



# **DISTRIBUTOR TRAINING**

## **BASIC OPERATIONS**

P009/80G 10/2022

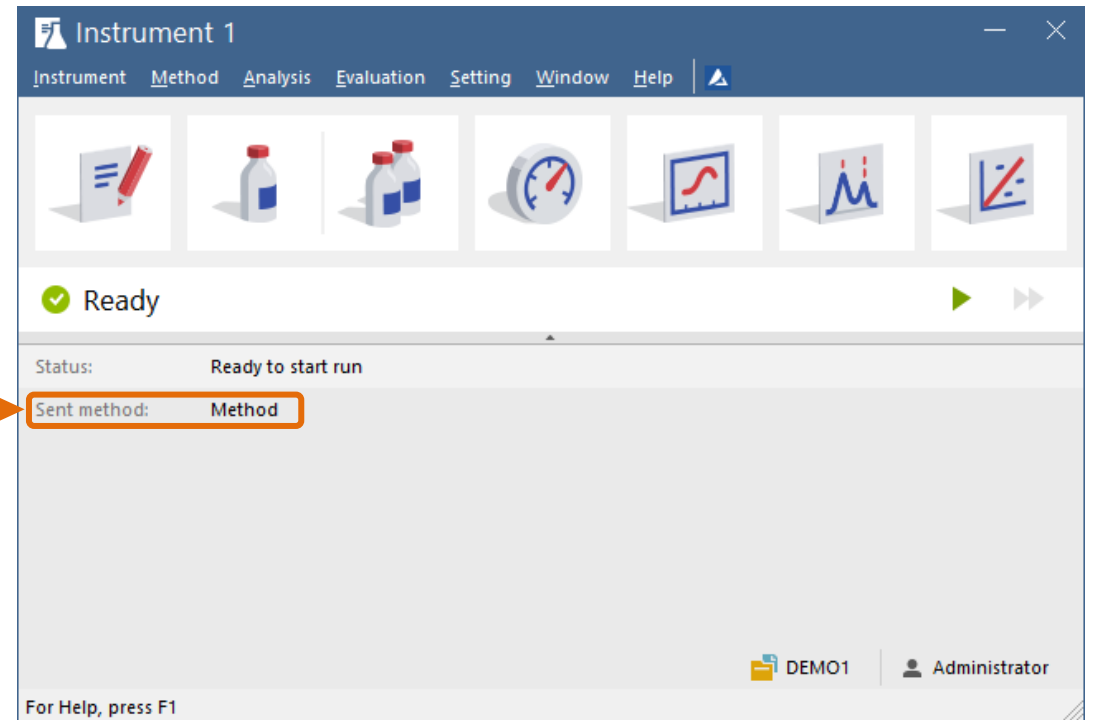
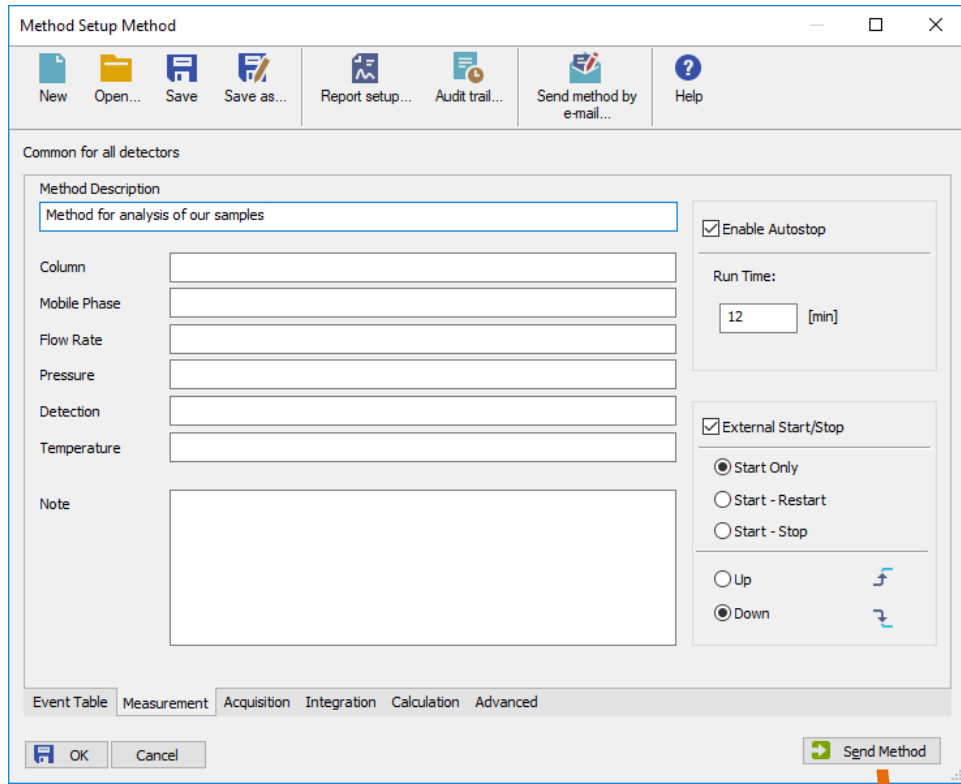


# CONTENT

- Developing a Method
- Acquiring of Data
- Creating of Calibration
- Reporting of Data

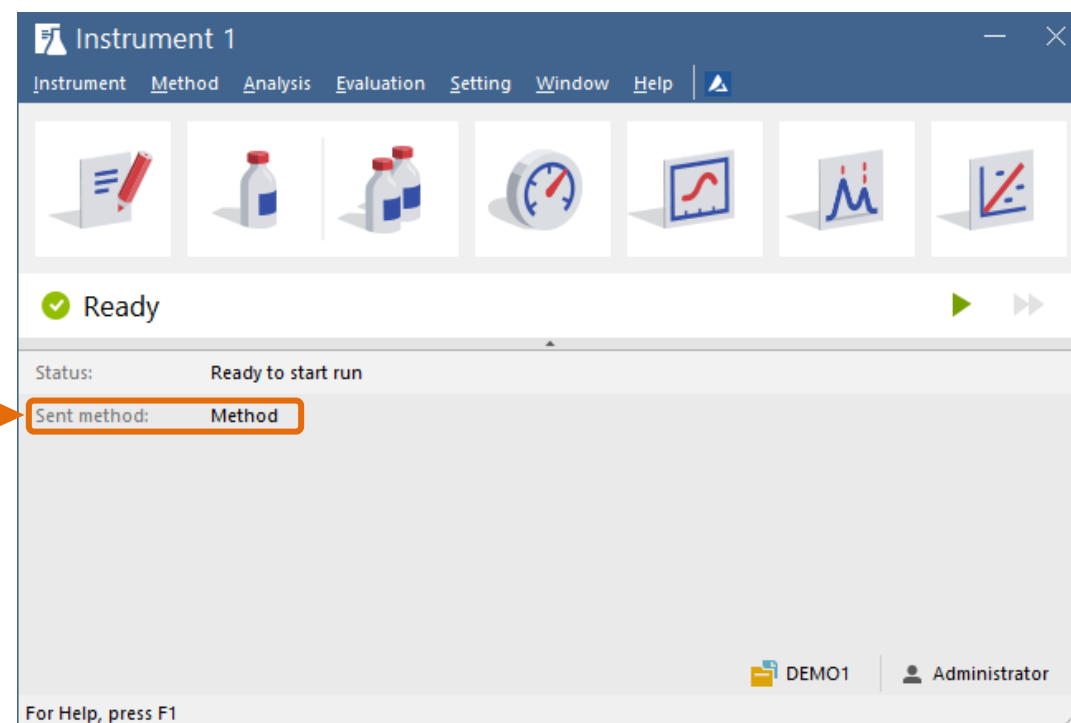
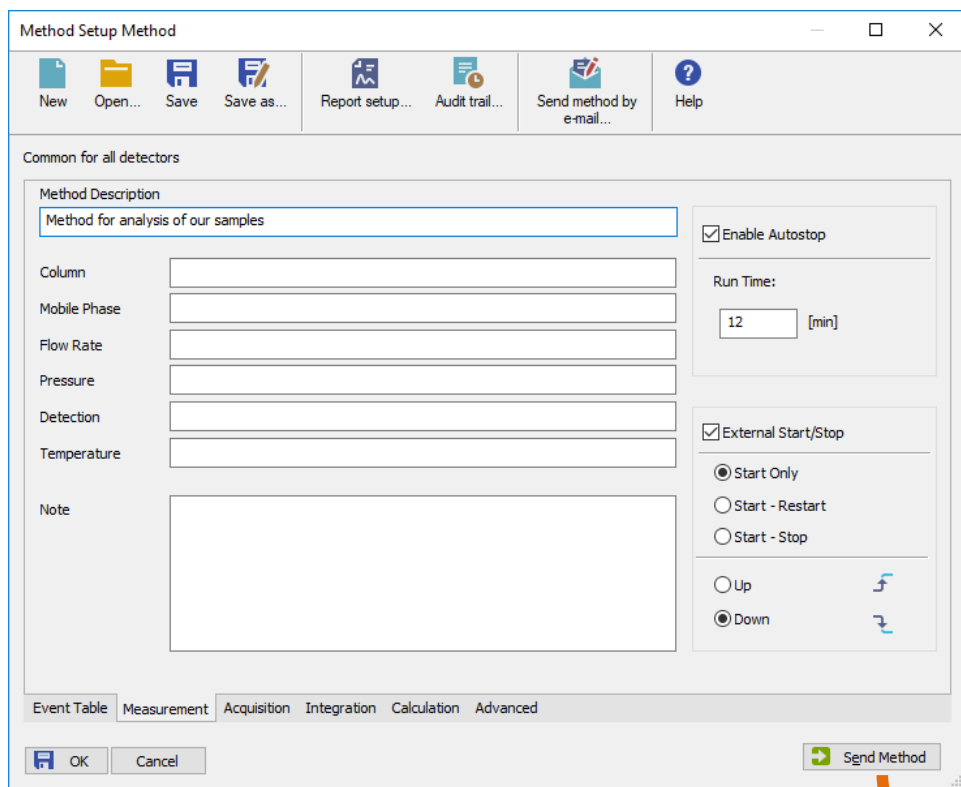


# DEVELOPING A METHOD





- method in Clarity = set of all instrumental parameters as well as set of processing parameters
- method opened in the Method Setup dialog can be sent to hardware and used for new acquisitions
- method is stored in method file (\*.met) in current project folder





## Developing a method - proposed workflow

- Set Acquisition Parameters
- Enter Sample Information
- Acquire First Chromatogram
- Optimize Automated Integration Parameters in Method
- Store Method for Future Analyses



# BASIC OPERATIONS → DEVELOPING A METHOD → METHOD SETUP DIALOG

Method Setup Method

New Open... Save Save as... Report setup... Audit trail... Send method by e-mail... Help

	Time [min]	MeOH [%]	ACN [%]	Flow [mL/min]
1	Initial	75,0	25,0	1,500
2	5,00	50,0	50,0	1,500
3	25,00	99,0	1,0	1,500
4				

Standby Flow: 0,2 mL/min  
Time to Standby: 2 min  
Standby Time: 2 min

Idle State:  
 Pump Off  
 Initial  
 Standby  
 Initial - Standby

Options...

Event Table AS LC Gradient LC Measurement Acquisition Thermostat Valves Integration  
PDA Method Calculation Advanced

OK Cancel Send Method

Method Setup Method

New Open... Save Save as... Report setup... Audit trail... Send method by e-mail... Help

Select GC: GC 1  Enabled

Current GC Status...

Oven/Zones Front Inlet Column 1 Front Detector Time Table Gradients

Oven Parameters:  
 On Oven: Max [°C] 200 Equilibration [min] 0,5

Heat Rate [°C/min]	Final Temp [°C]	Hold Time [min]	Total Time [min]
Initial	40	1,50	1,50
			---

Temperature Zones:  
 Inj. Front [°C] 50  
 Inj. Back [°C] 50  
 Det. Front [°C] 50  
 Det. Back [°C] 50  
 Det. Third [°C] 50  
 Det. Fourth [°C] 50  
 Aux #1 [°C] 50  
 Aux #2 [°C] 50

On Cryo: Temp [°C] 50 Timeout [min] 10  
 Quick Cool  Fault

Post Run: Time [min] 0 Temp [°C] 0

GC Status: Not Ready From GC

Event Table GC Measurement Acquisition Integration Calculation Advanced

OK Cancel Send Method

Instrument 1

Instrument Method Analysis Evaluation Setting Window Help

Ready

Status: Ready to start run  
Sent method: Method

DEMO1 Administrator

For Help, press F1

→ Accessing of Method Setup Dialog



→ Method Description

- informative

→ Autostop & Run Time

→ External Start/Stop

Method Setup Ethanol in blood

New Open... Save Save as... Report setup... Audit trail... Send method by e-mail... Help

Common for all detectors

Method Description  
DEMO Example - GC - Autosampler - Ethanol in blood

Column db 624-30m-3.0u-0,32 id

Mobile Phase hydrogen

Flow Rate 50 cm/min

Pressure 5.57 psi

Detection FID

Temperature Ramped to 225

Note short linear velocity 50 cm/sec  
column initial 45 deg

Enable Autostop

Run Time:  
4 [min]

External Start/Stop

Start Only

Start - Restart

Start - Stop

Up

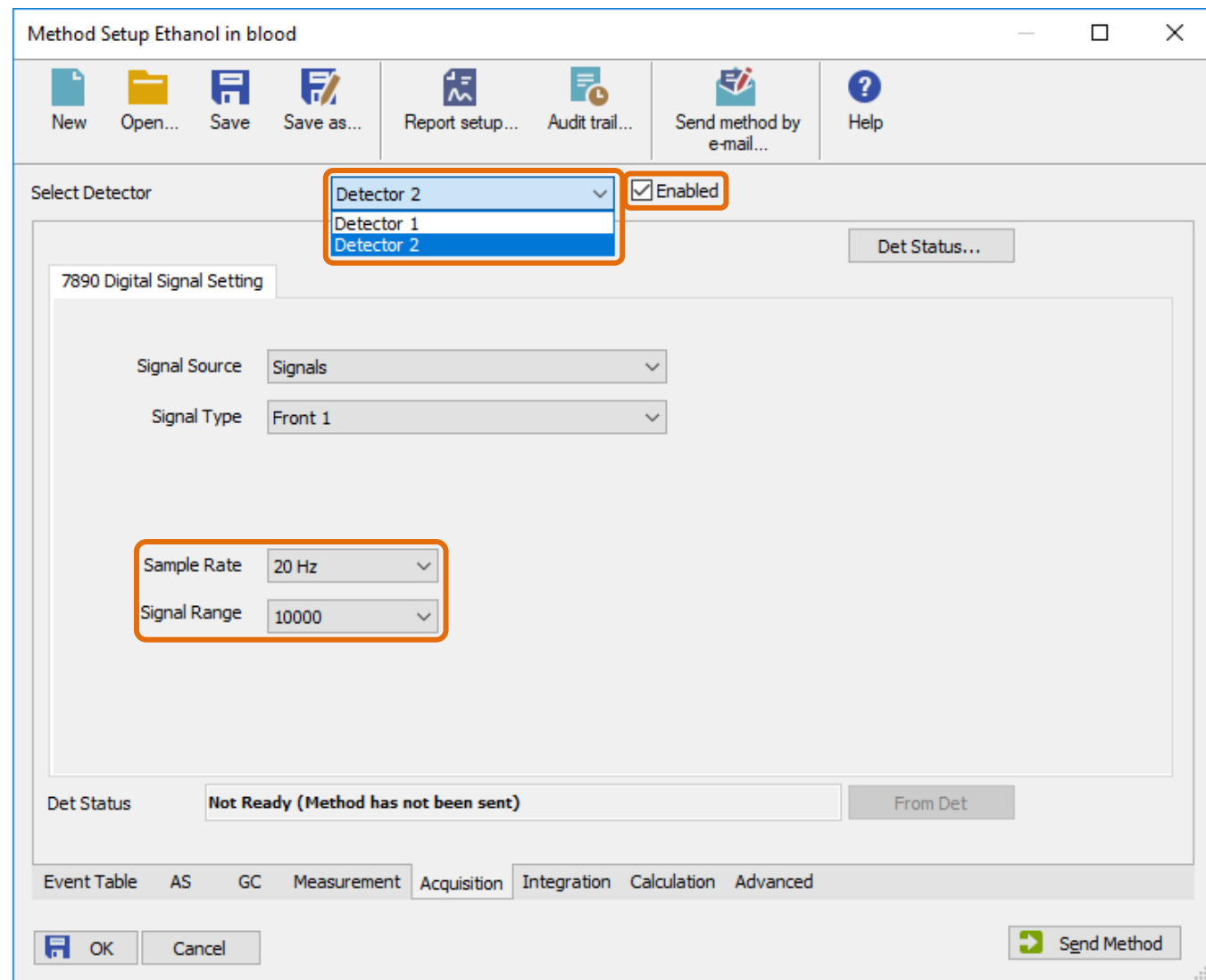
Down

Event Table AS GC Measurement Acquisition Integration Calculation Advanced

OK Cancel Send Method

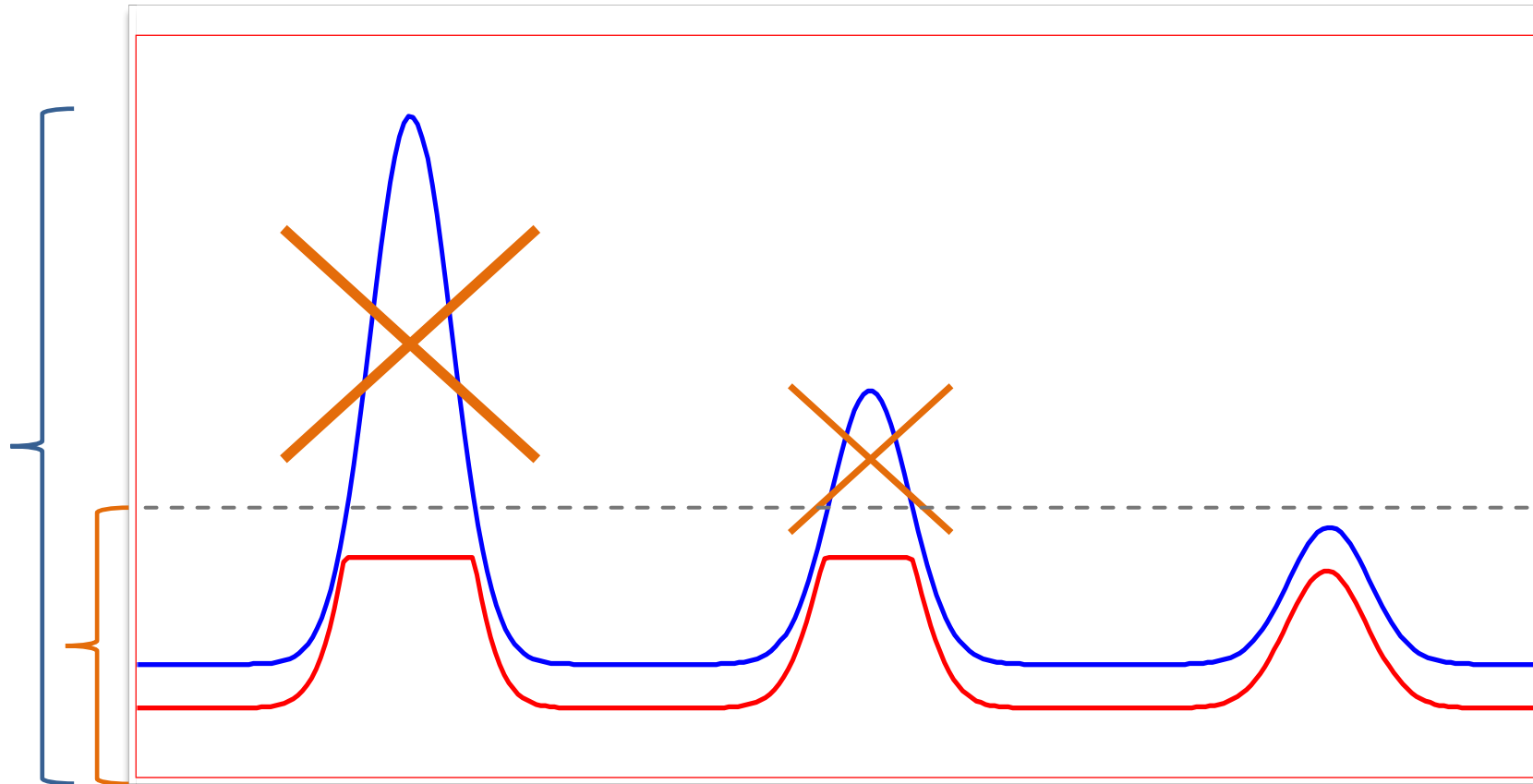


- Critical settings - they cannot be modified during acquisition
- Specific for each detector
- „Enabled“ checkbox



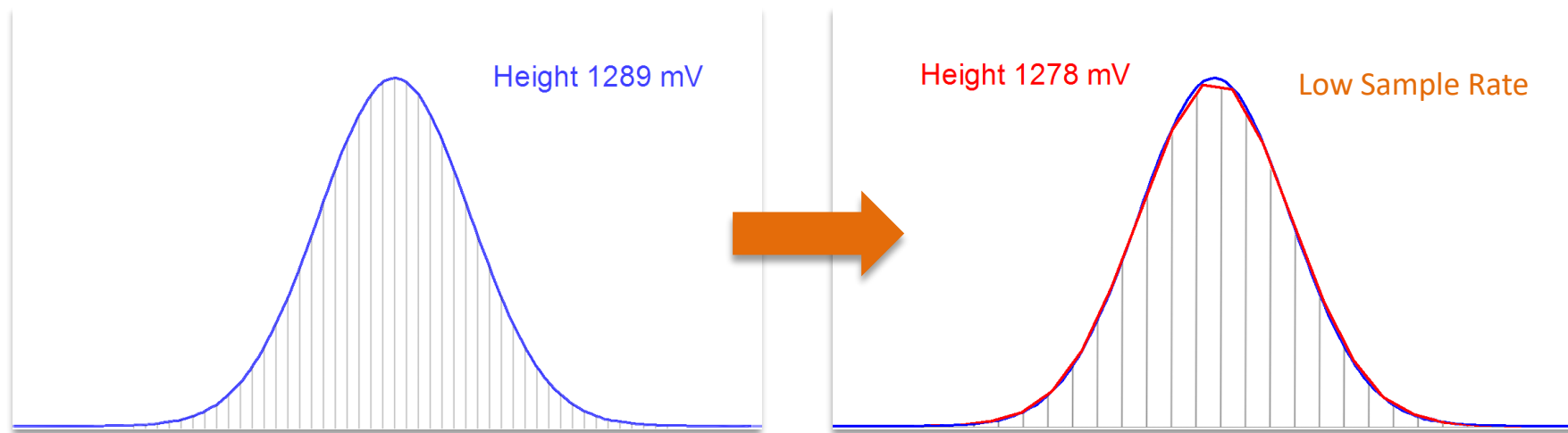


- Look dependent on configured instruments
- ‚Range‘ settings
- Signal outside of range → loss of chromatographic information



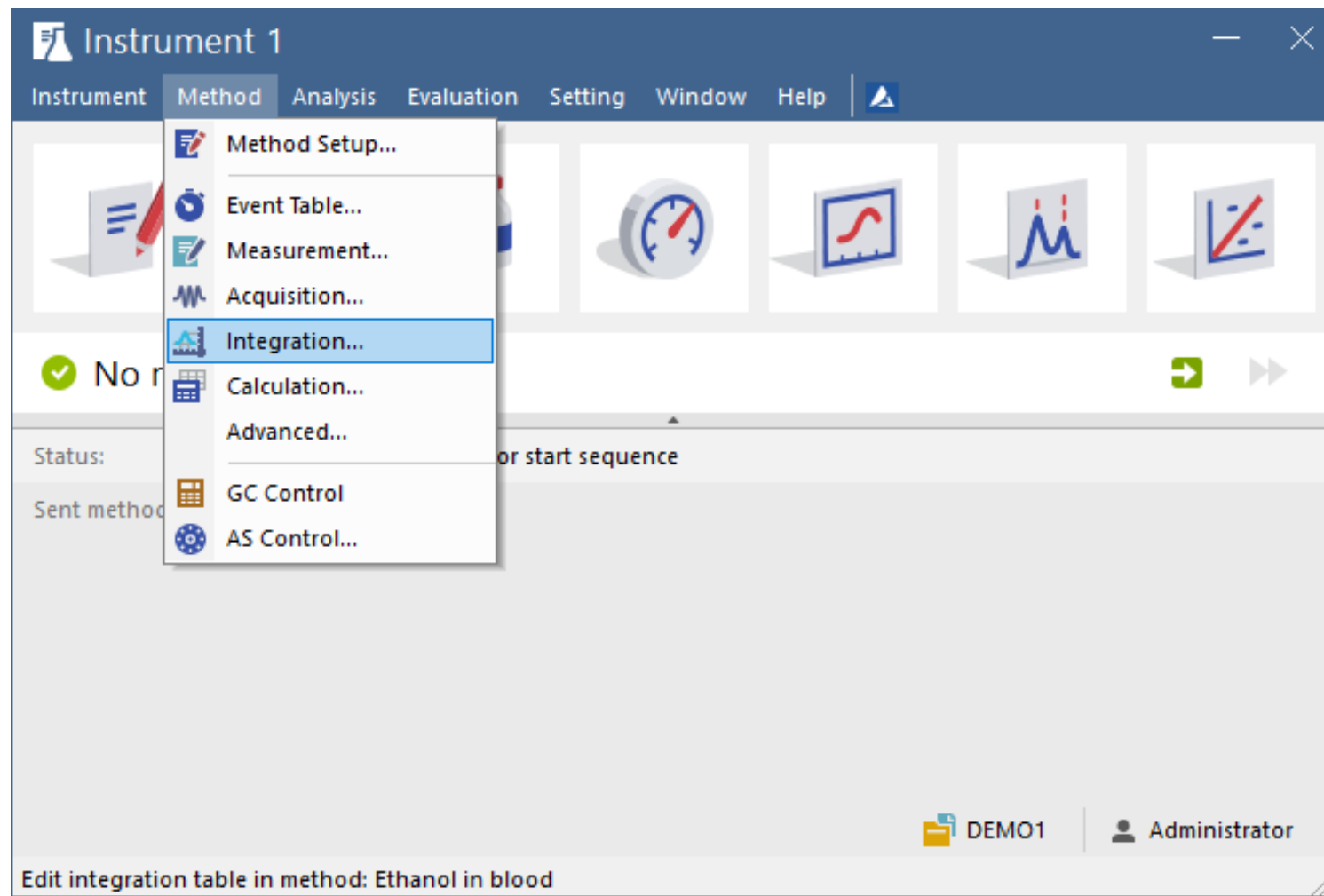


- ,Sample rate' settings
- If it is too low, it could lead into insufficient amount of datapoints in peaks resulting in incorrect results
- Selection of correct sample rate is dependent on used HW and current analytical application
  - GC detectors - usually approx. 25-50 Hz
  - LC detectors – according to application and HW parameters
  - Spectral detectors – according to application and HW parameters

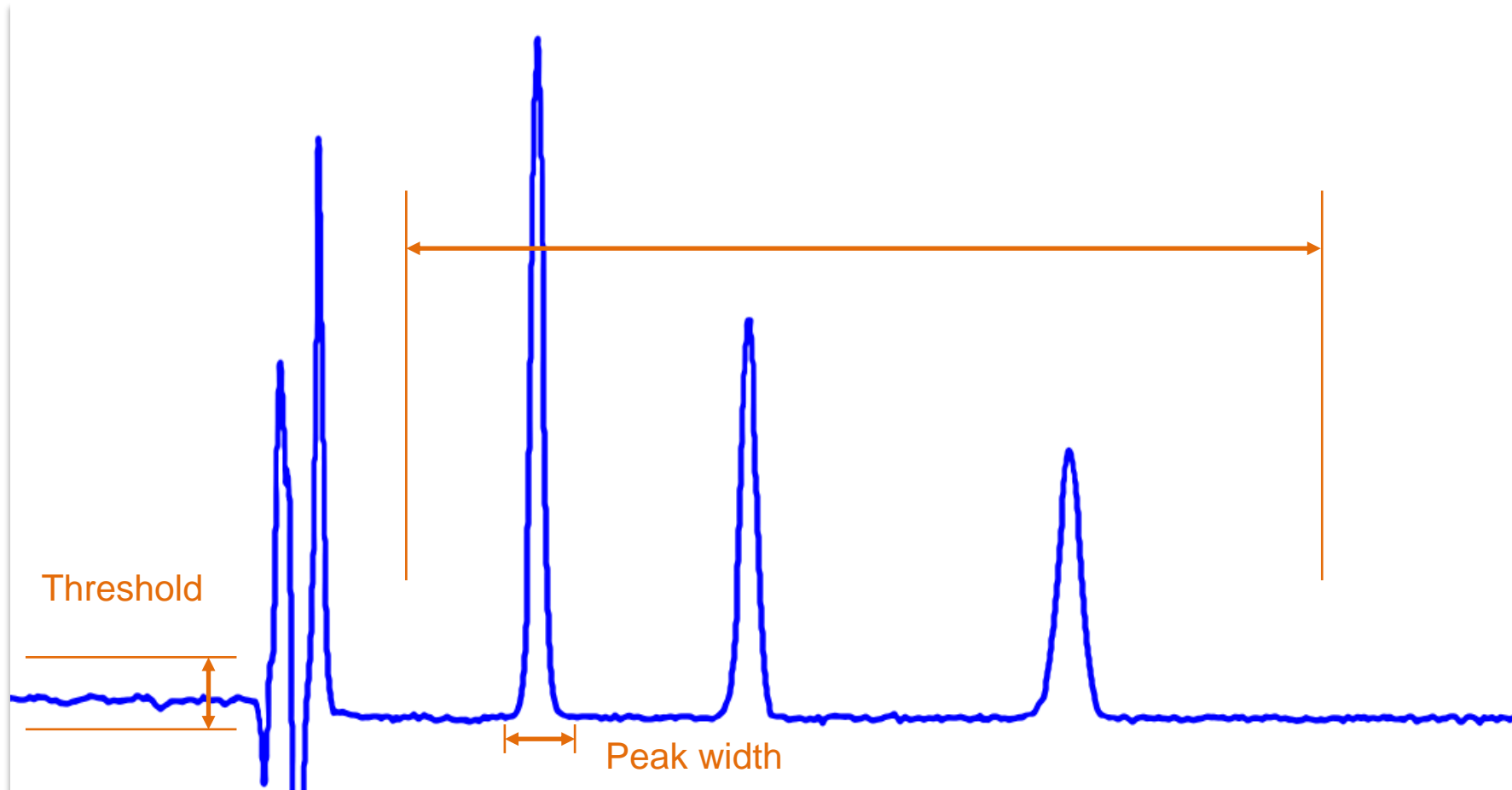




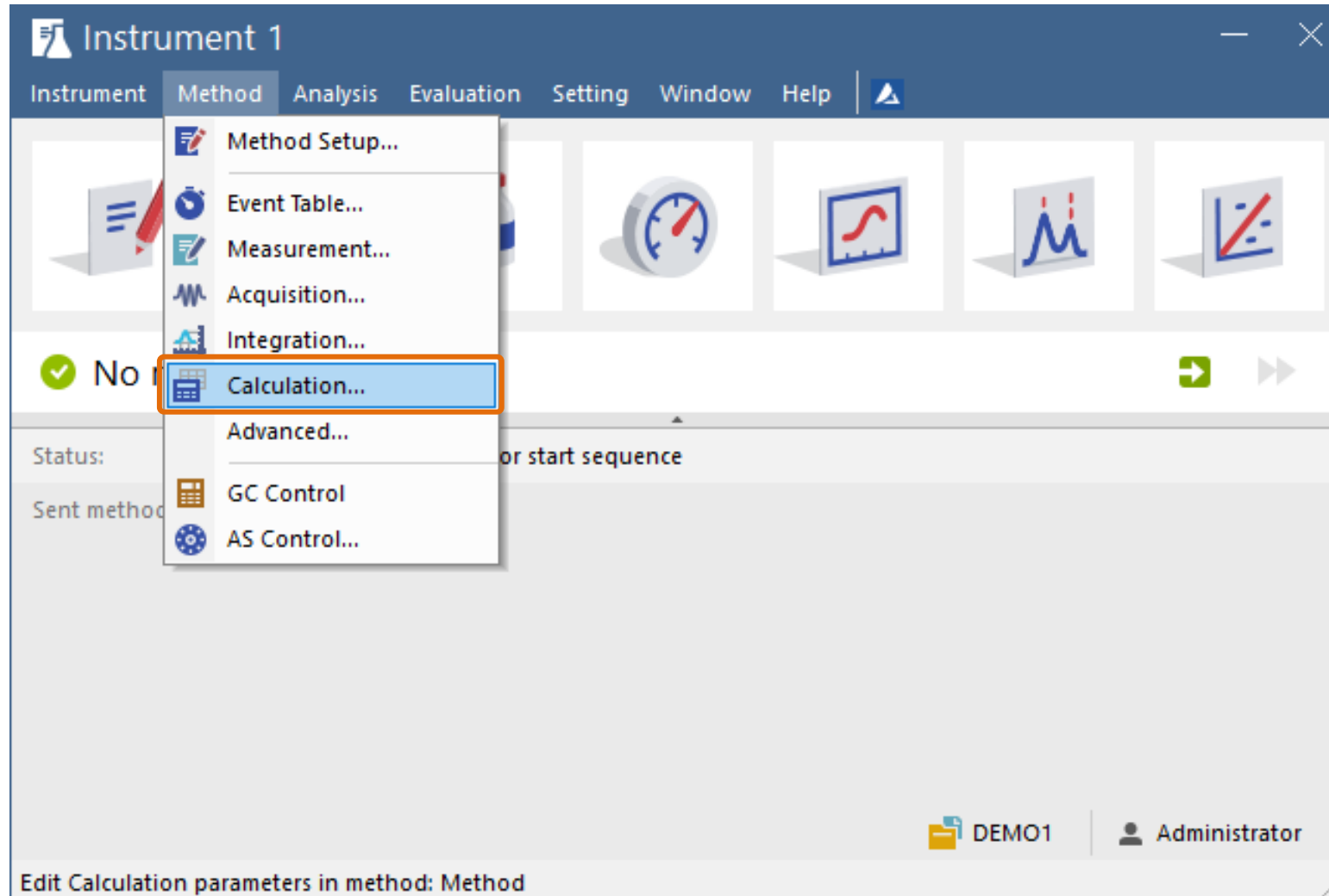
- Parameters for automatic integration of chromatogram
- Clarity integrates by default all chromatograms automatically using parameters stored in method
- If unchanged there are always applied default integration parameters originating from Clarity



- Integration parameters:
- Peak Width, Threshold, Integration Interval etc...



# Calculation tab



## → Calculation parameters

- Link the calibration file and set the calculation method

Method Setup Method

New Open... Save Save as... Report setup... Audit trail... Send method by e-mail... Help

Common for all detectors

Calibration File (Peak Table) Ethanol View  
Set... New... Clone... None

Calculations ISTD Integration Algorithm 8.0  
Author None  
Description DEMO Example - Ethanol in blood  
Created 30.03.1995 14:20:18 Modified 22.03.2018 10:06:11

Report in Result Table  
 Hide ISTD Peaks  All Peaks  
 All Identified Peaks  
 All Peaks in Calibration

Scale  
 Use Scale Factor  
Scale Factor 1  
Units uL

Unidentified Peaks  
Response Base: Area  
Response Factor 0 [Am/Rsp]

Calibration Cloning In Sequence  
[None]

Event Table AS GC Measurement Acquisition Integration Calculation Advanced

OK Cancel Send Method



**Instrument 1**

Instrument Method Analysis Evaluation Setting Window Help

Single Analysis Method

✓ No method sent

Status: Ready to send method or start sequence


Sent method: *none*

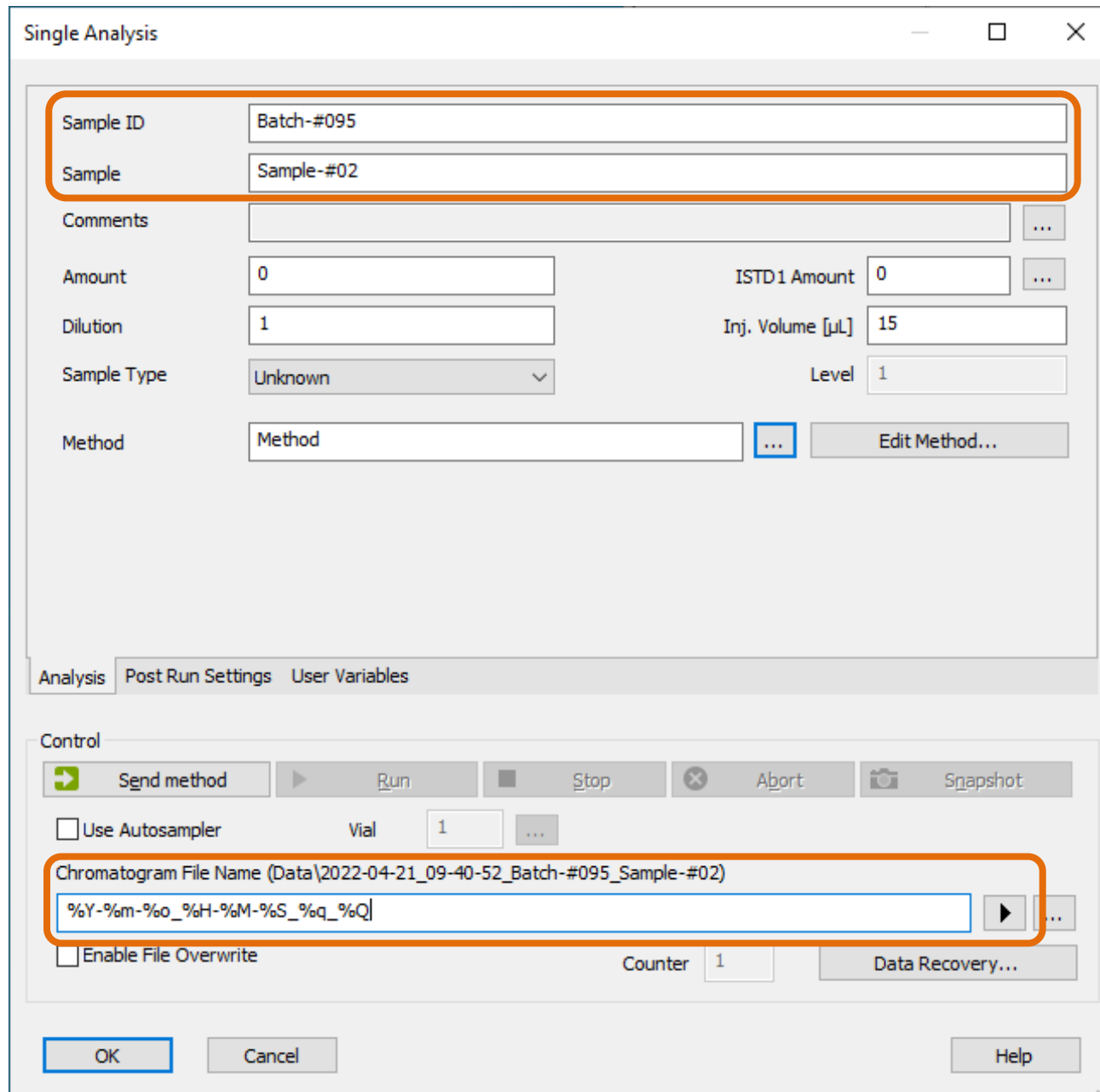
DEMO1 Administrator

View Single Analysis dialog with method: Method



## → Sample Information

- Enter the information about the sample
- Type in the file name. You can use variables in the file name by clicking on 



Single Analysis

Sample ID: Batch-#095

Sample: Sample-#02

Comments: [Empty]

Amount: 0

ISTD1 Amount: 0

Dilution: 1

Inj. Volume [µL]: 15

Sample Type: Unknown

Level: 1

Method: Method

Analysis | Post Run Settings | User Variables

Control

Send method | Run | Stop | Abort | Snapshot

Use Autosampler

Vial: 1

Chromatogram File Name (Data\2022-04-21\_09-40-52\_Batch-#095\_Sample-#02)

%Y-%m-%o\_%H-%M-%S\_%q\_%Q

Enable File Overwrite

Counter: 1

Data Recovery...

OK | Cancel | Help



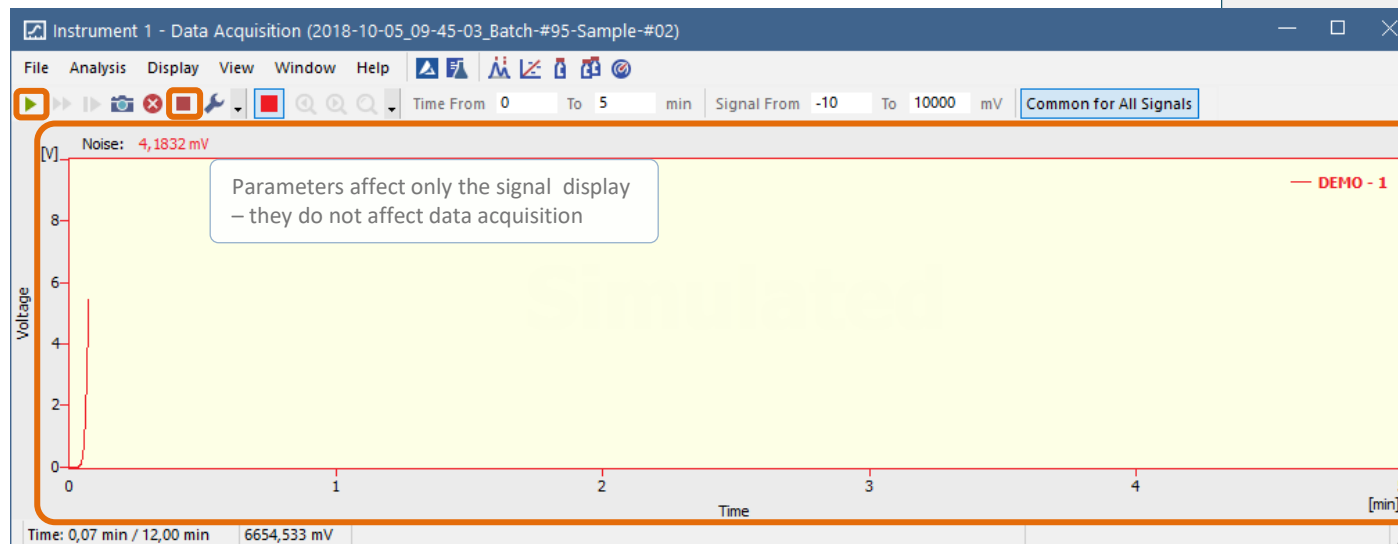
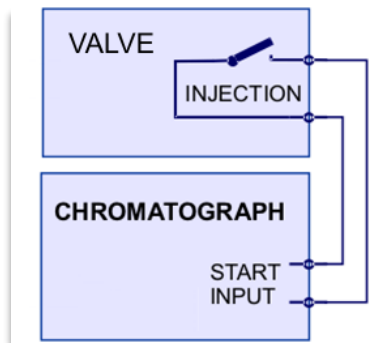
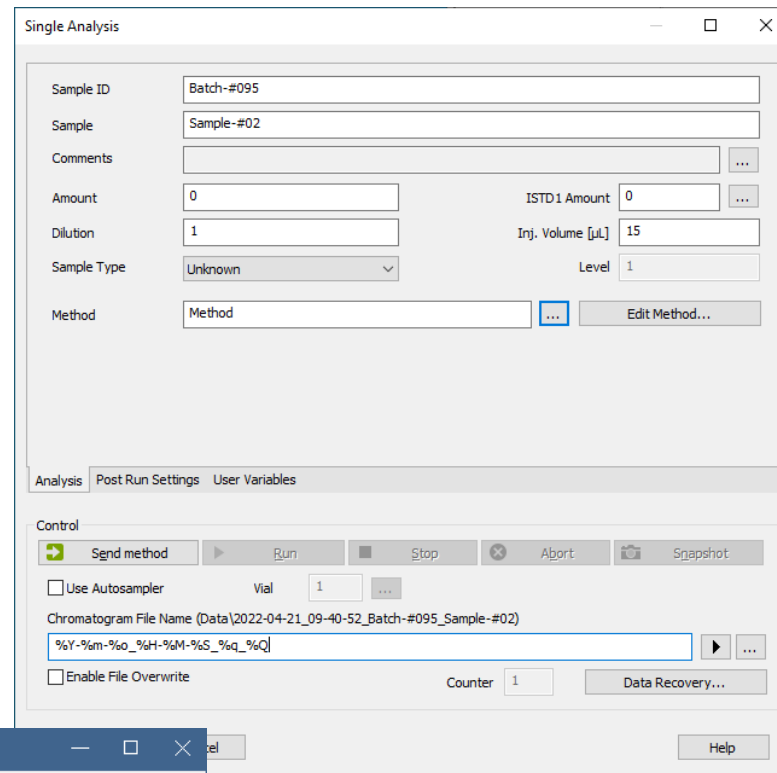
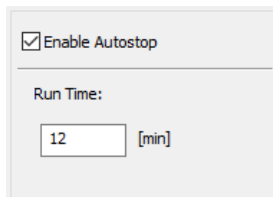


→ Inject sample

→ Start data acquisition

→ Watch the signal

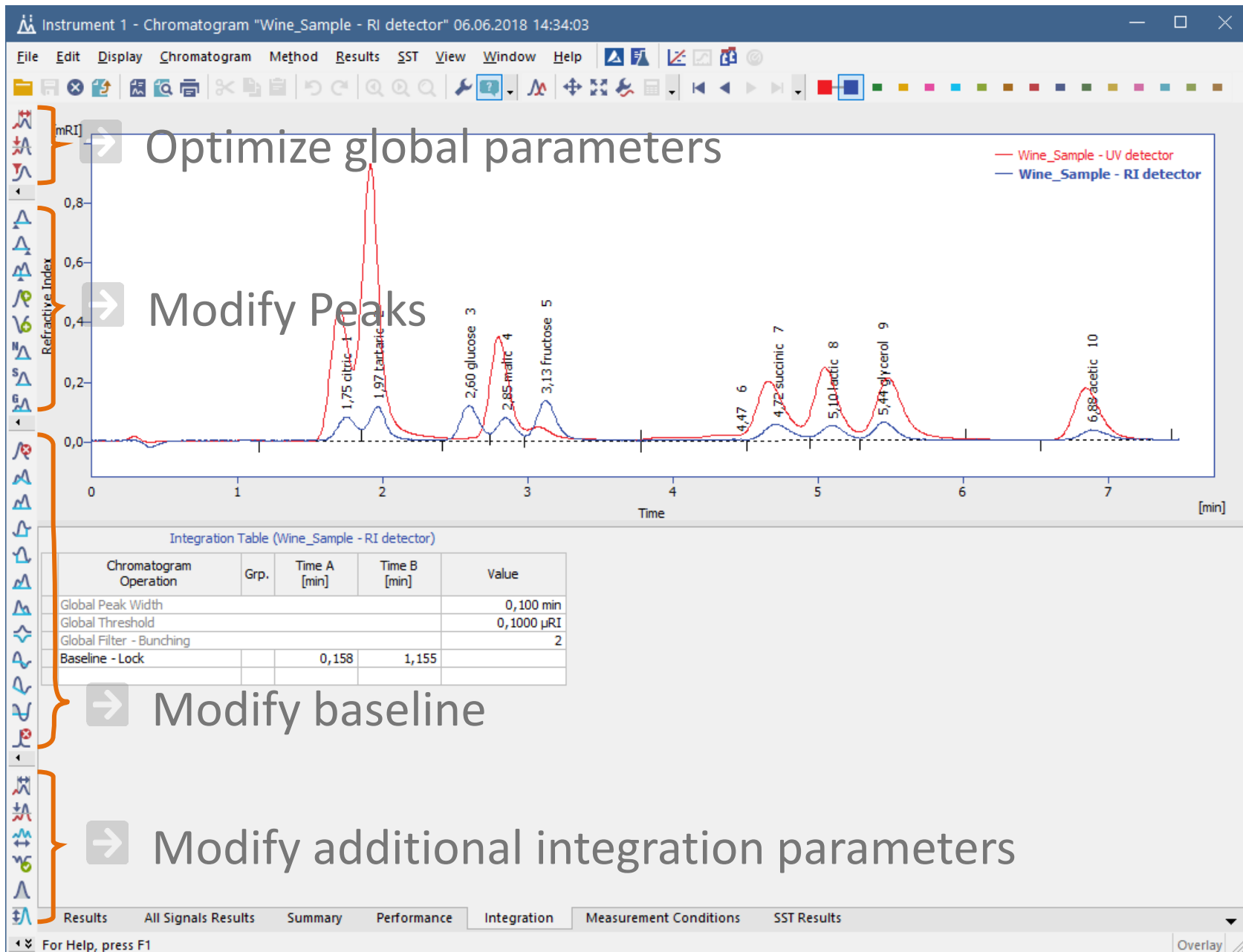
→ Stop acquisition





→ Optimize integration parameters

- For editing use graphical interface in the chromatogram window



→ Optimize global parameters

→ Modify Peaks

→ Modify baseline

→ Modify additional integration parameters



The screenshot shows a chromatogram window titled "Instrument 1 - Chromatogram 'Wine\_Sample - RI detector' (MODIFIED)". The plot displays Refractive Index [μRI] on the y-axis (ranging from -50 to 100) against Time [min] on the x-axis (ranging from 1,0 to 1,5). Two traces are visible: "Wine\_Sample - UV detector" (red line) and "Wine\_Sample - RI detector" (blue line). A context menu is open over the plot, with "Save as Template..." highlighted. An orange arrow points from this menu item to the "Integration Table" below.

Chromatogram Operation	Grp.	Time A [min]	Time B [min]	Value
Global Peak Width				0,100 min
Global Threshold				0,1000 μRI
Global Filter - Bunching				2
Peak - Start		1,063	-0,165	
Baseline - Lock		0,091	0,633	
Peak - Start		2,800	-0,218	
Peak - End		2,800	0,200	

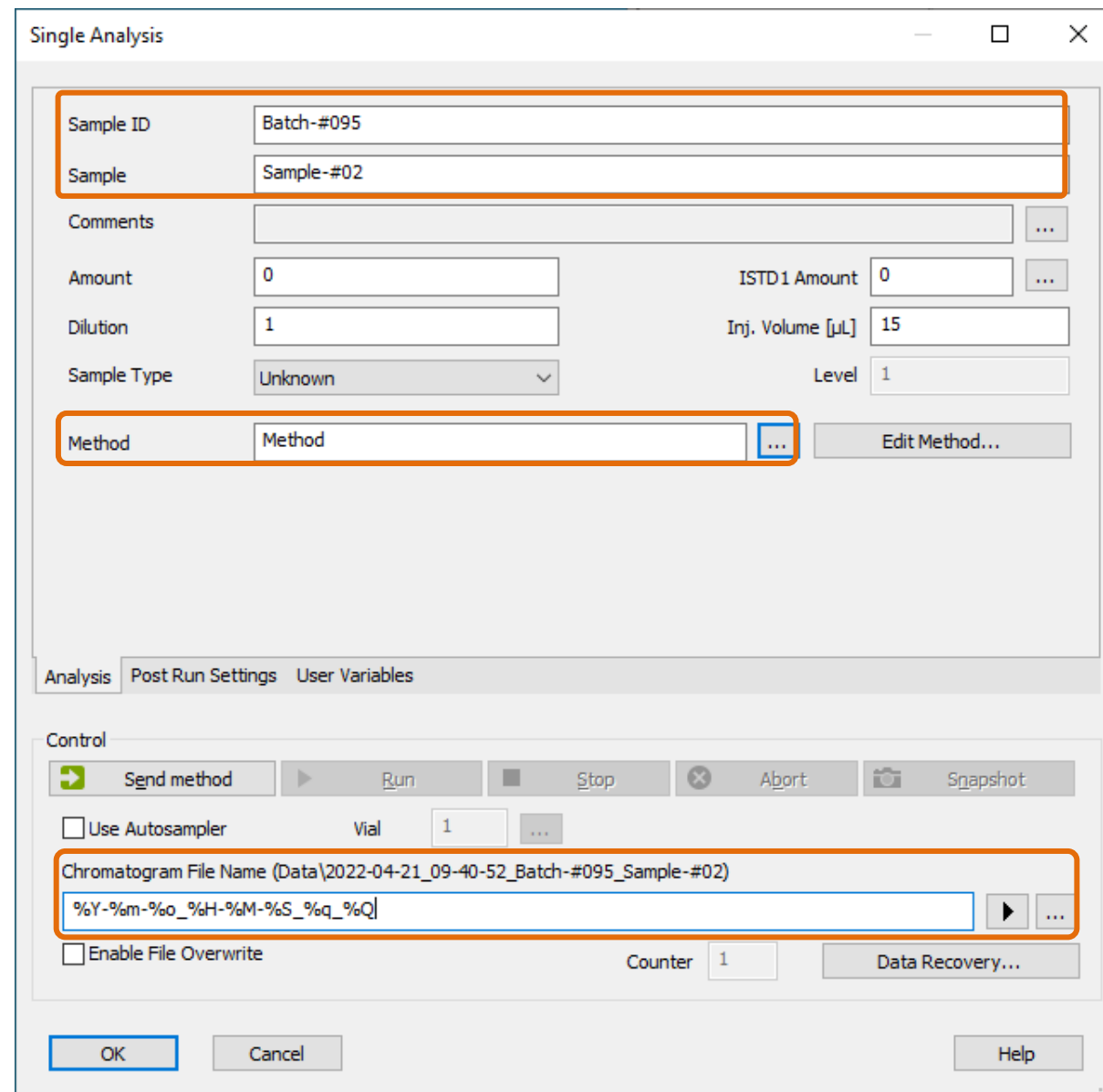
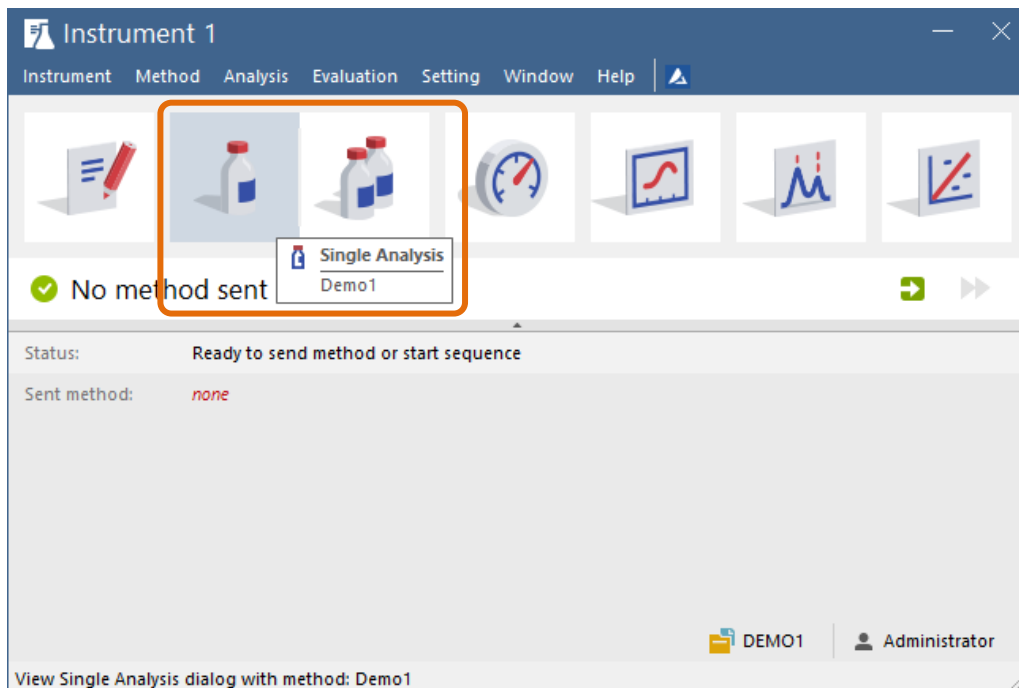
→ The integration parameters from the current chromatogram can be stored as part of a method that can then be used for acquisition of another chromatograms

Save the active method as template



# Single Analysis

- Open Single Analysis dialog
- Select method & enter sample info



# Single Analysis

→ Select default actions after finished analysis

Single Analysis

Open Chromatogram Window  
 Open Calibration Window  
 Print Results  
 Print Results To PDF  
 Export Data  
 Open Chromatogram with stored Calibration  
 Include Chromatogram in SST

Report Style  
Analysis ... Edit...

Export Chromatogram in AIA Format  
 Export Chromatogram in TXT Format  
 Export Chromatogram in EZChrom Ascii Format  
 Export Chromatogram in Multidetector Format

Program to Run  Only with Export  
...  
Parameters  
▶

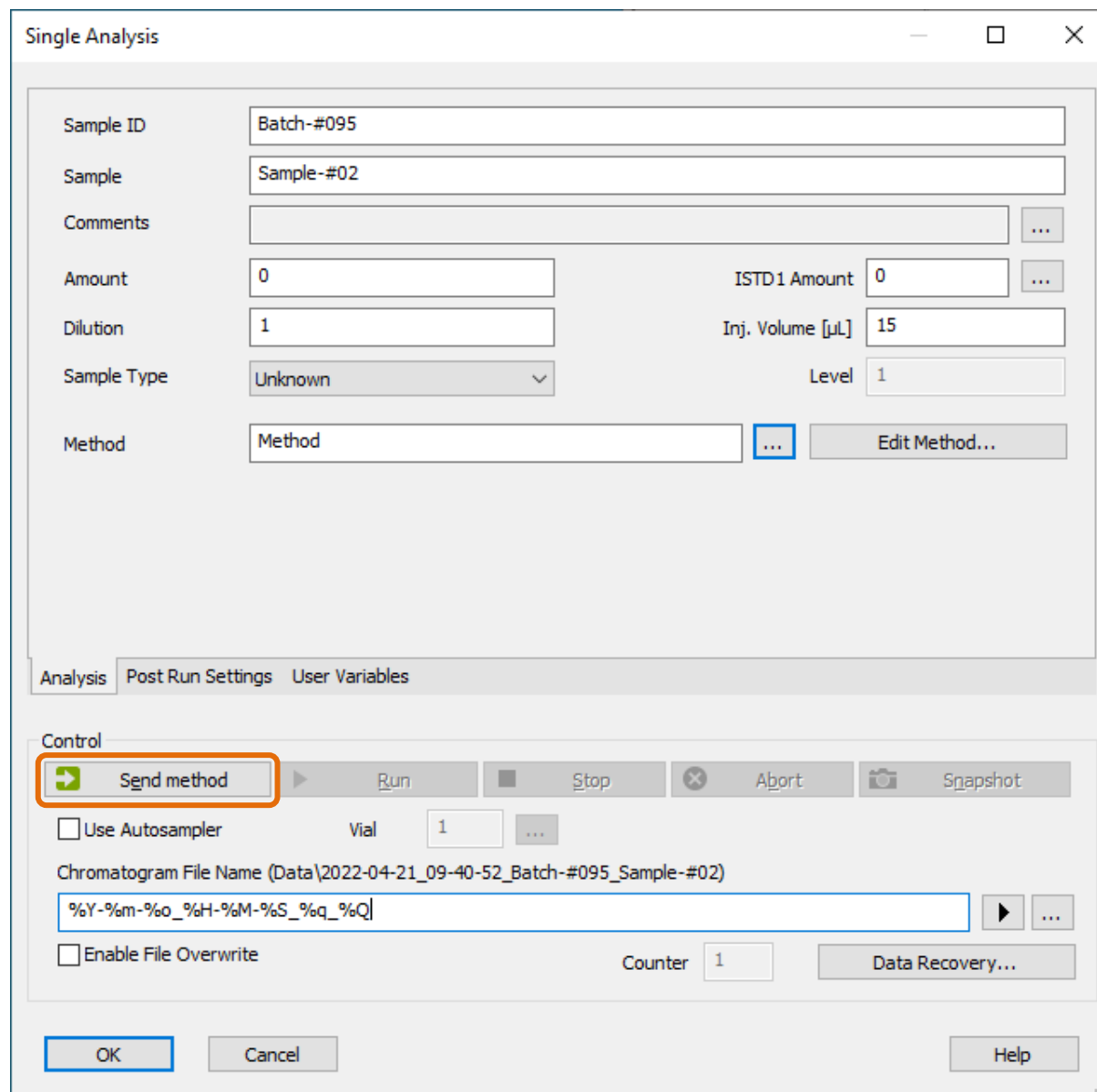
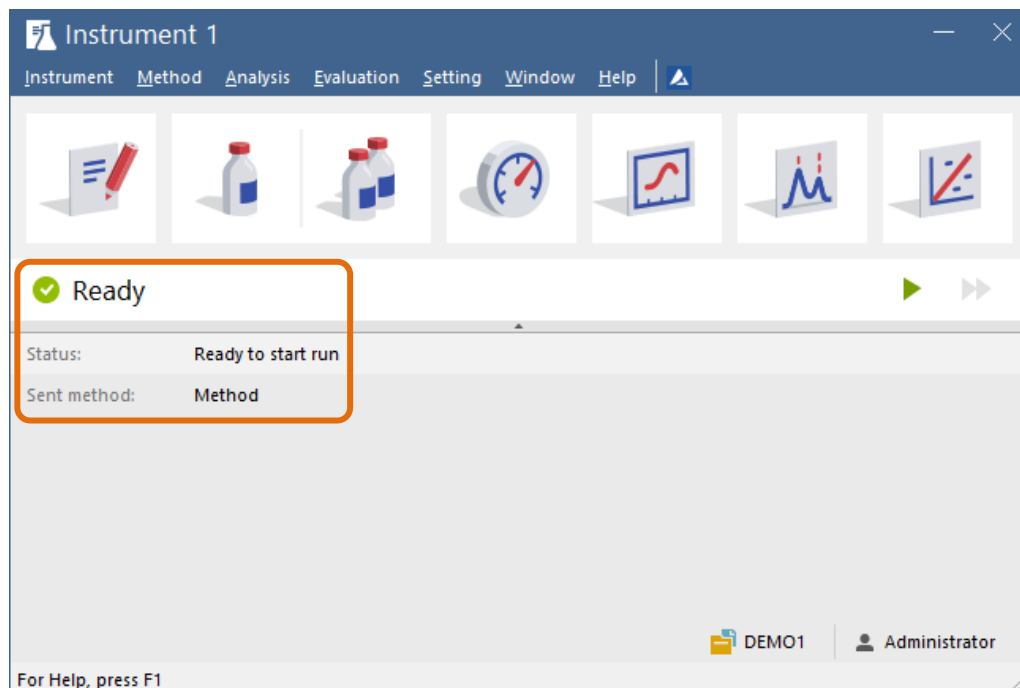
Analysis **Post Run Settings** User Variables

Control  
 Send method ▶ Run Stop Abort Snapshot  
 Use Autosampler Vial 1 ...  
Chromatogram File Name (Calib\2022-04-21\_09-52-36\_Batch-#95-Sample-#02)  
%Y-%m-%o\_%H-%M-%S\_%q-%Q ▶ ...  
 Enable File Overwrite Counter 1 Data Recovery...  
OK Cancel Help



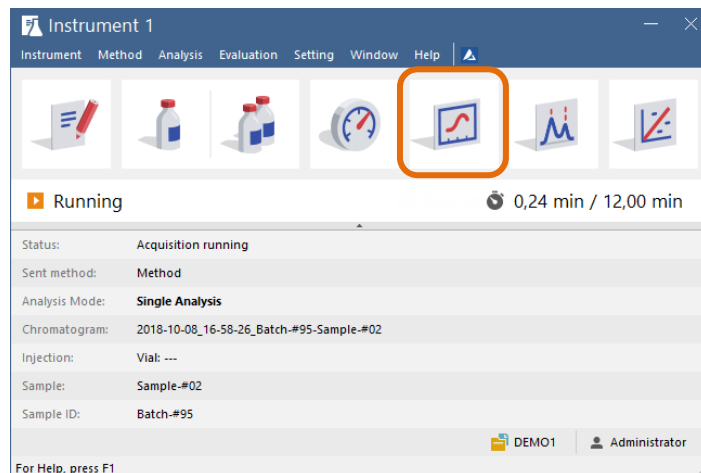
# Single Analysis

➔ Send a method to instrument

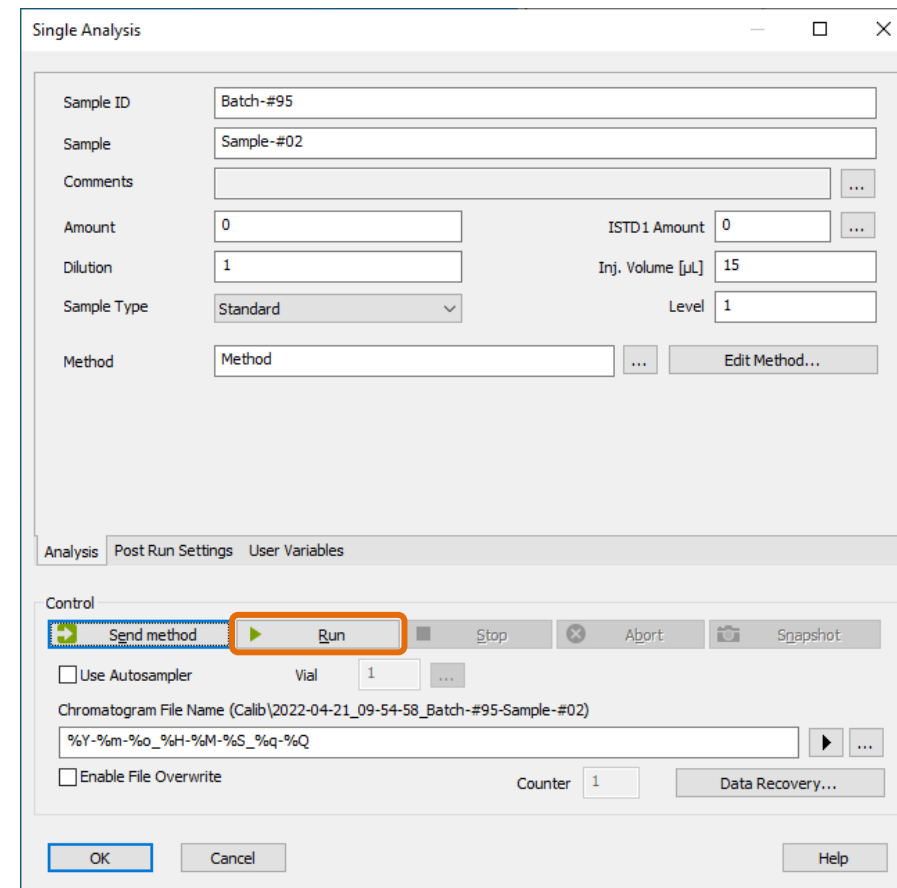
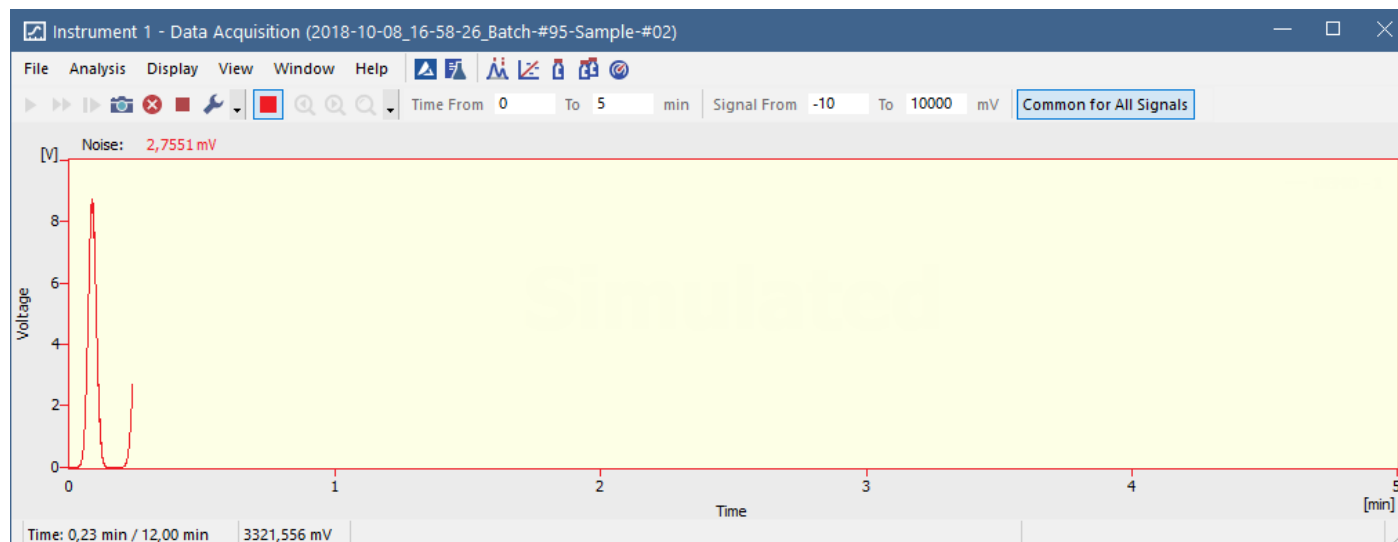


# Single Analysis

→ Run Analysis & watch its progress



→ Click the icon of Data Acquisition window

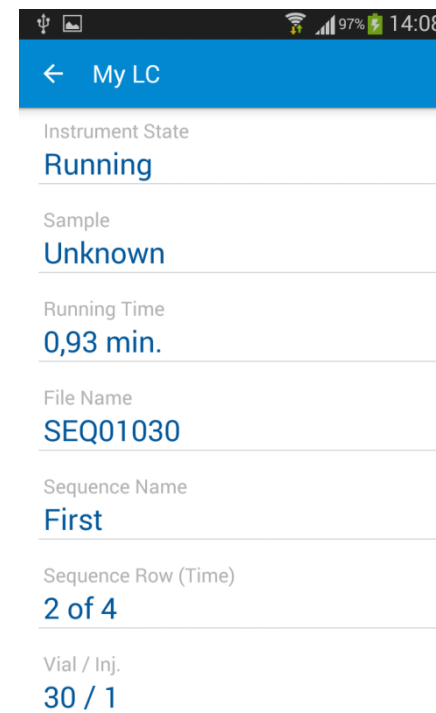
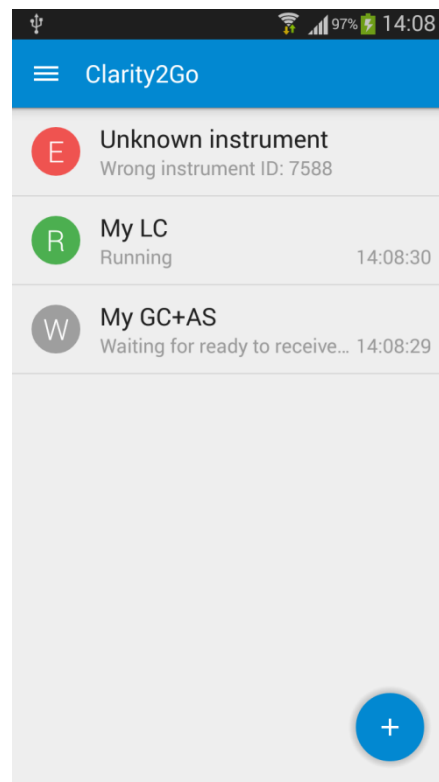


→ Start & stop settings of the analysis are explained in the method development section



# Single Analysis

→ Running analysis can be monitored via mobile device using Clarity2Go application

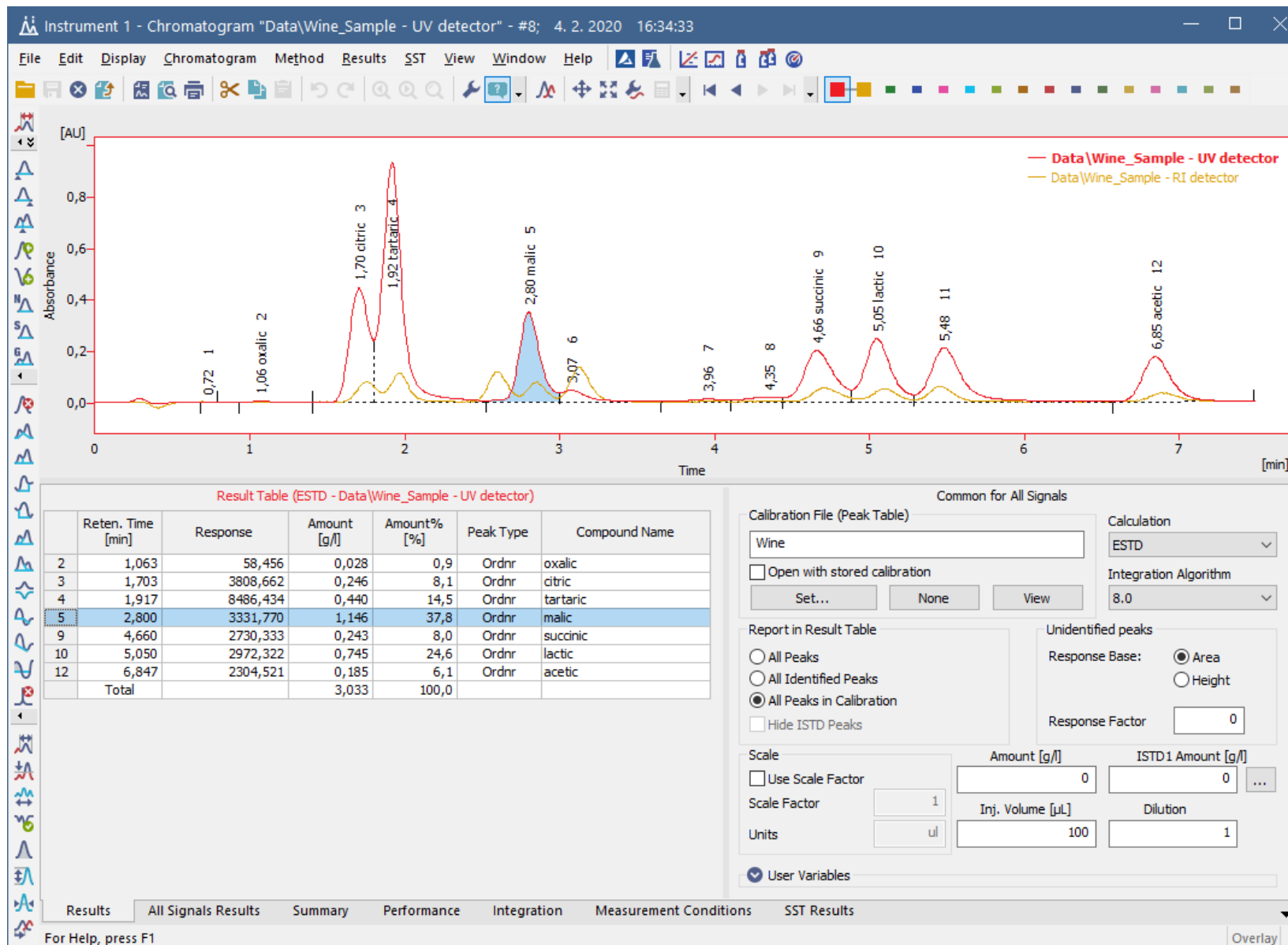






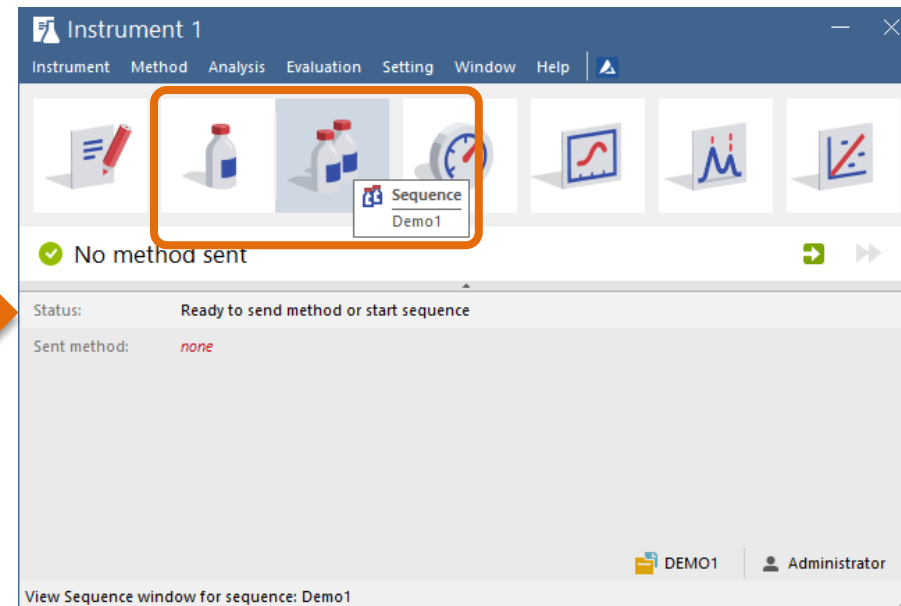
# Single Analysis

- Display results
- Open chromatogram if not set to open automatically
- Click on Results tab to display results
- Edit integration parameters, create groups of peak and/or similar
- Zoom in into graph if you wish to have a detailed section of chromatogram printed in report



# Sequence

- Analyze a large number of samples using an autosampler and the sequence option
- Sequence can be used even when injecting is performed manually





# Sequence

→ Enter vial info → Enter sample info → Select method → Select default actions → Check status → Start sequence

→ Enter Sample ID and File Name

→ Enter injection volumes for Autosampler (if used)

→ Automated actions after each run

The screenshot shows the 'Instrument 1 - Sequence Demo1' software interface. The main window contains a table with the following columns: 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., and Print. The 'Status' column is highlighted in green. The '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.', and 'Print' columns are outlined in orange. The 'Run' column has checkmarks for rows 1-5. The 'Open' column has checkmarks for rows 5 and 6. The 'Open Calib.' column has a checkmark for row 4. The 'Print' column has checkmarks for rows 4 and 6. The status bar at the bottom indicates 'Single Analysis: No method sent - Ready to send method or start sequence Vial: 1 / Inj.: 1'.

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
Ready	✓	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"/>
Ready	✓	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"/>
Ready	✓	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"/>
Ready	✓	4	4	1	Halocarbons	Std_4	5,000	2,000	1,000	5,000	%Q	Standard	4	Demo1	Calibration	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ready	✓	5	8	2	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"/>
Ready																<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

→ Status Ready or with errors

→ Start Vial, End Vial and number of injections per Vial

→ Select a method



## Creating a calibration

- Calibration is stored in calibration file
- Allows us to identify a component and determine its amount in a sample by relating Retention Time (RT) & Compound Name and Response (Area or Height) & Amount
- Acquire First Chromatogram
- Optimize Automated Integration Parameters in Method
- Store Method for Future Analyses



# BASIC OPERATIONS → CALIBRATION → CREATING A CALIBRATION FILE

Instrument 1 - Chromatogram "Wine\_Sample - UV detector" (MODIFIED)

File Edit Display Chromatogram Method Results SST View Window Help

Result Table (ESTD - Wine\_Sample - UV detector)

Reten. Time [min]	Response	Amount [g/l]	Amount% [%]	Peak Type	Compound Name
2	1,063	58,456	0,028	0,9	Ordnr oxalic
3	1,703	3808,662	0,246	8,1	Ordnr citric
4	1,917	8486,434	0,440	14,5	Ordnr tartaric
5	2,800	3331,770	1,146	37,8	Ordnr malic
9	4,660	273,333	0,243	8,0	Ordnr succinic
10	5,050	2972,522	0,745	24,6	Ordnr lactic
12	6,847	2304,521	0,185	6,1	Ordnr acetic
Total		3,033	100,0		

Common for All Signals

Calibration File (Peak Table): Wine

Open with stored calibration

Calculation: ESTD

Integration Algorithm: 8.0

Report in Result Table:

- All Peaks
- All Identified Peaks
- All Peaks in Calibration
- Hide ISTD Peaks

Unidentified peaks:

Response Base:  Area  Height

Response Factor: 0

Results All Signals Results Summary Performance Integration Measurement Conditions SST Results

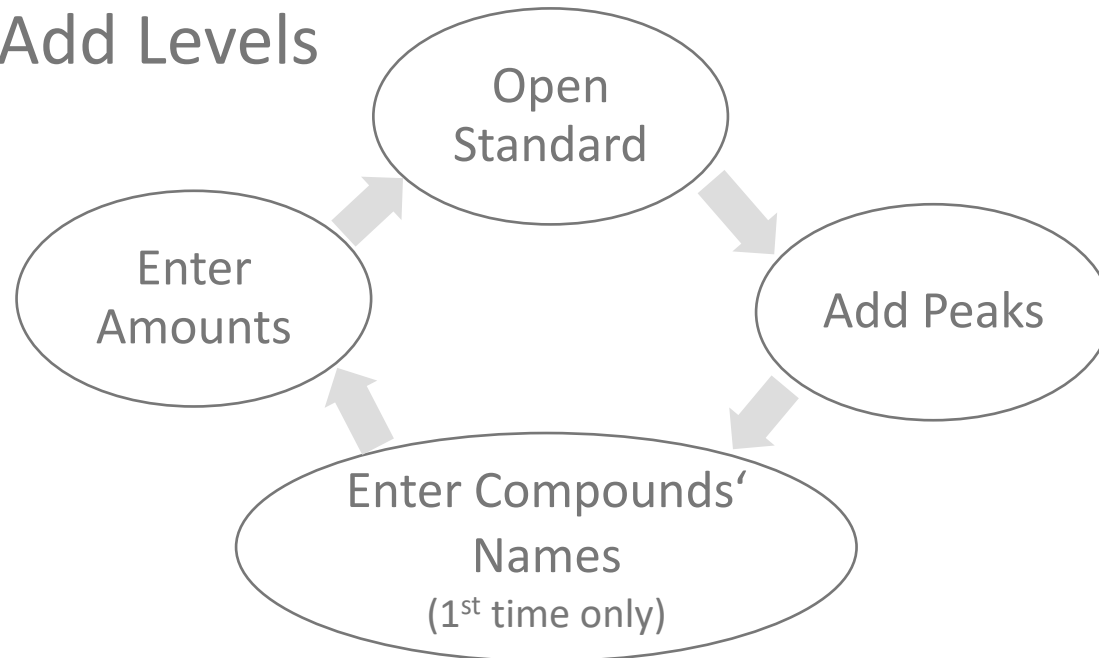
For Help, press F1



→ Acquire chromatograms from known Standards

→ Set Calibration Options

→ Add Levels



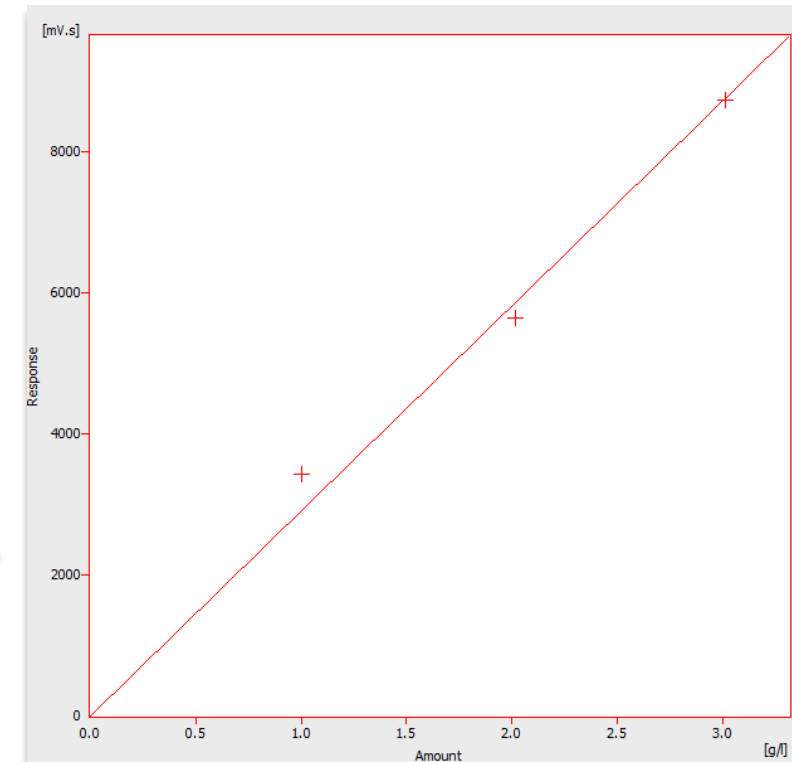
→ Save Calibration File

→ Link to Chromatogram



## Acquire Standards

- Acquire chromatograms of standards containing known compounds with known amounts
- Each standard will add a new point or ,Level' to the calibration curve of each compound
- The calibration relates detector response to the amount of compound





## → Calibration

- Automatic – add all peaks at once
- Manual – necessary to add peaks one by one

## → Units – units' name for result tables

## → Display Mode – ESTD/ISTD

- Related to a proper selection calculations

## → Mode

- Automatic – add new levels
- Recalibrate – for recalibrating selected level

Calibration Options (Calib\Wine) ? X

Calibration Options Defaults

Calibration Description: IEX H form, 9 mM H<sub>2</sub>SO<sub>4</sub>, 0,5 ml/min

Display Mode: ESTD

Number of Signals: 2

Calibration:  Automatic  Manual

Mode:  Calibrate  Recalibrate

Curve Check:  Deviation 0 %  Correlation 0

Apply on:  On All Signals  On Active Signal

Recalibration:  Replace  Average

Compound Units: g/l

No. of Points: 10

Recalibration Search Criteria 1 %

Enable Manual Response Value Change

Update Retention Time

Default Injected Volume 0 µL

Retention Indexes use Log. Interpolation with Unretained Peak

Response Factor as Response / Amount

OK Cancel Help





## → Open chromatogram of a standard

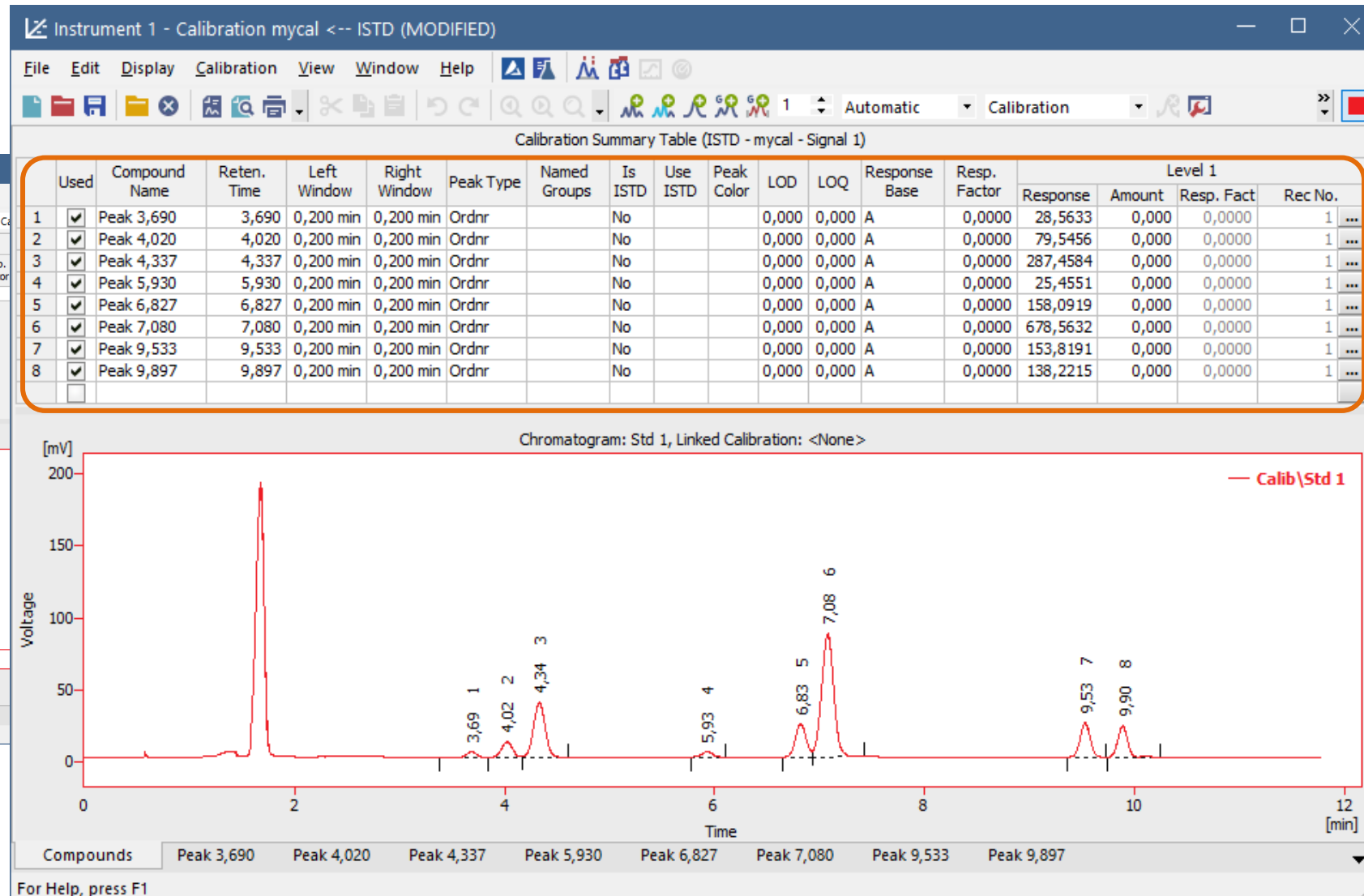
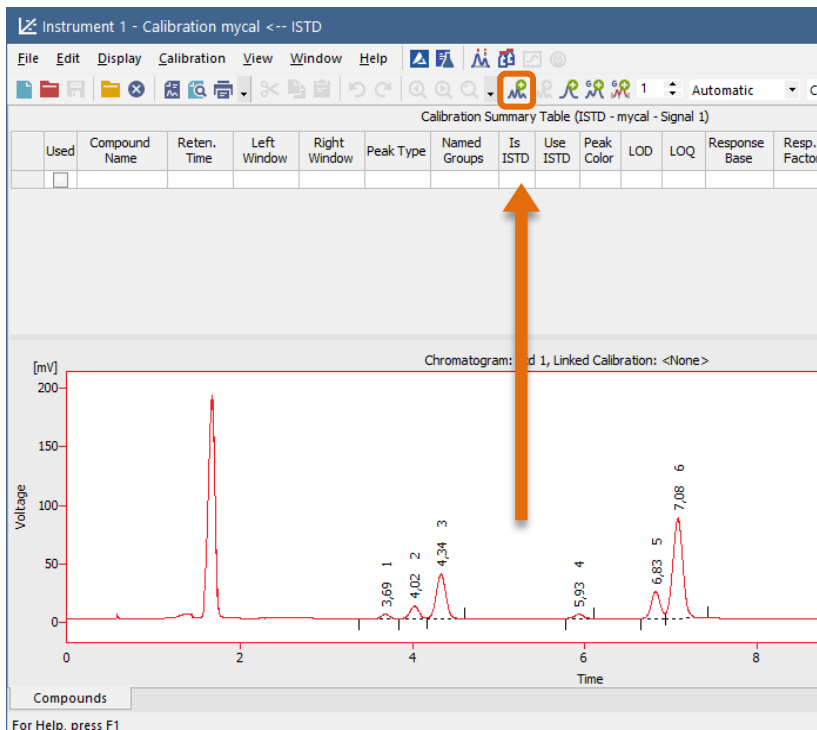
The screenshot displays the software interface for Instrument 1 - Calibration mycal <-- ISTD. It features a menu bar (File, Edit, Display, Calibration, View, Window, Help) and a toolbar with various icons. Below the toolbar is a 'Calibration Summary Table (ISTD - mycal - Signal 1)' with the following columns: Used, Compound Name, Reten. Time, Left Window, Right Window, Peak Type, Named Groups, Is ISTD, Use ISTD, Peak Color, LOD, LOQ, Response Base, Resp. Factor, and Level 1 (Response, Amount, Resp. Fact, Rec No.).

Below the table is a 'Chromatogram: Std 1, Linked Calibration: <None>' plot. The y-axis is labeled 'Voltage [mV]' and ranges from 0 to 200. The x-axis is labeled 'Time [min]' and ranges from 0 to 12. The plot shows several peaks with retention times labeled: 3.69 (1), 4.02 (2), 4.34 (3), 5.93 (4), 6.83 (5), 7.08 (6), 9.53 (7), and 9.90 (8). A legend in the top right corner indicates '— Calib\Std 1'.

An orange arrow points from the 'Open' icon in the Calibration Summary Table to the chromatogram plot.



# ➔ Add peaks chromatogram to Calibration Summary Table





## ➔ Edit generic names of compounds (necessary once only)

The screenshot displays the software interface for Instrument 1 - Calibration mycal <-- ISTD (MODIFIED). It features a 'Calibration Summary Table (ISTD - mycal - Signal 1)' and a 'Chromatogram: Std 1, Linked Calibration: <None>'.

The Calibration Summary Table (ISTD - mycal - Signal 1) is as follows:

Use	Compound Name	Reten. Time	Left Window	Right Window	Peak Type	Named Groups	Is ISTD	Use ISTD	Peak Color	LOD	LOQ	Response Base	Resp. Factor	Level 1			
														Response	Amount	Resp. Fact	Rec No.
1	Chloroform	3,690	0,200 min	0,200 min	Ordnr		No			0,000	0,000	A	0,0000	28,5633	0,000	0,0000	1 ...
2	Trichloroethan	4,020	0,200 min	0,200 min	Ordnr		No			0,000	0,000	A	0,0000	79,5456	0,000	0,0000	1 ...
3	Tetrachlorm...	4,337	0,200 min	0,200 min	Ordnr		No			0,000	0,000	A	0,0000	287,4584	0,000	0,0000	1 ...
4	Trichloroeth...	5,930	0,200 min	0,200 min	Ordnr		No			0,000	0,000	A	0,0000	25,4551	0,000	0,0000	1 ...
5	Bromodichlor...	6,827	0,200 min	0,200 min	Ordnr		No			0,000	0,000	A	0,0000	158,0919	0,000	0,0000	1 ...
6	ISTD	7,080	0,200 min	0,200 min	Ordnr		No			0,000	0,000	A	0,0000	678,5632	0,000	0,0000	1 ...
7	Tetrachloroe...	9,533	0,200 min	0,200 min	Ordnr		No			0,000	0,000	A	0,0000	153,8191	0,000	0,0000	1 ...
8	Dibromochlo...	9,897	0,200 min	0,200 min	Ordnr		No			0,000	0,000	A	0,0000	138,2215	0,000	0,0000	1 ...

The Chromatogram (Std 1, Linked Calibration: <None>) shows Voltage [mV] on the y-axis (0 to 200) and Time [min] on the x-axis (0 to 12). The chromatogram displays several peaks labeled with their retention times: 3,69 (1), 4,02 (2), 4,34 (3), 5,93 (4), 6,83 (5), 7,08 (6), 9,53 (7), and 9,90 (8). A legend indicates 'Calib\Std 1'.

The 'Compounds' list at the bottom of the chromatogram window includes: Chloroform, Trichloroethane, Tetrachlormethane, Trichloroethylene, Bromodichloroethane, ISTD, and Tetrachloroethylene.



# → Enter amounts in Amount column (necessary to repeat for each calibration level)

Instrument 1 - Calibration mycal <-- ISTD (MODIFIED)

File Edit Display Calibration View Window Help

Automatic Calibration

Calibration Summary Table (ISTD - mycal - Signal 1)

Used	Compound Name	Reten. Time	Left Window	Right Window	Peak Type	Named Groups	Is ISTD	Use ISTD	Peak Color	LOD	LOQ	Response Base	Resp. Factor	Response	Amount	Resp. Fact	Rec No.
1	Chloroform	3,690	0,200 min	0,200 min	Ordnr		No			0,000	0,000	A	0,0000	28,5633	0,400	0,0140	1
2	Trichloroethan	4,020	0,200 min	0,200 min	Ordnr		No			0,000	0,000	A	0,0000	79,5456	0,400	0,0050	1
3	Tetrachlormeth...	4,337	0,200 min	0,200 min	Ordnr		No			0,000	0,000	A	0,0000	287,4584	0,400	0,0014	1
4	Trichloroeth...	5,930	0,200 min	0,200 min	Ordnr		No			0,000	0,000	A	0,0000	25,4511	0,400	0,0157	1
5	Bromodichlor...	6,827	0,200 min	0,200 min	Ordnr		No			0,000	0,000	A	0,0000	158,0919	0,400	0,0025	1
6	ISTD	7,080	0,200 min	0,200 min	Ordnr		No			0,000	0,000	A	0,0000	678,5633	2,000	0,0029	1
7	Tetrachloroe...	9,533	0,200 min	0,200 min	Ordnr		No			0,000	0,000	A	0,0000	153,8191	0,400	0,0026	1
8	Dibromochlo...	9,897	0,200 min	0,200 min	Ordnr		No			0,000	0,000	A	0,0000	138,2215	0,400	0,0029	1

Chromatogram: Std 1, Linked Calibration: <None>

Compounds: Chloroform Trichloroethane Tetrachloromethane Trichloroethylene Bromodichloroethane ISTD Tetrachloroethylene

Instrument 1 - Calibration mycal <-- ISTD (MODIFIED)

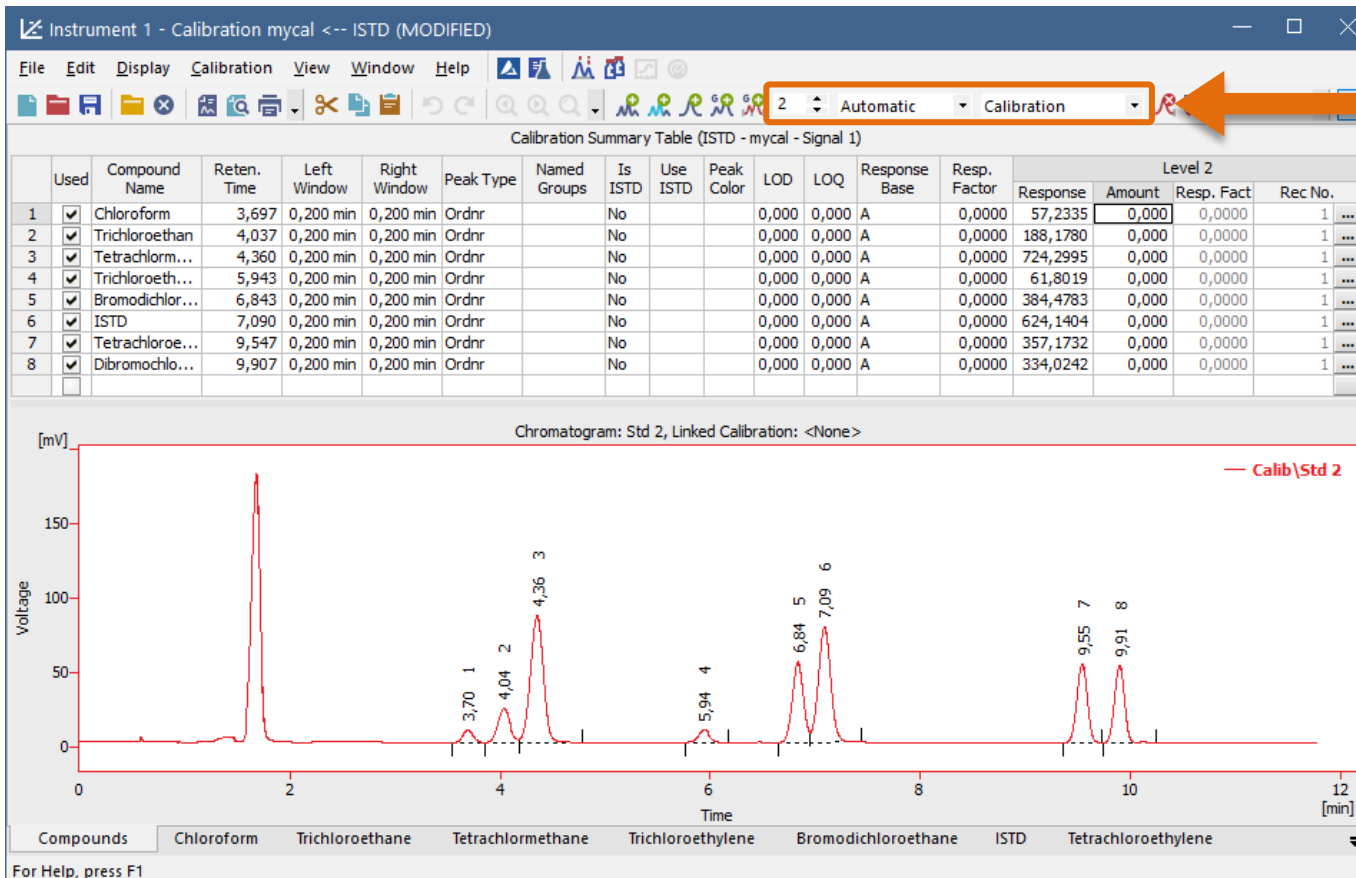
File Edit Display Calibration View Window Help

Automatic Calibration

Used	Compound Name	Reten. Time	Left Window	Right Window	Peak Type	Named Groups	Is ISTD	Use ISTD	Peak Color	LOD	LOQ	Response Base	Resp. Factor	Response	Amount	Resp. Fact	Rec No.
1	Chloroform	3,690	0,200 min	0,200 min	Ordnr		No			0,000	0,000	A	0,0000	28,5633	0,400	0,0140	1
2	Trichloroethan	4,020	0,200 min	0,200 min	Ordnr		No			0,000	0,000	A	0,0000	79,5456	0,400	0,0050	1
3	Tetrachlormeth...	4,337	0,200 min	0,200 min	Ordnr		No			0,000	0,000	A	0,0000	287,4584	0,400	0,0014	1
4	Trichloroeth...	5,930	0,200 min	0,200 min	Ordnr		No			0,000	0,000	A	0,0000	25,4511	0,400	0,0157	1
5	Bromodichlor...	6,827	0,200 min	0,200 min	Ordnr		No			0,000	0,000	A	0,0000	158,0919	0,400	0,0025	1
6	ISTD	7,080	0,200 min	0,200 min	Ordnr		No			0,000	0,000	A	0,0000	678,5633	2,000	0,0029	1
7	Tetrachloroe...	9,533	0,200 min	0,200 min	Ordnr		No			0,000	0,000	A	0,0000	153,8191	0,400	0,0026	1
8	Dibromochlo...	9,897	0,200 min	0,200 min	Ordnr		No			0,000	0,000	A	0,0000	138,2215	0,400	0,0029	1



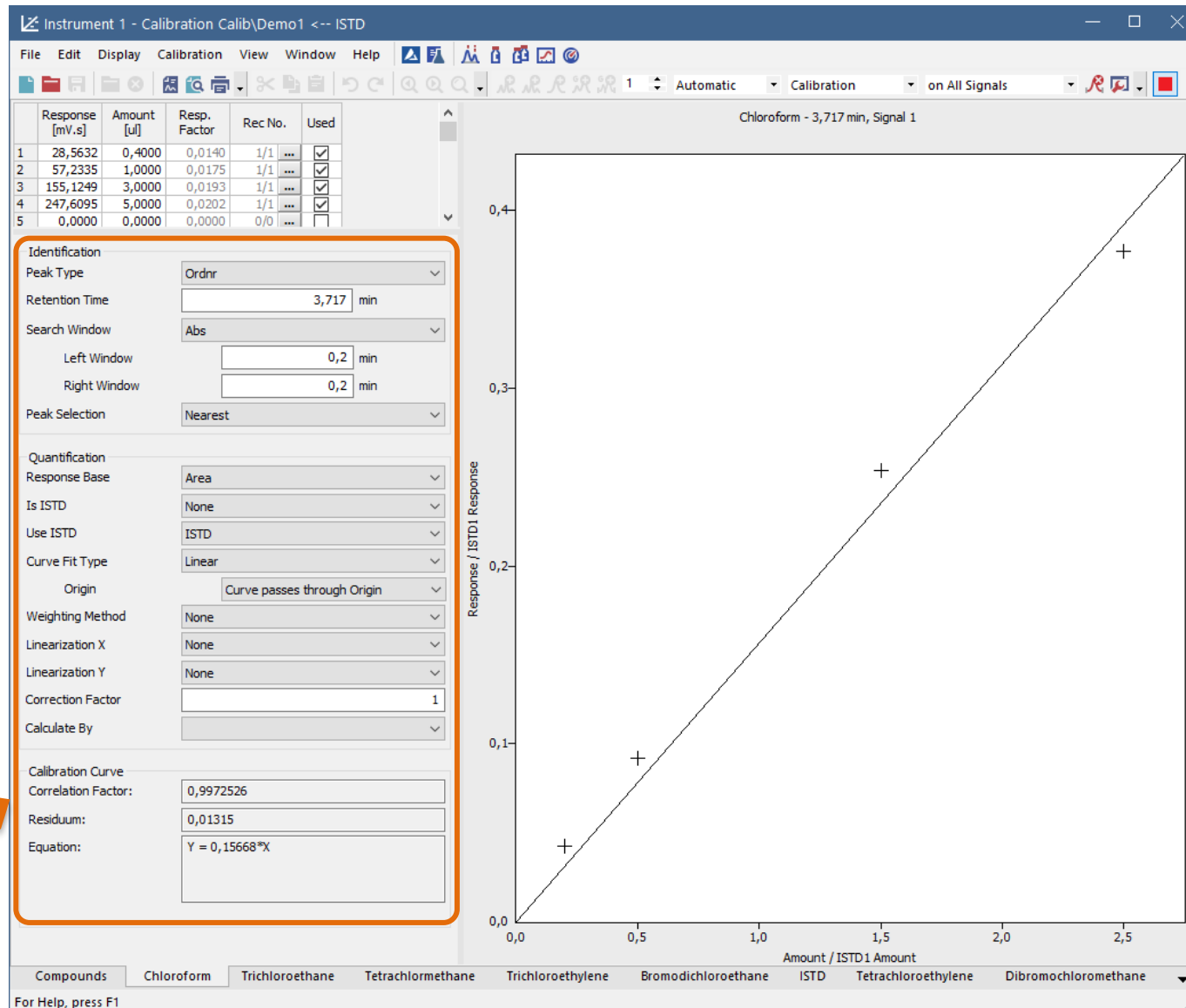
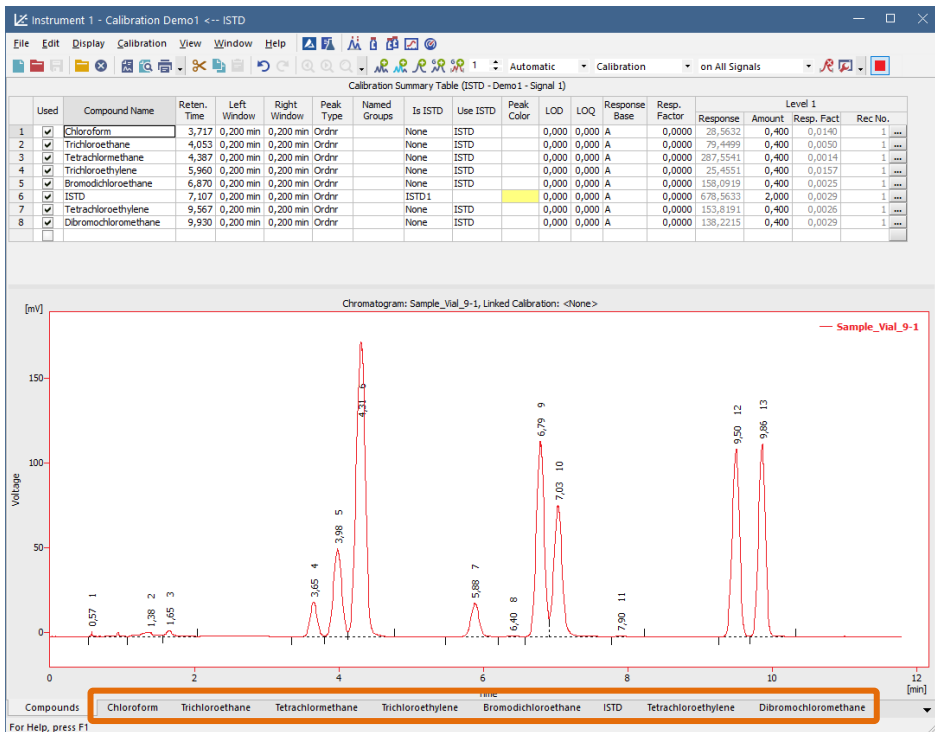
- Repeat this process of adding peaks from standards on multiple levels to build up a multilevel (multipoint) calibration
- Similarly repeat this process on a single level to build up a calibration with replicated/repeated injections of the same standard



- With such setting of calibration the peaks will be added to next empty level
- New calibration level is then created this way



# BASIC OPERATIONS → CALIBRATION → CREATING A CALIBRATION FILE → COMPOUNDS' TABS



→ Click on the tabs to see calibration curve for each compound

→ Set options for the calibration curve of individual compound



# BASIC OPERATIONS → CALIBRATION → CREATING A CALIBRATION FILE → SAVING OF A CALIBRATION

Instrument 1 - Calibration Calib\Demo1 <-- ISTD (MODIFIED)

File Edit Display Calibration View Window Help

Calibration Summary Table (ISTD - Calib\Demo1 - Signal 1)

Use	Compound Name	Reten. Time	Left Window	Right Window	Peak Type	Named Groups	Is ISTD	Use ISTD	Peak Color	LOD	LOQ	Response Base	Manual Resp. Factor	Level 1			
														Response	Amount	Resp. Fact	Rec No.
<input checked="" type="checkbox"/>	Chloroform	3,717	0,200 min	0,200 min	Ordnr		None	ISTD		0,000	0,000	A	0,0000	28,5632	0,400	0,0140	1/1 ...
<input checked="" type="checkbox"/>	Trichloroethane	4,053	0,200 min	0,200 min	Ordnr		None	ISTD		0,000	0,000	A	0,0000	79,4499	0,400	0,0050	1/1 ...
<input checked="" type="checkbox"/>	Tetrachlormethane	4,387	0,200 min	0,200 min	Ordnr		None	ISTD		0,000	0,000	A	0,0000	287,5541	0,400	0,0014	1/1 ...
<input checked="" type="checkbox"/>	Trichloroethylene	5,960	0,200 min	0,200 min	Ordnr		None	ISTD		0,000	0,000	A	0,0000	25,4551	0,400	0,0157	1/1 ...
<input checked="" type="checkbox"/>	Bromodichloroethane	6,870	0,200 min	0,200 min	Ordnr		None	ISTD		0,000	0,000	A	0,0000	158,0919	0,400	0,0025	1/1 ...
<input checked="" type="checkbox"/>	ISTD	7,107	0,200 min	0,200 min	Ordnr		ISTD 1			0,000	0,000	A	0,0000	678,5633	2,000	0,0029	1/1 ...
<input checked="" type="checkbox"/>	Tetrachloroethylene	9,567	0,200 min	0,200 min	Ordnr		None	ISTD		0,000	0,000	A	0,0000	153,8191	0,400	0,0026	1/1 ...
<input checked="" type="checkbox"/>	Dibromochloromethane	9,930	0,200 min	0,200 min	Ordnr		None	ISTD		0,000	0,000	A	0,0000	138,2215	0,400	0,0029	1/1 ...

Chromatogram: Sample\_Vial\_9-1, Linked Calibration: <None>

Click on the icon to save the calibration

Compounds: Chloroform Trichloroethane Tetrachlormethane Trichloroethylene Bromodichloroethane ISTD Tetrachloroethylene Dibromochloromethane

For Help, press F1



# BASIC OPERATIONS → CALIBRATION → LINKING TO CHROMATOGRAM

**Result Table (Uncal - Data\Sample\_Vial\_8-1)**

Reten. Time [min]	Area [mV.s]	Height [mV]	Area [%]	Height [%]	W05 [min]	Compound Name
0,580	3,217	2,335	0,1	0,7	0,02	
0,940	1,451	0,714	0,1	0,2	0,03	
1,380	32,441	2,595	1,3	0,8	0,16	
1,650	30,590	4,036	1,2	1,3	0,09	
3,650	56,395	8,050	2,3	2,5	0,11	
3,980	168,916	20,719	6,8	6,4	0,13	
4,300	615,509	72,408	24,7	22,5	0,14	
5,887	61,429	7,528	2,5	2,3	0,13	
6,790	338,621	44,742	13,6	13,9	0,12	
7,040	575,336	71,065	23,1	22,0	0,12	
9,500	314,014	44,872	12,6	13,9	0,11	
9,860	290,385	43,461	11,7	13,5	0,11	
Total	2488,302	322,524	100,0	100,0		

**Result Table (ISTD - Data\Sample\_Vial\_8-1)**

Reten. Time [min]	Response	Amount [ul]	Amount% [%]	Peak Type	Compound Name
1	0,580	3,217	0,000	0,0	
2	0,940	1,451	0,000	0,0	
3	1,380	32,441	0,000	0,0	
4	1,650	30,590	0,000	0,0	
5	3,650	56,395	1,251	14,5	Ordnr (by IST Chloroform
6	3,980	168,916	1,222	14,1	Ordnr (by IST Trichloroethane
7	4,300	615,509	1,268	14,7	Ordnr (by IST Tetrachlormethane
8	5,887	61,429	1,234	14,3	Ordnr (by IST Trichloroethylene
9	6,790	338,621	1,202	13,9	Ordnr (by IST Bromodichloroethane
10	7,040	575,336	ISTD	ISTD 1	ISTD
11	9,500	314,014	1,261	14,6	Ordnr (by IST Tetrachloroethylene
12	9,860	290,385	1,210	14,0	Ordnr (by IST Dibromochloromethane
Total		8,648	100,0		

→ Select a calibration file to link to the chromatogram

→ The compounds will be identified and their amounts in sample will be calculated

→ The calibration should be preferably linked in a Method that was used for acquisition of the chromatogram





# Analysis report

Single Analysis

- Open Chromatogram Window
- Open Calibration Window
- Print Results
- Print Results To PDF
- Open Chromatogram with stored Calibration
- Include Chromatogram in SST
- Export Chromatogram in AIA Format
- Export Chromatogram in TXT Format
- Export Chromatogram in EZChrom Ascii Format
- Export Chromatogram in Multidetector Format

Program to Run  Only with Export

Parameters

Analysis: **Post Run Settings** User Variables

Control

Use Autosampler

Chromatogram File Name (Calb)2022-04-21\_09-58-44\_Batch-#95-Sample-#02

Enable File Overwrite

Counter 1 Data Recovery...

OK Cancel Help

Instrument 1 - Sequence Demo1

File Edit Sequence View Window Help

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"/>

1/16/2013 1:00 PM Chromatogram: C:\Clarity\DEMO01\Data\Per01.PRM Page 1 of 2

**my LAB**  
New street, 23  
Prague 10

Chromatogram Info:  
File Name : C:\Clarity\DEMO01\Data\Per01.PRM File Created : 10/30/2007 8:19:32 AM  
Origin : Save File C:\Clarity\_2\_6\DEMO01\DATA\Per01.prm Acquired Date : 1/16/1995 2:16:00 PM  
Project : C:\Clarity\Projects\DEMO01.PR

Retain. Time [min]	Response	Amount [g/kg]	Amount [%]	Peak Type	Compound Name
1	1.187	0.703	0.000	0.0	
2	1.763	0.632	0.000	0.0	
4	2.305	157.639	3.233	100.0	Ordnr ETHANOL
4	2.557	1.307	0.000	0.0	
5	2.860	42.530	1.570	157.0	ISTD T-BUTANOL
Total		3.233	100.0		

Retain. Time [min]	Response	Amount [g/kg]	Amount [%]	Peak Type	Compound Name
1	1.187	0.768	0.000	0.0	
2	1.763	0.618	0.000	0.0	
4	2.302	33.049	0.647	16.2	Ordnr ETHANOL
4	2.552	1.595	0.000	0.0	
5	2.857	44.520	1.570	157.0	ISTD T-BUTANOL
Total		4.000	4.000	16.2	

6/2013 12:46:25 PM

Calibrate

Average

0.25

0.00%

Not Used

Peak Color	LOD	LOQ	RB	Resp. Factor
	0.000	0.000	A	0.0000
	0.000	0.000	A	0.0000

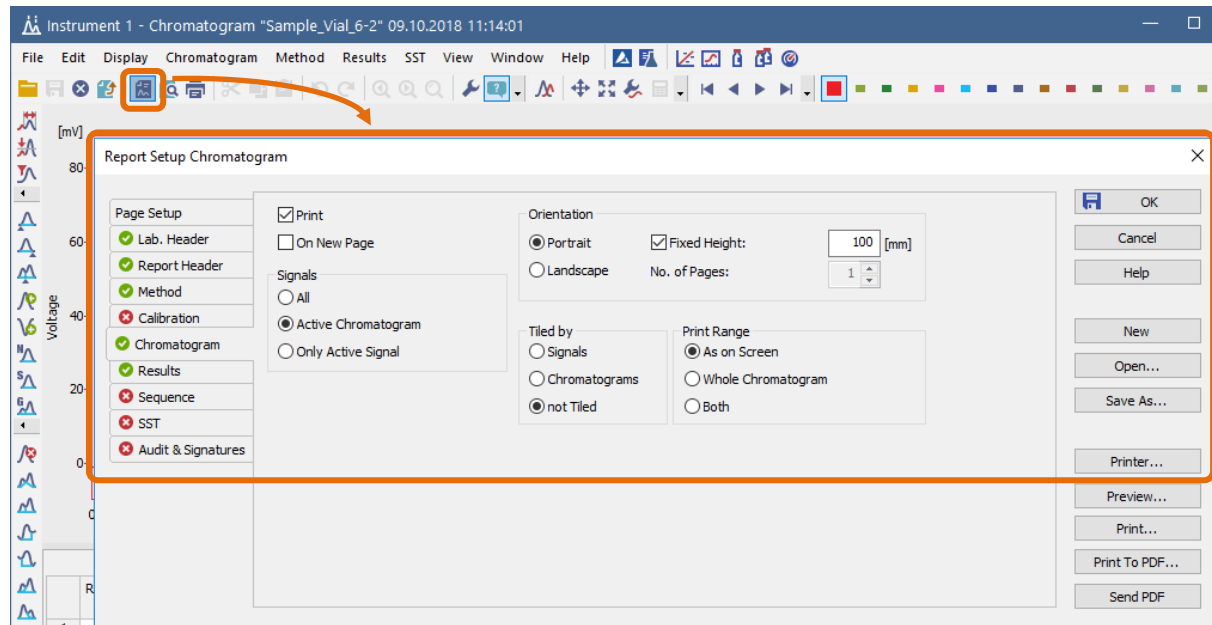
Instrument 1 - Chromatogram "Sample\_Vial\_6-2" 09.10.2013 11:14:01

File Edit Display Chromatogram Method Results SST View Window Help

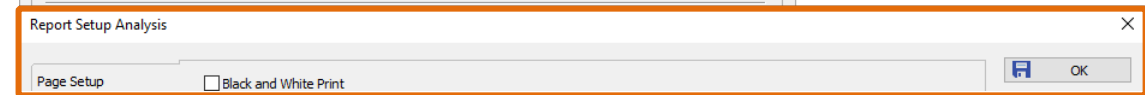
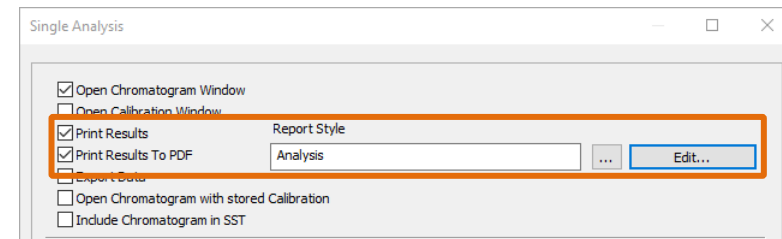
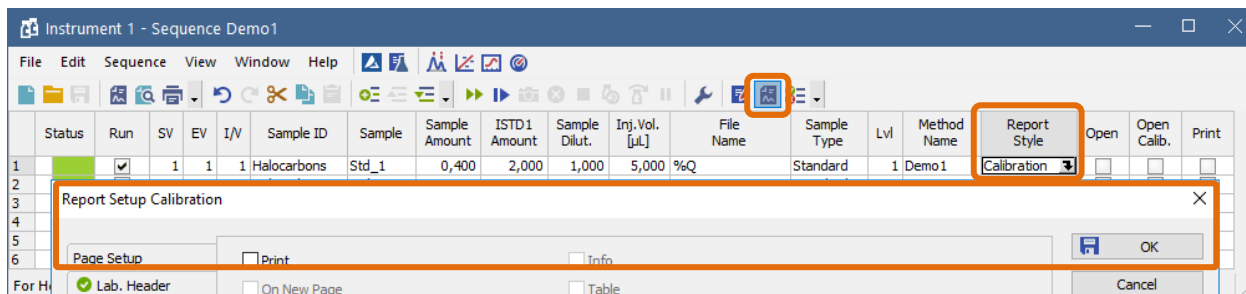
For Help, press F1



# Analysis report



- Each window (Chromatogram, Calibration etc.) has its own specific setup and contents in the Report
- Report style can be saved as .sty file (COMMON folder)





**...THANK YOU FOR YOUR TIME**



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[WWW.DATAAPEX.COM](http://WWW.DATAAPEX.COM)