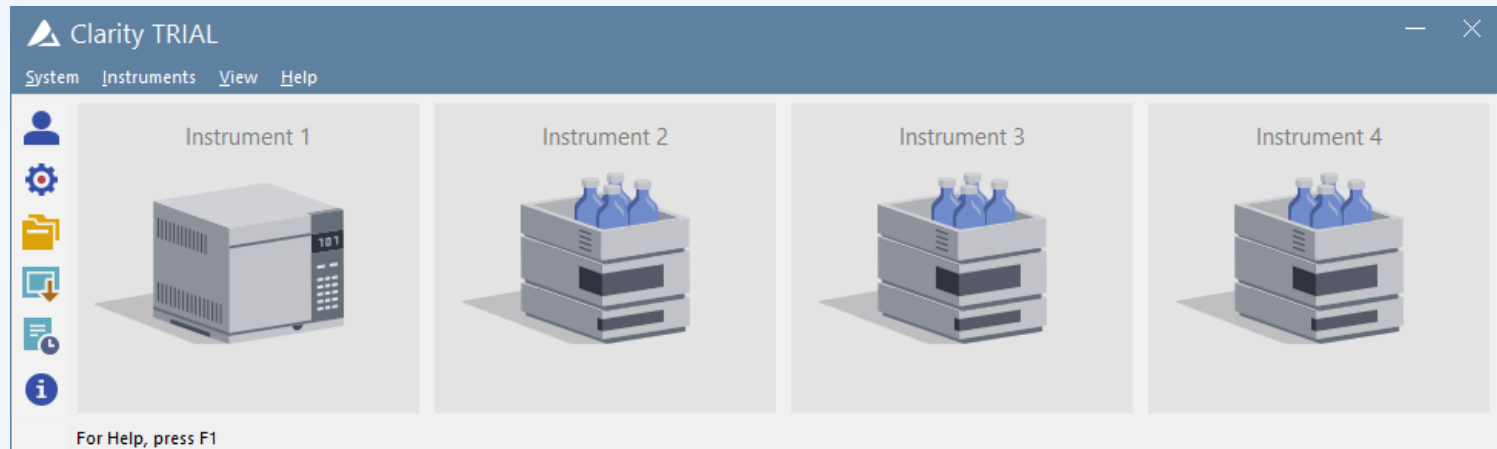
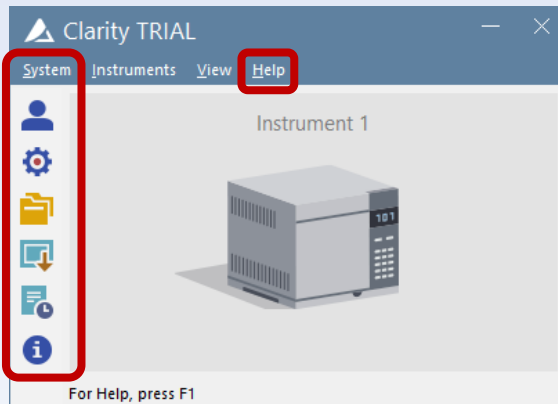


# **CLARITY CHROMATOGRAPHY SOFTWARE**

## CLARITY TOUR

# Clarity windows

- ✓ Main window
  - ✓ Access to Instrument(s)
  - ✓ General Settings for whole Clarity station
  - ✓ Access to Information about Clarity station



# Clarity windows

- ✓ System Configuration window
- ✓ Station communication configuration
- ✓ Linkage between configured equipment and Clarity Instrument(s)

System Configuration

Setup Control Modules

Name	N..	Used	S/N
AS			
NexSAR Inert HPLC Au... Sampler 1		Instrument 3	DemoSN
LC			
ICF	1	Instrument 1	293H8050107
Sampler		Instrument 1	
Flexar Quaternary...		Instrument 1	
Flexar UV/Vis LC D...		Instrument 1	
Flexar PDA Plus 2D...		Instrument 1	
Flexar PDA Plus Sp... Detector		Instrument 1	
Flexar Heat Only C...		Instrument 1	
ICF	2	Instrument 1	293H8050107
Sampler		Instrument 1	
Flexar Quaternary...		Instrument 1	
Flexar UV/Vis LC D...		Instrument 1	
Flexar PDA Plus 2D...		Instrument 1	
Flexar PDA Plus Sp...		Instrument 1	
Flexar Heat Only C...		Instrument 1	
GC			
NexSAR 200 Inert HPL...	1	Instrument 3	
LC 1		Instrument 3	
NexSAR 200 Inert HPL...	2	Instrument 3	
LC 2		Instrument 3	
Detector			
NexION ICP-MS			123456789
ICP-MS 1		Instrument 3	
ICP-MS 2		Instrument 3	
ICP-MS 3		Instrument 3	
ICP-MS 4		Instrument 3	
ICP-MS 5		Instrument 3	

Number of Instruments: 3

Instrument 1 Instrument 2 Instrument 3 Instrument 4

Name: HPLC Flexar PDA

Instrument Type: LC - PDA

Name	From
AS	
Sampler	ICF 1
LC	
Flexar Quaternary LC P...	ICF 1
Detector	
Flexar UV/Vis LC Detector	ICF 1
Flexar PDA Plus 2D Extr...	ICF 1
PDA	
Flexar PDA Plus Spectrum	ICF 1
Thermostat	
Flexar Heat Only Colum...	ICF 1
Valve	
Fraction Collector	

Data Inputs & Outputs

	Device	Number
Ext. Start Dig. Input:	LC ICF Flexar Peltier Autosampli	--
Ready Dig. Output:		

Miscellaneous Settings

Units Setup Method Options

OK Cancel Help

Clarity TRIAL

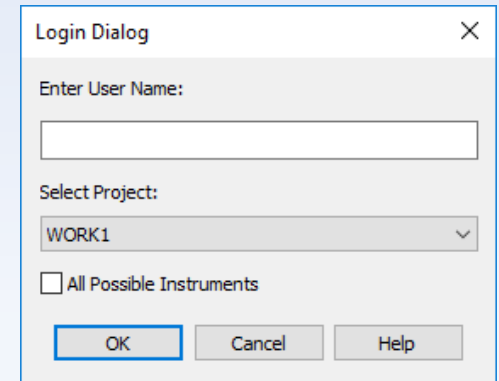
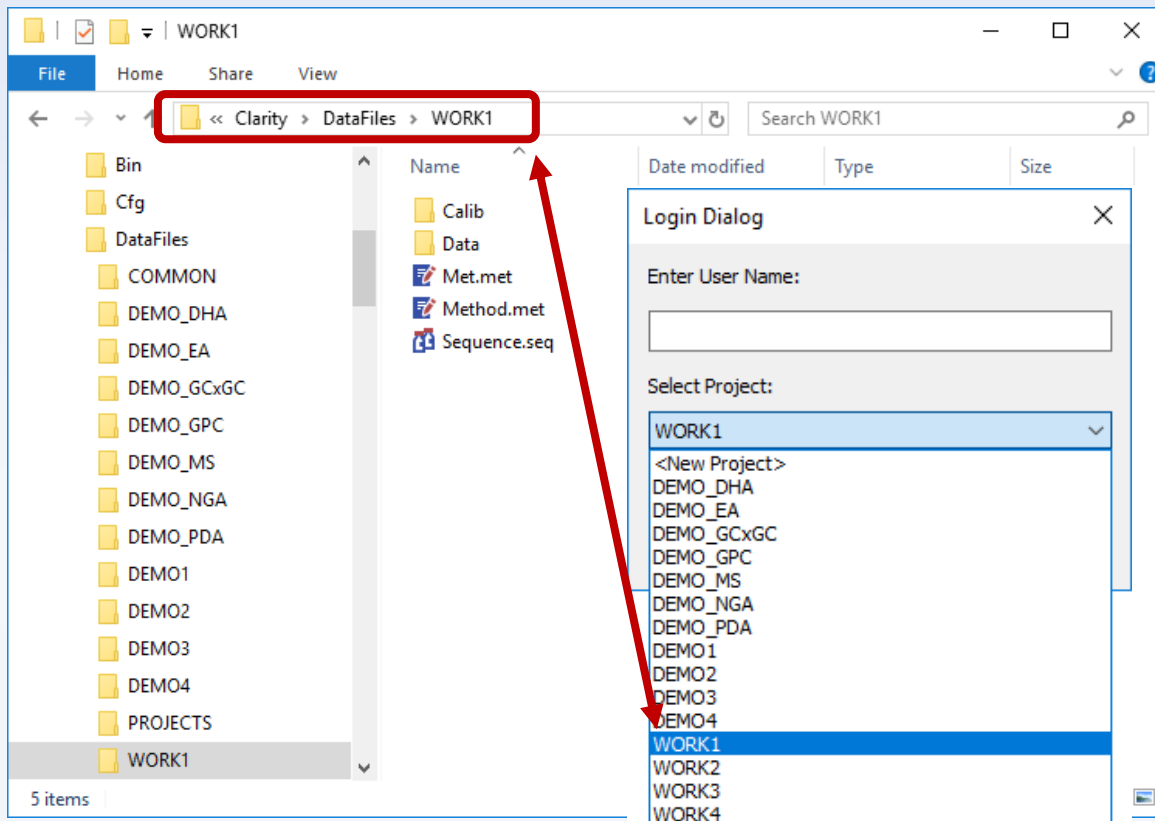
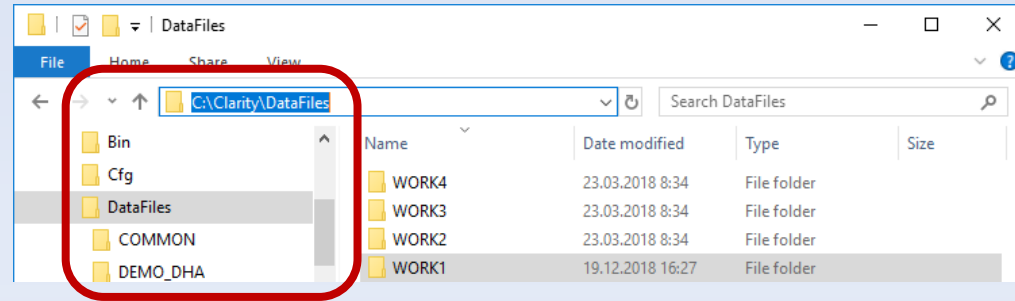
System Instrument View Help

Instrument 1

For Help, press F1

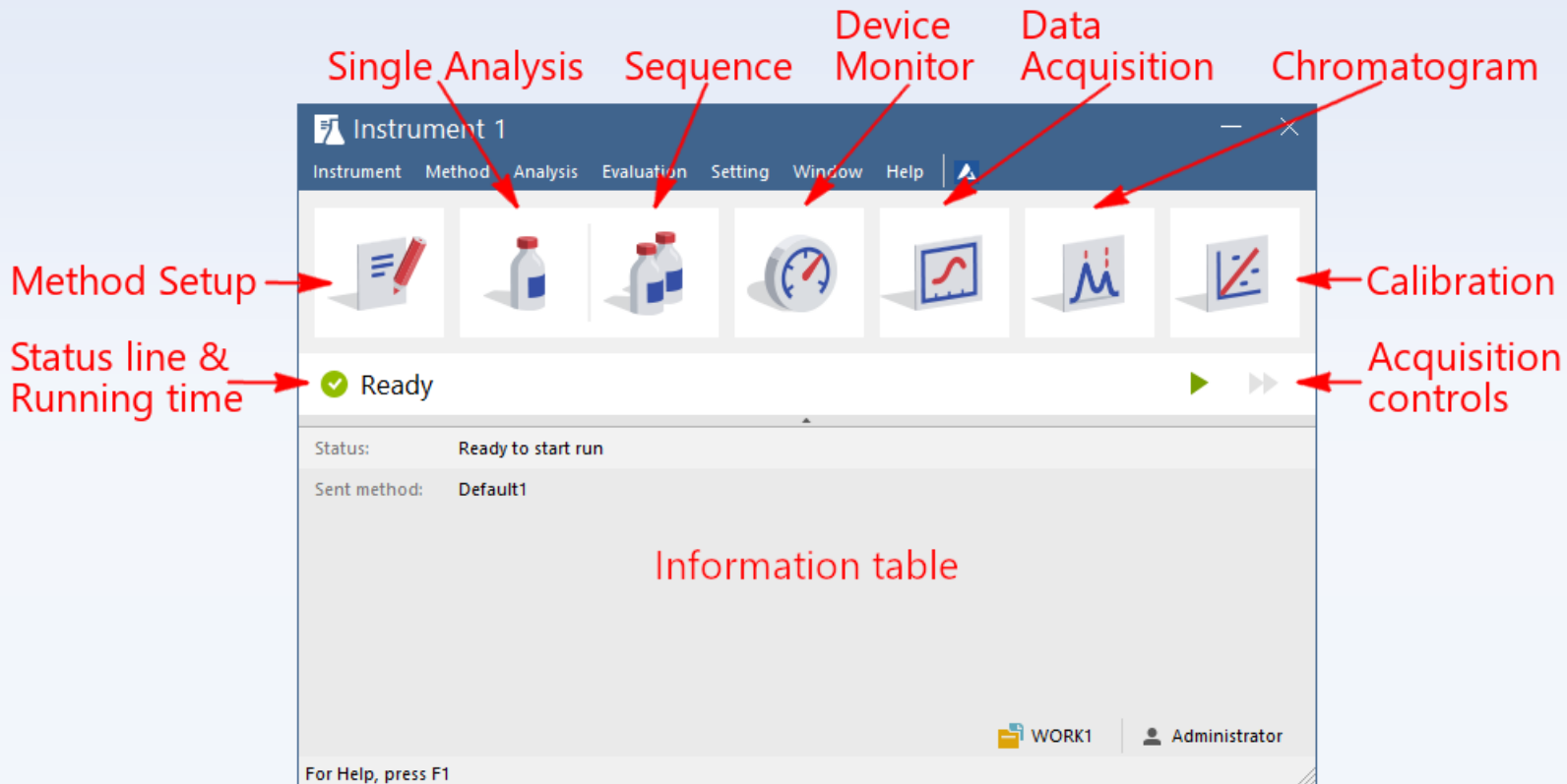
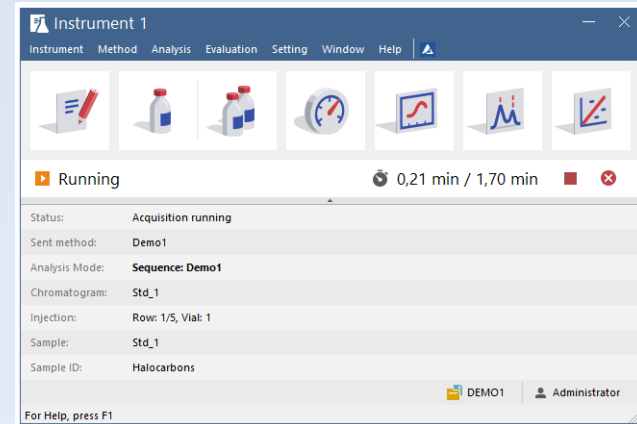
# Clarity windows

- ✓ Login dialog
- ✓ Identification of User
- ✓ Selection of Project
- ✓ Data stored here



# Clarity windows

- ✓ Instrument window
  - ✓ Core window – works as signpost
  - ✓ Control of respective Instrument
  - ✓ Status information
  - ✓ Access to all other windows
  - ✓ Icons' order is proposed workflow



# Clarity windows

- ✓ Method Setup
  - ✓ Adjusting method parameters in different tabs
  - ✓ Reads from and stores parameters to *\*.met* files
  - ✓ User interface is dependent on System Configuration

The image displays two windows from the Clarity software. The 'Instrument 1' window is in the foreground, showing a menu bar with 'Instrument', 'Method', 'Analysis', 'Evaluation', 'Setting', 'Window', and 'Help'. Below the menu is a toolbar with icons for a document, two bottles, a gauge, and three graphs. The 'Method Setup Demo1' window is open in the background, showing a toolbar with 'New', 'Open...', 'Save', 'Save as...', 'Report setup...', 'Audit trail...', 'Send method by e-mail...', and 'Help'. The main area is titled 'Common for all detectors' and contains several input fields and checkboxes. A red arrow points from the 'Method' icon in the 'Instrument 1' toolbar to the 'Method Setup Demo1' window.

**Method Setup Demo1**

Method Description: CKW 21.06.04

Column: Optima 624

Mobile Phase: Stickstoff

Flow Rate: 90 ml/min

Pressure: 1,2 bar

Detection: ECD

Temperature: 45 °C - 5 min, 8 °C/min, 125 °C - 0 min, 30 °C/min, 230 °C - 5 min

Note:

Enable Autostop

Run Time: 1,2 [min]

External Start/Stop

Start Only

Start - Restart

Start - Stop

Up

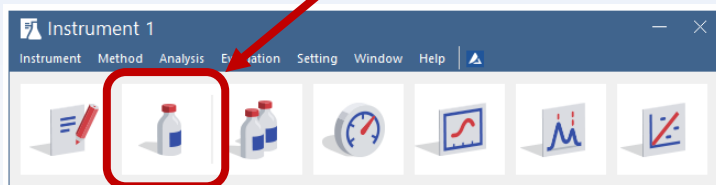
Down

Event Table | Measurement | Acquisition | Integration | Calculation | Advanced

OK Cancel Send Method

# Clarity windows

- ✓ Single Analysis
  - ✓ Setting of single analysis routine and post run actions
  - ✓ Presets stored as shared with other user settings



The 'Single Analysis' dialog window contains the following fields and controls:

- Sample ID:
- Sample:
- Comments:  ...
- Amount:  ISTD1 Amount:  ...
- Dilution:  Inj. Volume [μL]:
- Sample Type:  Level:
- Method:  ...
- Report Style:  ...

Analysis Post Run Settings User Variables

Control

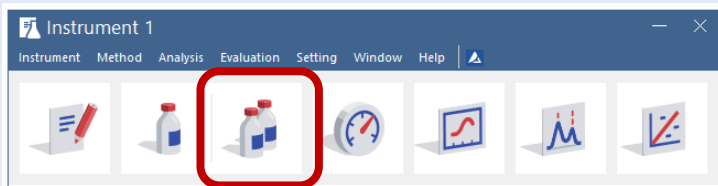
Chromatogram File Name (Instrument 1 - 03.04.2018 15\_03\_59)

...

Enable File Overwrite Counter

# Clarity windows

- ✓ Sequence window
- ✓ Setting of multiple injections through sequence table
- ✓ Sequence stored to \*.seq file



	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		<input checked="" type="checkbox"/>	1	1	1	Halocarbons	Std_1	0,400	2,000	1,000	5,000	%Q	Standard	1	Demo1	Calibration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2		<input checked="" type="checkbox"/>	2	2	1	Halocarbons	Std_2	1,000	2,000	1,000	5,000	%Q	Standard	2	Demo1	Calibration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3		<input checked="" type="checkbox"/>	3	3	1	Halocarbons	Std_3	3,000	2,000	1,000	5,000	%Q	Standard	3	Demo1	Calibration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4		<input checked="" type="checkbox"/>	4	4	2	Halocarbons	Std_4	5,000	2,000	1,000	5,000	%Q%i	Standard	4	Demo1	Calibration	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5		<input checked="" type="checkbox"/>	5	8	2	Halocarbons	Sample	5,000	2,000	1,000	5,000	%Q Vial_...	Unknown	Demo1	Instrument	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6		<input checked="" type="checkbox"/>	9	9	2	Halocarbons	Sample	5,000	2,000	1,000	5,000	%Q Vial_...	Unknown	Demo1	Instrument	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7		<input type="checkbox"/>	10	10	2	Halocarbons	Sample	5,000	2,000	1,000	5,000	%Q Vial_...	Unknown	Demo1	Instrument	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8		<input type="checkbox"/>	11	11	2	Halocarbons	Sample	5,000	2,000	1,000	5,000	%Q Vial_...	Unknown	Demo1	Instrument	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9		<input checked="" type="checkbox"/>	12	12	2	Halocarbons	Sample	5,000	2,000	1,000	5,000	%Q Vial_...	Unknown	Demo1	Instrument	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
10		<input checked="" type="checkbox"/>	13	13	2	Halocarbons	Sample	5,000	2,000	1,000	5,000	%Q Vial_...	Unknown	Demo1	Instrument	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11		<input checked="" type="checkbox"/>	16	16	2	Halocarbons	Sample	5,000	2,000	1,000	5,000	%Q Vial_...	Unknown	Demo1	Instrument	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
12		<input checked="" type="checkbox"/>	17	17	3	Halocarbons	Sample	5,000	2,000	1,000	5,000	%Q Vial_...	Unknown	Demo1	Instrument	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13		<input checked="" type="checkbox"/>	18	18	2	Halocarbons	Sample	5,000	2,000	1,000	5,000	%Q%i	Unknown	Demo1	Instrument	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14		<input type="checkbox"/>	19	19	2	Halocarbons	Sample	5,000	2,000	1,000	5,000	%Q%i	Unknown	Demo1	Instrument	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15		<input checked="" type="checkbox"/>	22	22	1	Halocarbons	Sample	5,000	2,000	1,000	5,000	%Q Vial_...	Unknown	Demo1	Instrument	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
16		<input checked="" type="checkbox"/>	15	15	2	Halocarbons	Sample	5,000	2,000	1,000	5,000	%Q Vial_...	Unknown	Demo1	Instrument	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
17		<input checked="" type="checkbox"/>	20	20	1	Halocarbons	Sample	5,000	2,000	1,000	5,000	%Q Vial_...	Unknown	Demo1	Instrument	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
18		<input checked="" type="checkbox"/>	23	23	1	Halocarbons	Sample	5,000	2,000	1,000	5,000	%Q Vial_...	Unknown	Demo1	Instrument	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
19		<input checked="" type="checkbox"/>	21	21	1	Halocarbons	Sample	5,000	2,000	1,000	5,000	%Q Vial_...	Unknown	Demo1	Instrument	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
20		<input checked="" type="checkbox"/>	22	22	1	Halocarbons	Sample	5,000	2,000	1,000	5,000	%Q Vial_...	Unknown	Demo2	Instrument	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
21																			

For Help, press F1

Single Run: Waiting

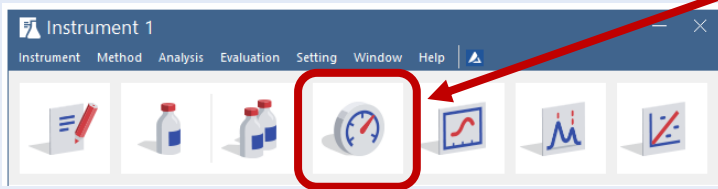
Vial: 16 / Inj.: 2

File Name:



# Clarity windows

- ✓ Device Monitor
  - ✓ Direct control of Instrument from application
  - ✓ Current status and values read-outs



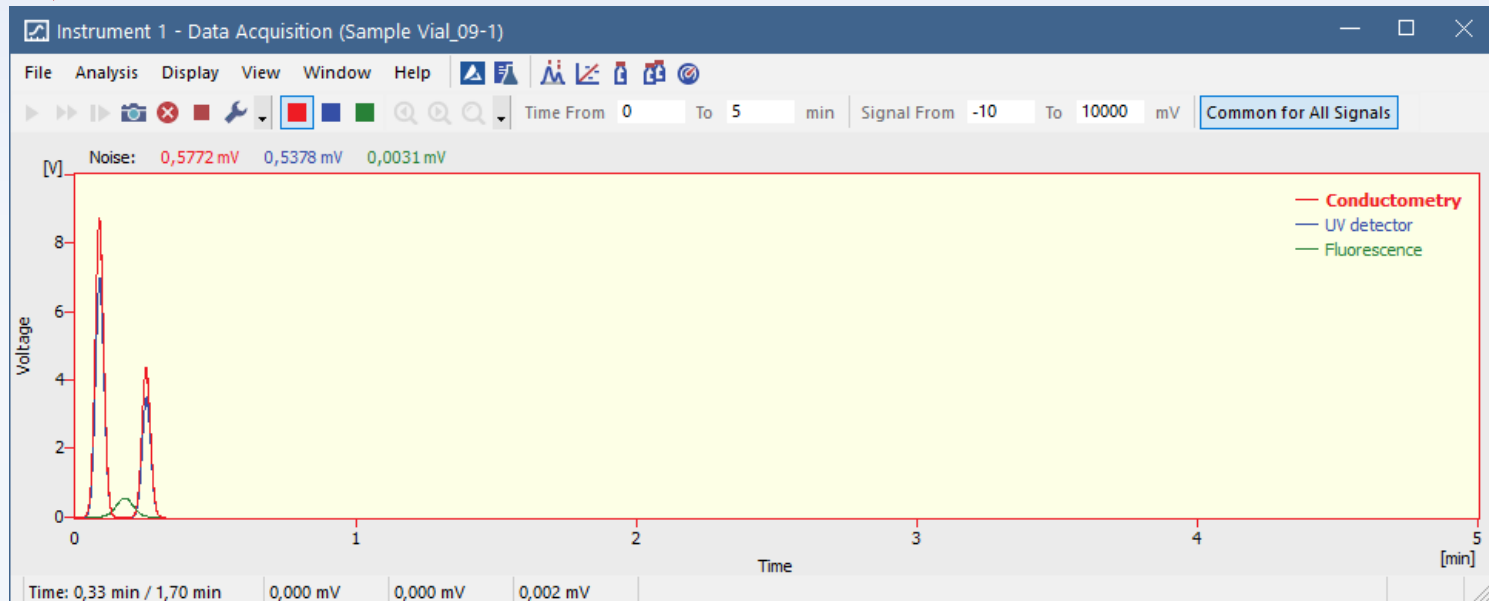
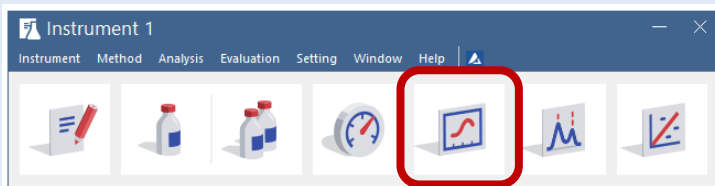
The 'HPLC NexSAR - Device Monitor' window displays the following information:

- LC Monitor:** Shows a table of components (A, B, -, -) with flow rates (0,000, 0,000, -, -) and a schematic diagram of the flow path. Controls include 'Stop Flow', 'Set Flow...', 'Resume Idle', 'Hold', and 'Modify Gradient...'. Total Flow [mL/min] is 0,000 and Pressure [MPa] is 0,00.
- NexSAR Inert HPLC Autosampler Sampl...:** Demo Mode: Not Ready (Method has not been sent). Controls include 'Initial Wash - Start', 'Reset error', 'AS Status...', 'Service ...', 'Tray Move - Front', 'Tray Move - Home', and 'Valve Position Change - Load'.
- NexSAR 200 Inert HPLC Pump 1:** Demo Mode: Not Ready (Method has not been sent).
- NexSAR 200 Inert HPLC Pump 2:** Demo Mode: Not Ready (Method has not been sent).
- NexION ICP-MS ICP-MS 1 (SN 1234567...):** Demo Mode: Not Ready (Method has not been sent). Controls include 'Plasma State: On' (Stop Plasma), 'Pump State: On' (Stop Pump), and 'Pump Speed: 0,0 rpm' (Set).
- NexSAR Column Oven Thermostat 1 (S...):** Demo Mode: Not Ready (Method has not been sent). Controls include 'Oven Temperature: --- / --- [°C]', 'Elapsed Time: ---', 'Th. Status...', and 'Switch On'.

For Help, press F1

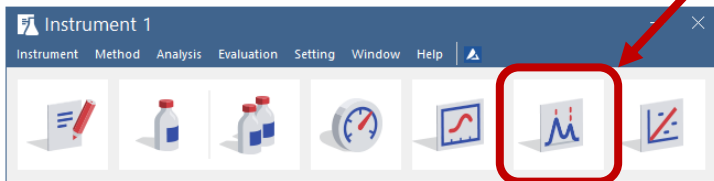
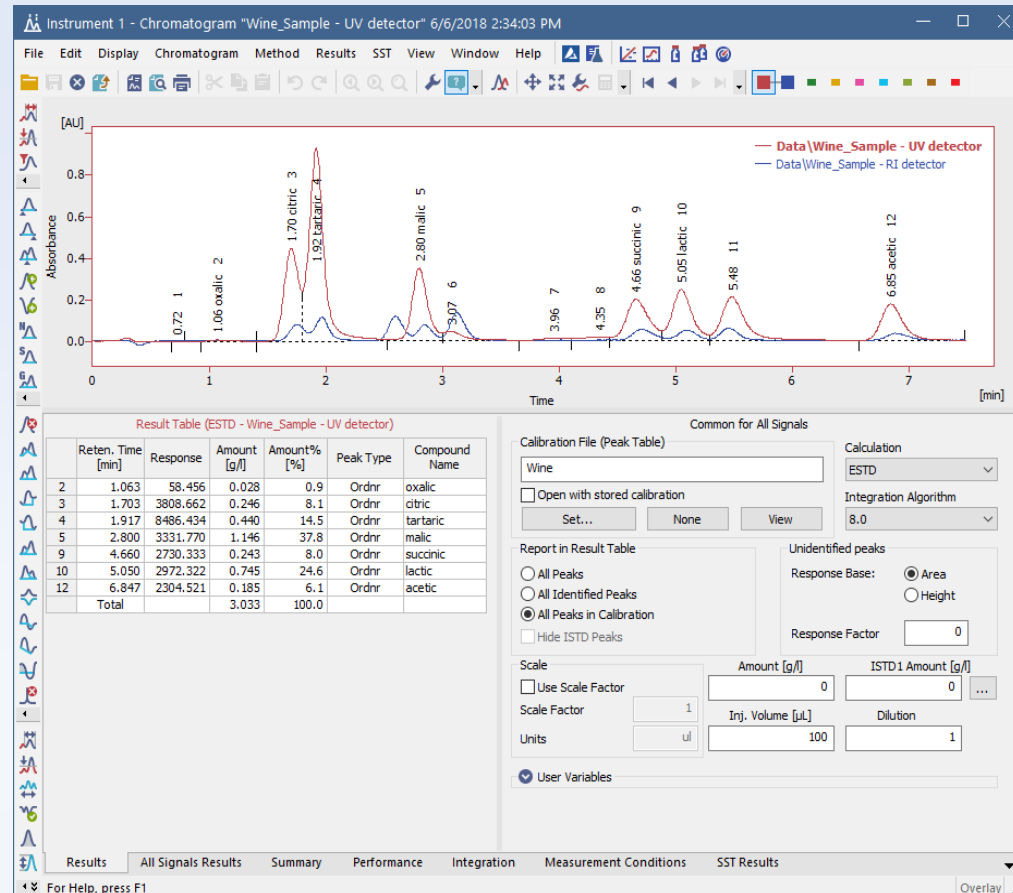
# Clarity windows

- ✓ Data Acquisition window
- ✓ Real time monitoring of signal(s)



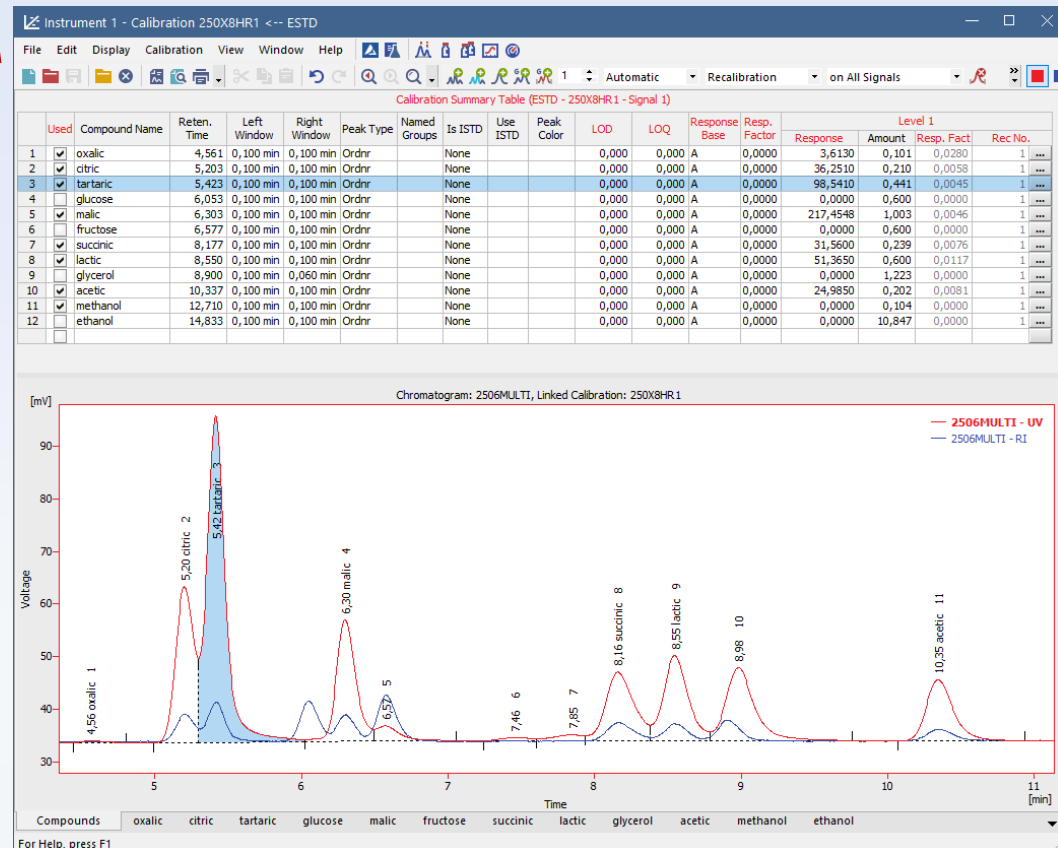
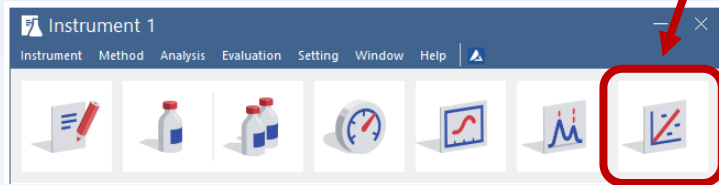
# Clarity windows

- ✓ Chromatogram window
  - ✓ Displaying of chromatogram(s)
  - ✓ Adjusting of intergration
  - ✓ Evaluate results
  - ✓ Results in tables
  - ✓ Tables in various tabs
  - ✓ And many more
  - ✓ The most important Clarity window from users' point of view



# Clarity windows

- ✓ Calibration window
- ✓ Calibration is **must for calculated results** in Chromatogram
- ✓ Creating of calibrations
- ✓ Adjusting of calibrations
- ✓ Review of calibration curves of individual components in tabs



For Help, press F1

# Clarity windows

- ✓ Report Setup dialog
- ✓ Preview
- ✓ Print
- ✓ Common editor for adjusting of report styles
- ✓ Selecting of report style (layout) for print



The screenshot shows the 'Report Setup Chromatogram' dialog box. On the left, a 'Page Setup' sidebar lists various report sections: Lab. Header, Report Header, Method, Calibration, Chromatogram, Results, Sequence, SST, and Audit & Signatures. The 'Chromatogram' section is selected. The main area contains settings for printing, including orientation (Portrait/Landscape), fixed height (100 mm), number of pages (1), tiling options (Signals, Chromatograms, not Tiled), and print range (As on Screen, Whole Chromatogram, Both). A red arrow points from the icon in the previous block to the 'Chromatogram' section in the sidebar. The right side of the dialog features a stack of buttons: OK, Cancel, Help, New, Open..., Save As..., Printer..., Preview..., Print..., Print To PDF..., and Send PDF.

# Clarity windows

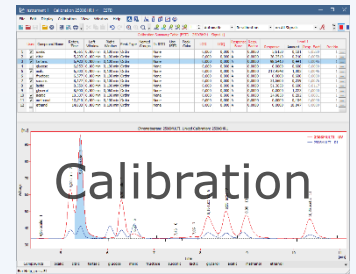
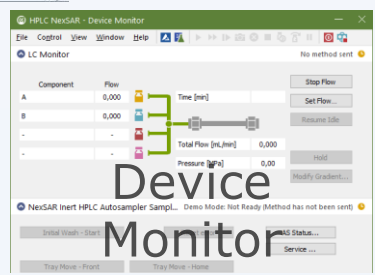
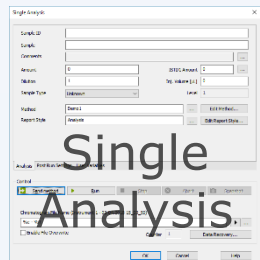
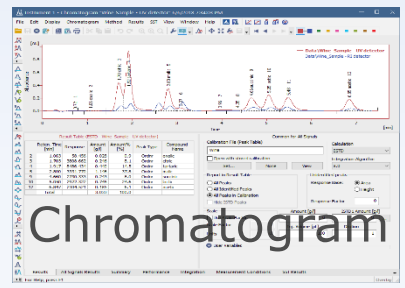
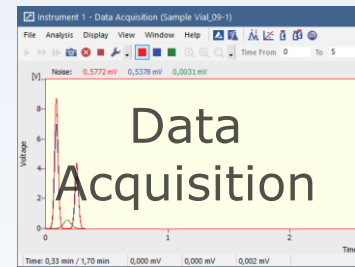
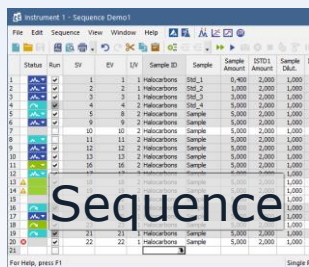
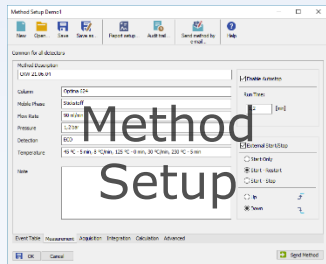
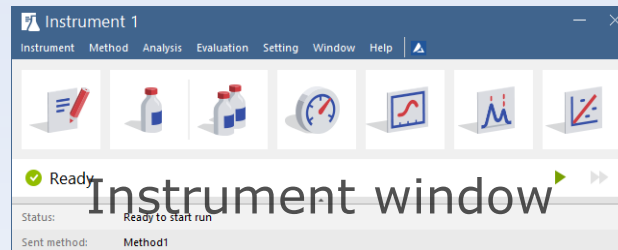
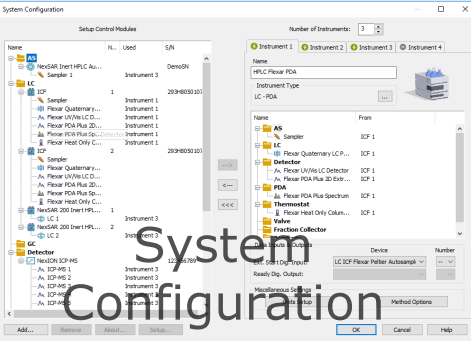
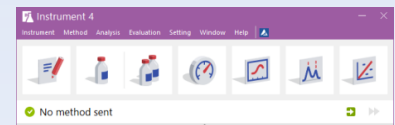
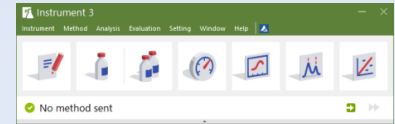
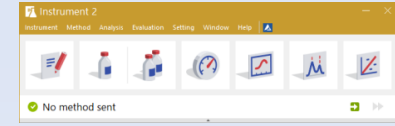
- ✓ Navigation among Clarity windows
  - ✓ Header color assigns window to instrument
  - ✓ Using icons in toolbar
  - ✓ Using menu Window
  - ✓ Using keyboard shortcuts among Instrument windows

The image displays the HPLC NexSAR - Chromatogram software interface. The main window has a green header bar with the title "HPLC NexSAR - Chromatogram" and standard window controls. Below the header is a menu bar with options: File, Edit, Display, Chromatogram, Method, Results, SST, View, Window, and Help. A red box highlights the toolbar icons, which include a triangle, a flask, a graph, a calibration curve, a bottle, a person, and a circular arrow.

A secondary window titled "HPLC Flexar PDA - Sequence Noname" is shown with a blue header. Its menu bar includes File, Edit, Sequence, View, Window, and Help. The "Window" menu is open, and a red box highlights the menu items: Main, Instrument 1, All Instruments, Chromatogram, Calibration, Single Analysis..., Data Acquisition, Device Monitor, Station Audit Trail, and Sequence Audit Trail.

Four smaller instrument windows are shown, each with a distinct header color: Instrument 1 (blue), Instrument 2 (yellow), Instrument 3 (green), and Instrument 4 (purple). Each window has its own menu bar and toolbar, and a status bar at the bottom. The status bars for Instrument 2, 3, and 4 display "No method sent".

# Clarity windows



# Clarity Summary

- ✓ ,Workstation`
- ✓ File based system with defined file structure
- ✓ Multiwindow environment
- ✓ Control of 1 - 4 independent chromatographs
- ✓ Chromatograph = Instrument
- ✓ Signal = individual detector trace
- ✓ Data stored in Projects
- ✓ Calibration Level



