



SRA Soprane CDS and ProChem Software Monitoring and automation in GC and Micro-GC online applications

SRA software have been developed to meet specific gas chromatography analytical needs. Thanks to an innovative and modern architecture, SRA **Soprane CDS** and **ProChem** increase the applicability of the technique also to areas outside the laboratory, such as monitoring and online analysis, solving real operational needs and improving the user experience.

From managing sampling systems to communicating with analyzers and external interfaces, SRA software is a smart control center. The efficient management of the equipment, the collection and integration of signals, the saving of data and the transmission of results to the various control systems of the production plants, guarantee an optimization of all the operating parameters involved.



■ *We create software to enhance your gas chromatography experience.*

Soprane CDS Software for GC and Micro-GC

- **Simplicity and high performance for laboratory analysis, on-line and process applications.**

Soprane CDS is a powerful software platform that manages **gas chromatography analysis and the entire logical integration of the analyzer in the specific context of measurement**: from the automation phase of sampling to the integration of signals, up to the transmission of results and alarms.

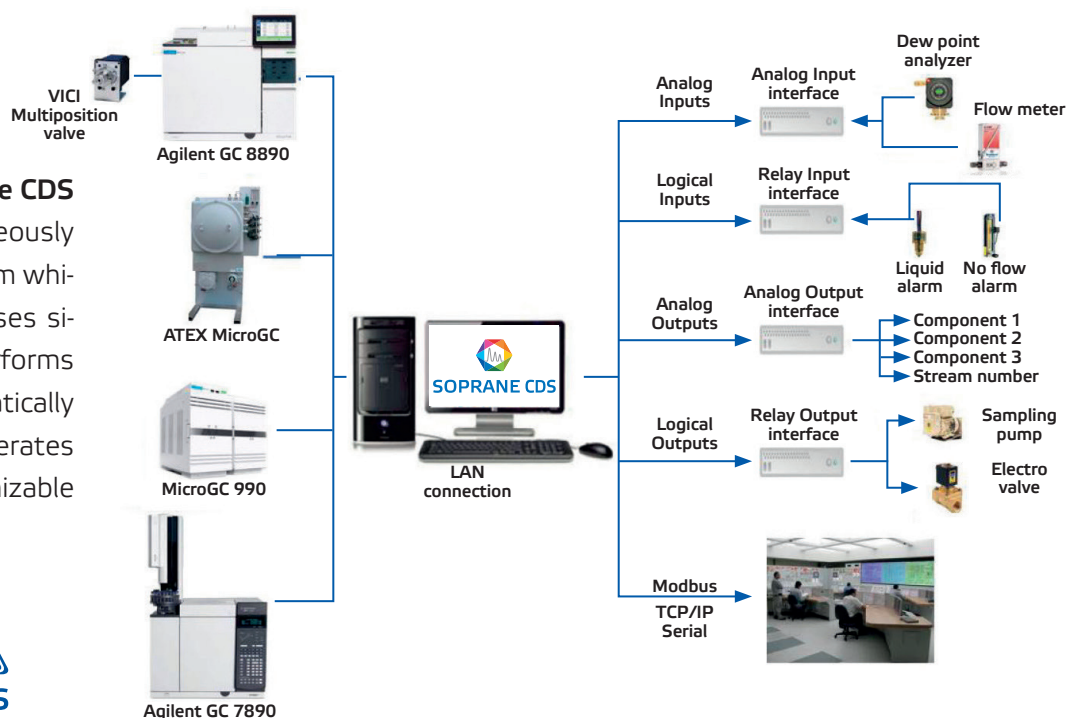
Numerous possibilities of connection with hardware interfaces allow to activate relays, to acquire and transmit digital and logic signals and to control measuring systems. All actions or events become part of the analysis sequences that **Soprane CDS** allows to carry out automatically.

Its **modern and intuitive graphical interface** makes analysis results and graphical trends easy to view. To meet specific needs, the software can be customized with user-program writing to make the user experience more and more enjoyable.

Soprane CDS is able to:

- control, with specific drivers, Agilent 8890, 8860, 7890, 7820 GCs, Varian 4900, Agilent 3000, 490, 990 Micro-GCs and all SRA MicroGCs
- check the status of the systems, set and program the various parameters from dedicated pages
- manage line selectors, electro valves, VICI Valco multi-position valves
- administer external accessories, suction pumps, flow or pressure sensors, elements for sampling and interfaces for the transmission of results
- monitor both outgoing and incoming alarms
- manage sequences and automatic calibrations
- acquire signals from external analyzers and integrate the values with the chromatographic results
- communicate the results in analog mode or via Modbus.

Each PC on which **Soprane CDS** is installed can simultaneously control 4 instruments, from which it acquires and processes signals, generates data, performs calculations, and automatically transmits results, generates personalized and customizable reports.



Agilent GC 7890

■ **The gas chromatography acquisition system with the best control and automation capabilities.**

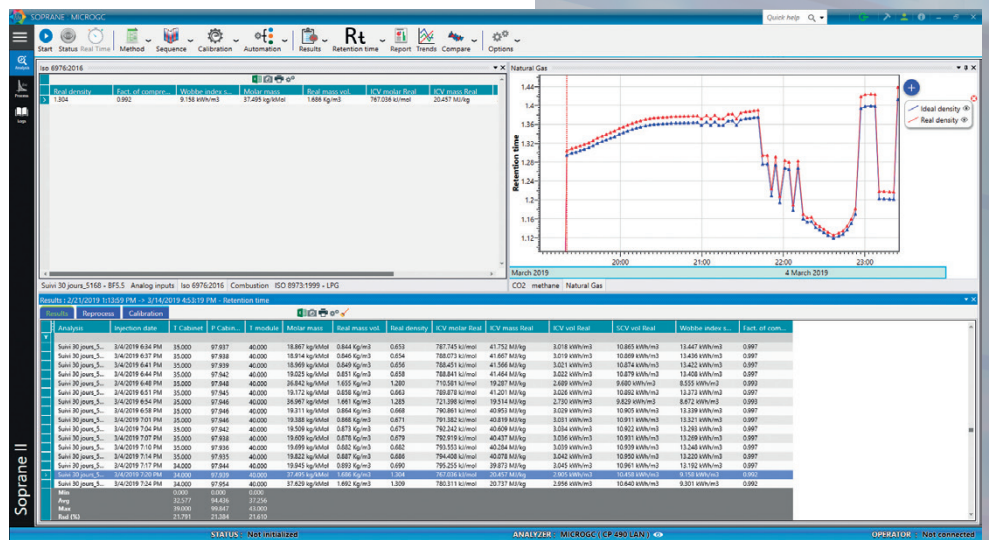
The main screen of **Soprane CDS** has been designed to provide **essential commands and information on the progress of the analyses at a quick glance**. In real time, it is possible to view the list of analyses, the graphical trends of the results or the trend of the concentration profiles or statistical data of a batch.

With one click it is possible to start analysis, create sequences, set instrumental parameters, define the representation and transmission of results, and report alarms.

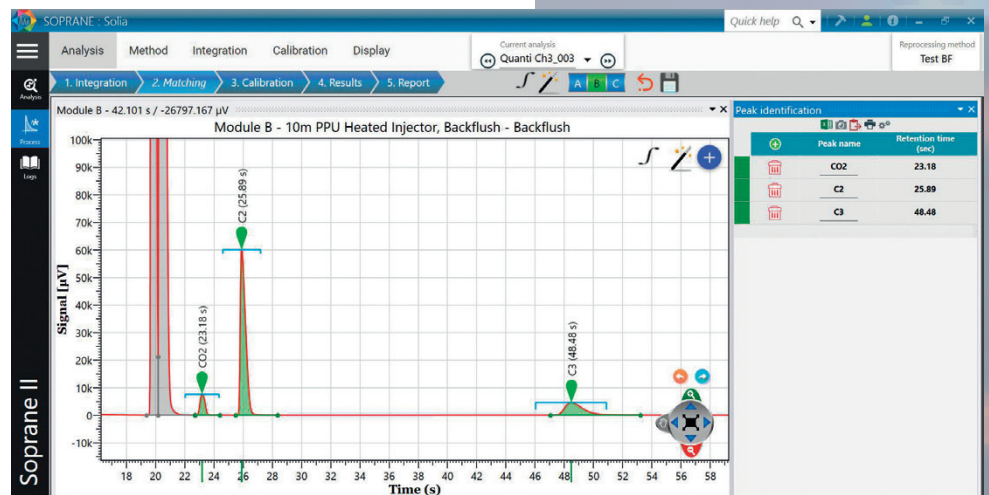
In addition, from the list of results it is possible to view the chromatogram, check the integration parameters, reprocess or recalibrate a method, view the report or compare and overlay multiple chromatographic traces.

Simple, high-performance, safe Soprane CDS is the control center for all operations related to the analysis.

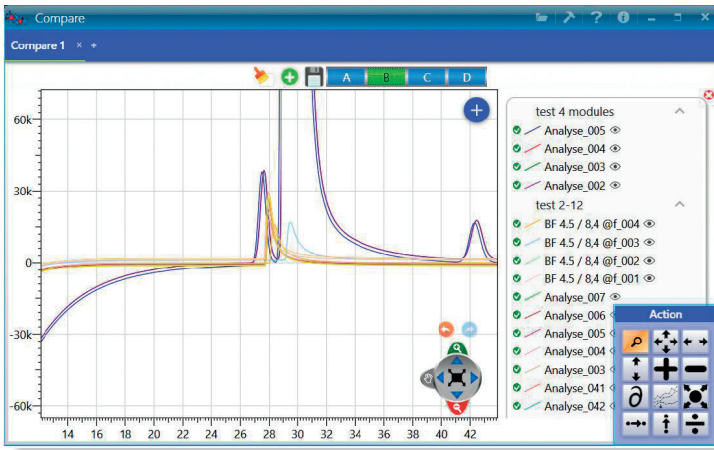
Dedicated, immediate, and intuitive sections help the operator at every stage of the process. Three levels of user identification can be set: operator, service and administrator, with different operating rights and access to the various functions with a password. Each access and action is recorded in a log file.



Main screen.
Results and calculations, graphical trends, list of all results with statistical values.



Method creation.
Five guided logical steps: Integration - Matching - Calibration - Results - Report.



Complete management of chromatographic data.

Comparison and superposition of 2 to 64 chromatographic traces. The chromatograms can be imported into other software with their conversion into Cdf or Aia formats. A dedicated "File Exporter" program also allows to customize the export of all results in Excel, Excel_xml, CSV, Xps, Dif files.

Event scheduling and automation.

The events table schedules the actions in sequence to be carried out before, during or after the analysis.

Time (s)	Command	Value
1	Change stream	
5	Read analog input	
10	Injection	
11	Message	Warning! Close Valve
20	Default stream	Check value before run

Transmission of results.

They can be transmitted through analog 4-20 mA, 0-1 V, 0-10 V, or digital Modbus signals. The two-way communication between Soprane CDS and a SCADA system allows the latter to start, stop or change analysis sequences independently.

Output	Minimal	Maximal	Set point	Value
1	5	15	8	8.900 mA
2	1	4	2	9.333 mA
3	0	155	10	5.032 mA
4	6	6	7.5	12.000 mA

Peak name	Followed value	Compare with previous analysis	Minimal	Maximal	Alarm	Action to execute if default	Notification
C2 (A)	Normalized concentration	<input checked="" type="checkbox"/> Last analysis	0	10000	Alarm 1	None	Email
IC4 (C)	Normalized concentration	<input type="checkbox"/>	0.1	1	Alarm 2	None	Email
ICS (C)	Normalized concentration	<input type="checkbox"/>	0.1	1	General alarm	None	None

Register	Name	Value
300001	O2 (A)	10.02
300002	N2 (A)	10.03
300003	CO2 (B)	10.28
300004	Pressure	0.1948
300005	Temperature	25.03
300006	Molar Mass	34.664

Alarms management.

Divided between instrumental and concentration alarms, they can be set with specific criteria, displayed with a message on the screen, a physical contact of a relay, sending an email message.

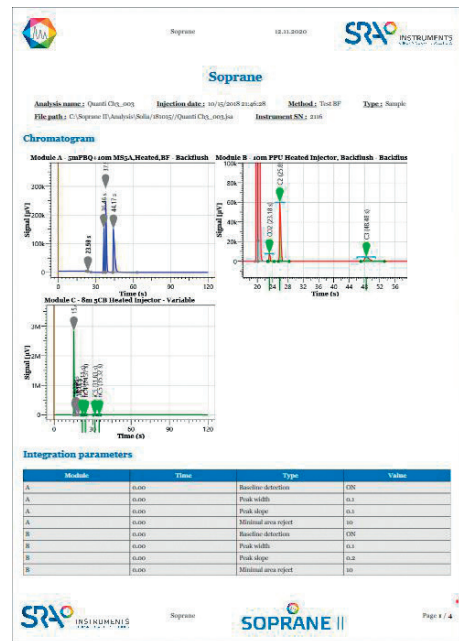
Setting of Modbus addresses and parameters to be transmitted.

Any quantity calculated or measured by the software, including signals acquired from other analyzers, can be added to the chromatographic results.



Customizable analysis reports.

Pre-configured reports defined as simple, medium, and complete are immediately available for printing. Customized reports in terms of format, company graphics and texts are easily created.



SRA ProChem Software

- Expand the Open Lab Chemstation CDS and Open Lab CDS functionalities to the field of on-line GC analysis and automation management.

Agilent's workstation version software can manage up to four instrument sessions independently for each PC.

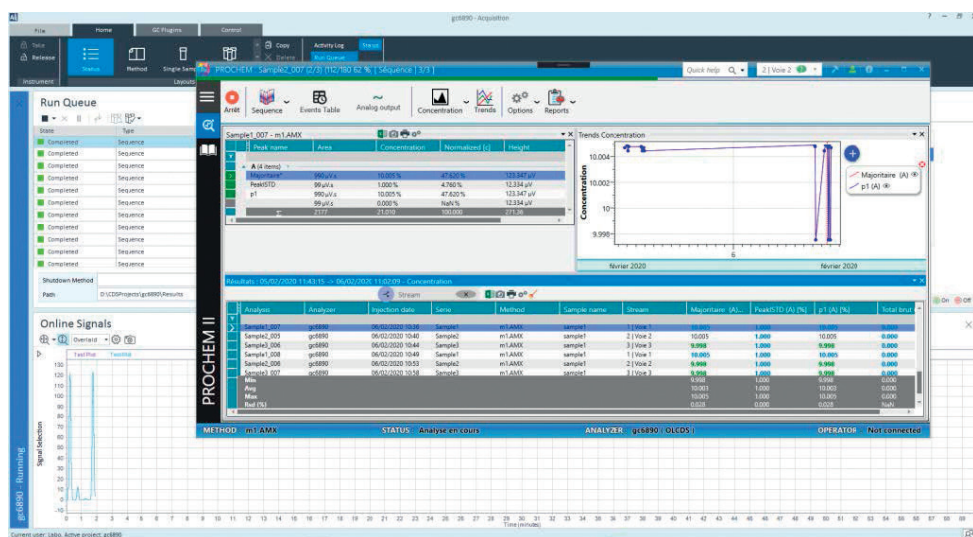
ProChem can be combined with each Agilent GC session.

The SRA **ProChem** software is a supervision and automation user interface. The graphics of the various work sections with tables and graphs of the results are intuitive and easy to use.

ProChem is integrated with Agilent chromatographic acquisition softwares to enable continuous and automatic analysis.

Management of analyzes and sampling systems

The analyzes are programmed through sequences in which the stream to be analyzed, the analytical method and the conditioning time of the line are defined for each row. The software optimizes and synchronizes the switching times of the valves, in order to reduce the duration of the individual analyzes.



Results of the analyzes

ProChem is able to:

- collect retention times, concentrations, units of measure and areas from the analyzes generated by the chromatographic software
- integrate the chromatographic results with any other external data (temperature, pressure, etc.)
- perform custom calculations according to ISO 6976:2016 or other methods.

The results of the chromatographic integration are displayed in the main window of the **ProChem** software in the form of a chronological table with statistical values (min, max and average) and in the form of graphical trends.

All **ProChem** processing and calculations are included in the OL Chemstation report.

Export and transmission of results

All results, calculations or values reported and displayed in **ProChem** can be part of a file that can be exported in various formats (Excel, Excel_xml, CSV, Xps, Dif) and can be transferred in Modbus protocol or as analog signals.

