



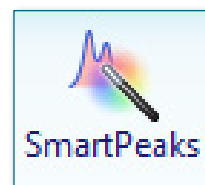
Speed up data analysis

Thermo Scientific Chromeleon 7 Chromatography Data System

Thermo Scientific™ Chromeleon™ 7 Chromatography Data System (CDS) helps you process chromatograms with minimal effort and saves you time by offering smart, intuitive tools to simplify and streamline data processing.

- Dynamic data processing and linking ensure all changes are instantly reflected in the data and results, saving valuable time.
- The Cobra™ Peak Detection Algorithm rapidly, reliably and accurately identifies peaks and baselines.
- The unique SmartPeaks™ Integration Assistant gives you the baselines you want quickly, reproducibly and intuitively.

Chromeleon 7 CDS speeds up data analysis and gets you from samples to results quickly and easily—boosting your overall lab productivity.





Unsurpassed tools for data evaluation

Dynamic data processing and linking ensures the selections and changes you make are instantly reflected in the data and results, for all injections in the sequence, saving huge amounts of data processing time. For example, changing the baseline of a calibration peak changes its area, which in turn changes the calibration curve, which then changes the results of the unknown samples and any further calculations based on those amounts. All these values are updated automatically and instantaneously eliminate repetitive batch processing of the data, drastically reducing effort, errors and time.

The **Cobra Peak Detection Algorithm** reliably detects peak start and end times, and correctly assigns peak baselines without requiring you to enter a long list of detection parameters. It uses advanced signal processing to distinguish true peaks from noise, and

sophisticated curve-fitting techniques to accurately locate peak maxima and inflection points. It will correctly integrate many chromatograms without the input of any integration parameters but refinement can be made, if needed, by adjusting just a few simple parameters which are set quickly and easily using the Cobra Wizard. This prompts the user to:

- Define the integration range
- Define the baseline noise range
- Select the narrowest peak to be integrated
- Select the smallest peak to be integrated

With just these four settings, the Cobra algorithm instantly integrates every chromatogram in the sequence.

The screenshot displays the Chromleon Chromatography Studio interface. The main window shows a chromatogram with 13 peaks labeled 'Component 1' through 'Component 13'. The y-axis is labeled 'mAU' and ranges from -5.0 to 33.0. The x-axis is labeled 'min' and ranges from 0.00 to 8.00. The 'Cobra Wizard' dialog box is open, showing the 'Integration Area Configuration' section. The 'Integration area' is defined by a range from 0.515 to 7.299 minutes. The 'Baseline noise range' is set to 'Auto'. The 'Cobra smoothing width' is set to 'Auto'. The 'Minimum area' is set to 'Auto'. The 'Channel and injection type' is set to 'All Channels'. The 'Integration Area Configuration' section includes a 'Consider Void Peak' checkbox (unchecked), a 'Use Auto Range' radio button (selected), and a 'From' field (0.515) and a 'To' field (7.299). The '13 peaks detected' message is visible. The 'Next >>' and 'Cancel' buttons are at the bottom of the dialog box.

#	Ret.Time	Param. Name	Param. Value	Inj. Type	Channel
1	<Initial>	Consider Void	Off	Any	All Channels
2	<Initial>	Baseline Noise	Auto	Any	All Channels
3	<Initial>	Smoothing Width	Auto	Any	All Channels

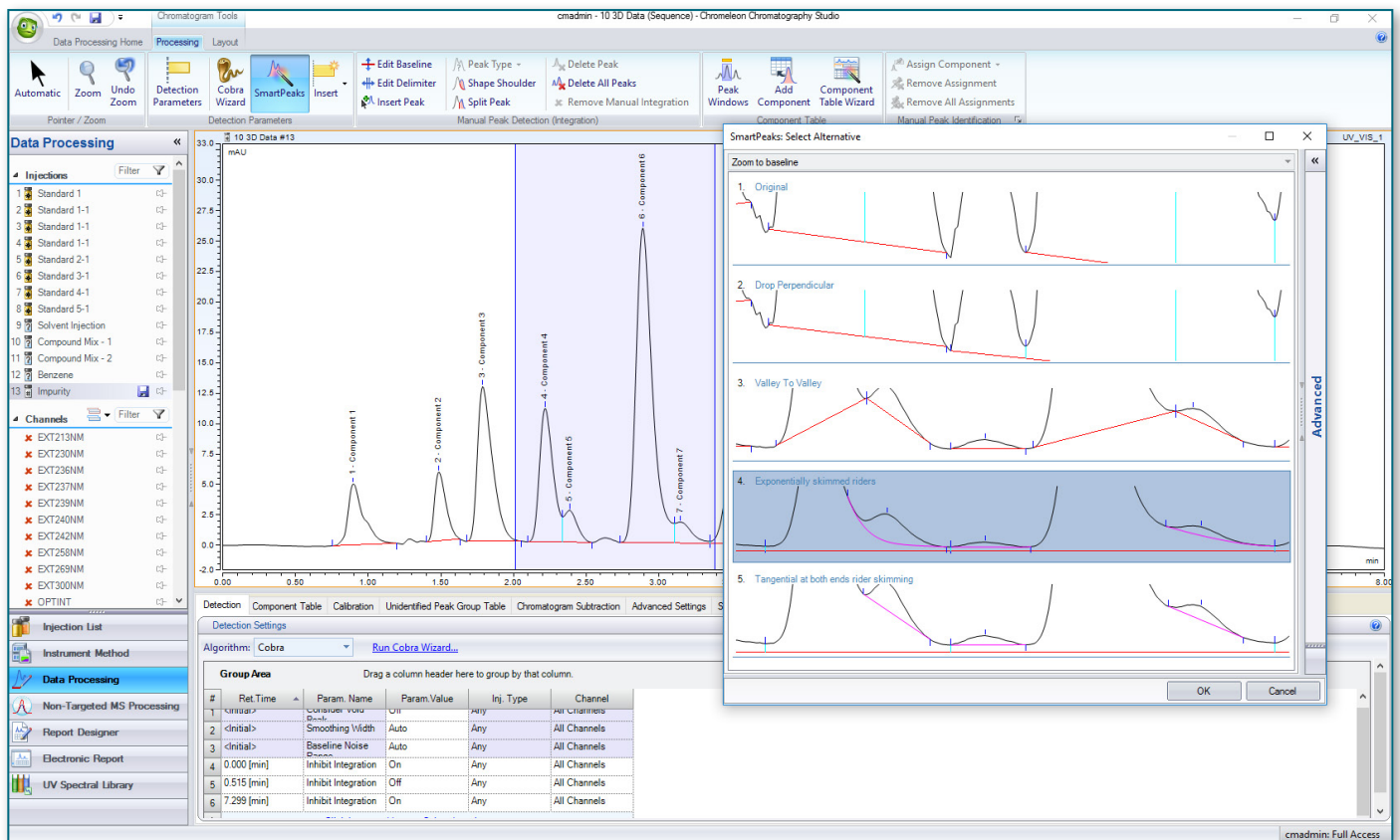
The Cobra Wizard sets basic integration parameters in four easy steps.



The **SmartPeaks Integration Assistant** is used when special peak treatment is needed - for example, when a different baseline approach is required for an unresolved peak group, peak shoulders or rider peaks—producing the desired results consistently, quickly and intuitively.

The user simply selects a region of the chromatogram, and SmartPeaks graphically displays available treatment options, such as valley-to-valley baselines or exponential

skirts. When the user selects an option, SmartPeaks adds the corresponding parameters and values to the processing method, so that the desired treatment will be automatically applied across all chromatograms in the sequence. This process takes just a few seconds and eliminates the subjective trial-and-error process of adjusting baseline integration that is a major weakness of most chromatography software and a major source of result variance and errors.



SmartPeaks presents alternative integration approaches and automatically adds parameters to the processing method for the chosen approach.

Find out more at thermofisher.com/chromleon

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