



GETTING STARTED

Clarity Lite Software

ENG

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To facilitate the orientation in the **Getting Started** manual and **Clarity Lite** chromatography station, different fonts are used throughout the manual. Meanings of these fonts are:

Instrument (blue text) marks the name of the window to which the text refers.

Open File (italics) describes the commands and names of fields in **Clarity Lite**, parameters that can be entered into them or a window or dialog name (when you already are in the topic describing the window).

WORK1 (capitals) indicates the name of the file and/or directory.

ACTIVE (capital italics) marks the state of the station or its part.

The bold text is sometimes also used for important parts of the text and the name of the **Clarity Lite** 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 Brief Description

Clarity Lite Chromatography Station is an effective tool for the acquisition, processing and evaluation of data from any gas or liquid chromatograph with analog output.

It is possible to acquire data from a single chromatograph equipped with up to 4 detectors.

The **Clarity Lite** station automatically processes all data acquired using **CSW** stations (previous **DataApex** chromatography stations).

1.1 Hardware and software requirements

Basic Hardware and Software Compatibility:

You have purchased a license for **Clarity Lite** Chromatography Station. This software is currently compatible with the majority of **Microsoft Windows** operating systems, starting with **Windows 7**.

Latest and more detailed information about hardware and software compatibility can be found in the datasheet **D016** or on the web page www.dataapex.com under section *Products - Clarity - Compatible Windows OS and Hardware*.

Verify that you have:

A free **USB** port for the **HW key**.

A free **USB** port for the **installation USB**.

In case of analog acquisition using an A/D converter, another free **USB** port.

Microsoft .NET framework version 4.7.2 or higher installed on the PC.

Note: When using discontinued hardware such as: INT5, INT7, INT9, U-PAD or U-PAD2, consult the separate manual for requirements and compatibility issues.

2 Installation

Verify that the package is complete according to the packing list.

Caution: Do not insert any devices, such as HW key or **Colibrick**, before installing **Clarity Lite**!

2.1 Language selection

Clarity Lite is available in **English** and several other languages: **Chinese, French, German, Russian** and **Spanish**.

You can set the preferred language at the beginning of the installation process or change it later using *Help - Languages* menu command from the main Clarity Lite window.

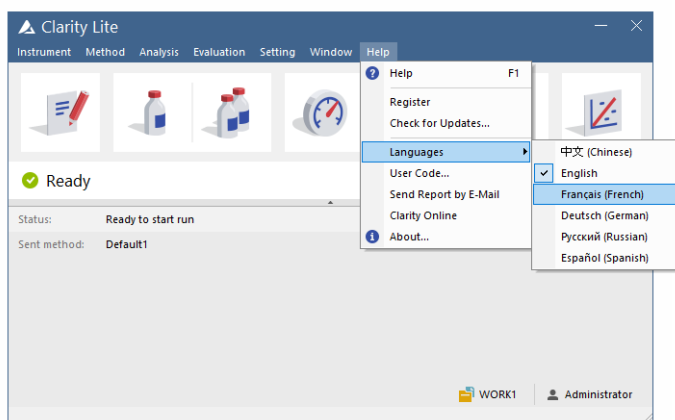


Fig 1: Switching Clarity Lite into different language

2.2 Software Installation

Setting the Windows environment:

Ensure you have Administrator access rights in your system before you proceed with the installation. **Clarity Lite** users must have read/write access to the **Clarity Lite** folders (C:\CLARITY LITE and all subfolders). Otherwise, installation process will be terminated by the operating system.

We recommend to switch off *User Account Control* (UAC) in **Windows** before the installation. In **Windows**, go to *Start - Control Panel - User Accounts - User Accounts* and click on the *Change User Account Control settings*. In the UAC dialog move the slider down - towards the *Never notify* selection.

Ensure that Windows is up-to-date. In case there are pending Windows updates Clarity installation will be terminated with the following message:

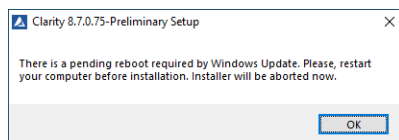



Fig 2: Pending Windows Update message

Installing Clarity Lite:

Insert the **Clarity Lite** installation medium into the PC or download the latest **Clarity Lite** version from www.dataapex.com/downloads.

If the installation does not start up on its own, select the INSTALL.EXE file and run it.

The installation wizard will take you through the installation process, including the creation of a **Clarity Lite** shortcut in the *Start - Program* menu and a **Clarity Lite** icon  on the Desktop.

Enter the User code provided during the purchase of your station or activate Trial mode.

Trial mode:

Leave the *User Code* field empty and press the *Skip* button. When no User code is provided, **Clarity Lite** will start in so called Trial mode. Trial mode is valid for 30 day or 100 station starts (whatever comes first) and enables all the functions **Clarity Lite** can offer. When the Trial period expires, you will be asked to fill in your User Code number you received with your station or enter the trial prolongation code. If none is supplied Clarity Lite will not start.

Caution: It is highly recommended **NOT** to install the Clarity Lite software into the **PROGRAM FILES** directory.

Note: If you are installing Clarity Lite in a regulated environment or if you want Clarity Lite to comply with the GLP, please refer to manual M132: Clarity in Regulated Environment, accessible on www.dataapex.com.

2.3 Hardware Installation

The following chapters describe the installation of **HW key** and a brief installation of the **Colibrick** A/D converter .

A detailed description of the hardware and its installation, including troubleshooting, is available in separate manuals (see www.dataapex.com/downloads).

Caution: Install **Clarity Lite** (including the **HW key**) before connecting any external devices to the PC.

2.3.1 HW key installation

Clarity Lite is shipped with a HW key which does not require any installation. Drivers are installed automatically after inserting the key into the **USB** port. The HW key number is displayed during installation.

The HW key needs to be present in the PC when using Clarity Lite.



Fig 3: Rockey4 ND (No Drivers required) HW key

Caution: Older versions of HW keys require different installation procedure. Please see the FAQ located at <http://www.dataapex.com/> under the section *Support - FAQ*.

2.3.2 Installation of the Colibrick A/D Converter

Caution: Install **Clarity Lite** before attaching the **Colibrick** to the **USB** port. Drivers will be installed automatically during the installation of **Clarity Lite**.

Install **Clarity Lite** from the provided medium or get the latest version from www.dataapex.com/downloads.

Connect the **Colibrick** with a cable to a **USB** port on the computer.

After connecting the **Colibrick**, the device will be automatically detected by operating system.

2.4 Device wiring

The wiring strongly depends on the particular configuration. The **Clarity Lite** station package with the **Colibrick** A/D converters contains a **cable set** composed of signal, starting and digital output cables for connecting **Clarity Lite** to the chromatograph and a **USB** cable for connecting the **Colibrick** to the computer.

2.4.1 Standard cable for Colibrick

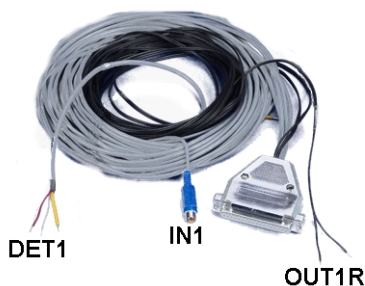


Fig 4: Standard Colibrick cable for one detector

Signal cables

The cables, labeled “**DET1**” to “**DET4**” (according to the number of channels), are supplied without connectors, with stripped and tinned endings - red/brown (+), white (-) and shielding (analogue ground).

Starting (marker) cables

The cables, labeled “**IN1**” to “**IN4**” (according to the number of channels), are ended with an RCA connector. Each starting cable has one cable with free leads [red (+), shielding (digital ground)] for direct connection to the chromatograph or a valve and one cable ended with a button for those cases where there is not a starting contact available and it is necessary to perform a manual start.

Digital output cables

Relay contacts, labeled “**OUT 1R**” to “**OUT 4R**” (according to the number of channels), are ended with free leads. They are used for synchronizing autosamplers in the active sequence without an AS Control module.

Note: **Clarity Lite** reacts on *Ext. Start/Stop* by default on *IN1* pin of the Colibrick's INT7 connector. It is necessary to use the Starting cable *IN₁* in case you have cable for more than 1 detector (signal).

At the **Colibrick** end, the cable ends on a female CANNON SUB D 37-pin connector.

2.4.2 Chromatograph

Connect cables according to one of the diagrams in **Fig 5** on pg **6**. Use a symmetrical connection only if you are sure that the chromatograph/detector is equipped with a symmetrical output - it is necessary to read the instructions for the corresponding chromatograph.

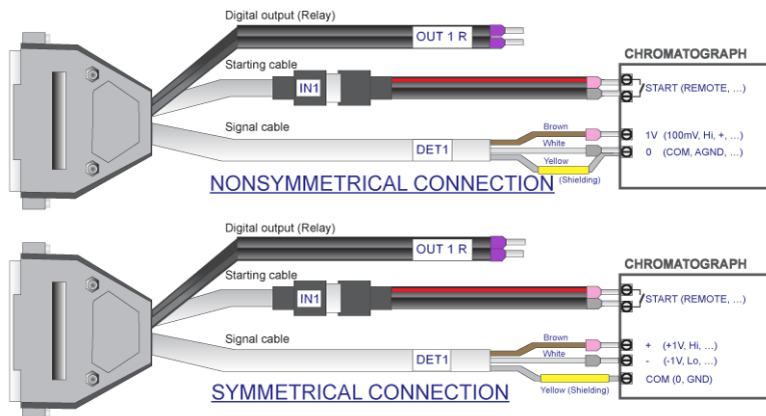


Fig 5: Connection of a Clarity Lite station with a chromatograph

Note: Since **INT7** converter all **DataApex** A/D converters use the same standard **INT7 Connector**.

Connection of signal cables:

Signal inputs of the **Colibrick** are symmetrical: red/brown (+), white (-), yellow shielding (= analogue ground/copper braiding).

Caution: The shielding must be connected. It works not only as the shielding, but also as the analogue ground against which the measurement takes place. In the case of asymmetrical output of a detector (only two leads/terminals/pins/screws), the shielding must be connected to the white lead! No lead of the signal cable may remain unconnected.

Try to connect to the output of the chromatograph detector with the largest possible level of signal, usually indicated as **INTEGRATOR** (signal approx. 1V). The level of the signal on the output marked **RECORDER** is only about 10mV.

For easier modification of the wiring, we supply a **SV9 Terminal board** (p/n SV9) with screw contacts.

Connection of starting cables:

Starting input reacts to a change of the TTL logical level (5V) or to a connection by any contact (button, contact of relay). It can be used for remote start from a chromatograph or a valve with contact closure when injecting manually.

The input implicitly reacts to a change from *HIGH* to *LOW* (or closing of a contact). The input function may be changed by switching the *Down* item to *Up* in the *Ext. Start/Stop* section from the [Method Setup - Measurement](#) dialog (accessible from the [Clarity Lite](#) window using the *Method - Measurement* command).

2.4.3 Autosampler

The most typical autosampler connections are described in the chapter "**Connecting Autosamplers (AS)**" on pg 25.

3 Qualification procedures

The quality of analytical data is an important issue for many laboratories. One of the requirements for ensuring the reliability of generated results is the validation of all instrumentation and procedures that are used to acquire data. For chromatography data stations usually three levels of validation (qualification) are relevant, from which only **Installation Qualification** is used in **Clarity Lite**:

Operational Qualification (not supported in **Clarity Lite**)

Performance Qualification (not supported in **Clarity Lite**)

3.1 Installation Qualification - IQ

The **Installation Qualification (IQ)** is a procedure confirming that the software has been installed successfully and that the files are in the correct version. The Installation Qualification is an integral part of the **Clarity Lite** installation procedure.

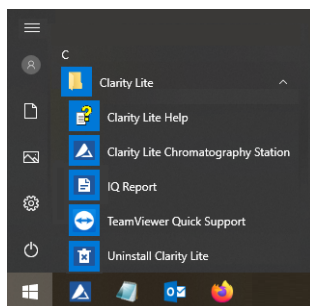


Fig 6: Start menu path to IQ report

How to use the Installation Qualification

Install **Clarity Lite** according to the instructions of the **Installation Wizard**.

Locating the **IQ Report** is dependent on your operating system. You can search for **IQ Report** in the search field of the *Windows Start* menu.

Click on the **IQ Report** program and the **IQ** window will be opened.

If the installation has been correctly performed, the status should read: "*Installation Qualification Test: Passed*".

Date	04.04.2020, 14:20
Serial number of application	
User Code	
Version of application	ClarityLite version 8.3.0.119
Build date of application	03.04.2020, 02:00
Instruments	1
Extensions	None
Controls	None
Certification file	C:\ClarityLite\Bin\iq.chk
Checksum of cert. file	77EC1289987DBE54
Date of cert. file	03.04.2020, 08:12
User	Zdenek
System	Microsoft Windows 10 Professional version 10.0 (Build 18363)
Acquisition and hardware devices	Key Rocky 4ND

Core Files, Embedded Components: Passed

Files

[Hide files list <](#)

File	Path	Version	Size	File date	Status
claritylite.exe	c:\claritylite\bin	8.3.0.119	32083968	03.04.2020, 02:00	Passed
cmal.exe	c:\claritylite\bin	1.0.0.1	40960	03.04.2020, 08:08	Passed
cppunit_dll.dll	C:\ClarityLite\Bin	-	187392	03.04.2020, 01:28	Passed

Fig 7: IQ window

If the **Installation Qualification** fails, it is recommended to uninstall and then re-install Clarity Lite. If it fails again contact DataApex support (support@dataapex.com).

Note: The most common reason for a "Failed" result is the installation of an upgrade over an existing full version of Clarity Lite. This itself does not produce any errors but since some of the files are preserved from the original installation, the checksums will not match.

The **Installation Qualification** report can then be printed, copied to the clipboard or sent by an email.

4 Program structure and control

The **Clarity Lite** Chromatography Station is a less expensive, simplified version of the full station with limited functionality. It is able to operate one chromatographic system, compared to four systems in the full version. The comparison between the features of the **Lite** and **Full** versions can be found in the D007 data sheet available for download on www.dataapex.com.

After start up, the main **Clarity Lite** window will open and prompt you to enter a *User Name* (more information on *User Names* can be found in the **Reference Guide**). This window is used for acquisition and processing of data using the connected chromatograph and contains an information table, a status line and an analysis-processing diagram.

5 Tour through the Clarity Lite station

The following two sections will guide you through a single analysis (the chapter "**Running the Single Analysis**" on pg 12.) and a sequence measurement (the chapter "**Running the Sequence measurement**" on pg 18.). Sections are shown as step-by-step instructions which should be performed in a given order. Some sections may be skipped, as their output files have been already included as examples. You will be informed about it in those sections. Also the whole process has *Note* sections - the procedures described in the Notes are optional and you do not need to perform them in order to reach the goal.

The **Clarity Lite** software is intuitive and easy to master without much training. The first analysis can be run in less than one minute after installing the station and configuring the hardware.

This tour assumes that the station is in its default configuration and that nothing has been modified in the demo projects. It is possible to test the **Clarity Lite** functions on other projects, but the files mentioned in this guide will not be present.

Note: Although this tour through the station is aimed at **Clarity Lite** beginners, it assumes that users have a basic knowledge of chromatography principles and basic processes such as calibration.

Note: Pressing the **F1** or *Help* button shows help page specific to the window or dialog. In the help, the *Index* tab serves for keywords searching and the *Search* tab serves for fulltext searching.

5.1 Running the Single Analysis

The software includes a simple project using basic functions. It shows how to start a **Single Analysis**, monitor the **Data Acquisition** and process the resulting **Chromatogram**.

5.1.1 Clarity Lite window

Start the **Clarity Lite** station. The **Clarity Lite** window will open and an emerging dialog will prompt you to enter the *User Name*. The *Administrator* user name is pre-selected.

Note: **Clarity Lite** does not support passwords, the *User Name* entered in this dialog is only used to identify the chromatogram author.

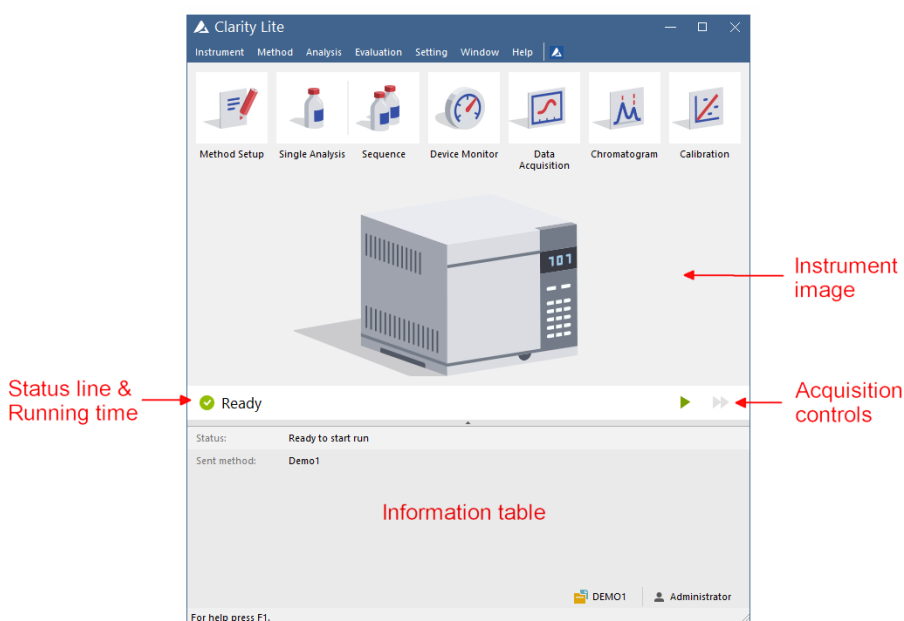



Fig 8: Clarity Lite window

Fig 8 on pg 12. shows the most important icons in the **Clarity Lite** window. During the tour, we will review all windows opened by these icons. You can also load the desired demo project to the **Clarity Lite** window by using the *Instrument - Project...* command, then use the *Open...* button and select the **DEMO2** project. This will load all the necessary files.

5.1.2 Single Analysis dialog

Use the *Single Analysis*  button in the *Clarity Lite* window to open the *Single Analysis* dialog.

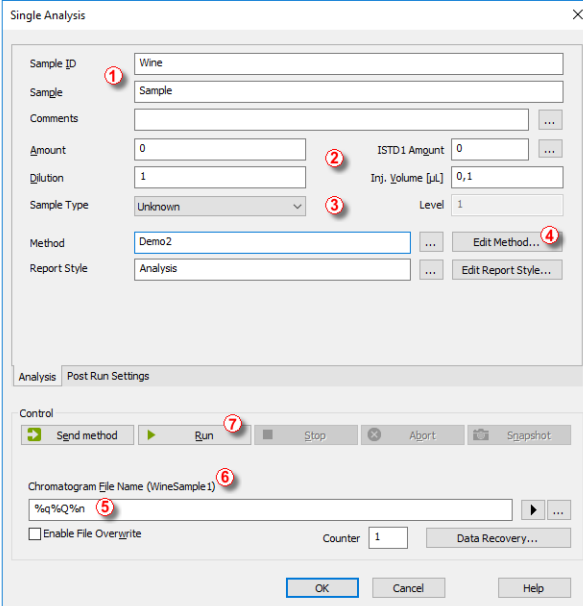


Fig 9: Single Analysis dialog

The fields in the *Analysis* section contain information about the sample. You may set the values in the fields as shown in **Fig 9** on pg 13., as typical analysis settings. Once this is selected as described, your *Clarity Lite* window will be the same as shown in **Fig 8** on pg 12.

Sample ID and *Sample* fields ① are only informational.

Values in *Amount*, *Dilution*, *ISTD Amount* and *Inj. Volume* fields ② are used for further calculations.

Choosing the *Standard* from the *Sample Type* menu and entering a value in the *Level* field ③ would mark this sample as the calibration standard and save the chromatogram into the CALIB subdirectory.

The measurement of the sample will be performed according to the actual modification of the template method opened in the *Clarity Lite* window. The *Edit Method...* button ④ serves to change the parameters of the actual template method. Click the button to open the *Method Setup* dialog and check the setting of the *Autostop* parameter (*Autostop* is enabled and *Run Time* set to 7.5 minutes). Return to the *Single Analysis* dialog by pressing OK button.

Chromatogram File Name ⑤ field is used for entering the file name of the resulting chromatograms. It is possible to use plain text together with variables adding the time, date, sample name or other parameters to create a unique chromatogram name. The resulting name can be seen just above the field ⑥ in parentheses.

Note: The complete set of available variables is shown after clicking the field and selecting the ▶ icon.

Run the analysis by clicking the **Run** button ⑦. The **Single Analysis** dialog will close now. If you open it again, you will see three more buttons (**Stop**, **Abort**, **Snapshot**) that will allow you to stop or abort the analysis or take snapshots (see the chapter "**Data Acquisition window**" on pg 14.). Close the **Single Analysis** dialog and return to the **Clarity Lite** window.

5.1.3 Data Acquisition window

In the **Clarity Lite** window look at the **Status line** (see **Fig 8** on pg 12.). The acquisition is now signaled by the **RUNNING** state and the actual run time shown there.

To see the data acquisition in process and possibly control it, click the **Data Acquisition** 🖼️ icon (see **Fig 8** on pg 12.) to enter the **Data Acquisition** window.

Depending on your station's configuration, one or more signals may be displayed. The number of detectors (signals) and their names can be seen in the upper right corner of the graph ①.

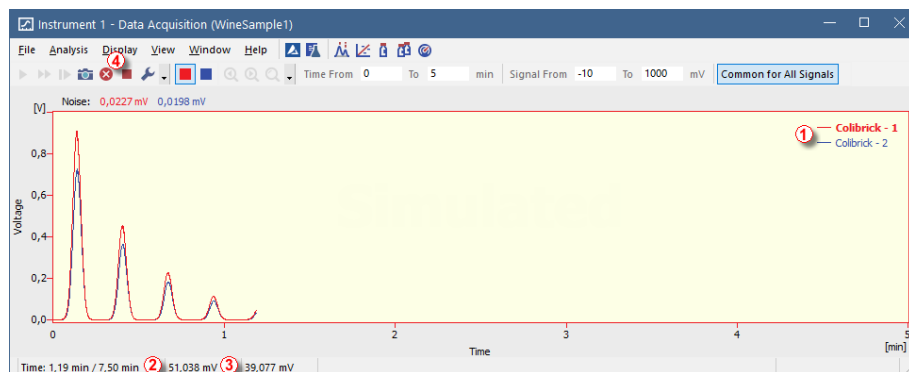






Fig 10: Data Acquisition window

In the **Status bar** on the bottom of the **Data Acquisition** window, the time of the analysis ② can be seen, as well as the signal for each detector ③ and its units.

Note: If the detector range is exceeded, the **OVER** string in red lettering will be displayed in the part of the status bar corresponding to the detector.

Stop  and *Abort*  icons  allow you to cancel the analysis. If it is stopped, **Clarity Lite** will save all the data acquired so far and stop the analysis. Abort cancels the acquisition without saving any data.

Snapshot icon  creates the preview of already measured data. After clicking on it, the **Chromatogram** window will open with the chromatogram file corresponding to the part of the data already measured (more information on the **Chromatogram** window can be found in the chapter "**Chromatogram window**" on pg 16.).

After 7 minutes 30 seconds (the time set in the template method used for the measurement), the analysis will automatically stop and the **Chromatogram** window will open.

The **Chromatogram** window opens automatically because the station is set to do so. These settings are available in the **Single Run** window at **Post Run Settings** tab. Other postrun actions including export of data or running external program can be set there as well.

5.1.4 Chromatogram window

The **Chromatogram** window can also be opened manually by clicking on the **Chromatogram** icon in the **Clarity Lite** window.

Here you can evaluate your previously acquired data or open our sample chromatogram to get familiar with the basic functions which will be covered in this chapter.

Use the **File - Open Chromatogram...** command or click the open icon and select the **WINE_SAMPLE.PRM** file and press the **OK** button.

The **Chromatogram** window is divided into two parts: the **Graph** (upper) pane and the **Results** (lower) pane.

Enlarge any part of the chromatogram by selecting the area while holding the left mouse button. Return to the view of the entire chromatogram by double-clicking in the graph.

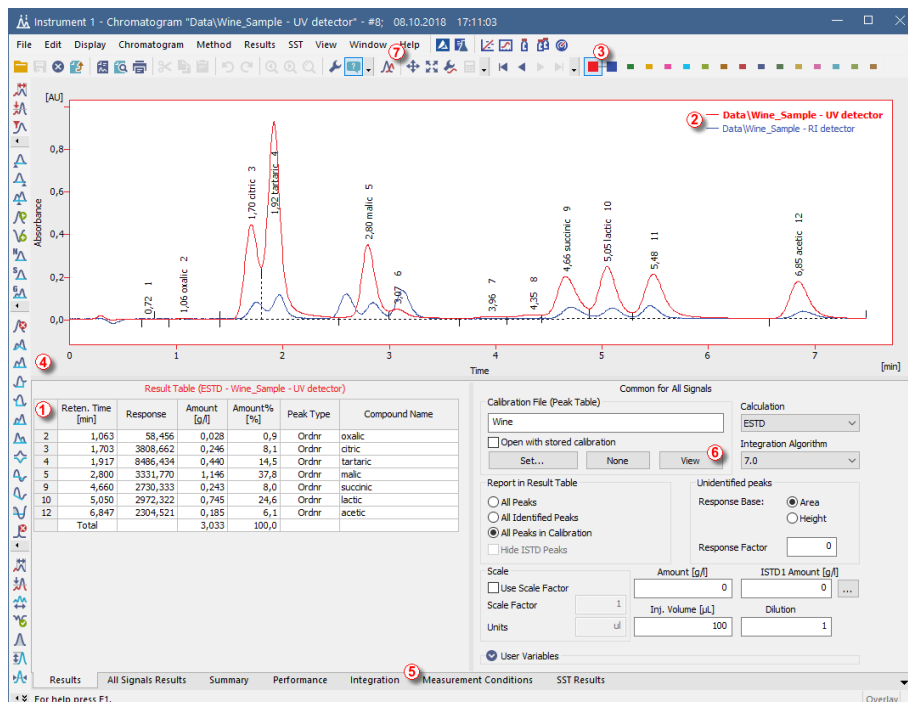





Fig 11: Chromatogram window

Clicking on a cell in the **Result table** ① will color the peak (or peaks) corresponding to the row you just clicked onto.

Only one signal of the chromatogram can be active at the time. The active signal can be recognized from the legend section ② in the upper right

corner of the graph (the active signal is bold), from icons in the *Overlay* toolbar ③ (the active signal has the debossed  icon) or from the graph outline color and table headers color. Try to change the active signal by double clicking on its name in the legend section. You will notice that the **Result table** has changed.

To change the color of the active signal click on the desired color in the *Overlay* toolbar. All parts of the **Chromatogram** window will change color. You can change the integration of peaks by using the interactive icons on the toolbars on the left side of the **Chromatogram** window ④ or directly on the **Integration** tab ⑤. Any changes made either way will change the **Integration table** and can be copied to the template method.

To add permanent color to the peak, click the **View** button ⑥ in the right side of the **Results** tab. This will get you to the linked calibration file. There, in the *Calibration Summary Table*, find the *Peak Color* column (see **5.3.1** on pg **21**). In the row corresponding to the peak to be colored, select the desired color by clicking in the field and selecting the  icon. Pick desired color and click **OK**. Return to the **Chromatogram** window by using the  icon in the menu bar. The selected peak is now colored according to the color selected in the **Calibration** window.

Note: After copying the **Integration table** contents to the template method, new chromatograms will be automatically integrated according to the changed parameters. Already measured results can be reprocessed (for more details see the chapter **Linking the calibration to the method** on pg **23**).


5.2 Running the Sequence measurement

This chapter and prepared **DEMO1** project will guide you through **Sequence**, **Calibration** and **Method Setup** windows used for automated measurement and preparation of template methods.

Sequence operation allows automated measurement of large number (depending on PC and autosampler configurations) of samples for chromatographs equipped with autosamplers. **Clarity Lite** provides the possibility to select an **ACTIVE** (start controlled by the station) or **PASSIVE** (start controlled by the autosampler) sequence. It is also possible to re-process already measured sequences.

5.2.1 Sequence window

In the main Clarity Lite window, choose option **DEMO1** in **File - Project...** and press the **OK** button.

Use the **Sequence**  button in the **Instrument** window to enter the **Sequence** window.

	Status	Run	SV	EV	I/V	Sample ID	Sample	Sample Amount	ISTD:1 Amount	Sample Dilut.	Inj. Vol. [µL]	File Name	Sample Type	Lvl	Method Name	Report Style	Open	Open Calib.	Print
1	[checked]	[checked]	1	1	1	Halocarbons	Std_1	0,400	2,000	1,000	5,000	%Q	Standard	1	Demo1	Calibration	[unchecked]	[unchecked]	[unchecked]
2	[checked]	[checked]	2	2	1	Halocarbons	Std_2	1,000	2,000	1,000	5,000	%Q	Standard	2	Demo1	Calibration	[unchecked]	[unchecked]	[unchecked]
3	[checked]	[checked]	3	3	1	Halocarbons	Std_3	3,000	2,000	1,000	5,000	%Q	Standard	3	Demo1	Calibration	[unchecked]	[unchecked]	[unchecked]
4	[checked]	[checked]	4	4	1	Halocarbons	Std_4	5,000	2,000	1,000	5,000	%Q	Standard	4	Demo1	Calibration	[checked]	[checked]	[checked]
5	[checked]	[checked]	5	8	2	Halocarbons	Sample	5,000	2,000	1,000	5,000	%Q Vial...	Unknown	Demo1	Demo1	Analysis	[checked]	[unchecked]	[unchecked]
6	[unchecked]	[unchecked]															[unchecked]	[unchecked]	[unchecked]

Fig 12: Sequence window



Look at the **Sequence Table**. Each row of this table defines one or more analyses, depending on the fields **SV** (Starting vial), **EV** (Ending vial) and **I/V** (Injections per vial) ①. As seen, the first four rows each present a single measurement (**SV** and **EV** is the same, **I/V** is 1), while row 5 represents eight analyses (**SV** is 5, **EV** is 8; thus measuring 4 samples from 4 successive vials and as **I/V** parameter is 2, each sample will be measured twice).






Also note that in the fields **Sample Type** and **Lvl** ② the first four samples are marked as standards on levels 1-4. Chromatograms measured from those rows will be automatically used for creating the calibration (or its recalibration, if there already were any data in the calibration).


The **Method Name** column ③ sets the template method used for measuring the sample.



The **Report Style** column ④ sets the print style used for reporting the measurement. Each row can have its own template method and report

style; it is thus possible to measure according to several template methods in one sequence.


In the *File Name* column  the name of the resulting chromatogram file is specified. It is possible to use variable parameters to form the chromatogram filename, for example %Q means that the file name will use the text from the *Sample* field. It is possible to combine several of these variables with plain text or symbols to create a unique file name for each chromatogram. The complete set of available variables can be seen after clicking in the field and selecting the  icon.


To check the correctness of the sequence press the  icon . **Clarity Lite** station will change all symbols at the beginning of the row to green field () meaning the row is ready or issue an error/warning   message listing what should be corrected on which row to be able to proceed.




Note: For demonstration purposes only, try to make a mistake and check the sequence once more. For example, on the row **3** change the text in the *Sample* column to *Std_1*, you can see immediately that a warning sign appeared on the corresponding rows - 1 and 3. After pressing the  icon, warning message appears telling that there are two rows which would produce chromatogram with the same file name. Holding the mouse above either field will display the tooltip with the cause of the problem. Set the sequence back to its original state and continue to the next step.

Start measuring the sequence using the  icon . The state of the *ACTIVE* sequence will change to *WAITING FOR INJECTION* and as soon as the *Ready* signal from the autosampler is detected, the measurement will start.

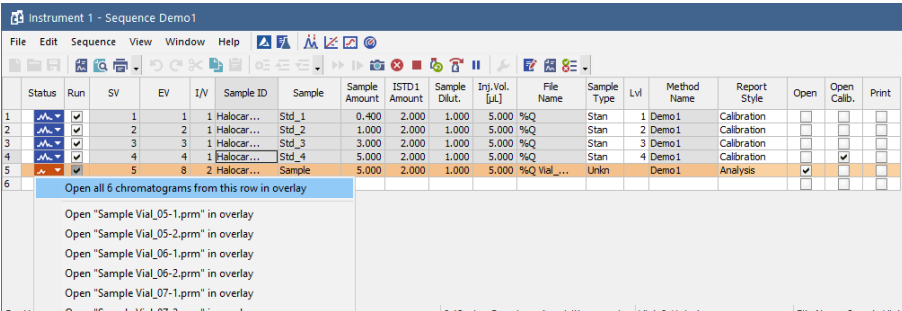
Note: Even if the autosampler is not connected, the **Clarity Lite** will get the *Ready* signal, thus starting the sequence. However, it is not possible to generate separate demo data for each chromatogram, as all chromatograms would be the same. There are examples of the resulting files in the project folder. You may stop or abort the sequence now or later either from the [Data Acquisition](#) window or directly from the [Sequence](#) window. Close the [Sequence](#) window before proceeding.

After the first row of the *Sequence table* (controlling one analysis) is measured, the Instrument will once again switch to the *WAITING FOR INJECTION* state and the autosampler will start a new measurement by sending the *Ready* signal. Stop the sequence from the [Data Acquisition](#) window or [Sequence](#) window at any time by pressing the *Stop*  button (single-click means that the currently measured Chromatogram will finish and the sequence will stop subsequently, after double-click the sequence will stop immediately). All data measured will be saved. Or abort the measurement with *Abort*

 button (does not produce any chromatogram).

Already measured rows will change *Status* from green field () to icon with small chromatogram (). During measuring the icon is orange. If there is a chromatogram resulting from this row, small triangle will appear in the icon - . Left mouse click on the triangle will reveal option to open the chromatogram(s). You can click on the name of the chromatogram to open it or select option to open all chromatograms in overlay as seen in **Fig 13** on pg 20..

Note: It is possible to edit the sequence even during the measurement. However, if it pauses due to an error, it is necessary to resume the measurement.



Status	Run	SV	EV	I/V	Sample ID	Sample	Sample Amount	ISTD1 Amount	Sample Dilut.	Inj.Vol. [µL]	File Name	Sample Type	Lvl	Method Name	Report Style	Open	Open Calib.	Print
	1	1	1	1	Halocar... Std_1	0.400	2.000	1.000	5.000	%Q	Stan	1	Demo1	Calibration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2	2	2	1	Halocar... Std_2	1.000	2.000	1.000	5.000	%Q	Stan	2	Demo1	Calibration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	3	3	3	1	Halocar... Std_3	3.000	2.000	1.000	5.000	%Q	Stan	3	Demo1	Calibration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	4	4	4	1	Halocar... Std_4	5.000	2.000	1.000	5.000	%Q	Stan	4	Demo1	Calibration	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	5	8	2	1	Halocar... Sample	5.000	2.000	1.000	5.000	%Q Vial...	Unkn	Demo1	Analysis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	6																	

Open all 6 chromatograms from this row in overlay

- Open "Sample Vial_05-1.prm" in overlay
- Open "Sample Vial_05-2.prm" in overlay
- Open "Sample Vial_06-1.prm" in overlay
- Open "Sample Vial_06-2.prm" in overlay
- Open "Sample Vial_07-1.prm" in overlay
- Open "Sample Vial_07-2.prm" in overlay

0.45 min - Running - Acquisition running | Vial: 8 / Inj.: 1 File Name: Sample Vial_...

Fig 13: Opening chromatograms in overlay

On the right side of the **Sequence Window** you can check at each row whether corresponding chromatogram should be opened, printed or loaded into the calibration window.


5.3 Calibration window


The following section describes how to make a calibration.


To demonstrate the functions of calibration, load the prepared demo project: in the Clarity Lite window click the *Instrument - Project...* menu invoking the **Project Setup** dialog. In this dialog click on the *Open...* button and choose the **DEMO1** project.


Note: If you wish to use prepared demo calibration instead of creating a new one, in the **Calibration** window open (via the *File - Open...* command) the calibration file DEMO1.CAL and test the functions of the **Calibration** window on it. In this case you can skip the following section and continue with the chapter "**Linking the calibration to a chromatogram**" on pg 23.


5.3.1 Creating new calibration

Use the Calibration  button in the **Clarity Lite** window to open the **Calibration** window.

Use the *New Calibration*  icon ① to create new calibration file. Save the calibration under CALIBDEMO for example.

Note: To save the calibration now, it would be necessary to change its name (no calibration can be saved under the name NONAME.CAL) and fill in at least the first compound name. Then the calibration can be saved using the *Save Calibration*  icon ②, *File - Save* or *File - Save As...* command.

Use the *Calibration Options*  icon ③ and change the *Display Mode* (top right corner of the dialog) to *ISTD*, then press *OK* button.

Now the calibration standards need to be imported to the calibration. Use the *Open Standard*  icon (yellow) ④ to open the STD 1.PRM data file. The lower part of the **Calibration** window now displays the chromatogram of the calibration standard.

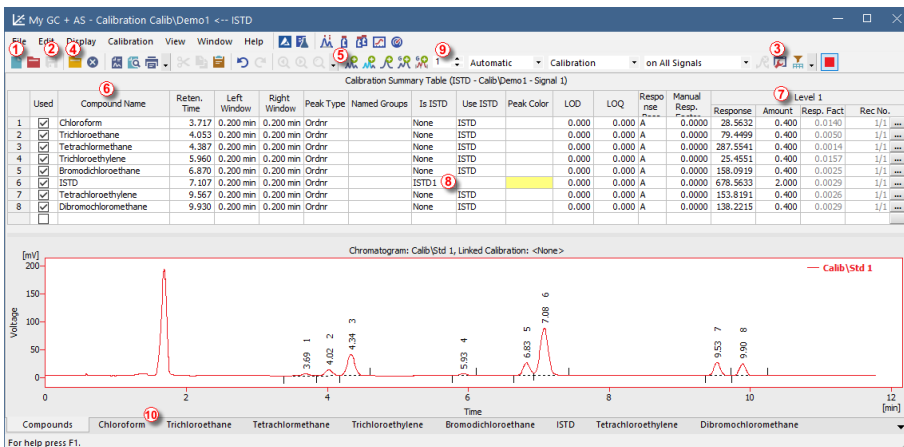


Fig 14: Calibration window - loaded standard

Use the **Add All** icon (blue) ⑤ to move all identified peaks to the calibration table. The Calibration table appears in the **Calibration** window, ready to be completed as seen on **Fig 14** on pg 22.

As it can be seen in the calibration, individual peaks are now identified according to their retention times only. Click and edit the fields in the **Compound Name** column ⑥ to those seen on **Fig 14** on pg 22. You may also set the peak color for specific peak, for example the ISTD peak, in the **Peak Color** column can be yellow.

Fill the **Amount** column ⑦ with the concentration of the particular compounds. In this standard mixture, all compounds except for the peak number 6 have amount of 0.4.

Peak number 6 is marked as ISTD peak. In the **Is ISTD** column change its type to ISTD1 ⑧ and then set its amount in the **Amount** column to 2.


The first calibration level is now set. On the tabs of the individual compounds ⑩ (named according to the **Compound Name** field) the graph with single-point linear calibration can be seen.


Proceed to setting the other calibration levels. The operation is quite simple and straightforward - use the **Open Standard** icon (yellow) ④ again to open another calibration standard named STD 2.PRM. Set the calibration level in the **Current Level** field ⑨ to 2 and use the **Add All** icon (blue) ⑤. Fill in the **Amount** column with 1.0 values (except for peak 6, in which value of 2 should be used again).

Set the third calibration level accordingly using the STD 3.PRM file and **Amount** of 3.0 and the fourth level (file STD 4.PRM, **Amount** 5.0) except for the ISTD peak (always **Amount** = 2). On the tabs of the individual compounds ⑩, the linear four-point calibration can be seen. Save the

calibration file now using the *Save Calibration*  icon; calibration is saved into the default directory.

5.3.2 Linking the calibration to a chromatogram

Any chromatogram can be linked to a calibration file thus automatically giving calibrated results. In the *Clarity Lite* window use the *Chromatogram*  icon to open the *Chromatogram* window.

Use the *Open Chromatogram*  icon to open chromatogram data based on the calibration you have just created. Use the SAMPLE_VIAL_6-1.PRM file saved in the default directory. Other files in the directory are uncalibrated too, but they will be used later.


The data are uncalibrated and no information about the names of individual compounds is available; peaks in the **Result Table** are just described according to their retention times. To change this, the appropriate calibration should be linked to these data.

Select the **Results** tab (it should be opened automatically) and look at the section on the right side of the screen. Use the *Set...* button in the *Calibration File (Peak Table)* section to select the calibration file created in the previous chapter (it should be in the default directory under the name CALIBDEMO.CAL). Any peaks present in the calibration are now identified with their names in the chromatogram.

Note: In case you skipped the process of making your own calibration, please use the DEMO1.CAL instead of CALIBDEMO.CAL.

5.3.3 Linking the calibration to the method

If you have a large number of chromatograms, linking the calibration to each file separately would be a time-consuming process. To avoid this, the calibration may be linked to the resulting chromatograms automatically.

Return to the *Clarity Lite* window and use the *Method - Calculation...* command to open the *Method Setup* dialog directly on the **Calculation** tab . Alternatively, you can use any command from the *Method* menu and then move to the **Calculation** tab. All of these sections (and some others) are part of the template method; thus they are present within the same dialog but on different tabs.

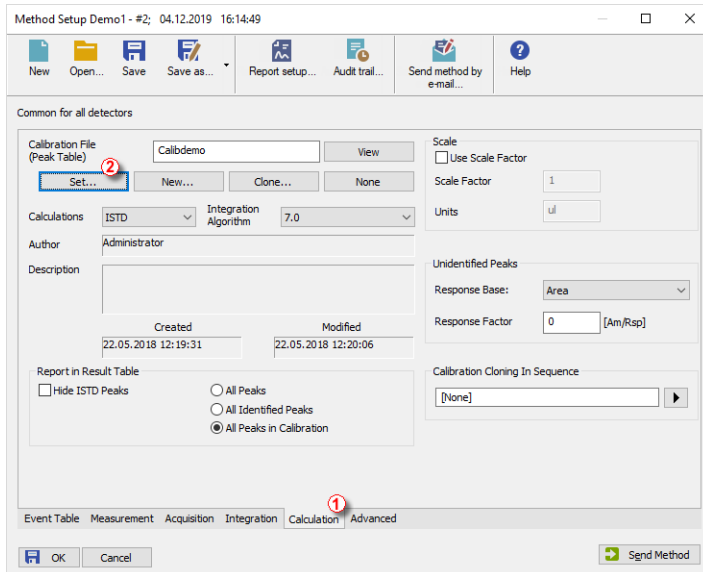


Fig 15: Method Setup - Calculation dialog

Use the **Set...** button ② to select the calibration file and link it to the method.

Exit the **Method Setup** dialog using the **OK** button. Clicking this button applies and saves this change to the template method.

Any chromatograms measured with this template method in the future will have the actual calibration linked.

6 Connecting Autosamplers (AS)

This chapter describes the most common wiring of autosamplers. The configuration varies depending on the type of chromatograph (GC or LC) and sequence mode (*ACTIVE* or *PASSIVE*).

Typical configurations are:

AS + GC set - *ACTIVE* sequence

AS + LC set - *ACTIVE* sequence

AS + GC set - *PASSIVE* sequence

In *ACTIVE* sequence the start is controlled by the station. **Clarity Lite** sends the permission signal to the autosampler and waits until the sampler acknowledges the injection. Data acquisition will be started after the confirmation signal has been sent back to **Clarity Lite** and the permission to another injection is disabled.

In *PASSIVE* sequence the start is controlled by the autosampler. **Clarity Lite** only waits for external start signal from the autosampler and then starts the sequence and data acquisition.

For **Clarity Lite** the communication is managed throughout Colibrick A/D converter. **Clarity Lite** reacts on *Ext. Start/Stop* by default on *IN1* pin of the Colibrick's INT7 connector. It is necessary to use the Starting cable *IN₁* in case you have cable for more than 1 detector (signal).

6.1 AS + GC set - Active Sequence

In GC systems the sample cycle is typically controlled by the GC. With the commonly used temperature gradient, the time for the necessary cool down of the system varies. The sampler is thus synchronized with the GC by a signal wire (READY), allowing the next injection only after the GC gets to the READY state. The autosampler performs the injection and starts the GC using another signal wire (START). Any autosampler that is used in the **Active Sequence** must be synchronized by cable with **Clarity Lite** as well as with the chromatograph. The **IN₁** starting cable should be plugged into the synchronization output (INJECTION) of the autosampler or GC. The **OUT₁** cable should be connected to the synchronization input between GC and autosampler.

The diagram shows the wiring of an autosampler that will initiate the injection after its input contact has been closed. For **Clarity Lite** contacts are opened by default.

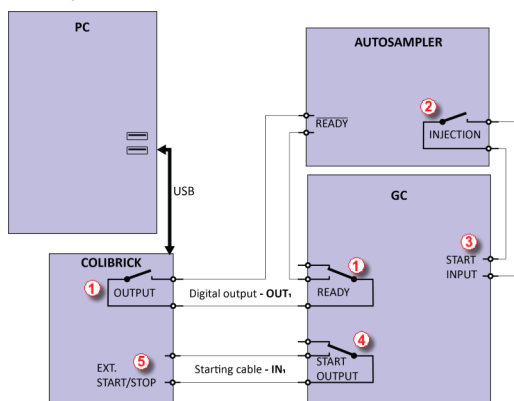


Fig 16: Wiring of the autosampler - variant A

The injection will start only after both serially connected contacts (**Clarity Lite** and the GC) has been closed (1). After an injection, the autosampler will close the INJECTION contact (2) and thus the command to start the temperature gradient program will be given (3). At the same time, the chromatograph will close the START contact (4) and thus the command to start acquisition will be given (5).

Clarity Lite reacts on *Ext. Start/Stop* by default on *IN1* pin of the Colibrick's INT7 connector. It is necessary to use the Starting cable *IN₁* in case you have cable for more than 1 detector (signal).

If the chromatograph does not have a START OUTPUT contact then the starting cable **IN₁** must be connected directly to the INJECTION output on the autosampler (this way, in fact, parallel to the START INPUT contact of the chromatograph).

6.2 AS + LC set - Active Sequence

In LC systems the autosampler typically governs the timings. The eventual gradient of the pump or detector programs are set independently. Any autosampler that is used in the **Active Sequence** must be synchronized with **Clarity Lite** by cables. The **IN_n** starting cable should be plugged into the synchronization output (INJECTION) of an autosampler and the **OUT_nR** cable plugged into the synchronization input (READY) of an autosampler.

An autosampler will initiate the injection after its input contact has been closed ①. After the injection, the autosampler will close the INJECTION contact ② and the command to start acquisition will be given directly back ③. When using additional devices (Detectors, LC Pumps, etc.) it is recommended to connect these devices independently to other digital outputs of the A/D converter ④. Each device will then need a dedicated row in the **Event Table** to be started or stopped by **Clarity Lite**.

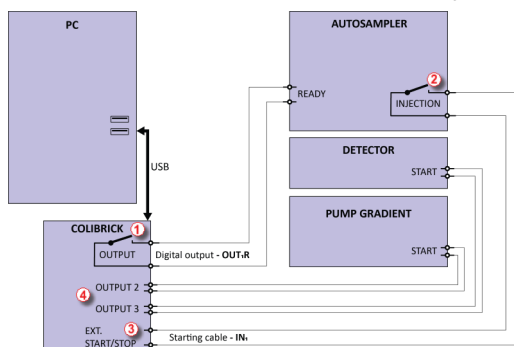


Fig 17: Wiring of an autosampler in a LC set

Note: The labels on the input and output contacts may vary depending on the type of the autosampler.

Note: When the detector or pump start inputs are connected in parallel to the **Clarity Lite** start input, make sure to ground the device properly.

Clarity Lite reacts on *Ext. Start/Stop* by default on *IN1* pin of the Colibrick's INT7 connector. It is necessary to use the Starting cable *IN₁* in case you have cable for more than 1 detector (signal).

6.3 AS + GC set - Passive Sequence

The autosampler used in the **Passive Sequence** does not need the **OUT_nR** digital output cable to be connected. All timings are controlled by the chromatograph and autosampler. **Clarity Lite** performs only one analysis for each start signal received. Synchronization includes only external start of data acquisition in **Clarity Lite** using the **IN_n** starting cable.

The sequence must be started in **Clarity Lite** before the autosampler. The autosampler initiates the injection after manual start on the device. The sampler is synchronized with the GC by a signal wire (READY), allowing the next injection only after the GC gets to the **READY** state. After an injection, the autosampler will close the INJECTION contact ① and thus the command to start GC will be given ②. At the same time, the chromatograph will close the START contact ③ and thus the command to start acquisition will be given ④.

Caution: It is necessary to set timings in autosampler and **Clarity Lite** to ensure next injection will be performed after previous run is finished.

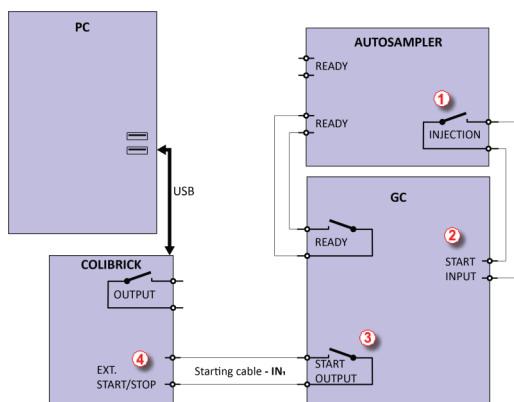


Fig 18: Wiring of an autosampler in Passive Sequence

Passive Sequence must be used for example in the sets with Headspace autosamplers.

Clarity Lite reacts on *Ext. Start/Stop* by default on **IN₁** pin of the Colibrick's INT7 connector. It is necessary to use the Starting cable **IN₁** in case you have cable for more than 1 detector (signal).

7 Troubleshooting

If you do not find your answers here, use the www.dataapex.com website where the *Support* menu will navigate you to frequently asked questions (FAQ), **Clarity Lite** forum or contact to **DataApex** helpdesk. Please note we can request collecting some of configuration files, in case you have an e-mail client installed, you can collect those files using the menu *Help - Send Report by E-mail* in main **Clarity Lite** window.

Note: You may find other Error Messages and solutions for problems connected to particular hardware in their respective manuals.

DataApex also provides remote support to registered customers in case of complicated issues. **TeamViewer QuickSupport** can be downloaded by clicking *Help - TeamViewer QS* in the **Clarity Lite Instrument** window. The application is ready to be used straight after downloading.

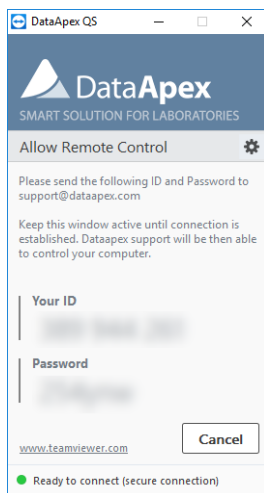


Fig 19: TeamViewer QuickSupport application

Before using the **TeamViewer QuickSupport** application, user is advised to contact **DataApex Technical Support** (support@dataapex.com) first for troubleshooting via this option.

This function serves as a last option while troubleshooting a problem.

7.1 Locate your problem

When troubles occur, the fastest way to find a solution is to search for it in the following index via the **Dialogs**, the window in which the problem occurred, **Error Messages** that appear or according to the used **Hardware**. The name of the window is visible in its header.

Tab 1: List of windows and dialogs

Windows and Dialogs	
Clarity Lite	pg 32., pg 33., pg 34., pg 36., pg 38.,
Data Acquisition	pg 38., pg 39., pg 40., pg 41., pg 42.

Tab 2: List of Error Messages

Error Messages	
Clarity Lite is unable to find HW key	pg 33.
Missing HW key	pg 32.
TRIAL Expired	pg 34.
Access to Audit Trail was denied	pg 36.
Wrong Software Version	pg 34.
Wrong User Code	pg 34.
DEMO (in the window header)	pg 36.
Installation did not pass Windows Logo Testing	pg 2.
Other Error Messages	pg 43.
Simulated (in Data Acquisition)	pg 38.

Tab 3: List of hardware

Hardware	
HW key	pg 32., pg 33.

Note: You may find other Error Messages and solutions for problems connected to specific hardware in their respective manuals.

7.2 Problems at station start

Chapters containing problems at station start.

7.2.1 Missing HW key

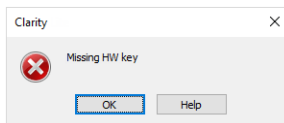


Fig 20: Missing HW key error dialog

The key must be plugged in a **USB** port and its driver must be properly installed. Under normal circumstances **USB** drivers are automatically installed upon inserting the key into the **USB** port. If you try to start **Clarity Lite** without the key, error message about "Missing HW key" is displayed and **Clarity Lite** will not start.

Reason 1: Your HW key may not be installed properly.

Solution: In [Windows Control Panel - System and Security](#) select the *System* icon, access the [Device Manager](#) tab and look for "**Universal Serial Bus Controllers**" - "**Rockey4**" item. It can be also in some cases found directly in the root folder of device manager. If it is not there, unplug and plug in the HW key to the **USB** port. If it does not help, see FAQ at www.dataapex.com website, where the Support menu will navigate you to FAQ (frequently asked questions) - HW key does not function.

Reason 2: Your HW key may not be correctly connected.

Solution: Check the functionality of the following:

- See whether the **USB port** is working (e.g. try to connect a different device, etc.).
- See whether the **HW driver** is installed. In such case the green LED on the key should be on.

7.2.2 Clarity Lite is unable to find HW key

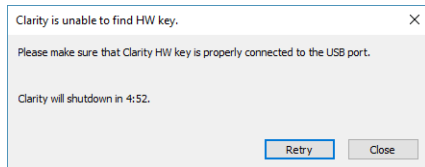


Fig 21: Clarity Lite is unable to find HW key

Clarity Lite has lost communication with the HW key. Window with "**Clarity Lite is unable to find HW key**" error message is displayed. User has 5 minutes to try to reestablish the communication between Clarity Lite and the key. Once this time elapses, Clarity Lite will automatically shutdown. There are two explanations for this error message.

Reason 1: The key was removed while Clarity Lite was running.

- Solution:*
- Click on the *Retry* button to reestablish the communication between Clarity Lite and the key.
 - Unplug the key and plug it in again. Click on the *Retry* button to reestablish the communication.

Reason 2: The USB port in which the key is plugged in entered sleep mode.

- Solution:* Go to *Start - Control Panel - Hardware and Sound - Device Manager*, locate **Universal Serial Bus Controller**. On each **USB Root Hub** item right-click and choose *Properties*. Click on the *Power Management* tab and un-check the box for "Allow the computer to turn off this device to save power".

Caution: Another way to forbid **USB** ports from entering the sleep mode is in **BIOS**. This option is however recommended only for **advanced** users and is usually performed by local System Administrator.

7.2.3 Wrong User Code

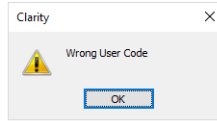


Fig 22: Wrong User Code error dialog

The **User Code** of the workstation does not match the code in the HW key.

Reason: You have probably entered a wrong User Code.

Solution: Once you click the *OK* button, dialog to enter the correct **User Code** will pop-up. Upon submitting correct **User Code** Clarity Lite will start. Otherwise Clarity Lite will not start and you will be asked to enter the correct **User Code** again. The **User Code** can be found on the back of the plastic card provided with **installation USB**.

Note: The **User Code** dialog does not distinguish between upper case and lower case letters. On the other hand, be careful not to confuse the letter "l" with the number "1" on the keyboard.

If necessary, contact the manufacturer or your distributor to request this code. You will need to provide the serial number (S/N) of the workstation.

7.2.4 Wrong Software Version

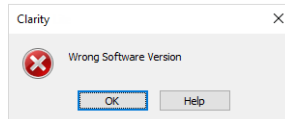


Fig 23: Wrong Software Version error dialog

The **User Code** is not valid for version of **Clarity Lite** you are running.

Reason: You may have probably installed different application than you previously obtained. For example, you installed Clarity instead of Clarity Lite.

Solution: Ensure you are using correct version of the application. If not, install the correct one. If necessary, contact the manufacturer or your distributor to check your version of software. You will need to provide the serial number (S/N) of the workstation.

7.2.5 Trial Expired

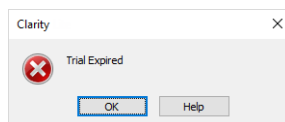


Fig 24: Trial Expired error dialog

Clarity Lite does not accept the User Code. There may be two reasons for this error.

Reason 1: Your Clarity Lite station just ended its trial period.

- Solution:*
- a) Enter the correct *User Code* which switches Clarity Lite from trial into full mode ①.
 - b) Switch to section ② and enter the trial prolongation code to continue with trial mode. Trial prolongation codes must be requested from your distributor or DataApex.
- Once a correct *User Code* or trial prolongation code has been supplied, click on the *OK* button to start Clarity Lite.

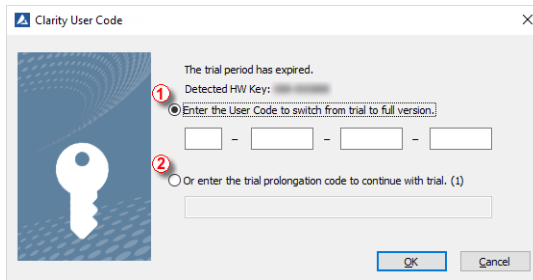


Fig 25: Clarity Lite User Code

Reason 2: The file CLARITY.SNO is empty or missing by an error.

Solution: Same as for Reason 1.

7.2.6 Trial Extension Failed

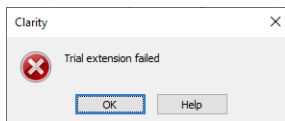


Fig 26: Trial extension failed error message

Trial period failed to be extended.

Reason: Clarity Lite could not extend the trial period.

Solution: To rectify this situation, please contact our support for further instructions.

7.2.7 Failed to create Audit Trail

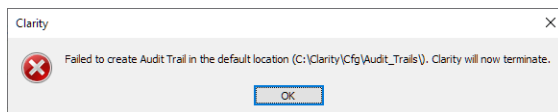


Fig 27: Denied access to C:\ directory

Clarity Lite has restricted access to create or write to audit trail. The Clarity Lite user needs to have read and write access rights, otherwise Clarity Lite will not start.

Reason: You have probably limited access rights for the C:\CLARITY LITE.

Solution: Note that this solution requires user with administrator rights. Right-click on the C:\CLARITY LITE directory and choose *Properties*. In the *Clarity Lite Properties* on the *Security* tab locate User/Group of Users and click *Edit*. Provide Administrator password, when prompted. In the next dialog grant the User/Group of User permissions by checking the *Allow* option for: *Read & Write, List folder contents* and *Read*.

7.2.8 DEMO (in the window header)

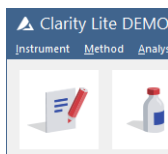


Fig 28: Clarity Lite DEMO

The **DEMO** inscription is displayed in the header of the [Clarity Lite](#) window without any further description.

Reason: You have installed the Clarity Lite Demo version.

Solution: Uninstall this version and install the full version of the **Clarity Lite** software.

7.3 Problems upon collection of data

Chapters containing problems upon collection of data.

7.3.1 Data Acquisition - Simulated

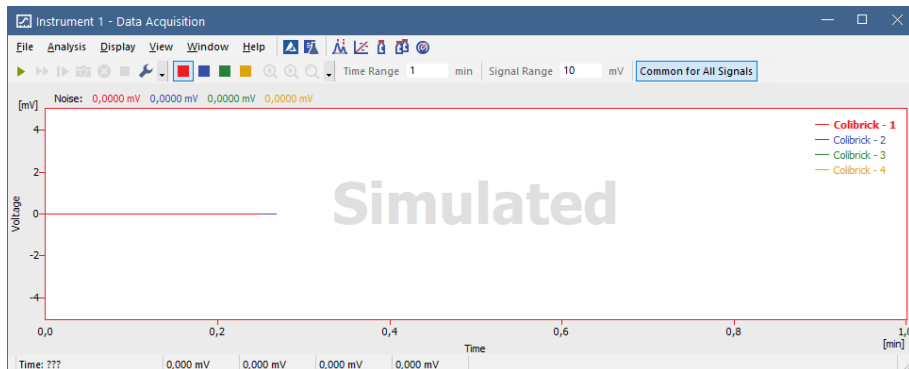


Fig 29: Data Acquisition Simulated

The title "**Simulated**" is displayed. The **Clarity Lite** only displays the simulated curve (from the CHANNX.DTA file) in the [Data Acquisition](#) window.

Reason: A DEMO detector is allocated to the Instrument.

- Solution:*
- In the **Clarity Lite** window, use the *Help - About...* command and select the **System Files** tab. The last row should show the type of the A/D converter you are using. If it does not, it is necessary to update or re-install the drivers for your A/D converter. For more information see chapter Manual installation in the manual of your A/D converter.
 - Make sure that you have installed a full version of **Clarity Lite**. If this is not the case, inscription *DEMO* is in the header of the main window. If so, uninstall the demo software, install the full version and enter the user code you have been provided. Also make sure that the detector is properly configured.

7.3.3 Signal is cut at the top

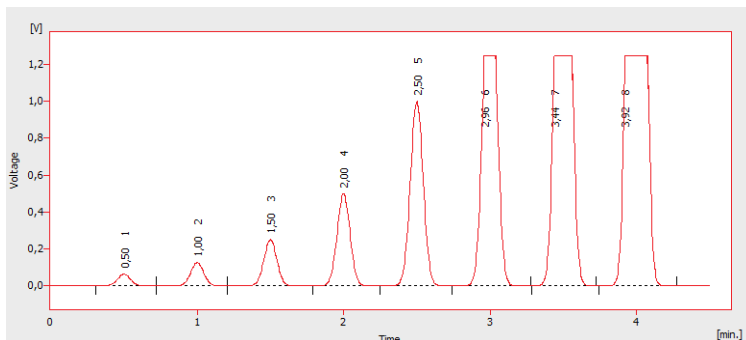


Fig 31: A saturated signal

The signal is saturated and therefore cut at the top. There are three possible causes.

Reason 1: A high sensitivity/amplification of the detector.

Solution: Decrease the sensitivity of the detector directly on the device.

Reason 2: A low range set for the A/D converter (Colibrick, Int9, U-PAD2, ...).

Solution: Set a higher range in the [Method-Acquisition...](#) dialog accessible from the window.

Reason 3: An improper connection of the A/D converter (Colibrick, Int9, U-PAD2, ...).

Solution: Check whether the cable shielding is properly connected. For more information see [Fig 5](#) on pg 6.

7.3.4 Small peaks in the chromatogram

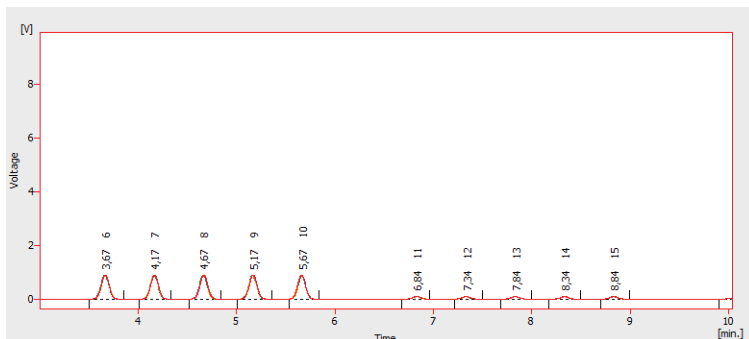


Fig 32: The small peaks in the chromatogram

The detector response is low. There are three possible causes.

Reason 1: A low sensitivity/amplification of the detector.

Solution: Increase the sensitivity of the detector directly on the device.

Reason 2: A high range set for the A/D converter (Colibrick, Int9, U-PAD2, ...).

Solution: Set a lower range in the [Method-Acquisition...](#) dialog accessible from the window.

Reason 3: An improper connection of the A/D converter (Colibrick, Int9, U-PAD2, ...).

Solution: Check whether the cable shielding is properly connected. For more information see [Fig 5](#) on pg 6.

7.3.5 No peaks in the chromatogram

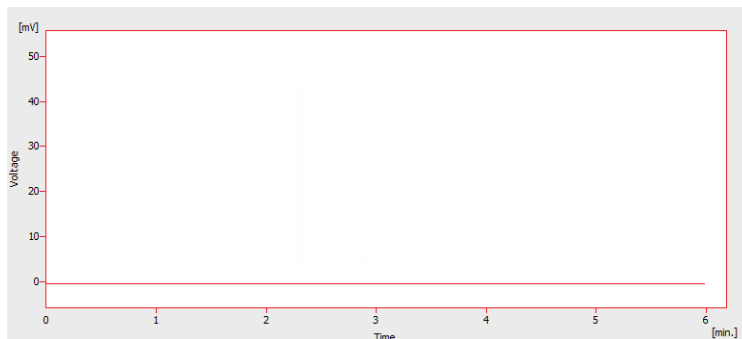


Fig 33: No peaks in the chromatogram

There is no response from the detector at all. There are four most common causes.

Reason 1: The problem with A/D converter connection to the detector.

Solution: Check connections and cables. For more information see **Fig 5** on pg **6**.

Reason 2: The analytical conditions problem.

Solution: Check the system for wrong injection or wrong conditions (temperature, FID flame, etc).

Reason 3: The chromatograph problem.

Solution: If a voltmeter is available, connect it to the chromatograph and check voltage changes during an analysis with a real sample.

Reason 4: The A/D converter failure.

Solution: You can perform a simple test. Connect an AA battery to white and red cable and switch the range of the A/D converter to 10 V and check whether the voltage is about 1.5 V.

7.3.6 Other Error Messages

You can find the description of other Error Messages and possible problems and solutions to them in other manuals. Here is the list of known possible Error Messages with reference to their descriptions:

Tab 4: Other Error Messages

Error Message	Hardware	Note:
Board Malfunction	INT7, INT9	
Cannot create detector	INT7, INT9	
Cannot find driver file \\.\CSWINT70	INT7	
Cannot find driver file \\.\CSWINT91	INT9	
Cannot load device driver	Colibrick, U-PAD2	
Cannot find first board	INT7, INT9	
Cannot find second board	INT7, INT9	
Card not found	INT7	only older stations
Error Occurred During Setup	INT7, INT9, Colibrick, U-PAD2	
Cannot establish communication with DataApex U-PAD	Colibrick, U-PAD	

Note: Some of these Error Messages can also appear if using hardware other than those listed above. The remedy for such Error Message should be the same for any device installed. **Clarity Lite** Hardware manuals can be found on the **DataApex** website (www.dataapex.com).

7.4 HW key

The Getting Started Guide describes the **Rockey4 ND** HW key which does not require driver installation.

To (re)install or troubleshoot older versions of HW keys such as **Rockey USB**, **Rockey LPT** and **Sentinel**, please visit www.dataapex.com website where the Support menu will navigate you to FAQ (frequently asked questions) - HW key does not function.

7.4.1 ROCKEY4 ND HW key not detected



Fig 34: ROCKEY4

ROCKEY4 ND (no driver) has not been detected by **MS Windows**. If it is not detected, it will trigger the following error: [Missing HW key](#).

Reason: ROCKEY4 ND HW key not detected.

Solution: Make sure that the **USB** port in which the **ROCKEY4 ND** is plugged in functions properly. Otherwise use a different **USB** port.

ROCKEY4 ND does not need manual installation of drivers.

Insert the **ROCKEY4 ND** into the **USB** port and start **Clarity Lite**. If no error is displayed, the automatic installation of the **ROCKEY4** was successful.

Proper functioning of the HW key is indicated by a steady green LED on the key.

Caution: In case of using **Windows 8.1** or later make sure the version of **Clarity Lite** is at least 4.0.4.987, but preferably the latest version.

If you suspect the HW key is damaged, please contact **DataApex** Support (www.dataapex.com).

7.5 System Files (systeminfo.txt file)

The C:\CLARITY LITE\CFG\SYSTEMINFO.TXT file contains valuable diagnostic information. Its contents can also be displayed in the **Clarity Lite Help – About – System Files** dialog.

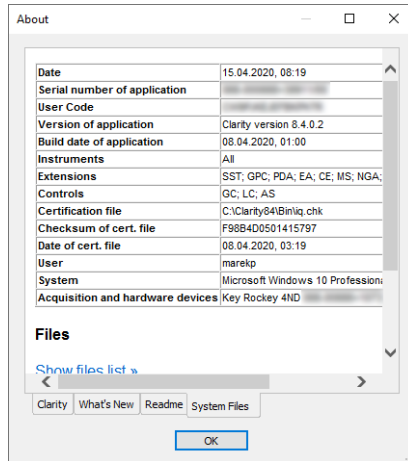


Fig 35: Help - About - System Files

The file contains the following information (these are examples of what the listings could look like):

Serial number of application, User Code

Lists the serial number of the application and User Code used. These data are very helpful in troubleshooting any problems.

Version of application, Instruments, Extensions, Controls

Shows the actual version of the software and all functions allowed by the user code entered.

System

Microsoft Windows 7 Professional 64-bit version 6.1 Service Pack 1 (Build 7601)

Files

A section below the first table lists the state and versions of all present and registered files in the **Clarity Lite** station:

CSWINT7.DLL , C:\CLARITY LITE\BIN\, 6.0.0.286, 17.02. 2015
 CLARITY.EXE, C:\CLARITY LITE\BIN\, 6.0.0.286, 17.02. 2015
 ...

The sections **Version of application** , **Instruments** , **Extensions** and **Controls** show information on installed parts of the **Clarity Lite** station. It shows the version of **Clarity Lite** and the date of the build, serial number

of the station, type and serial number of the HW key and the type of A/D converter connected to the computer and configured in the station. The registered file entries should match installed files in version and location. If there were any discrepancies, this may cause some problems.

7.6 Sleep Mode

An active **Clarity Lite** station prevents the PC from entering sleep mode. This is intentional; otherwise, **Clarity Lite** will not be able to ensure reliable data acquisition.

7.7 Switching Users in Windows OS

Switching User profiles in **Windows** may cause communication error between Clarity Lite - the A/D converter - the HW key. It is thus recommended not to switch users on the computer while **Clarity Lite** is running.

7.8 Apparently large font and items

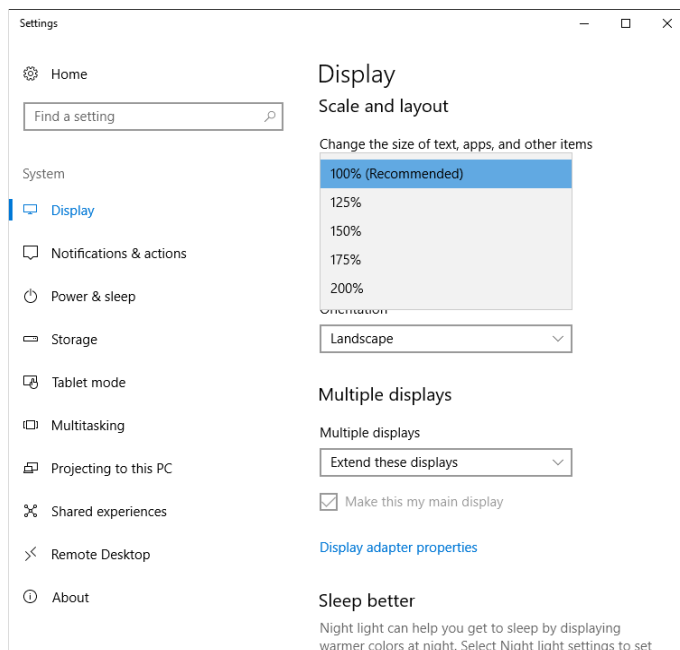


Fig 36: Setting of text size in Windows Control Panel - Display

Font and other items in Clarity Lite windows and dialogs are quite large and do not fit columns in tables, etc.

Note: Since Clarity Lite version 7.2, majority of problems caused by larger fonts have been resolved. Update to the latest Clarity Lite available. If the update has not worked for your particular problem, continue with the solution below.

Reason: Windows 8 and later may be preset to display larger text and other items in windows and dialogs. It may also happen when you set larger font manually in Windows 7.

Solution: Change the size of all items in *Windows Control Panel - Appearance and Personalization - Display to Smaller - 100% (default)*. See Fig 36 on pg 47.