card.

Note: We do not recommend to use DHCP option in **Clarity**.

3.3 Description of LAN connector

The LAN interface board is installed usually in only one component of the **Agilent ICF** system. On others a cover plate is in its place.

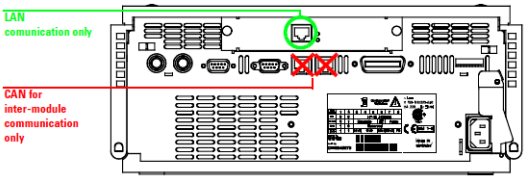


Fig. 6: Back side of the Agilent 1100 and the LAN connector

Caution: Be careful that you connect the LAN cable to the **LAN Interface** and NOT to one of the CAN connections. The CAN bus uses 12-Volt signals, and a misconnection to the CAN bus may destroy network equipment on the other end of the cable.

3.4 Wiring

When using a system without autosampler or single modules (detectors, pumps) only, they need to be started using the Remote external event contact connector.

The connector is 9 pin Sub D Receptacle (Canon female) on the backside of the module, marked Remote. Use the Pin 1 to Pin 3 (Start) contacts to connect the injector. The pins 1 to 8 may be used to Stop the run alternatively.

Caution: Next to it is another connector of the same type marked RS232.

3.5 Clarity Configuration

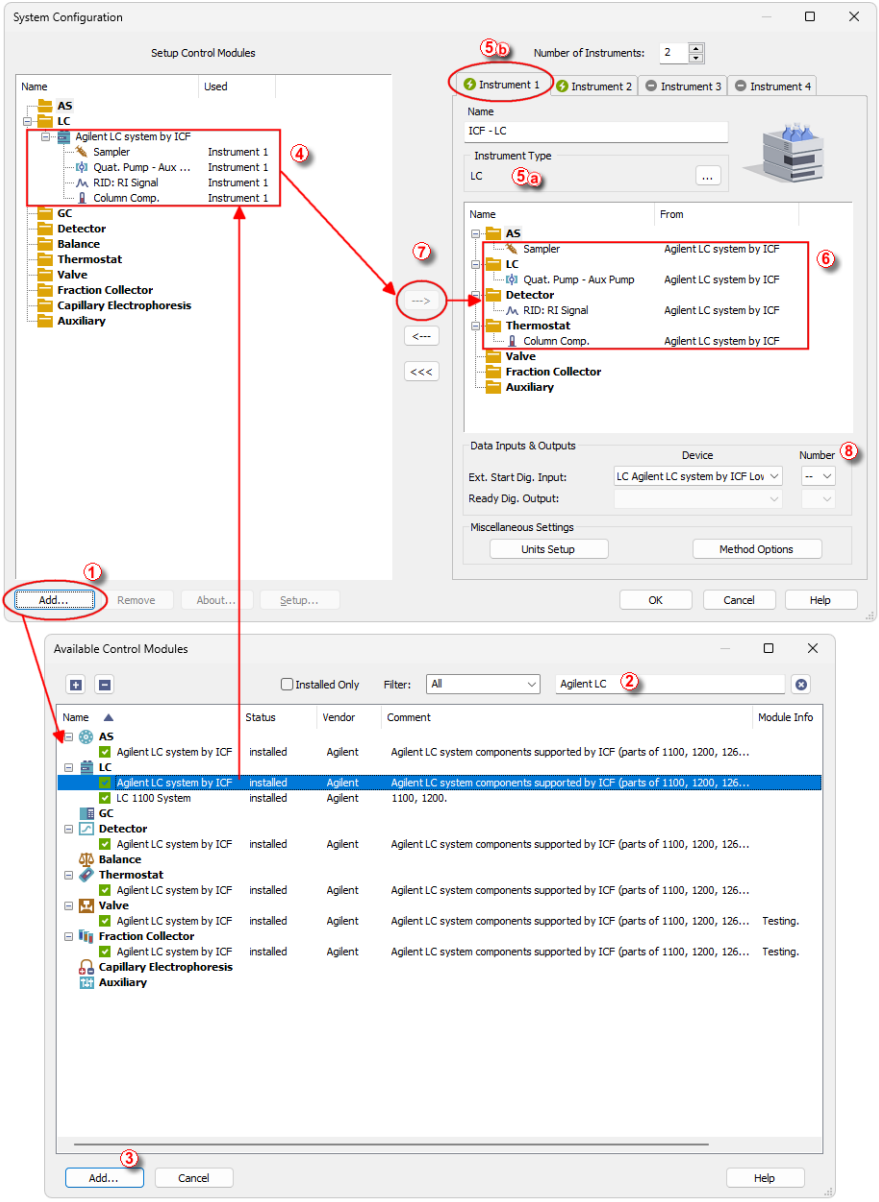


Fig. 7: System Configuration

Caution: Before you start **Clarity**, ensure there is not any other application or the **Agilent Handheld Controller** active and controlling the **Agilent** instruments.

- Start the **Clarity** station by clicking on the  icon on the desktop.
- Invoke the *System Configuration* dialog accessible from the *Clarity* window using the *System - Configuration...* command.
- Press the *Add* button ① (See **Fig. 7** on pg. **9**.) to invoke the *Available Control Modules* dialog.
- You can specify the searching filter ② to simplify the finding of the driver.
- Select the **Agilent ICF for LC** item and press the *Add* ③ button.

The ICF Setup dialog will appear.

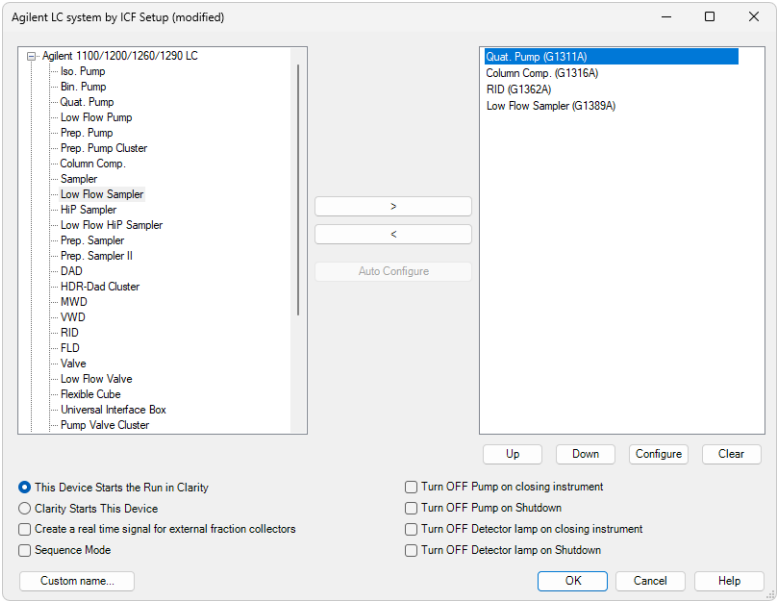


Fig. 8: Agilent ICF Setup

Note: Press the *F1* key to display the **Agilent help** with detailed description of the dialog.

Note: The *Custom name...* button can be used to alter the name of the module. This change propagates to the module name in the *Setup Control Modules* ④ and in the *Data Inputs & Outputs* ⑧ sections of the *System Configuration* dialog. Default name is used when the field is left empty.

- Click on the *Auto Configure* button in the *ICF Setup* dialog and the *Automatic configuration parameters* dialog is displayed for entering the connection

parameters:

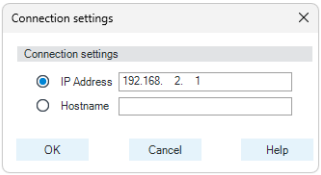


Fig. 9: Automatic configuration parameters dialog

- Fill in the *IP address* or *Hostname* of the Agilent system and press the *OK* button.

For more details about the options in this dialog, see the chapter **"Agilent ICF Setup"** on pg. **14**.

Caution: In case you configured any modules before using the *Auto Configure* function, they will be preserved in the configuration. Please remove obsolete modules manually.

- Press the *OK* also in the *ICF Setup* dialog.

The **ICF** will appear in the *Setup Control Modules* list ④ of the *System Configuration* dialog.

- Change the *Instrument Type* ⑤ ⓐ on the desired *Instrument* tab ⑤ ⓑ to LC and drag the **ICF** item from the *Setup Control Modules* list on the left ④ to the *Instrument* tab on the right ⑥ , or use the --> button ⑦ .

- Set the *Ext. Start Dig. Input* ⑧ the system.
  - Default value *"--"* ⑧ . **Clarity** will be started by receiving start data from the ***Agilent ICF LC***. *Instrument*.
  - Value *"1"* ⑧ will synchronize start of the analysis with the ***Agilent ICF LC*** autosampler's injection with **other** than Agilent ICF detector.

Caution: If you change the configuration of the **Agilent ICF** system (for example remove and add another instruments), the communication parameters like *IP address* will be lost and it is necessary to set it again.

Note: The configuration dialog of the **ICF** (Agilent ICF Setup) can be displayed any time by double-clicking on its icon or using the *Setup* button.

3.6 Installation Qualification of Agilent ICF

Agilent ICF is an external program developed by Agilent and for that reason it must be validated using its utility. If you have installed Clarity with Agilent ICF, **the IQ is valid only if successful validation of ICF is attached**.

The validation of ICF can be performed directly from the *IQ Report.*

Caution: When Clarity expects *Agilent ICF* is installed then **IQ** expects the same. If (due to any reason) the *Agilent ICF* installation is not found within Clarity, the *Installation Qualification Test* status is set by default to *FAILED*. To resolve this, it is necessary to re-install **Agilent ICF** through Clarity reinstallation and then perform **IQ** again.

Click the link *"here"* ① , after that it is necessary to click *Run* in two pop-up windows. *Agilent Software Verification Tool* window will open. Select what report file type should be generated and define post-qualification actions. Click *Qualify* ② to run the IQ. The HTML reports are opened in the default browser if the *Open reports* option was enabled. Installed drivers and their versions are listed at the end of the report.

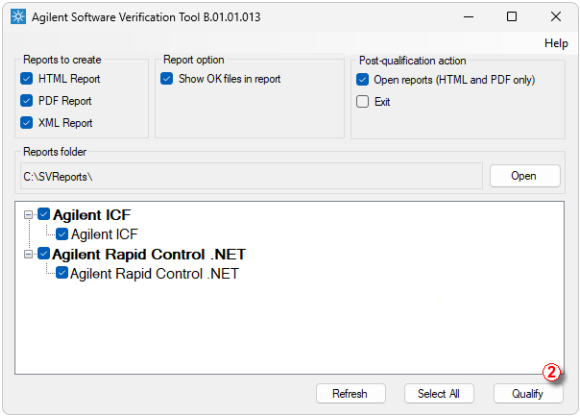


Fig. 10: Agilent Software Verification Tool

Address field of the generated report displays the location of the actual report.

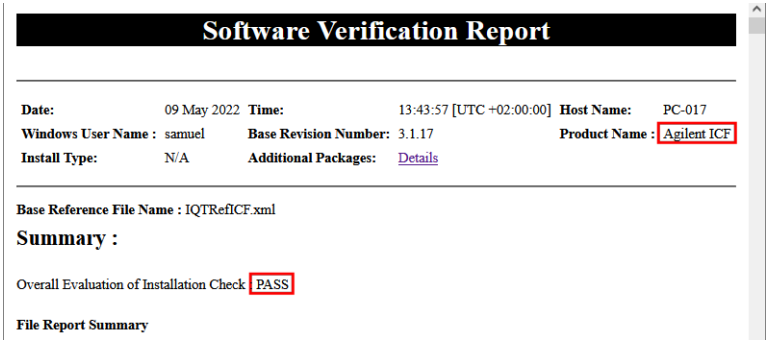


Fig. 11: ICF Report - PASS

4 Using the Agilent ICF

There are multiple places for setting the parameters of the **Agilent ICF for LC** in the **Clarity**:

- the Agilent ICF Setup dialog
- the Method Setup - AS tab
- the Method Setup - LC tab
- the Method Setup - Acquisition tab.
- and the Method Setup - PDA tab.

Caution: Before opening the *Instrument* window with configured **Agilent ICF** devices, ensure there is not any other PC connected to one of the Agilent's devices. Otherwise there will be raised an error during the connection.

4.1 Agilent ICF Setup

The *ICF Setup* dialog serves for configuring your **Agilent** instruments.

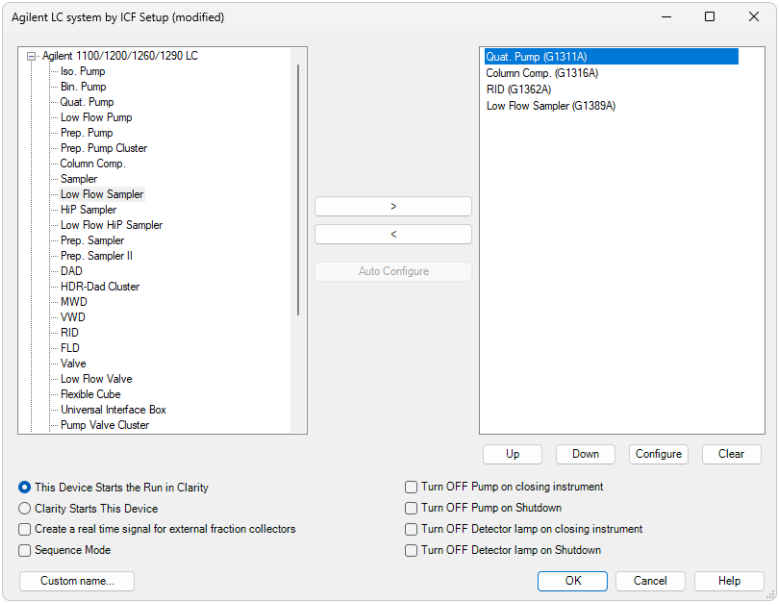


Fig. 12: ICF Setup

Note: Press the *F1* key to display the **Agilent help** with detailed description of the dialog. Each **Agilent** instrument controlled by the **ICF** library has its help.

Caution: System Configuration is not fully synchronized with the Method Setup dialog, so you can see some parameters there even if they are not configured on the Instrument. For example number of signals in FLD, DAD or MWD detectors, etc.

Automatic configuration

- Click on the *Auto Configure* button and a dialog is displayed for entering the connection parameters:

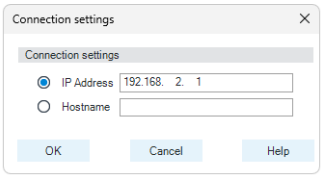


Fig. 13: Automatic configuration parameters dialog

- Fill in the *IP address* or *Hostname* of the **Agilent** system and press the *OK* button.

Manual configuration

- Select a component from the list on the left side you want to add to your **Agilent** system.
- Click the *Right* button to add it to the configuration or the *Left* one if you intend to remove it.
- By clicking on the *Configure* button, you can display the setup of the respective instrument.

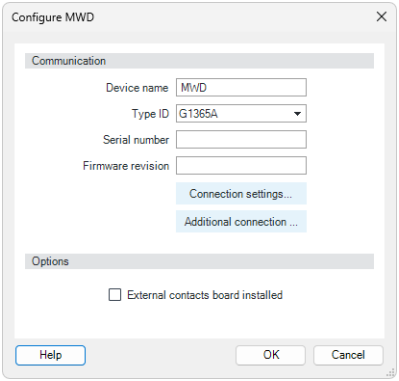


Fig. 14: Example of configuring the MWD

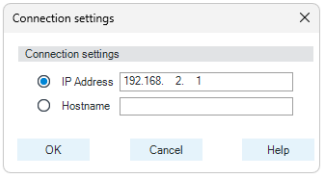


Fig. 15: Automatic configuration parameters dialog

- Fill in the *IP address* or *Hostname* of the **Agilent** system and press the *OK* button.

Note: In each dialog you can press the *F1* key to display the **Agilent help** with detailed description of the dialog.

This Device Starts the Run in Clarity / Clarity Starts This Device
This radiobutton enables to start the analysis run from the **Clarity**. With *This Device Starts the Run in Clarity* checked, the device is started prior to **Clarity** by its front button or autosampler connected to this device and passes the start to **Clarity**. When *Clarity Starts This Device* is checked, **Clarity** is started prior to this device by separately wired autosampler, Start button in Single Run or different device and then starts this device.

Note: The *This Device Starts the Run in Clarity* option is checked by default.

Create a real time signal for external fraction collectors
This option turns on an additional real time signal during the acquisition run which can be used for fraction collectors to response on the signal immediately.

Turn OFF Pump on closing instrument
If checked, all pumps connected to the instrument will be stopped when the user closes the Instrument window.

Turn OFF Pump on Shutdown
If checked, all pumps connected to the instrument will be stopped when a Shutdown event happens, either from error caused by **Clarity** or other modules, by Event Table or by pressing the *Shutdown* button in Device Monitor or other windows.

Turn OFF Detector lamp on closing instrument
If checked, all detectors connected to the instrument will be stopped when the user closes the Instrument window.

Turn OFF Detector lamp on Shutdown
If checked, all detectors connected to the instrument will be stopped when a Shutdown event happens, either from error caused by **Clarity** or other modules, by Event Table or by pressing the *Shutdown* button in Device Monitor or other windows.

Sequence Mode
If checked, it enables to use high throughput operations of the autosampler. Depending on the type of the sampler and functions it supports, this either means using "Full Sequence Download" functionality (working with optimized sequences of up to 60 samples) or enabling to use the *Enable Optimization* functionality on Method Setup - AS tab.

4.2 Method Setup

Possibility of displaying and parameters of the Method Setup - AS, Method Setup - LC and Method Setup - Acquisition dialogs depend on the Agilent ICF Configuration.

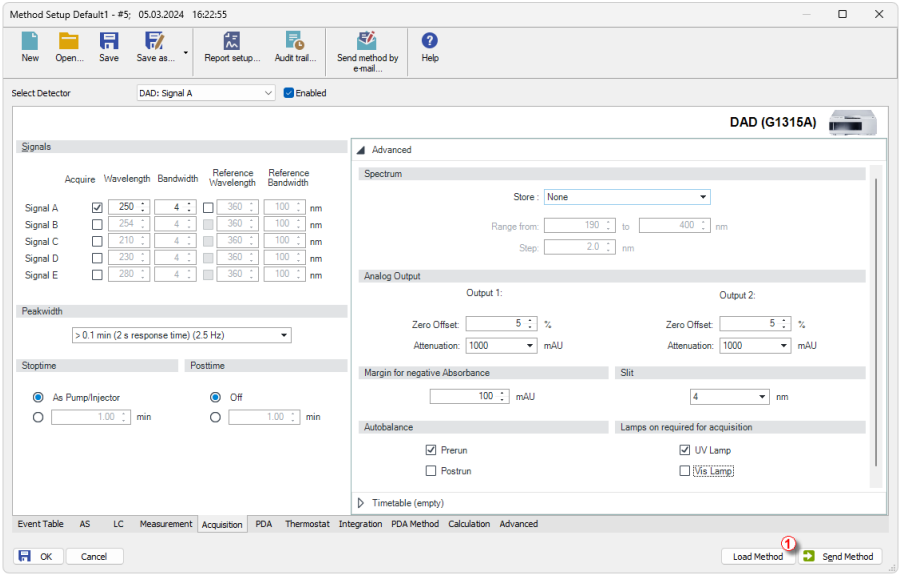


Fig. 16: Load Method - Method Setup

You can load the whole method from the configured **Agilent ICF** system by clicking on the *Load Method* button ① .

Be aware that *Load Method* is does not have to be supported by the other control modules even if they are configured on the ***Instrument***.

Caution: Method parameters can't be changed during running analysis.

4.2.1 Method Setup - AS

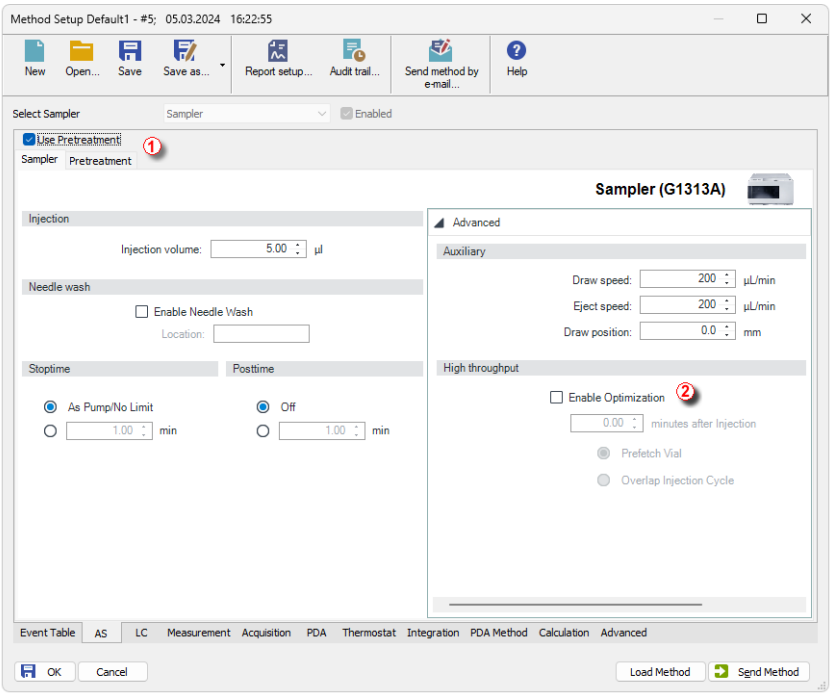


Fig. 17: Method Setup - AS

Note: Press the *F1* key to display the **Agilent help** with detailed description of the dialog.

- Select the *Sampler* or the *Pretreatment* tab ① to configure respective function of your sampler.
- *Enable Optimization* ② option in the *High throughput* section is correctly operational only if option *Sequence Mode* in the Agilent ICF Setup is checked.

Note: Activating a pretreatment (injector program) replaces the standard injection cycle.

4.2.2 Method Setup - LC

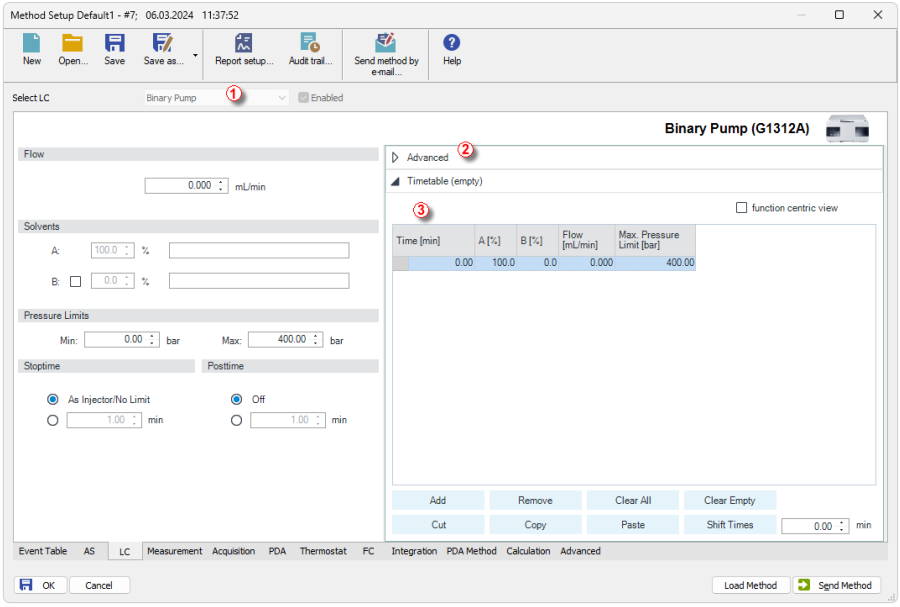


Fig. 18: Method Setup - LC

Note: Press the *F1* key to display the **Agilent help** with detailed description of the dialog.

- Select a pump ① if you have configured more than one on your instrument.
- For advanced setting of your pumps, click the *Advanced* ② row.

Caution: **Agilent LC Control** is independent on the **LC Gradient** tab in the **Clarity**. The composition of gradient and flow presets for **Agilent** pumps has to preset in the *Timetable* section ③ . If there are configured other the gradient pumps (from different vendor) on the Instrument their operation would be controlled by values given in the *LC Gradient* tab. These two mentioned gradients would then performed simultaneously and independently during analysis. If there is configured any other Auxiliary pump on the Instrument its presets would be inserted in independent table of *LC* tab. Selection of the control presets for respective pump is done using ① .

4.2.3 Method Setup - Acquisition

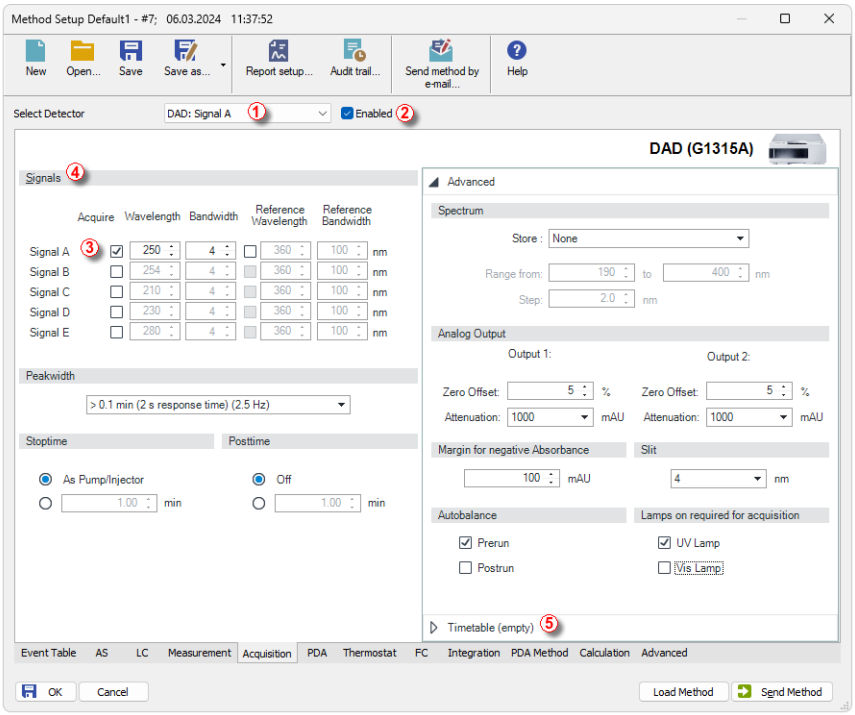


Fig. 19: Method Setup - Acquisition (Agilent ICF)

Select the detector ① you want to configure.

Make sure the detector/signal is enabled or disabled both in *Method Setup* ② header and signals setting in the *Acquisition* ③ tab.

Note: Disabling or enabling of individual signals of each configured module has to be done in the *Signal* section ④ of each configured module *Acquisition* tab. Disabling of acquisition of any signal of any configured module is not sufficient just to uncheck *Enabled* checkbox ② .

For setting up the time table, click the Timetable ⑤ are to display it in the window.

Caution: The configuration in the Agilent ICF Setup window and in this dialog is not fully synchronized. It means, that in this dialog you can configure signals or spectra even if they are not configured in the System Configuration dialog. Always use only those signals and spectra you configured in the System Configuration dialog.

Note: Press the *F1* key to display the **Agilent help** with detailed description of the dialog.

4.2.4 Method Setup - PDA

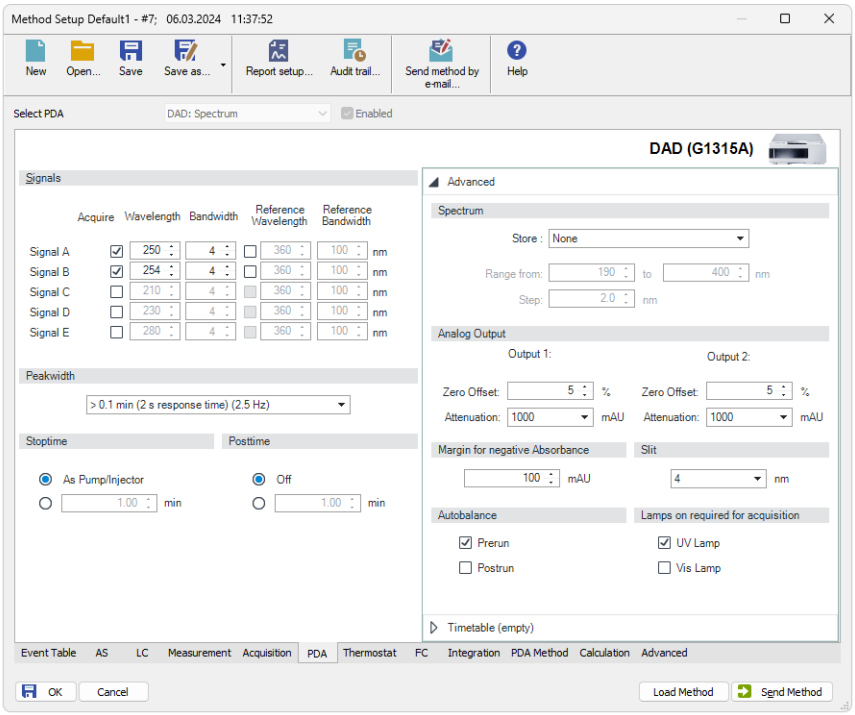


Fig. 20: Method Setup - PDA (Agilent ICF)

The **PDA** tab is present where there is configured PDA detector. The settings are in this table are fully synchronized with the settings in the Method Setup - Acquisition tab. Therefore there is no difference if the method parameters for the PDA detector are set in this tab or in the Method Setup - Acquisition tab.

Note: Press the *F1* key to display the **Agilent help** with detailed description of the dialog.

4.2.5 Method Setup - FC

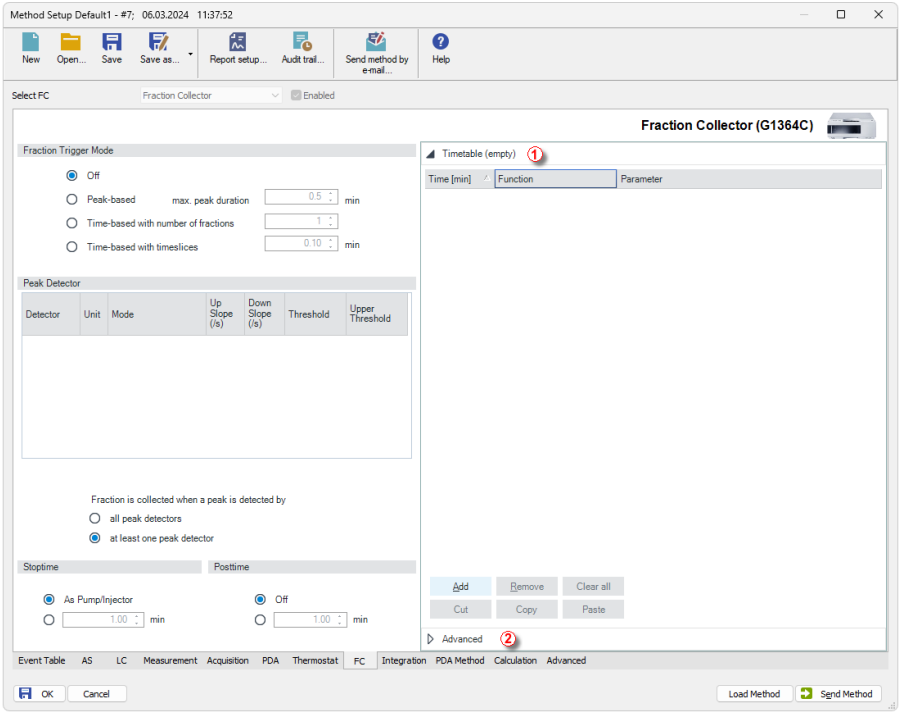


Fig. 21: Method Setup - FC

Note: Press the *F1* key to display the **Agilent help** with detailed description of the dialog.

- *Timetable* ① is used to program changes in the fraction collector parameters during the analysis .
- For advanced setting of your fraction collector, click the *Advanced* ② row.

Note: The collected fractions are displayed in the resulting chromatogram as shown in the image bellow. Table containing the Vial number, Volume, Start, and End Time for each fraction is displayed on *ICF Fraction Collector - Result* tab ⓐ .

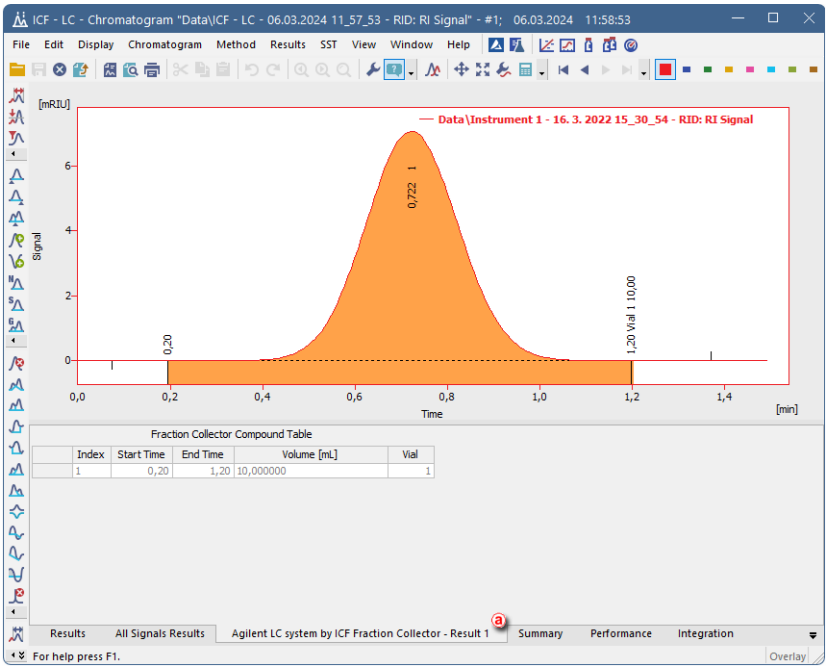


Fig. 22: Chromatogram - FC

4.2.6 Method Setup - Advanced

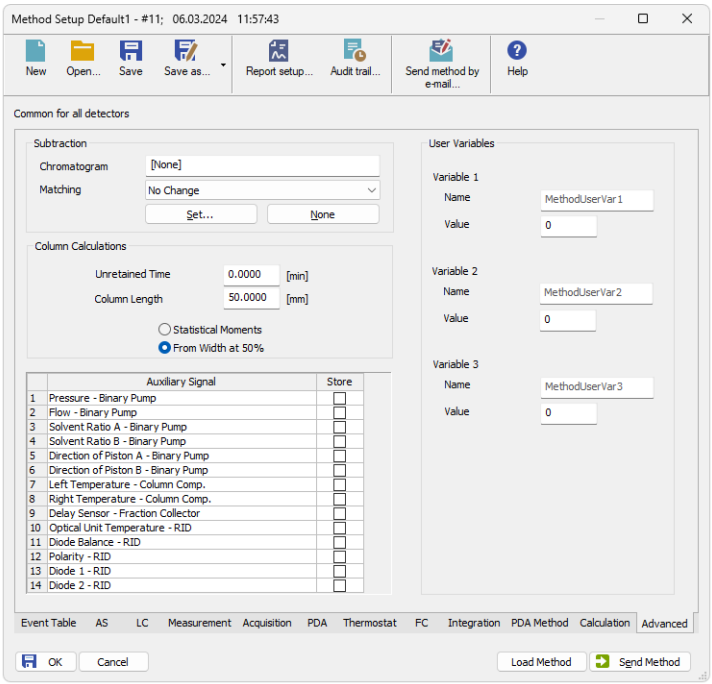


Fig. 23: Method Setup - Advanced

Agilent ICF for LC provides the pump flow and pressure auxiliary signals for use in **Clarity**. To save the auxiliary signals into each chromatogram measured according to the given method, check the particular checkbox in the lower section of the Method Setup - Advanced dialog.

4.3 Device Monitor

The *Device Monitor* window can be invoked by the *Device Monitor* command from the *Analysis* menu or using the **Device Monitor** icon in the *Instrument* window. You may use icon for accessing *Device Monitor* from all **Clarity** windows. For the **Agilent ICF**, it displays the states of configured **Agilent** system and enables the user to monitor and/or change states of this **Agilent** system.

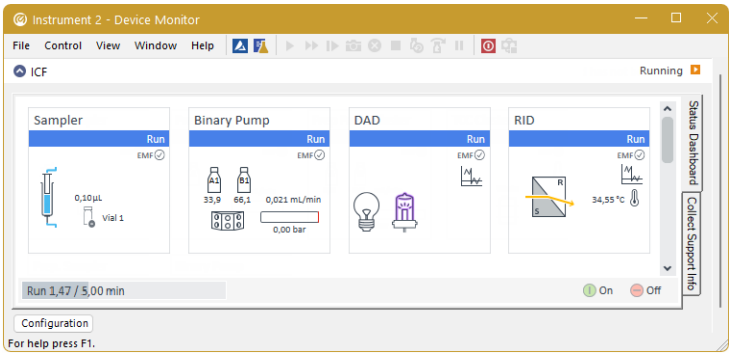


Fig. 24: Device Monitor

Button *Configuration* allows to enter and modify configuration of some modules, mostly their trays, directly from the *Device Monitor*. This feature is supported only for selected modules. Modifications of configuration may cause that method might need an adaptation before its use in analysis. The *Configuration* feature is not accessible during running analysis or running *Sequence*.

Note: Press the *F1* key to display the **Agilent help** with detailed description of the dialog.

Note: Tabs on right side of the *Device Monitor* allowing setting collection of diagnostic information are displayed only when **Clarity** is started under Administrator Windows account. For other Windows accounts, when running **Clarity**, there are displayed fewer tabs on the right side of the *Device Monitor*.

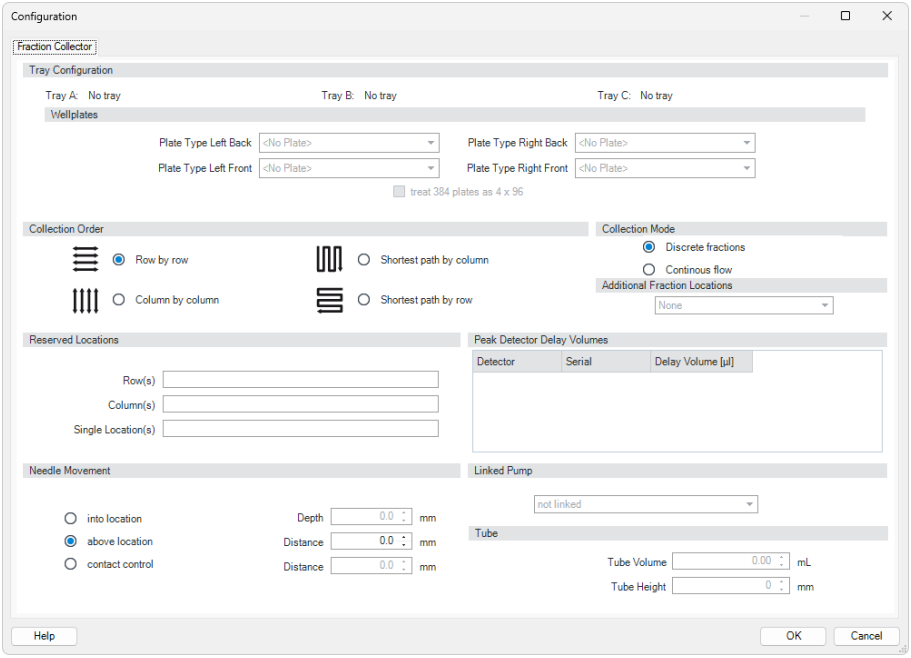


Fig. 25: Configuration from Device Monitor

ICF Device Monitor is interactive. Right-click on a particular device, like *Sampler*, *MWD*, etc. and a pop-up menu with corresponding commands is displayed.

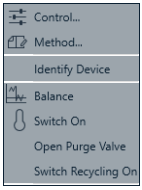


Fig. 26: Device Monitor - Context Menu

Caution: To enable the commands in the context menu, it is necessary to get the **Clarity** *Instrument* to status *No method sent*. This can be performed by clicking on the *Shut Down* button in the toolbar.

4.4 Select Vial Location

In the Sequence window, it is also possible to interactively select the vial location instead of typing it manually. Click on the drop-down button in the *SV* or *EV* column to display it.

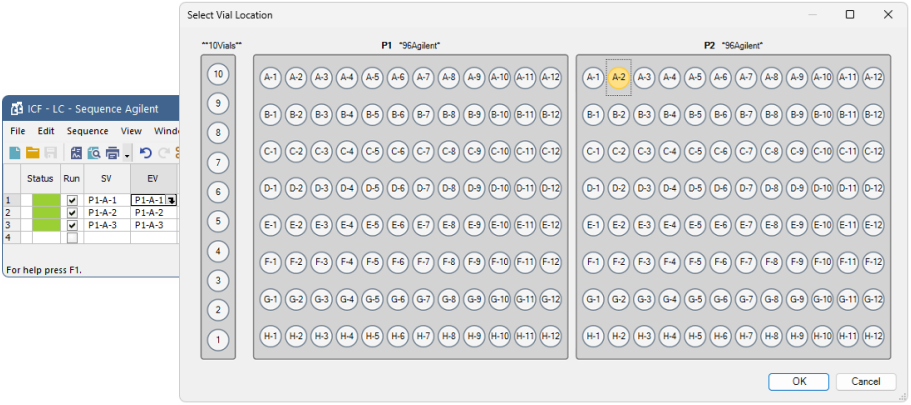


Fig. 27: Select Vial Location

5 Troubleshooting

When the remedy for some problem cannot be discovered easily, the recording of communication between **Clarity** and *Agilent ICF* control module can significantly help the **DataApex** support to discover the cause of the problem. The recording can be found in the **Clarity** installation directory (C:\CLARITY \CFG\DEBUG_ LOGS\PGMLOG by default). Older communication log files are removed and replaced by newer ones, therefore, it is necessary to copy out the communication log which was collected during the problem occurrence soon after it happened.

In case you cannot establish communication with Agilent instruments, please review the following issues:

Check the network connection using the Ping command

The problem in communication between **Clarity** and Agilent instruments may be caused by wrong network configuration, firewall preventing the connection, etc. Run the command line in Windows (for example by pressing the **Windows key** together with the **R** key, in the displayed *Run* window type *cmd* and press *Enter*).

In the command line type ping <ip-adress-of-instrument> or <hostname> and press *Enter*. The *IP Adress* (*hostname*) is the same you entered in the ICF Setup dialog.

Agilent Lab Advisor or handheld controller must be turned off

When controlling Agilent instruments from **Clarity**, please make sure any other application or controller is not connected to those instruments.

Use Lab Advisor to check the functionality of the instruments

In case you encounter some problems in communication between **Clarity** and Agilent instruments, turn off the **Clarity** and try to connect to these instruments using the **Agilent Lab Advisor**.

Agilent Diagnostic Information

There is an option to obtain additional information on Agilent devices using the **Agilent Lab Advisor** (such as the valve switching counter, lamp on-time, lamp ignition counter and others). These options are not implemented in **Agilent ICF** therefore they cannot be accessed through **Clarity**.

5.1 Specific Problems

Clarity can't be run and it displays "Agilent ICF is not installed correctly." message.

Cause: The cause of the problem is that the Agilent ICF has a different version than expected by Clarity. It can typically happen when other software also using Agilent ICF decides to reinstall it. Thus next time Clarity expects different version than is installed.

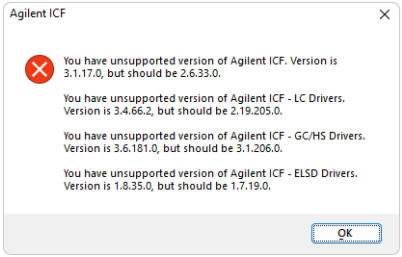


Fig. 28: An Agilent ICF error during Clarity start

Solution: Solution is to reinstall Agilent ICF during **Clarity** installation. Follow steps described in the chapter **"Installation procedure"** on pg. **3**.

ICF problems during installation or operation.

Cause: The cause of the problem might be that *Microsoft .NET Framework* is not enabled. Agilent ICF requires *Microsoft .NET Framework* enabled for its function.

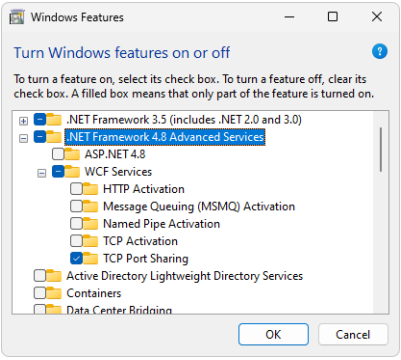


Fig. 29: Turn Windows features on or off - Windows 11

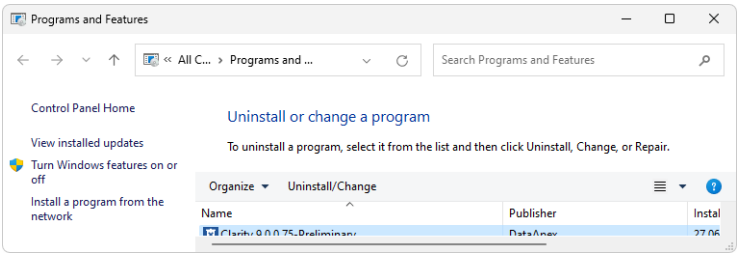


Fig. 30: Location of Turn Windows features on or off in Windows 11

Solution: Check if *Microsoft .NET Framework* is enabled in *Turn Windows features on or off* dialog. If *Microsoft .NET Framework* is not enabled enable it. *Turn Windows features on or off* dialog is accessible in *Control Panel* window under section *Programs* in its subsection *Programs and Features*.

Note: *Microsoft .NET Framework* version 3.5 is not needed. The required version 4.7.2 or higher can be only disabled in Windows 8.1 or newer, where it is installed with system updates.

Agilent LC system by ICF Sampler (SN xxx): Gyyyy:xxx - Reply error during COSY list execution

Cause: Most common cause is that next injection was called too soon after the previous one. This can be caused by using *Skip Vial* command soon after analysis start or by running extremely short acquisitions in *Sequence*. Generally, this error can occur when the sampler receives new request while processing the previous one.

Problems regarding specific control modules.

Cause: Because the control is realized using the ICF which is in *TESTING* state, some issues may arise during the use. Known issues are described in the table below.

Type	Description of the issue
7100 CE	Not supported so far (there is no demand for this control).
FLD detector balance	FLD performs no balance (contrary to DAD/VWD detectors). FLD always measures the actual concentration in the cell (by Agilent design).