Product Spotlight

Focused on your samples and instruments

Introduction

When discussing sample analysis, it is normally expected that this also includes the injection of blanks, calibration standards, check standards and so on, all combined in a series of injection, a sequence.

However, this is not always the case. For example, in the chemical or petrochemical industries, the analysis is typically driven by the need to get a fast result for an individual sample without additional injections. The main chromatography instrument used is a gas chromatograph (GC), and running a calibration curve for a specific method is only required periodically, for example once every six months. Then, running a daily blank and a check standard is sufficient to confirm the validity of the calibration. In addition, the GC instruments in the laboratory are dedicated to only one or two methods and the analysis may require manual interaction with the system. Also, one technician in the laboratory usually can be responsible for many instruments.

All of this drives a more sample and instrument-centric approach to the analysis, rather than a sequence-centric view. To support these specific workflows required by (petro)chemical laboratories, Thermo Scientific™ Chromelone™ Chromatography Data System (CDS) provides a comprehensive set of tools that streamline and simplify operation.
Instruments Overview
As mentioned before, one analyst in the laboratory can be responsible for multiple instruments. It is key that they can instantly see the status of all these instruments at a glance. Not all instruments have fully automated injection systems and may need manual interaction, for example loading a gas cylinder which was used to take the sample. Monitoring multiple instruments for their status and readiness to perform this manual action should be possible in one glance.

With the Chromeleon Instruments Overview (Figure 1) the status of all the analysts favorite instruments are visible at once, clearly indicating which instruments are running (including run time), available for a new sample analysis or ready for a new injection.

With additional privileges, system administrators can have an overview of all instruments in the network (Figure 2), this can quickly identify issues, for example when an Instrument Controller is offline.
Instant sample run
From the Instrument Overview samples can be started instantly. Once a suitable and available instrument is selected for the required analysis, the run can be started in only two clicks.

1. Select the analysis method to run (Figure 3)
2. Click Finish to start the analysis (Figure 4)

Chromeleon software’s built-in eWorkflow™ procedures provide a unique framework to support this ultra-streamlined operation. They ensure that whichever instrument is selected, the correct methods and files are used for the analysis every time. This eliminates errors, simplifies operation and reduces training requirements.
Instrument control
To take a closer look at the status of an instrument, click the View Instrument button (Figure 5A). This opens the instrument ePanel (Figure 5B), which shows the status and provides tools for direct control of the instrument.

Direct data access
Once acquired, the operator needs to quickly and easily find the data that was just generated. Without leaving the Instruments Overview, results can be directly accessed. Simply click View Queue to open the queue tab of the instrument ePanel (Figure 6A) and then select the recent sequence to see a preview, including MiniPlots™ of the actual chromatograms (Figure 6B) and results for instant information. A double click on a sequence will open the data in the Chromatography Studio for detailed viewing or further processing if required.

Conclusion
By providing intelligent tools to enable operators to work with multiple instruments, start analyses quickly and review results immediately, Chromeleon CDS supports the workflows in (petro)chemical laboratories, while delivering ease of use and minimizing training requirements.
The collective power of chromatography

One CDS to do it all

From workstation to global deployment, Chromeleon CDS seamlessly scales to any business, from research through development to QC. Delivering proven productivity gains and straightforward compliance, Chromeleon software provides a unique unification of workflows for chromatography and mass spectrometry analysis. It’s cloud-ready software that does it all, backed by a product team dedicated to keeping you one step ahead of the next regulatory or market change. With the largest portfolio of chromatography solutions, we remain a steadfast and committed partner in your endeavor to improve the world around us.

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