



# **SST – SYSTEM SUITABILITY TEST**

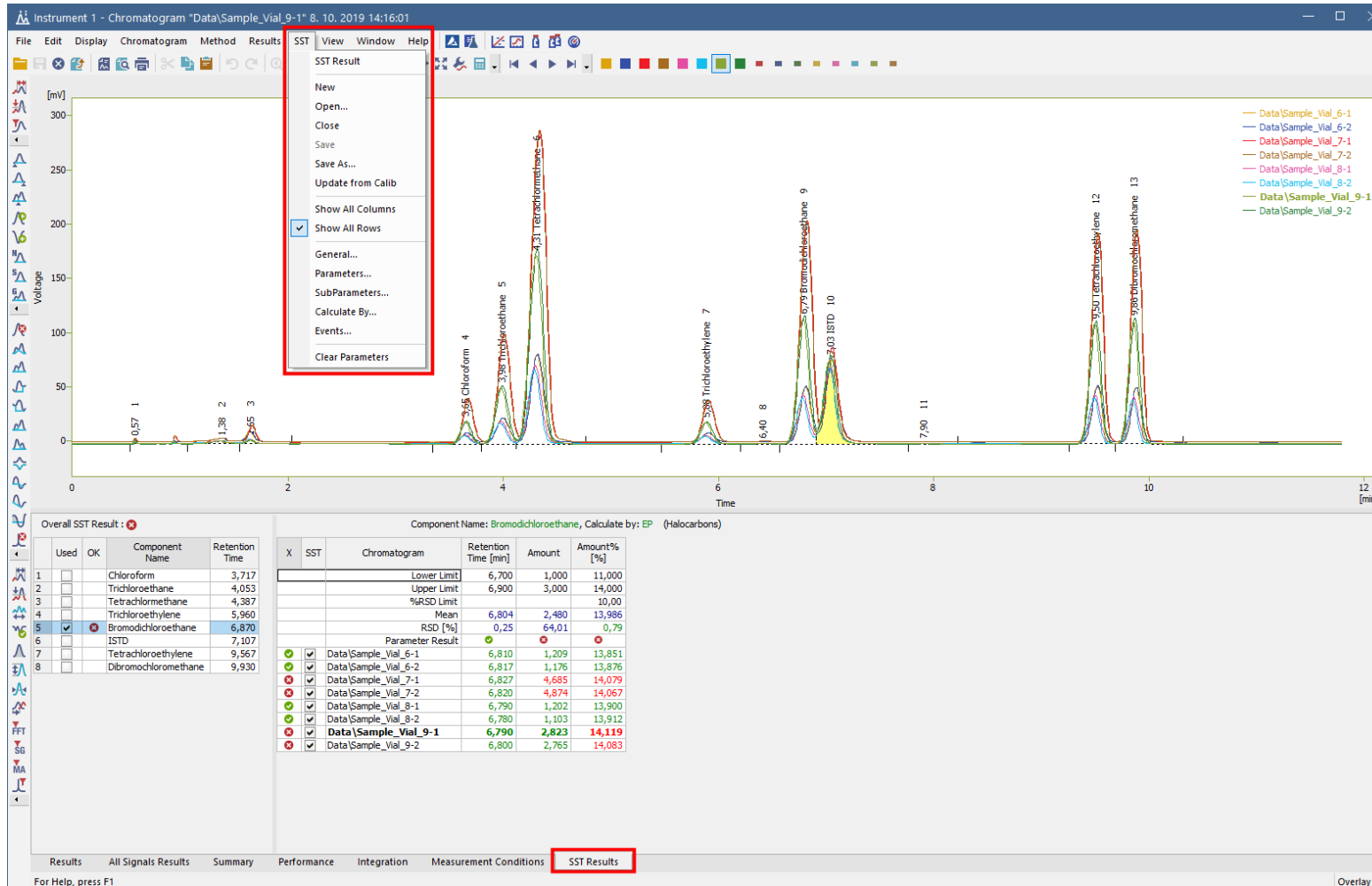
## **CLARITY EXTENSION**

P022/80F 01/2023

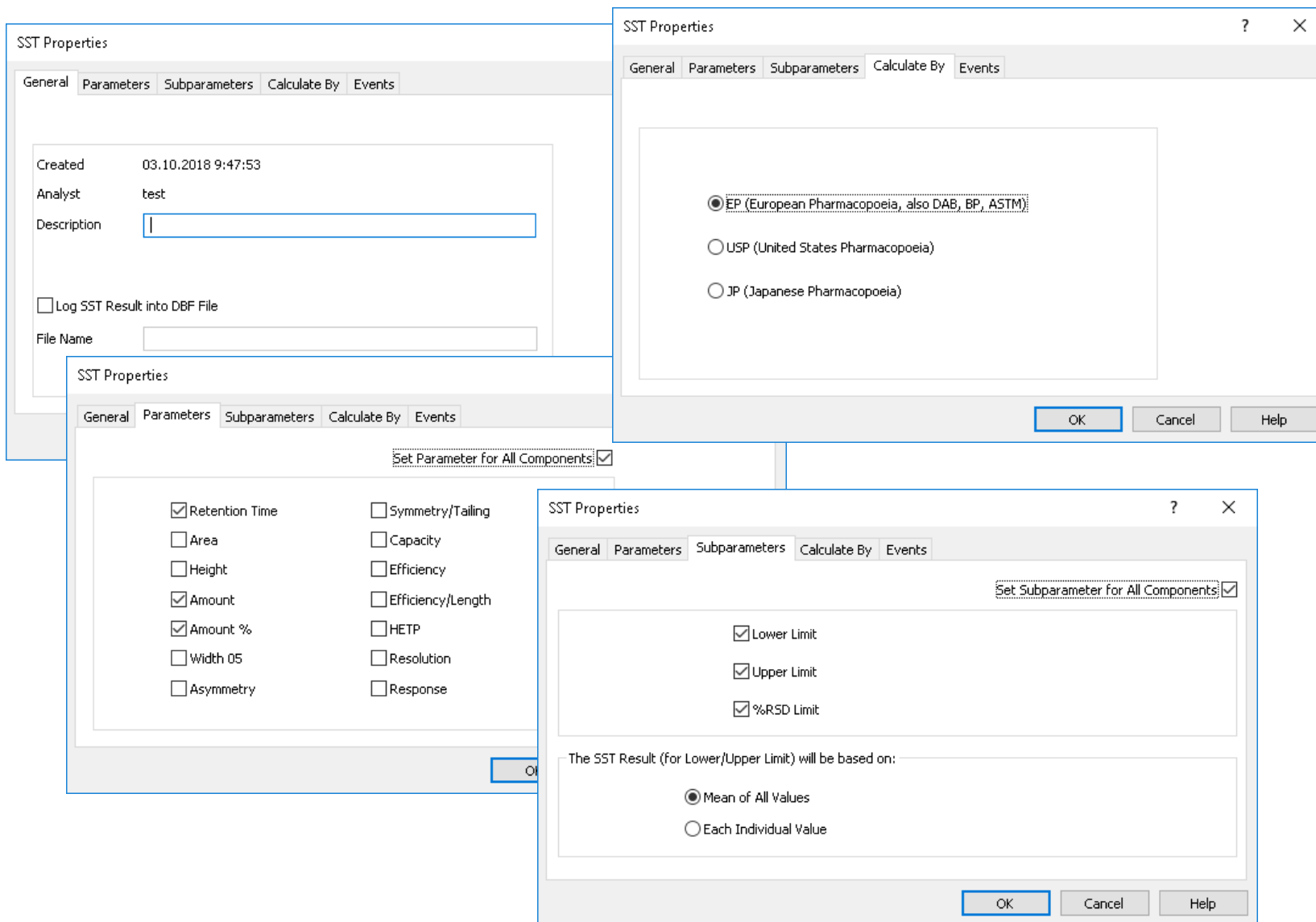


# System suitability test overview

- **Statistical evaluation** of selected values (Average, RSD)
- **Comparison** to pre-set **criteria** (Pass/Fail testing)
- **Actions** based on **Pass/Fail** results
- **Enabled by User Code**
- Accessible from menu in the Chromatogram window
- For **identified compounds** only (based on calibration)



- Dedicated SST menu
- SST Results tab for the sole purpose of the SST calculations



- **SST properties** allow to further set additional **parameters and conditions** for evaluation
- **USP** has changed from 1.12.2022 due to normalization with EP, necessary changes in Clarity will be done during 1st half of 2023

Method Setup Demo1 (MODIFIED)

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

Common for all detectors

Name	Type	Input				Output	
		Source	Input	Value	Units	Output Type	Output
1	SST OK						
2							

Acq End  
Run End  
Control Elapsed  
HW Error  
User Abort  
Close Instrument  
SST OK  
SST Unknown  
SST Failure

Event Table Measurement Acquisition Integration Calculation

OK Cancel

SST Properties

General Parameters Subparameters Calculate By Events

Invoke SST Events: Each Injection

If SST result is PASSED

Stop Sequence

Run External Program:

If SST result is NOT RUN

Stop Sequence

Run External Program:

If SST result is FAILED

Stop Sequence

Run External Program:

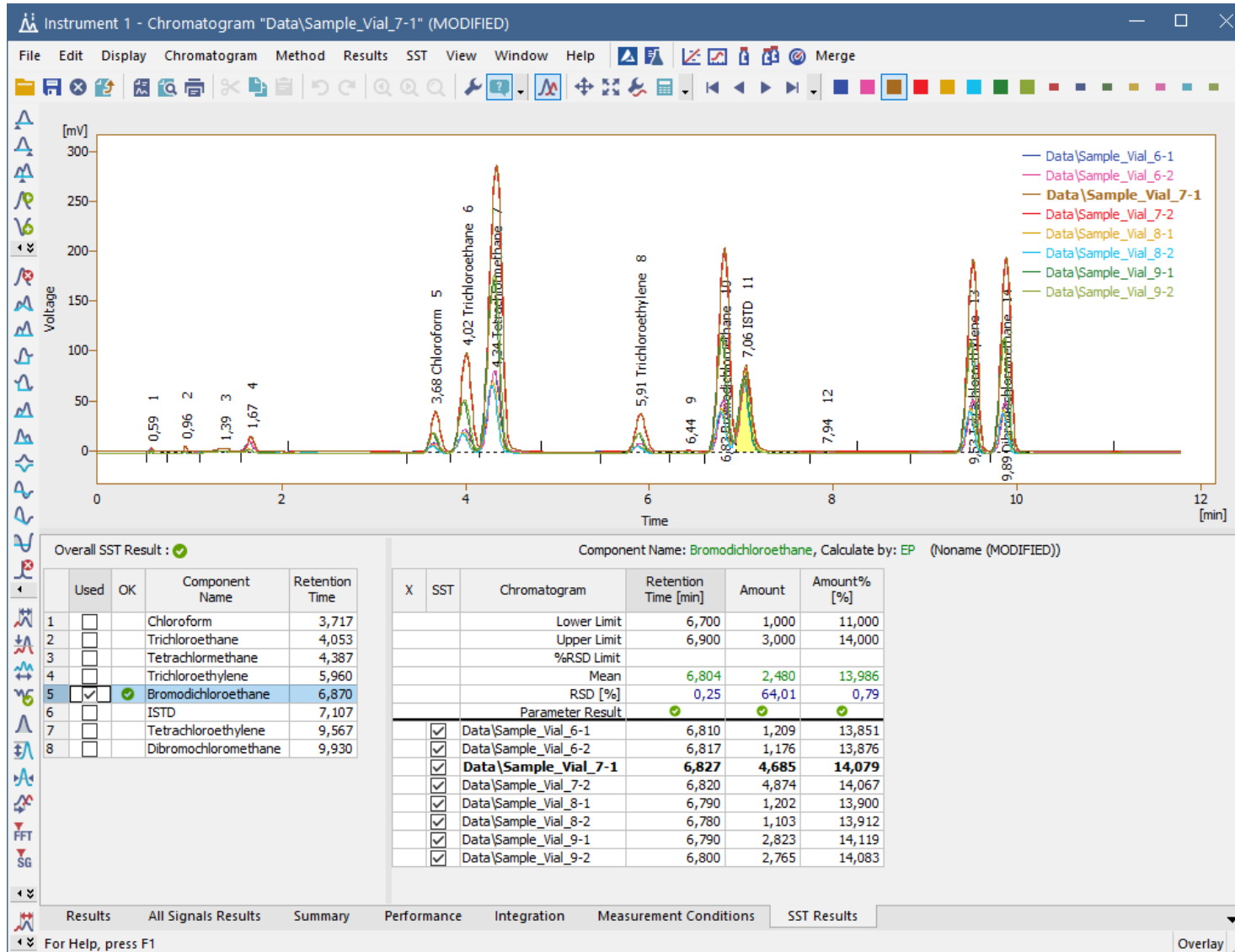
OK Cancel Help

→ Specify event reactions when SST is Passed/NOT RUN/FAILED

→ Increase the capabilities via Run External Program



# SST EXTENSION → SST RESULTS



- Choose what **Component** (from the calibration) will be checked for
- Define the **Lower/Upper Limits, %RSD Limit**
- Get immediate results about the **evaluation**



# SST EXTENSION → SST REPORT SETUP

➔ **SST tab** in the Report Setup allows to check options to be printed

Print Preview

27.04.2020 11:21 Chromatogram C:\Clarity\83\DataFiles\DEMO1\Data\Sample\_Vial\_9-1.prm Page 1 of 1

**Clarity - Chromatography SW**  
DataApex  
www.dataapex.com

SST Method : TEST  
Description :  
Created : 27.04.2020 11:03:09 By : Admin

*SST Components Table*

Overall SST Result

	Used	OK	Component Name	Retention Time
1	<input type="checkbox"/>		Chloroform	3.717
2	<input type="checkbox"/>		Trichloroethane	4.053
3	<input type="checkbox"/>		Tetrachloromethane	4.387
4	<input type="checkbox"/>		Trichloroethylene	5.960
5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Bromodichloroethane	6.870
6	<input type="checkbox"/>		ISTD	7.107
7	<input type="checkbox"/>		Tetrachloroethylene	9.567
8	<input type="checkbox"/>		Dibromochloromethane	9.930

*SST Parameters Table*

SST Result for Component "Bromodichloroethane", Calculate By: "EP"

Calculated by Mean Value

X	SST	Chromatogram	Retention Time [min]	Amount	Amount% [%]
		Lower Limit	6.700	1,000	11,000
		Upper Limit	6.900	3,000	14,000
		%RSD Limit			
		Mean	6.804	2,480	13,986
		RSD [%]	0.25	64.01	0.79
		Parameter Result			
	<input checked="" type="checkbox"/>	Data\Sample_Vial_9-1	6.790	2,823	14,119
	<input checked="" type="checkbox"/>	Data\Sample_Vial_6-1	6.810	1,209	13,851
	<input checked="" type="checkbox"/>	Data\Sample_Vial_6-2	6.817	1,176	13,876
	<input checked="" type="checkbox"/>	Data\Sample_Vial_7-1	6.827	4,685	14,079
	<input checked="" type="checkbox"/>	Data\Sample_Vial_7-2	6.820	4,874	14,067
	<input checked="" type="checkbox"/>	Data\Sample_Vial_8-1	6.790	1,202	13,900
	<input checked="" type="checkbox"/>	Data\Sample_Vial_8-2	6.780	1,103	13,912
	<input checked="" type="checkbox"/>	Data\Sample_Vial_9-2	6.800	2,765	14,083

Page 1

Report Setup Chromatogram

Page Setup

- Lab. Header
- Report Header
- Method
- Calibration
- Chromatogram
- Results
- Sequence
- SST
- Audit & Signatures

Print

On New Page

SST Method Info

Components Table

Parameters Table

Components

All Selected

Only Current

Signals

All

Only Current

OK

Cancel

Help

New

Open...

Save As...

Printer...

Preview...

Print...

Print To PDF...

Send PDF



# SST EXTENSION → INCLUDE IN SST

→ Sequence

→ Batch

The screenshot displays the SST software interface. At the top, a window titled "Instrument 1 - Chromatogram 'Data\Sample\_Vial\_7-1' (MODIFIED)" shows a chromatogram with a peak at 6.827 minutes. Below it, a window titled "Instrument 1 - Sequence Demo1 (MODIFIED)" contains a table with columns: Status, Run, SV, EV, I/V, Sample, Sample Amount, File Name, Sample Type, Lvl, Method Name, Open, Open Calib., Print, and Include in SST. The "Include in SST" column has checkboxes for each row, with the first five rows checked. A red box highlights this column. Below the sequence table, an "Overall SST Result" section shows a table with columns: Used, OK, Component Name, Retention Time, X, and SST. The component "Bromodichloroethane" is highlighted, with its retention time 6,870. A red box highlights the "X" and "SST" columns. To the right, a "Batch" dialog box is open, showing options for "File Type" (Sequence Files), "Sort by" (Name), and "Order" (Normal). The "Include in SST" dropdown menu is highlighted with a red box, showing options: Unchanged, Exclude, Include, and Unchanged. The "Include" option is selected.

Status	Run	SV	EV	I/V	Sample	Sample Amount	File Name	Sample Type	Lvl	Method Name	Open	Open Calib.	Print	Include in SST
1	1	1	1	1	Std_11	0,400	%Q	Stan	1	Demo 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	2	2	2	1	Std_22	1,000	%Q	Stan	2	Demo 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	3	3	3	1	Std_3	3,000	%Q	Stan	3	Demo 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	4	4	1	1	Std_4	5,000	%Q	Stan	4	Demo 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	5	8	2	2	Sample	5,000	%Q Vial...	Unkn		Demo 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Used	OK	Component Name	Retention Time	X	SST
<input type="checkbox"/>	<input type="checkbox"/>	Chloroform	3,717		
<input type="checkbox"/>	<input type="checkbox"/>	Trichloroethane	4,053		
<input type="checkbox"/>	<input type="checkbox"/>	Tetrachloromethane	4,387		
<input type="checkbox"/>	<input type="checkbox"/>	Trichloroethylene	5,960		
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Bromodichloroethane	6,870		
<input type="checkbox"/>	<input type="checkbox"/>	ISTD	7,107		
<input type="checkbox"/>	<input type="checkbox"/>	Tetrachloroethylene	9,567		
<input type="checkbox"/>	<input type="checkbox"/>	Dibromochloromethane	9,930		

Chromatogram	Retention Time [min]	Amount	Amount% [%]	
	Lower Limit	6,700	1,000	11,000
	Upper Limit	6,900	3,000	14,000
	%RSD Limit			
	Mean	6,804	2,480	13,986
	RSD [%]	0,25	64,01	0,79
	Parameter Result			
<input checked="" type="checkbox"/>	Data\Sample_Vial_6-1	6,810	1,209	13,851
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<input checked="" type="checkbox"/>	Data\Sample_Vial_9-1	6,790	2,823	14,119
<input checked="" type="checkbox"/>	Data\Sample_Vial_9-2	6,800	2,765	14,083





# SST EXTENSION → INCLUDE IN SST

## → Single Analysis

Instrument 1 - Chromatogram "Data\Sample\_Vial\_7-1" (MODIFIED)

File Edit Display Chromatogram Method Results SST View Window Help

Voltage [mV]

0 50 100 150 200 250 300

0 2 4

0.59 1  
0.96 2  
1.39 3  
1.67 4  
3.68 Chloroform 5  
4.02 Trichloroethane 6  
4.24 Bromodichloroethane 7

— Data\Sample\_Vial\_6-1  
— Data\Sample\_Vial\_6-2  
— Data\Sample\_Vial\_7-1  
— Data\Sample\_Vial\_7-2  
— Data\Sample\_Vial\_8-1

Overall SST Result : ✔

Used	OK	Component Name	Retention Time	X	SST	Chromatogram
1	<input type="checkbox"/>	Chloroform	3,717			Low
2	<input type="checkbox"/>	Trichloroethane	4,053			Upp
3	<input type="checkbox"/>	Tetrachloromethane	4,387			%RS
4	<input type="checkbox"/>	Trichloroethylene	5,960			
5	<input checked="" type="checkbox"/>	Bromodichloroethane	6,870			R
6	<input type="checkbox"/>	ISTD	7,107			Parameter
7	<input type="checkbox"/>	Tetrachloroethylene	9,567			
8	<input type="checkbox"/>	Dibromochloromethane	9,930			

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

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

Chromatogram File Name (Calib\Instrument 1 - 27.04.2020 11\_36\_47)

%e - %R

Enable File Overwrite Counter 1 Data Recovery...

OK Cancel Help



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



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