

23.0331



Clarity™

ADVANCED CHROMATOGRAPHY SOFTWARE

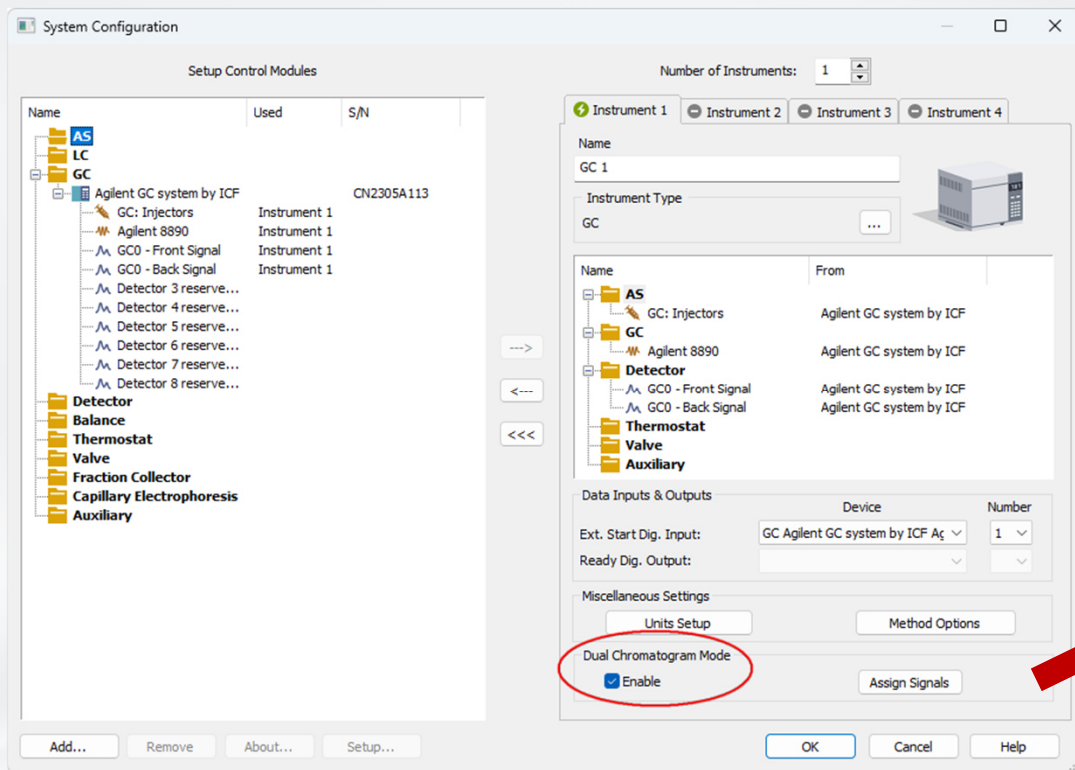
CLARITY 10.0

WHAT'S NEW

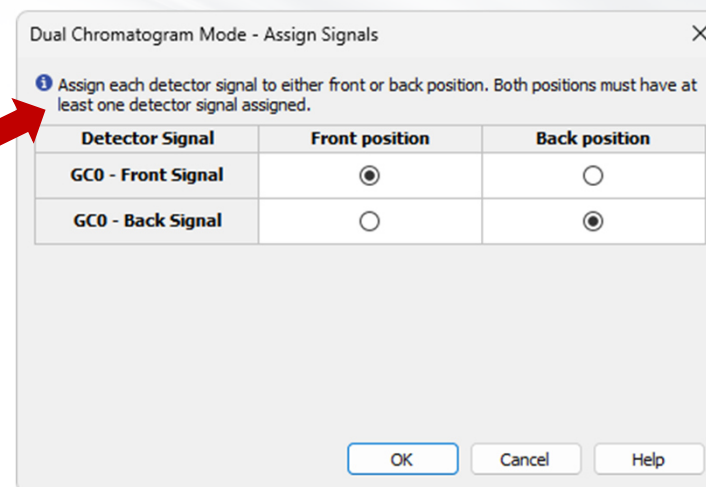
WHAT IS NEW IN CLARITY 10.0?

- Dual Chromatogram Mode
- Improvements for GLP mode
- Real time isoplot in Data Acquisition window
- Method adaptation message extended by reason of adaptation
- Improvements for MS extension
- NGA calculations according to Natural gas norm EN ISO 6976:2016
- External control module installer
- New and updated control modules

DUAL CHROMATOGRAM MODE – SYSTEM CONFIGURATION

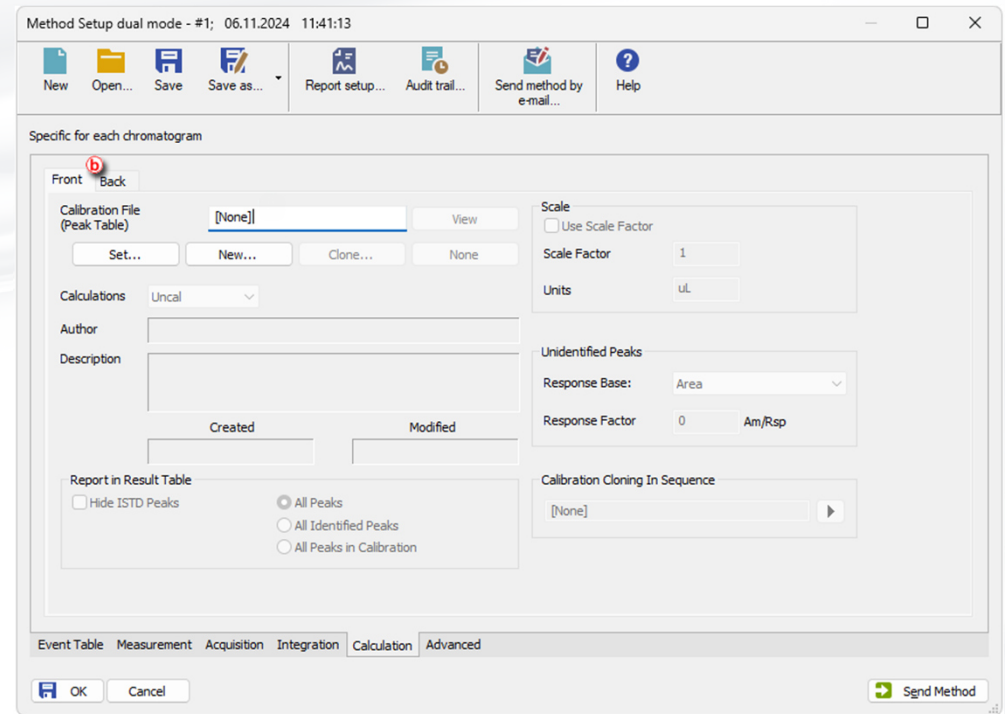
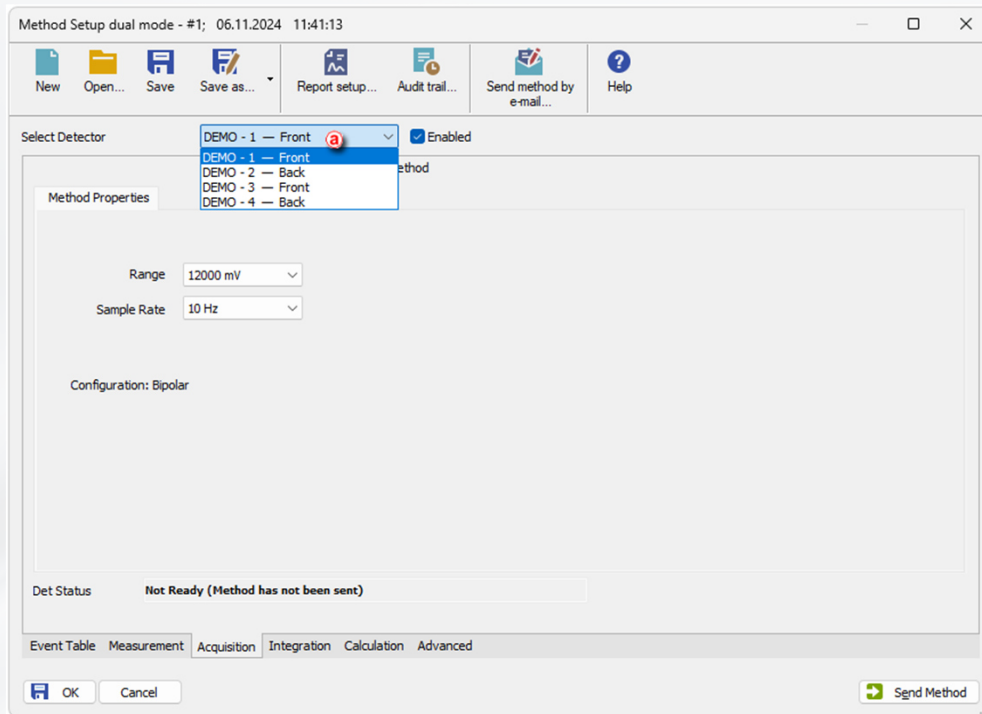


- Creates **separate chromatograms of 2 samples from one analysis**
- GC with dual tower sampler or LC with dual loop sampler
- Requires at least 2 detector signals on Instrument - one set as Front, one as Back



DUAL CHROMATOGRAM MODE - METHOD

- Each signal is identified with assigned **Front or Back position** (a)
- Calculation and Advanced tabs are divided into 2 sub-tabs (b)



DUAL CHROMATOGRAM MODE - SEQUENCE

- Duplicated columns: **Sample ID, Sample, File Name, Line Info**
- Back vial position is derived from the front position by a fixed offset

Instrument 1 - Sequence DualChromatogram

File Edit Sequence View Window Help

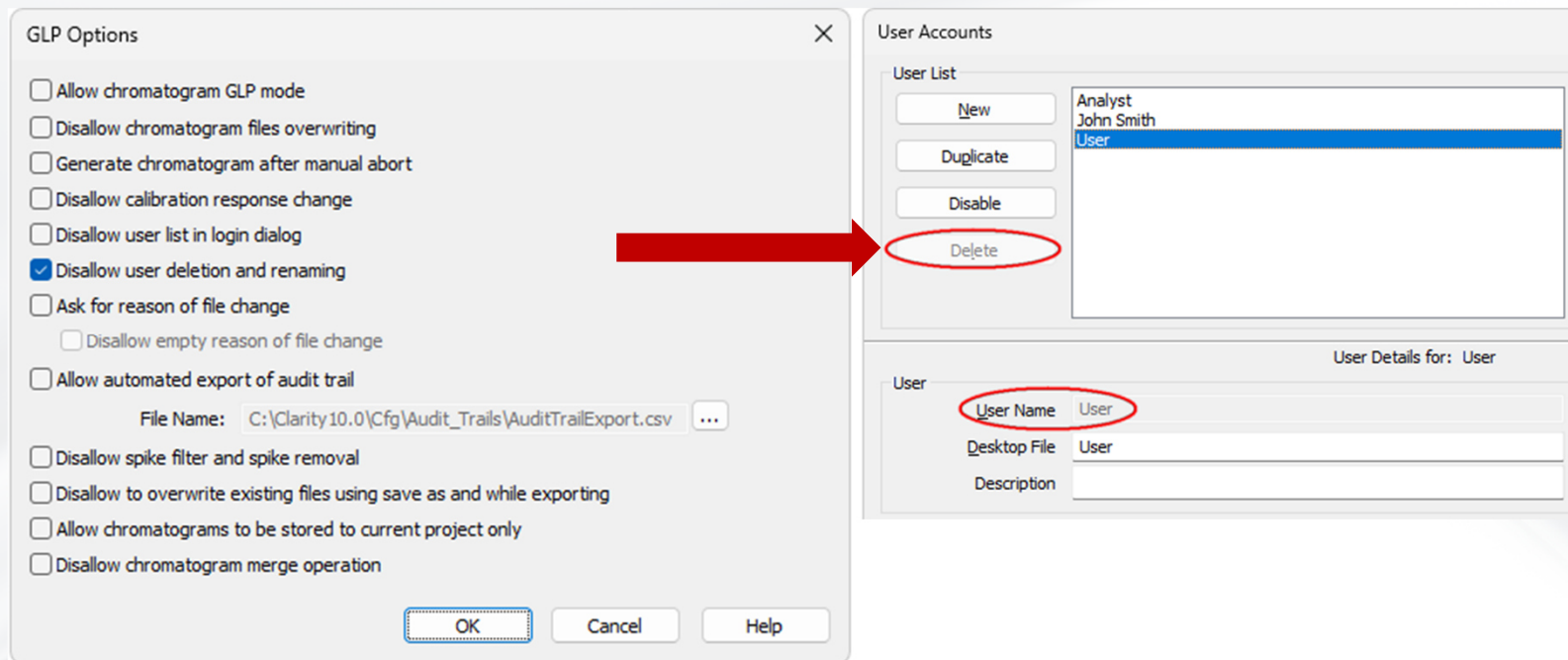
	Status	Run	SV	EV	I/V	Sample ID - Front	Sample ID - Back	Sample - Front	Sample - Back	Sample Amount	ISTD1 Amount	Sample Dilut.	Inj. Vol. [µL]	File Name - Front	File Name - Back	Sample Type	Lvl	Method Name	Report Style	Open	Open Calib.	Print	Line Info - Front	Line Info - Back
1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	1	1	STD1	STD1			0,000	0,000	1,000	100,000	%q_%R_Front	%q_%R_Back	Stan	1	Demo1		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	2	2	1	STD2	STD2			0,000	0,000	1,000	100,000	%q_%R_Front	%q_%R_Back	Stan	2	Demo1		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	3	3	1	Unk1	Unk1			0,000	0,000	1,000	100,000	%q_%R_Front	%q_%R_Back	Unkn		Demo1		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
4	<input type="checkbox"/>	<input type="checkbox"/>																		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

For help press F1. Single Analysis: No method sent - Ready to send method or start sequence Vial: 1 / Inj.: 1 File Name: Act

For more see [M251-Dual Chromatogram Mode](#) manual on our website in section Downloads.

IMPROVEMENTS IN GLP

- A new item to **prevent any user account from being deleted or renamed**
- Renaming is possible only before initial saving of the new user account



IMPROVEMENTS IN GLP – USER ACCOUNTS

Automatic disabling of user account

- A new checkbox *Login Attempts* (a)
- After reaching the set limit account is disabled: (b)
=> account with access to User Accounts - **for 1 h**
=> regular account - **permanently**

Manual disabling of user account

- A new button *Disable* (c)
- To enable account again press the same button

Audit Trail

- A new Access Right for opening audit trails (d)

IMPROVEMENTS IN GLP – AUDIT TRAIL

- A new header in Print Preview
- Basic information about report: **Printed Date**, **Printed File(s)** and **Printed By**

	Time	Group	Severity	User Name	Instrument	Area	Description
1	31.07.2024 12:08:51	Start/Close			System	System	End System
2	31.07.2024 12:08:50	System Configuration			System	Configuration	System Configuration dialog has been closed.
3	31.07.2024 11:23:56	System Configuration			System	Configuration	System Configuration dialog has been opened.
4	31.07.2024 10:38:21	System Configuration			System	Configuration	System Configuration dialog has been closed.

REAL TIME ISO PLOT IN DATA ACQUISITION WINDOW

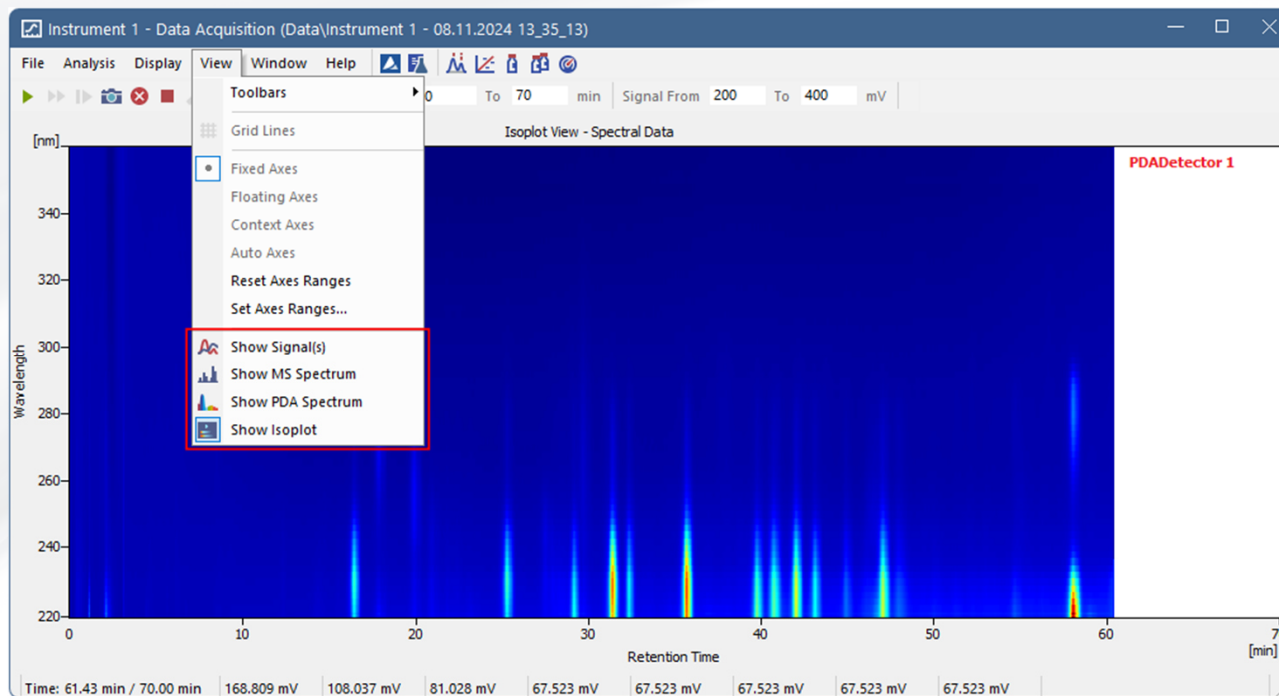
View menu:

Show Signal(s) = displays signal(s)

Show MS Spectrum = displays a real time MS spectrum during analysis

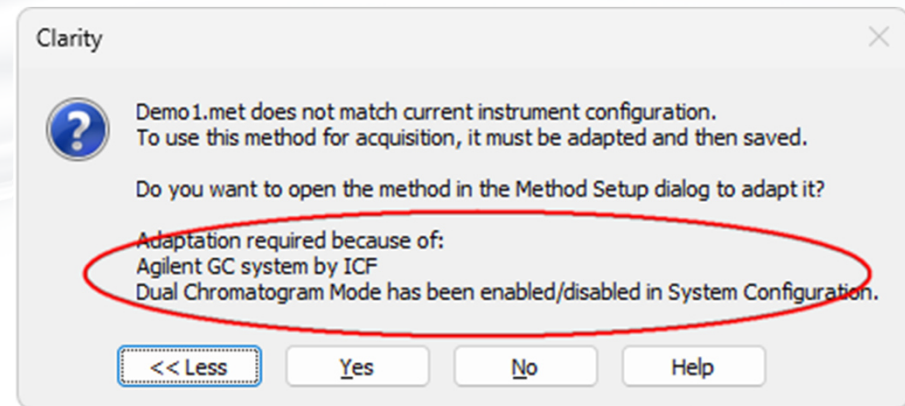
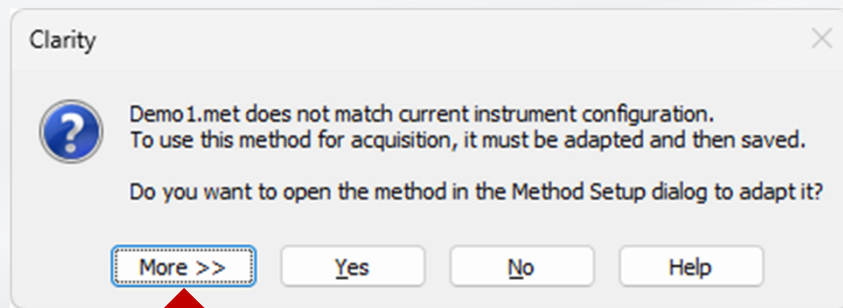
Show PDA Spectrum = displays a real time PDA spectrum during analysis

Show Isoplot = displays a real time isoplot view for PDA



METHOD ADAPTATION

- Message extended by **reasons for adaptation**
- Displayed after pressing *More* button



IMPROVEMENTS IN MS EXTENSION

- Library selection in Single Compound Search

MS Search

Single Compound Search | Automatic Compound Search | Target Compound Search

Search In Ret. Time [min]: From: 7.294 To: 7.294 Select From Graph

Search Options

Min Match Factor: 0 (0 .. 1000) Max Hits: 3

Restrict m/z Range From: 40 To: 500

Use Selected m/z m/z 1..4: [] [] [] []

Search Only Selected Search All But Selected

Background Subtraction

Background 1 [min]: From: To: Select From Graph

Background 2 [min]: From: To: Select From Graph

Search in Libraries:

- Demo_ms
- MAINLIB

MS Library Search

	Match	R. Match	Prob. [%]	Compound Name	Library	ID	Formula	MW	CAS No.
1	<input checked="" type="checkbox"/>	644	743	26.22	Hydrocortisone Acetate	MAINLIB	C23H32O6	404	50-03-3
2	<input type="checkbox"/>	628	840	15.10	β Carotene	MAINLIB	C40H56	536	7235-40-7
3	<input type="checkbox"/>	627	714	14.51	Gamabufotalin	MAINLIB	C24H34O5	402	465-11-2

7.294 min (Spectrum)

Hydrocortisone Acetate

- MS Method tab available in chromatogram without spectral data

Instrument 1 - Chromatogram "C:\Clarity10.238\DataFiles\DEMO1\Data\EXAMPLE - Signal 1" (MODIFIED)

File Edit Display Chromatogram Method Results SST MS View Window Help

MS Method

MS Integration

MS Method

Set NIST Libraries Directory...

Select Spectral Data

Prefer Spectral Data from Method

Single Compound Search...

Automatic Compound Search...

Target Compound Search...

Manage Libraries...

Add Spectrum to Library...

Show Spectrum

Add Reference m/z

Add Compound w/o Library Spectrum...

Add Selected m/z Signal as Temporary

Add Temporary m/z Signal Manually...

Remove All Temporary m/z Signals

Mean and Backgrounds

Create Spectrum Label

Switch MS Warnings Off

MS Calibration Update MS Calibration

Spectrum

Stick Spectrum

Raw Spectrum

Peak Detection...

Conformity of Whole Spectrum

Max. Conformity Error: 10

Matching Tolerance: 10

MS Method

Compound	Library Compound		Quantify On	EIC 1 -	EIC 2 -	EIC 3 -	EIC 4 -	Peak Detection	Mean Calculation					
	Library	ID		Reference m/z 1	Reference m/z 2	Reference m/z 3	Reference m/z 4		Ret. Time	Left Wind	Right Wind	Calculation Type	Start	End
1	test		0 EIC 1	96.0				0.000	0.300	0.300	Relative [%]	-10.00	10.00	No

Results Summary Performance Integration MS Integration MS Method Measurement Conditions SST Results

EXTERNAL CONTROL MODULE INSTALLER



- A custom-made package installer
- To update/add control modules **outside** the official Clarity **release schedule**
- All control modules **must be approved** by DataApex
- Distributed by instrument producer
- Requires **its own installation qualification (IQ)**

OTHER IMPROVEMENTS AND FIXED BUGS

- Colored infobars in main window for better indication of Clarity installation type ([Clarity Demo](#), [Clarity Offline](#))
- NGA: Calculations of heating values (ASTM D 3588-98 and GPA 2172-09) and calculations on wet basis (ISO 6976-95) refined
- NGA: Support of calculations according to the Natural gas norm EN ISO 6976:2016
- Improvements in printing from sequence

... and a lot more

For more see **What's New** accessible from **Help - About...** menu of your Clarity station main window.

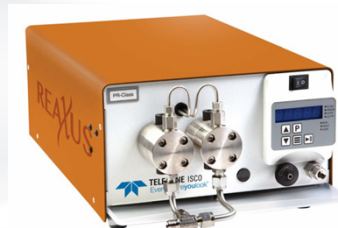
NEW CONTROL MODULES (VERSION 9.0.1 - 10.0)

- Agilent 8697 XL
- Agilent 8850 GC
- Chromsystems HPLC system modules CLC 200, CLC 320, CLC 330, CLC 340, CLC 420
- CXTH P3000, P6000, UV1000, UV3000, UV6000
- Ecom ECVA2000, ECA Amino 500 and CDM2000
- Haosi Bio ARIES LC 2400
- Knauer FC6.1 and P4.2S, UAD 6.1L and UAD 6.1L Prep
- Netel Chrom Plus 6000



NEW CONTROL MODULES (VERSION 9.0.1 - 10.0)

- Sykam S6410
- Teledyne ReaXus pumps
- VWR ELSD
- Welch WelNova 6110 Isocratic pump, 6120 High Pressure Gradient pump, 6140 Low Pressure Gradient pump, 6210 Autosampler



... and many control modules have been updated and improved.

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... THANK YOU FOR YOUR INTEREST IN CLARITY