



Release Notes

Chromeleon 7.2 CDS SR2

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Thermo Scientific™ Dionex™ Chromeleon™ Chromatography Data System (CDS) Software

Thermo
S C I E N T I F I C

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1 Introducing Chromeleon 7 CDS

Chromeleon 7 CDS is a new-generation chromatography data system that provides the fastest path from samples to results. Building upon market-leading innovations of prior Chromeleon CDS releases – such as dynamic interactive data displays, an integrated database for rapid data retrieval, and spreadsheet-based reporting – Chromeleon 7 CDS features a modern user interface, comprehensive new tools for peak detection, and an innovative workflow management framework, all of which speed up learning, simplify operation, and deliver results with greater efficiency than any other chromatography data system.

This new version, Service Release 2 of Chromeleon 7.2 CDS, provides instrument control for the Vanquish™ UHPLC system in addition to introducing various instruments from Thermo Scientific and other manufacturers. This release expands on the Mass Spectrometry control and processing capabilities for pharmaceutical and biopharmaceutical applications and now provides a controlled workflow for non-targeted peak detection in proteomic applications. There are many other new features, and improvements which are listed in more detail below.

The software is developed using modern software development tools and technologies that improve performance, sustainability, and extensibility.

Backward compatibility with Chromeleon 6 CDS is maintained to the greatest practicable extent, to provide an easy migration path.

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2 Other Documentation

Chromeleon CDS is provided with many other documents that will help you to learn more about the software. All have been updated with this release. Their scope is described in the *Document Overview*, which is delivered in printed form with the Chromeleon CDS installation media, but also available in electronic form on the installation disk in the *Documents* folder.

Please refer to the *Installation Guide* for information regarding:

- System Requirements
- Supported Operating Systems and Databases
- Required Third-Party Software
- Compatibility with Previous Versions
- Installing and configuring the Chromeleon CDS software

Tip: The *Glossary* describes Chromeleon CDS specific terms and common abbreviations used throughout the documentation.

3 What's New in Chromeleon 7.2 CDS SR2

Chromeleon 7.2 CDS SR2 implements a large number of new features with a lot of options and new possibilities including targeted peptide quantitation and non-targeted peak detection for certain QC applications in biopharma. This document can only give a short overview of all features without going into much detail. For more details, refer to the Online Help.

3.1 Thermo Scientific Instrument Drivers

Note: This chapter lists updated drivers added to Chromeleon 7.2 CDS SR2. For details on supported options, required licenses, installation, and control, refer to the Online Help or the List of Supported Instruments document found on the Chromeleon 7.2 CDS SR2 DVD.

3.1.1 Vanquish – New Drivers [SWFR-554]

Vanquish is the new Thermo Scientific HPLC platform consisting of several modules. This Service Release introduces drivers and client functionality required to support the new platform.

3.1.1.1 New Vanquish Autosampler Driver

This release supports the new Vanquish Autosampler module, including the optional Charger module allowing the user to select from up to 20 further plate positions.

3.1.1.2 New Vanquish Binary Pump Driver

This release supports the new Vanquish Binary Pump module, including support for selection of solvents via options such as A1, A2, B1, B2 etc. as well as the increased pressure range available (up to 1500 bar).

3.1.1.3 New Vanquish Diode Array Detector Driver

This release supports the new Vanquish Diode Array Detector module. This module uses new LightPipe™ technology for improved performance.

3.1.1.4 New Vanquish Column Compartment Driver

This release supports the new Vanquish Column Compartment module. This module allows the user to define up to three temperature zones for improved method development

3.1.2 TSQ Quantiva LCMS Driver – New Driver [SWFR-670]

With this Service Release, the Thermo Scientific TSQ Quantiva driver version 1.1 QF1 is included.

Note: The driver version 1.1 QF1 may be incompatible with existing TSQ Quantiva units on driver version 1.0 without a hardware update. Please contact your local MS service engineer prior to attempting an upgrade.

3.1.3 Exactive Plus Orbitrap Mass Spectrometer – Updated Driver

The Thermo Scientific™ Q Exactive™ Plus bench-top Orbitrap Mass Spectrometer driver has been updated to improve the interface with Chromeleon CDS so that auditable events are fully captured.

3.1.4 TRACE 1300 (“Native”) – Updated Driver [SWFR-801, SWFR-1009]

With this Service Release, the (“native”) driver has been updated to add:

- Vapor Volume and Column Flow calculators to the Inlets pages of the Instrument Method editor
- Column Evaluation functionality to the Inlet ePanels

3.1.5 TriPlus 300 HS – Updated Driver [SWFR-989]

With this Service Release, the existing Thermo Scientific™ TriPlus™ 300 Headspace (HS) Autosampler driver has been updated to support:

- Optional Aux Carrier Module used for pressure control

3.1.6 TSQ Series GCMS Driver - Updated Driver [SWFR-861], [SWFR-862]

The TSQ 8000 GCMS driver has been updated to version 3.1 SP1 QF1, which adds support for the following models:

- TSQ 8000 Classic
- TSQ Duo
- TSQ 8000 Evo

Note: This driver update is not automatically installed with this service release. In order to use the new driver, you must:

- a) Remove the existing TSQ 8000 module from the Chromeleon Instrument Configuration
- b) Uninstall the existing TSQ Driver (using the 'Programs and Features' page of the Control Panel)
- c) Install the new TSQ Series driver by running setup.exe from the Drivers\Thermo TSQ 8000\Full\ folder of the Chromeleon 7.2 SR2 distribution.
- d) Add the TSQ 8000 module back into the Chromeleon Instrument Configuration

3.1.7 AI/AS 1310 Autosampler – Updated Driver [CM7-16739]

With this Service Release, the internal timing of the driver has been improved.

3.1.8 AS-AP – Updated Driver [CM7-16653], [CM7-16654]

The AS-AP driver has been updated to allow the Fraction Collection feature to work properly. Changes include addition of two new Instrument Wizard pages with settings that enable pertinent parameters, including Samples/Fractions split point, Meandering Scheme, Vial/Well Type, Fraction Valve Operation, as well as a Peak Detection Options page.

AS-AP users who use the Fraction Collection feature should upgrade to SR2.

3.1.9 ASE-350 Driver - Updated Driver [CM7-9640]

With this Service Release, the extraction volume is now recorded in the Audit Trail.

3.2 Third Party Instrument Drivers

Note: This chapter lists new and updated drivers added in Chromeleon 7.2 CDS SR2. For details on supported options, required licenses, installation and control refer to the Online Help.

3.2.1 Varian 3800 GC – New Driver

With this Service Release, support has been added for the Varian 3800 GC with the following modules;

- Autosamplers:
 - Varian 8100/8200 Autosampler
 - Varian 8400 Autosampler
 - Varian 8410 Autoinjector
- Injectors:
 - 1041 On-Column Injector with EFC
 - 1079 Universal Capillary Injector with EFC
 - 1177 Isothermal Split/Splitless Injector with EFC
- Detectors:
 - Electron Capture Detector (ECD)
 - Flame Ionization Detector (FID)
 - Thermal Conductivity Detector (TCD)
 - Thermionic Specific Detector (TSD)

3.3 Instrument Controller Features

3.3.1 Fully Automatic AutoDilution [SWFR-1143]

The AutoDilution feature has been enhanced to enable automatic calculation of a dilution factor by way of referencing the calibration curve for samples that fall outside (above) the calibration range. This dilution factor is then applied to calculate the appropriate dilution of the sample and execute on the result of that calculation.

This feature has also been improved to allow selection of the vial from which a diluted sample is to be injected.

3.3.2 Privilege to Control Manual Injections [SWFR-1010]

This Service Release introduces the option to restrict manual injections and is supported by all instrument types.

3.4 Client Features

3.4.1 Intelligent Run Control: Pause Queue on Failed SST [SWFR-146]

A new action for Intelligent Run Control is implemented in this Service Release that allows an operator to pause the queue based on SST results.

3.4.2 Chromatogram Plot Signal Parameters [SWFR-819]

This Service Release introduces a visual display of signal parameters in the chromatogram plot for example wavelength changes.

3.4.3 Autoscale Options for Signal Axis [SWFR-845]

This Service Release introduces further options to autoscale the signal axis. Options such as "Autoscale in Time Window" and "Autoscale on Peak" have been introduced.

3.4.4 Chromatogram Plot – Delete Peak [SWFR-170]

When manually deleting a peak in the Chromatogram Plot view the next peak is now automatically selected.

3.4.5 Automatic Component Assignment Removal of Erroneous Peak [SWFR-596]

This Service Release introduces the possibility to remove automatic component assignment of erroneously identified peaks that were assigned automatically. This has resulted in improvements to the user interface, most notably to the Peak Properties view which now has the addition of controls for manual peak identification.

3.4.6 Evaluate Signal to Noise by Root Mean Square Method [SWFR-1156]

This Service Release introduces the ability to determine signal-to-noise ratio using Root Mean Square method.

3.4.7 QD Processing Method Template [SWFR-814]

With this Service Release, a new processing method template has been added that is designed to be used with the QD Charge Detector. It includes a new tab that allows the use of composite scoring to help confirm peak identity based on peak amount. It also includes a modified Calibration tab (QD Calibration tab) that allows Normality to be set as the calibration unit.

3.4.8 Capillary Electrophoresis Area Variable [SWFR-1034]

This Service Release introduces a new reporting variable for Capillary Electrophoresis area/retention time.

3.4.9 Data Vault Storage Space Checks [CM7-8397]

During a sequence queue run, update or start, the Instrument Controller ready check now issues graded messages when the available free space on the raw data drive for local Data Vaults is running low.

3.5 Client Features for Mass Spectrometry

3.5.1 Exactive Series Tune Integration in Chromeleon [SWFR-691, SWFR-692]

This Service Release introduces greater integration of Tune by offering the following features;

3.5.1.1 *Execution of Tune from Chromeleon ePanels on local PC [SWFR-909]*

It is now possible to open the Tune application in a pop-up window from within the Exactive Series MS ePanel.

3.5.1.2 *Tune Parameter Handling [SWFR-691, SWFR-692]*

The source parameters for the tune file are now captured in the Chromeleon audit trail during data acquisition.

3.5.1.3 *Date of Last Mass Calibration*

It is now possible to read and display the date of last calibration of instrument via a Chromeleon instrument symbol. The date stamp is logged at the beginning of every injection.

3.5.1.4 *Calibration "Summary Report"*

The calibration information used at time of data acquisition is now available in a report table.

3.5.1.5 *Exactive Instrument Status*

The Exactive instrument status is now indicated.

3.5.2 Targeted Peptide Quantitation (Pinpoint) [SWFR-698, SWFR-701, SWFR-702, SWFR-703]

This Service Release introduces the ability for Chromeleon to import specifically formatted Pinpoint workbooks to enable targeted peptide quantitation. This is made possible by handling of multiple charge states and isotopes across multiple peptides in the processing method, calculating a composite score based off of one or more user-selected match parameters, and visualizing these components via specific interactive chart types. The Report Designer has also been extended to report out calculated results for targeted peptides.

3.5.3 Non-Targeted MS Processing (SIEVE) [SWFR-1051]

This Service Release introduces a new licensed category into the Chromatography Studio titled Non-targeted MS Processing. The new category allows users to parse through MS raw data in an automated manner in order to detect non-targeted peaks from the 3D MS data using the SIEVE v2.1 proteomics framing and detection algorithm.

3.5.3.1 *General Implementation*

The workflow implemented supports a direct one-to-one relationship between an unknown and a reference injection generating one set of results at any given time for a single injection. Results are not associated with multiple injections.

Parameters for non-targeted MS data processing are identical to the parameters available in SIEVE v2.1 and are divided into 2 portions – basic parameters which are exposed to the user by default, and advanced parameters which are only exposed when a user opts to access them.

3.5.3.2 *Alignment and Detection Process*

Users can execute Alignment, Detection, and Alignment + Detection as a partial or full workflow with permissible skipping of alignment prior to detection when using SIEVE detection parameters.

3.5.3.3 *Review and Reporting*

Results from the SIEVE engine are integrated into Chromeleon as a report table containing the non-targeted processing method, XIC mass, extraction PPM, and frame width. These parameters generate the appropriate XIC visualizations using the Chromeleon plotting engine.

The "frames" which are detected by the SIEVE engine are displayed on a per injection basis in the navigation pane, similar to the component view or as a collapsible list under each injection with only the first 10 frames listed initially.

In addition, it is possible to display the mass spectrum of the peak via the time spectra tool. Selecting the data point of the unknown XIC displays the spectrum for the unknown XIC and equivalent reference XIC in either stacked or overlaid representations.

3.5.4 Graphical Specification of XICs and Quant/Confirming Ions Is Now Based on Nearest Ion [SWFR-932]

In the 'Extracted Ion Chromatogram' page of the Processing Method properties; in order to accurately specify the ion, the extraction snaps to the nearest m/z for which there is actually a response in the plot. In a similar way, clicking in the mass spectrum plot will now extract an XIC based on the nearest m/z with a response.

3.5.5 Calculate Mass from Chemical Formulae [SWFR-1155]

This Service Release supports the conversion of a chemical formula to an accurate or nominal mass.

3.5.6 Peak Composite Scoring [CM7-16501]

With this Service Release, the peak Composite Scoring feature has been improved and now includes the ability to calculate mass accuracy of quantitation peaks.

3.6 Compliance Features

3.6.1 User Management Privileges

The following new user privileges have been added:

- Manual Injection

3.6.2 Mixed Mode Login [CM7-6168, SWFR-717]

Chromeleon User Management can now use both LDAP and non-LDAP accounts in the same user database, and use them simultaneously. This permits special accounts without associated Windows user accounts to be created.

3.7 Administrative Features

3.7.1 Suppress TeamViewer Installation [SWFR-844]

A command line option is now available to suppress TeamViewer installation during setup. For details, please refer to the document **\\Documents\\Installation Guide – Chromeleon 7.2.pdf** on the Chromeleon CDS disk.

3.8 IQ/OQ/PQ

3.8.1 HPLC Instruments IQ

New HPLC Instruments IQ tools are available in Chromeleon CDS. HPLC Instruments IQ version 3.10 adds support for Vanquish devices. For details, please refer to the document **\\Documents\\HPLC Instruments IQ V.3.10 - Release Notes.pdf** on the Chromeleon CDS disk.

3.8.2 HPLC OQ/PQ

New HPLC OQ/PQ tools are available in Chromeleon CDS. The sections below describe the main features introduced in the respective versions.

3.8.2.1 HPLC OQ/PQ – Version 8.10

HPLC OQ/PQ version 8.10 adds support for Vanquish System and ECD-3000RS Pulse Mode. For details, please refer to the document **\\Documents\\HPLC OQ PQ v.8.10 - Release Notes .pdf** on the Chromeleon CDS disk.

3.9 Firmware

This release adds new firmware for new and updated instruments and modules. For an overview of the firmware versions available with this release, please refer to the document **\\Documents\\List of Supported Instruments – Chromeleon 7.2 SR2.pdf** on the Chromeleon CDS disk.

3.10 Additional Features

3.10.1 AutoSRM for Chromeleon [SWFR-863]

Included in the distribution of Chromeleon 7.2 CDS SR2 is AutoSRM 3.1 for Chromeleon. AutoSRM is a standalone application for optimizing TSQ-8000 series QqQ scan filters for a collection of compounds to achieve the best overall selectivity and signal-to-noise response. The AutoSRM package can be found in the \Tools\Thermo AutoSRM folder of the Chromeleon 7.2 CDS SR2 DVD.

4 Limitations and Known Issues

4.1 Functional Differences between Chromeleon 7.2 CDS and Chromeleon 6.8 CDS

Chromeleon 7.2 CDS implements the vast majority of Chromeleon 6.8 CDS features, and in general, has a richer feature set than Chromeleon 6.8 CDS. However, a few Chromeleon 6.8 CDS features remain to be implemented on the 7 platform and a few will never be implemented, since they are now obsolete or no longer relevant. If a particular missing feature is important to you, please contact your local Thermo Fisher Scientific representative to find out if that feature is in the product development plans.

4.2 Vanquish Charger [CM6-22842]

If the Vanquish Charger loses power subsequent attempts to reconnect the Charger can fail. Unplug and plug back in the Charger's USB cable and reconnect with Chromeleon using the Connect command.

4.3 UltiMate 3000 FLD-3000 [CM7-17151]

The fluorescence field settings Response Time range was incorrectly defined and has been amended. All existing instrument methods with Response Time greater than 400 seconds will need to have this property amended.

4.4 Thermo Scientific Accela Open Autosampler [CM6-21321]

When using this autosampler a dot ('.') must be used as decimal separator.

4.5 Waters Driver Pack [CM6-23194]

There are several known issues with the Waters Driver Pack. These are:

- Should a Waters instrument detect an IP address conflict during start up, the Chromeleon CDS driver will log the error message in the Audit Trail. If this message is ignored, it will be displayed again after 2 hours, which can result in a running sample being aborted.
- Localization to a non-English regional setting for the PC (e.g., German) does not function correctly for the timed events table, e.g., using a Waters 2998 PDA detector and setting a timed event in the program file (e.g., wavelength change at 5 minutes). The event is recorded, but without the event time.
- Waters 2489 PDA detector: After changing the Instrument Method from single to dual-wavelength mode (without changing Channel A wavelength), the data rate for Channel B is set incorrectly and incomplete data collection occurs.
- After removing the Sample Organizer from the Instrument Configuration, the plate setup is not updated correctly. Manually updating the plate settings in the plate setup configuration dialog avoids this issue.
- If the total length of the instrument name plus detector name is more than 32 characters, the sequence will abort shortly after initial injection. The affected detectors are: W2489, W2998 and Acquity FLR.

4.6 Waters Alliance [CM6-22371]

It is not possible to connect two Waters Alliance instruments via one GPIB board. This is also documented in the online help.

4.7 Agilent ICF

For limitations regarding the Agilent Instrument Control Framework, please refer to section 5 of the document **Chromeleon and Agilent ICF - Quick Start Guide - Chromeleon 7.2 .pdf**, found in the \Documents\ folder of the Chromeleon 7.2 CDS DVD.

4.8 Agilent 5890 DICE Card [CM7-12366]

Please note the following when using the 19257 DICE card with the Agilent 5890 GC:

- Control and acquisition using the DICE card is only supported via the serial interface. The GPIB interface is not supported.
- Digital data acquisition via the serial interface of the DICE card is only supported for a single channel; dual channel digital acquisition is not supported.
- Currently, it is possible to select certain illegal combinations in the Configuration Dialog such as:
 - Digital acquisition with the 19254 card. This is not supported.
 - Digital acquisition on one detector and analog acquisition on the other. Acquisition needs to be exclusively digital or exclusively analog.
- When using the DICE card to acquire data digitally, the 5890 INET mode must be set to "GLOBAL" not "LOCAL". Failure to do so will result in a "No response from GC" message following the AcqOn command in the audit trail.

Note that when performing analog acquisition, the 5890 INET mode should still be set to "LOCAL" (as described in the online help).

To change this setting:

1. Remove both ends of the cable.
2. On the 5890 keypad, press **CLEAR** and then press the C." key. The following information appears on the display: **CALIB AND TEST [0-9]**.
3. Press **3**. **CONFIGURE NETWORK** appears on the display.
4. Press **ENTER**.
5. If the information **LOCAL ADDR:** appears on the display, then Press **OFF** to change the setting to **GLOBAL ADDR:**.
6. Press **CLEAR** to exit the menu.

4.9 Agilent 6890 GC [CM6-22512]

When using an Agilent 6890 with a single injector configured for use as both a front and back injector, a spurious warning message will appear in the audit trail: "The device is not present in the GC. Please check configuration using Chromeleon Instrument Configuration Manager"

This message can be ignored, and the instrument used as desired in this case.

4.10 Agilent 7890 GC Sampler Positions [CM7-9675]

There is a backwards compatibility issue that affects the Agilent 7890 GC Sampler Positions:

When using a 7890 GC in combination with a 7693 sampler, certain positions in the sampler could give a misspelled value to a move command. This has now been corrected and could in rare cases lead to Instrument Method files needing to be updated to avoid errors.

4.11 AI/AS 1310 [CM7-17325]

The value 'SamplerCheckingForVial' was incorrectly named due to an error in the firmware status description and has been renamed to 'SamplerDoorOpen'. All existing instrument methods will need to have this value amended.

4.12 TriPlus RSH and TriPlus 100 LS [CM7-15429, CM7-15621]

If an "Open Instrument View" dialog is used with an instrument containing a TriPlus RSH or TriPlus 100 LS, then closing this view may cause Chromeleon CDS to stop working. A workaround for this is to open the view from the Instruments category of the Console.

4.13 TRACE 1300 GC [CM6-22663]

The only GC detector that supports an autozero in the time program at 0.00 min is the TCD. The TCD filament needs to be on in order to execute an autozero.

4.14 TSQ 8000 and ISQ Instrument Methods [CM7-17648]

It is not possible to create or edit an instrument method for TSQ 8000 immediately after viewing or modifying an instrument method belonging to an ISQ without restarting the Chromeleon client. When tried an unhandled exception will be thrown due to the ISQ assemblies predating those required for the TSQ 8000. Recovery of the problem is to close and reopen the Chromeleon client.

4.15 CDB Import/CSV Export Does Not Properly Export Precursor Mass, Product Mass or Collision Energy [CM7-17606]

When a TraceFinder CDB file containing triple quadrupole data is imported into the MS Components page of the processing method, a subsequent CSV export of the MS Components table will not properly list the precursor masses, product masses or collision energies. As a result, this information will not be correctly imported into a TSQ series instrument method.

4.16 MS Drivers: TSQ Quantiva or Endura [CM7-15632, CM7-16030, CM7-16154]

The following known issues exist with MS Drivers including TSQ Quantiva or Endura:

- When removing the source from a TSQ Quantiva or Endura in mid-acquisition, the sequence does not abort.
- When using a TSQ Endura or Quantiva, the standby state reports that the instrument is on, regardless of the real instrument state.
- When creating an Instrument Method for the TSQ Endura or TSQ Quantiva, the MS run time is not the same as the Chromeleon run time. The user should enter the correct run time on the MS page of the wizard.

4.17 Exactive Series Instrument Data Files [CM7-17500]

Exactive Series instruments are usually shipped with a PC ("Exactive PC") that includes all the necessary instrument data files, such as calibration files, for operating the instrument. If you want to control an Exactive instrument using a different PC, make sure that the specific instrument data files residing on the Exactive PC are backed up and transferred to the new PC. For details on performing the data backup on the Exactive PC, refer to the Thermo Exactive Series 2.5 SP1 Release Notes, section Backup provided on the Chromeleon installation disk in the Packages\Thermo Exactive\Documentation folder.

4.18 Thermo Scientific TSQ Endura and TSQ Quantiva [CM7-17668]

TSQ Endura and TSQ Quantiva instruments are usually shipped with a PC ("Endura / Quantiva PC") that includes all the necessary instrument data files, such as calibration files, for operating the MS instrument. If you want to control an instrument using a different PC, make sure that the specific instrument data files residing on the Endura or Quantiva PC are backed up and transferred to the new PC. For details on performing this process, please consult with your local MS field service engineer.

4.19 MSQ Plus and Tune Application [CM7-16557]

When using the MSQ Plus with Chromeleon CDS the user has to wait for the Chromeleon Instrument Controller to be in idle mode before opening the Tune application. Without waiting, the MSQ Plus will not be able to change the operating mode (On, Off, Standby), or it will not be possible to run injections. To recover from this error both the PC and the MSQ Plus would have to be restarted.

4.20 Perkin Elmer LC200 Autosampler [CM7-15400, CM7-15556, CM7-15734, CM7-15736]

When upgrading from earlier versions of Chromeleon 7 CDS to Chromeleon 7.2 CDS SR2, it is necessary to reload the Perkin Elmer LC200 Autosampler driver and configure the loop size within the configuration. The user should then check all instrument methods using this autosampler to ensure that they continue to function correctly.

4.21 No Access to SQL Server after Renaming the PC [CM7-15439]

After renaming a PC with a Chromeleon CDS installation the Data Vault Service can no longer access the MS SQL Server anymore. This is related to connection information for the SQL database. At the moment, this can only be resolved with a manual process. Contact your local Thermo Fisher Scientific service representative in case you need to rename the PC.

4.22 Installation on a PC with Identical Computer Name and User Name [CM7-16705]

The Chromeleon installation will fail on a PC where the name of the computer and the logged-in user are identical. Refer to section 5 of the document **Installation Guide - Chromeleon 7.2.pdf**, found in the \Documents\ folder of the Chromeleon 7.2 CDS DVD.

4.23 MS and Real Time Chromatogram Plot Objects [CM7-15601, CM7-16510]

There is a known performance issue with the Chromatogram and Mass Spectral Plot Objects on the instrument control ePanel when acquiring data from mass spectrometers:

Attempting to monitor non-existent or large number of MS scan data in real-time causes the Instrument Controller to become unresponsive. To prevent accidental monitoring of non-existent or excessive data, mass spectrometer ePanels affected by this issue have had the following changes applied:

1. Chromatogram plot only allows for monitoring of the TIC plot by default with the option to monitor specific scans disabled
2. Mass Spectral Plot Object has been removed from affected ePanels.

Note that it is possible via the ePanel editor to add the Mass Spectral Plot Object to custom ePanels. However, due to the above mentioned issue, users are discouraged from attempting to use the Mass Spectral Plot Object to encountering an unresponsive instrument controller.

4.24 Consolidated Report Table – Results Columns [CM7-14543]

When results are grouped by injection, in this release it is not possible to apply Excel formulas, for example to average results.

4.25 WibuKey Install [CM7-17681]

After upgrading Chromeleon or if installing on a system that already has Chromeleon 6.80 running the license key may not be recognized by the License Manager in the Administration Console. If this problem is encountered uninstall the WibuKey drivers in Programs and Features, restart the machine and reinstall the WibuKey drivers again and then restart the Chromeleon services.

4.26 .Net Framework 4.5 [CM7-17173]

The calibration results rely on the Math.Pow method of .Net framework. In .Net 4.5 the method has been altered which could result in very small relative differences between calibration results that were calculated using .Net 4.5 compared to results obtained using previous framework versions.

5 Resolved Issues

This chapter describes the issues that have been resolved with the release of Chromeleon 7.2 CDS SR2.

Many trivial and minor issues have been resolved, but are not mentioned here. If you require information about the status of an issue observed in a Chromeleon 7 CDS release, but which is not listed here, please contact your local Thermo Fisher Scientific representative for more information.

The numbers in the first column of the table below refer to the Thermo Fisher Scientific tracking IDs.

ID	Description
CM6-22382	Shimadzu GC-2010: In the instrument configuration it was only possible to enter integer values for the signal factor.
CM6-22433	UltiMate 3000 WPS-3000: When using a WPS-3000, occasionally the tray description would be truncated, causing a problem with the rack view.
CM6-22481	TriPlus RSH: Injection volume of 0 was allowed, which caused an unhandled exception in the client during calibration calculations.
CM6-22514	TriPlus RSH: In GC Headspace mode it was possible that a zero volume was injected. If an invalid injection volume is set an error will be displayed and the acquisition will not start.
CM6-22535	TriPlus RSH: The vial position in the sequence was not validated against the actual tray configuration during the ready check, potentially limiting the valid vial range.
CM6-22589	UltiMate 3000 FLD-3x00(RS): When changing the system time for daylight saving, the FLD driver would report a timeout and interrupt the running sequence.
CM6-22601	Shimadzu LC Pumps: When a second pump is configured alongside a Quaternary pump, the flow rate for the second pump couldn't be set from the F8 command box.
CM6-22612	TRACE 1300 GC: The instruments Ignition Threshold value of the flame ionization detector wasn't displayed correctly in the Instrument Method Editor.
CM6-22641	Agilent 7890 GC: Although it is not possible to change the Litoffset parameter within the instrument method (program file), no Ready Check error was reported when it was included.
CM6-22648	TRACE 1300 GC: If the instrument configuration contained a TriPlus 100 LS and TRACE 1300 GC and the instrument was started by a program that did not contain an Inject command then the GC had to be stopped manually. The GC is now automatically stopped at acquisition end time.
CM6-22863	Vanquish Charger: It was not possible to download firmware updates to the Vanquish Charger via Chromeleon.
CM6-22881	Agilent 68xx GC: The GC hardware kept running even if a sequence was stopped manually.
CM6-22914	TRACE 1300 GC: Hydrogen gas should not be allowed when using a GSV inlet.
CM6-22995	TriPlus RSH: Non-default derivatization vial was not accepted in the Instrument Method Wizard.
CM6-23011	Vanquish DAD and UltiMate 3000 DAD: 3D field Bunch width field allowed non-integer values. Only integer values are now accepted. If you enter a decimal value, it will automatically round up to an integer value.
CM6-23023	TRACE 1300 GC / TriPlus RSH: Selecting Manual Inject when a TriPlus RSH was also configured resulted in a Ready Check error.
CM6-23058	TRACE 1300 GC: Changes to signal unit in the Instrument Configuration were ignored.
CM6-23107	TRACE GC Ultra: It was not possible to change the default setting for AutoStart.
CM6-23124	TRACE 1300 GC: Communications could be terminated after aborting manual injection.
CM6-23151	Vanquish Charger: During an inject preparation run if the door was opened immediately after the "PrepareNextInjection" command was executed the injection could be interrupted. Several improvements have been made to minimize the recurrence of the issue.
CM6-23185	Vanquish Pump: Sometimes the pumps would run isocratically even though the instrument method specifies a gradient.
CM6-23207	Vanquish Pump: After firmware update from 1.00 to 1.00.04 an error was observed stating that the firmware had not been updated correctly. The error message has been updated to reflect the true issue which was that the driver could not reconnect after the firmware download. The timeout has also been extended and now there will be several retries before issuing an error that the driver failed to connect.
CM6-23226	Vanquish TCC: If a VTCC is in use and preheater is switched on and the device becomes disconnected for whatever reason during data acquisition the system will now abort rather than continue as was previously the case.
CM6-23248	Accela/Surveyor Plus: Autosampler inject synchronization failed. The driver did not configure all relevant aspects of the COM port it uses.

CM6-23260	TriPlus 300 RSH: Connecting Chromeleon to a TriPlus 300 HS that was running resulted in the instrument control becoming locked out and couldn't be controlled via Chromeleon or by its own control panel. It is now possible to disconnect Chromeleon if this occurs.
CM7-1508	Console: Various optimizations have been applied to improve the performance when copying Chromeleon 6 data to a Chromeleon 7 Data Vault. Previously the computer could become unresponsive but this has also been addressed.
CM7-1553	Console: Non-Chromeleon files that are associated with a Data Vault, folder, or sequence could not be saved after editing. They are now clearly marked as read-only.
CM7-6233	UltiMate 3000 FLD-3000/VWD-3000: It is now possible to store manual spectra scans performed with a FLD-3000 or VWD-3000, but only with baseline monitoring.
CM7-8983	Data Audit Trail: When using 'Save As' for Processing Methods the objects data audit trail operation stated copied and the comment contained the path but not the originating source object. The operation now states that the action was Save As and the full details of the originating source are recorded in full in the comment.
CM7-10447	Data Audit Trail: When Sequences were saved within the same location using 'Save As', and in the process the sequence was renamed, the object's data audit trail comment contained the path of the original sequence but did not reflect the change in the sequence name. The operation now records in the comment details of the path and identity of the object and in doing so identifies that the sequence was renamed.
CM7-10525	Instruments - Queue: If a sequence was added to the queue of an instrument that was not assigned to said sequence, then before starting the queue a ready check warning was displayed notifying the user that the sequence did not belong to the instrument. If a user now adds a sequence to a different instrument's queue the sequence is automatically updated to reflect the new instrument assignment.
CM7-10754	Client - Data: It was possible to experience an exception with the error message "The children of an item cannot be loaded if the item is not contained in a data vault." when working with sequences. Improvements have been made to prevent it occurring.
CM7-11370	Services: The Chromeleon services failed to start if the PC name had non-standard characters. The Services now support non-standard character PC naming conventions.
CM7-13499	Thermo Scientific TSQ 8000: After changing "MS Transfer Line Temp" or "Ion Source Temp" or both the save icon was not enabled until any other setting of the method was changed.
CM7-13627	Studio: The contour plot with 3D view enabled could become inactive resulting in the properties no longer being available until the Studio was restarted.
CM7-14021	Online Help: The Help file now contains information relating to the scaling of MiniPlots.
CM7-14668	Console: When silent LDAP logon was enabled and the option to allow multiple logons was disabled, if second instance of the Console was started it would lock the existing Console instance and open a new Console window. This behaviour has been corrected and in such a scenario only a single Console instance is available.
CM7-14674	Agilent 6890/7890 GC: "DualOperation = Shared" could not be set via the ePanel.
CM7-14677	Studio - Injection List: When entering too many digits into the level column inconsistent handling occurred depending on the value due to rounding issues.
CM7-14737	Console - Query: It was not possible to query Custom Variables that were named the same but originated from different Data Vaults. After copying all sequences into one Data Vault, only the results originating from one Data Vault would be returned. All results of the query are now returned for Custom Variables that have an identical name and type even if they originated from differing Data Vaults.
CM7-14764	Console: When comments were enabled, Save As, Copy/Paste, Drag/Drop actions within a sequence did not prompt for a comment to be entered. If Comment required is active then a comment entry must now be made for all of these actions inside a sequence. There have also been improvements to commenting outside a sequence for creating items, Save As, Copy/Paste, Drag/Drop, Cut/Paste and overwriting.
CM7-15033	Services: The communication between the Instrument Controller service and the Data Vault service could timeout and potentially result in data acquisition being interrupted. The communication channel has now been altered to prevent the timeout.
CM7-15151	Studio: It was not possible to generate an extracted ion chromatogram for any injections during a sequence run. It is now possible to create a permanent channel for finished injections and a temporary channel for a running injection.
CM7-15491	Licensing: If the client crashed or became unresponsive, the licenses consumed by this session were not released for several minutes. In such a situation the license will now be released promptly.
CM7-15588	Discovery: The Discovery service failed to start if the PC name had non-standard characters. The Discovery service will now support non-standard character PC naming conventions.
CM7-15605	Console - Injection List: Performance of the Injection List degraded for large sequences with multiple result columns.
CM7-15663	Studio - Chromatogram Plot: When using a fixed calibration, the peak windows from the current method would incorrectly be shown in the chromatogram plot.

CM7-15664	Studio - Chromatogram Plot: When using fixed calibration, frozen peak assignments were not distinguishable from manual assignments either in the UI or via the variable peak.assigned.
CM7-15666	Console - Import: CM6 data that contains a QNT with "fixed" calibration injections could lose previously assigned peaks during the conversion process. An inappropriate check was being performed which has been removed.
CM7-15782	Studio - Reporting: Typing an Excel formula (e.g., "=IF(C14=GA14; GA14;"")) into a cell that already contained a dynamic Chromeleon variable would display an "Invalid formula syntax" error and prevent the formula from being entered.
CM7-15835	Studio: The contour plot with 3D view enabled could become inactive resulting in the ribbon contextual tabs not updating correctly until the Studio was restarted. The Contour/3D Plot Tools contextual tab is now always available when the contour plot with 3D view enabled is activated.
CM7-15840	Exactive Series: When a new Exactive Series instrument tune file was created it was not picked up automatically but the user had to open the Instrument Configuration and click the Read Configuration button.
CM7-15874	Studio - Chromatogram Plot: If the Chromatogram Plot view had been zoomed and a peak was selected that lies outside the zoomed area, the Chromatogram Plot view did not adjust and bring the selected peak into view. The Chromatogram view now changes so that the selected peak can be viewed.
CM7-15920	Studio – View Settings: When deleting a pinned injection, the injection was not properly removed from the view settings.
CM7-15963	Agilent 7890 GC: An unnecessary ready check warning was issued for inlet and oven temperature settings.
CM7-16072	Studio - Processing Method: If a reference peak was not found, then any peak referring to it via relative retention time was also not found. A new option 'Requires Reference Peak' has been added, which will now either maintains the existing behavior or when the check box is cleared, will use the retention time that was entered in the processing method for the reference component, in the detection algorithm.
CM7-16108	Studio - Data Processing: After adding a processing method and creating a component in a sequence containing MS data the MS Quantitation Channel was not created automatically.
CM7-16231	Studio - Data Processing: Extracted Ion Chromatograms displayed a misleading error message when using an even smoothing value.
CM7-16237	Studio - Data Processing: An unhandled exception could occur if data was exported to text format from a Mass Spectral plot and in the Export Spectrum dialog the parameter 'Use fixed scan step was set'. The parameter is inappropriate and is now no longer available for mass spectral plot exports.
CM7-16250	Client - Export: After an upgrade of Chromeleon the Chromeleon 7 PDF converter could lose its assigned printer port 'DionexCM7Port' and attempts to export to PDF would hang. The correct printer port assignment is now maintained when upgrading.
CM7-16304	Console - Data: If a Chromeleon 6 Datasource with user management was the last item selected before closing the console, the console would be unresponsive upon restarting Chromeleon.
CM7-16306	Console - Chromeleon Data Import: It was not possible to restore a CMBX file if the name of a sequence within it contained international characters.
CM7-16326	Versioning: Instrument Method versions for Q-Exactive and Exactive Series instruments could not be compared under some circumstances. A direct comparison of instrument methods is now possible.
CM7-16328	Console - Non-Chromeleon Data Importer: After importing .cdf files the Inject Time entries would be blank if the AnDI file did not adhere to the standard. If the file does not meet the standard Chromeleon now uses the operating system date/time stamp and converts to UTC (Coordinated Universal Time) format. In addition, a warning is logged in the Data Import progress dialog box, which describes the issue and the action taken by Chromeleon.
CM7-16398	UltiMate 3000 ECD-3000RS: In pulse mode, the raw background signal was not available. This parameter has been added.
CM7-16424	TSQ-8000: When using a TSQ-8000, attempting to change the instrument configuration would lead to errors.
CM7-16592	MSQ: Online chromatogram plot (TIC) on ePanel was not available because of missing Filter tab.
CM7-16597	Console - ePanels: When configuring an UltiMate 3000 WPS-3000 using internal Fraction Collection, the Fraction Collection ePanel did not appear.
CM7-16608	Console - Query: When using the operator "is between" in a query, no match was found under certain circumstances.
CM7-16623	Data Vaults: The Data Vault's Deleted Items was only created after the Console was started on the system that the Data Vault was created on. Deleted Items are now created at the point when the Data Vault is created.
CM7-16638	Console - Data: When importing Chromeleon data via CMBX, it was possible to overwrite a sequence without having the "Delete Sequence" privilege.
CM7-16639	Console: The speed of license retrieval in certain network configurations has been improved.
CM7-16646	Studio - Data Processing: Incorrect results for peaks of an unidentified peak group were reported when multiple

	data channels exist and reports include 'fixed channel' results.
CM7-16648	Data Vaults: It was possible that when creating sequences using eWorkflows the cached network sequences in the XVault could not be cleaned and the XVault could grow large as a result and slow down the upload and download of sequences. Improvements have been made to prevent this occurring.
CM7-16653	AS-AP: It is now possible for the fraction collection valve to switch to drain in order to prevent needle leaks.
CM7-16654	AS-AP: In the Instrument Method Wizard/Editor, an option to select vial/well type has been added to the Fraction Collection General Settings page.
CM7-16665	MS data acquisition: Improved memory usage of the Instrument Controller when acquiring sequences with many injections, or many sequences in the same folder
CM7-16676	Studio - Reporting: When using unidentified peak groups in an integration table including all channels, some of the peaks were not displayed correctly.
CM7-16690	Console: It was not possible to paste text into the injection list filter.
CM7-16698	Studio: The validation of inputted formulas could result in a 'Parameter has an invalid type' error when the formula contained group criterion of a table for example table.groupaverage(). This was caused when the evaluation of the formula returned an unexpected string value rather than a numeric value. The validation handling has now been improved.
CM7-16706	Studio - Reporting: When inserting a detection settings table into a report of a sequence with no raw data, a confusing error message was displayed.
CM7-16719	Console - Import Non-Chromeleon Data: Under certain circumstances, the import of Chemstation CE data could fail with the message "the data points are not sorted in ascending order."
CM7-16720	Client - Import: When importing ChemStation signal data an 'Unable to read beyond the end of the stream' error was observed. The data importer handling has been improved.
CM7-16733	Audit Trail: The Data Audit Trail now contains greater granularity in the comments for deleted items, so that the action can be more easily identified and interpreted.
CM7-16740	Console - Custom Variables Manager: Under certain circumstances, using an Injection Custom Variable in a sequence could cause an unhandled exception.
CM7-16741	Console - Import: Data copied from Chromeleon 6 that used the 'Sample ID' variable was not properly mapped which resulted in the variable not being automatically modified to the equivalent variable in Chromeleon 7.
CM7-16749	Studio - Reporting: If a large picture was used in a report, this would lead to out of memory exceptions when attempting to create an electronic report or printing the report.
CM7-16764	Administration Console - Scheduler: In some circumstances a task scheduled to be performed daily would skip a day.
CM7-16795	Studio – Instrument Method: The UHPLC method speed up wizard has been improved to give more accurate predictions.
CM7-16799	UltiMate 3000 VWD-3x00: When using a very low data collection rate, occasionally the injection could abort unexpectedly.
CM7-16807	Studio - Processing Method: When using fixed calibration, if a fixed blank run did not contain the calibrated components an erroneous "fixed calibration mismatch" error was displayed.
CM7-16837	Console: Objects containing special characters such as § or umlauts in their name could not be copied.
CM7-16845	Studio: The Component Table properties dialog now opens after double click, anywhere within the table without requiring a component to be selected first via the chromatogram view or selecting a row of the component table.
CM7-16849	Client - Export: It was not possible to import files generated by Chromeleon in the ANDI/netCDF scientific data interchange file format into the Traditional Medicine Fingerprint Similarity Calculation Software (TMFSCS). The Chromeleon converter has been updated so that all required values are mapped correctly.
CM7-16873	ICS-4000: When using an instrument with an AS-DV module, an error could be seen if clicking on the AS-DV icon after creating an instrument method.
CM7-16881	Console - Send To: It was not possible to use foreign language characters in objects transferred to CMBX format. Unicode for names is now enabled when generating CMBX files.
CM7-16906	Studio - Calibration Plot: Calibration formulas were not displayed correctly for components, when the TIC channel was selected in the processing method.
CM7-16911	Instruments - Queue: If a new injection was added to a sequence using an SDK program and the sequence was in an instrument queue but had a finished status the sequence could not be restarted and a ready check error showed 'The queue contains finished sequences only.'
CM7-16920	Vanquish Pump: Vanquish pump Smart Startup executed pump purge even though purge is deactivated in the startup settings. Smart Startup no longer purges Vanquish pump if this setting is not enabled.
CM7-16943	Studio: The Triggers controls in the Events Chromatogram View Properties in the Studio (Data Processing or

	Report Designer) had no effect. The controls now operate as intended.
CM7-16956	Studio - MS Processing: Improved handling of MS extraction settings such as "Apply these Ratio Settings to all MS Confirming Peaks of All Components" for large compound lists in the Chromatography Studio have been implemented to address unhandled exceptions.
CM7-16961	Studio: Grouping channels by detector resulted in an exception when switching between injections in the Chromatography Studio. The exception no longer appears.
CM7-16963	Studio - Processing Method: The number of entries in Custom Variables of type "List" in the component table was limited to 30. This limit has been removed.
CM7-16973	Data - Custom Variables: Custom Variables could not be edited once associated with a sequence in particular those with lists. It is now possible to add to lists of custom variables but not delete existing entries if in use.
CM7-16977	Client - Electronic Signatures: If an electronically signed sequence is saved to a new location using 'Save As', and the sequence name was not altered the signature became invalid. Save as an electronically signed sequence without renaming now removes the signatures and resets the status.
CM7-16990	Instrument Access: Improvements have been made to the handling of driver out-of-range values so that instrument access is maintained and exceptions are not encountered.
CM7-17018	Client - Electronic Signatures: Sequences that had a Processing Method containing a test case that includes AutoDilution conditions could not be electronically signed. Electronic Reports and Signatures can now be applied in such cases.
CM7-17053	Vanquish Charger: Ready Check failed for certain injections from Charger positions.
CM7-17064	Console - eWorkflows: Launching an eWorkflow did not check whether the sequence would be created on a versioned Data Vault and could therefore be created without the correct license requirements. There is now a check in place which means that the 'Compliance License' is a necessity for versioned Data Vaults.
CM7-17067	Studio - MS Data Processing: Extracting a large number of XICs from timed-SIM data resulted in an exception.
CM7-17085	ICS: After removing a capillary suppressor the integrated DC Detector/Chromatography module temperature setting could not be set above 20°C.
CM7-17088	Services: When the Chromeleon 7 Cache Service was in operation, if two Data Vaults shared the same Data Vault Service host i.e. the Data Vaults were created on the same server, it was possible that raw data from a sequence stored in one Data Vault could not be distinguished from the raw file of another completely separate sequence which was stored in a different Data Vault, if the files had the same ID. The Cache Service has been updated so that if the raw files have the same ID they will be distinguished by Data Vault.
CM7-17099	Audit Trail: The data audit trail and the version history are no longer copied when the data audit trail / versioning option is disabled on the target Data Vault with the following exceptions; signed sequences, locked injections and signed electronic reports, where the data audit trail is always copied.
CM7-17106	AI/AS 1310: Opening/Closing the syringe door would abort communications and terminate a running sequence.
CM7-17116	Studio - Processing Method: Custom variables created as lists in Chromeleon versions prior to 7.1 would behave as if they were numeric custom variables when imported.
CM7-17118	Console - eWorkflows: It was not possible to have a sequence name containing a comma directly after a special character.
CM7-17141	TRACE 1300 GC: The Post-Column ID was reported incorrectly in the ePanel.
CM7-17146	<p>Studio - Data Processing: The peak detection algorithms rely on the .Net Sort algorithm. Importantly the order of equal elements can be affected depending on which sort algorithm is implemented and this order can affect chromatographic results. In .Net 4.5 the sort method introduced differing algorithm implementations which could impact Chromeleon such that;</p> <ul style="list-style-type: none"> - Cobra: auto smoothing width, found during the switch to .NET 4.5 in system tests, results in relative deviations about 10⁻⁵ - Classic/Cobra: if two or more component/peak pairings are equally possible, the used match depends on the sort order produced by the sort algorithm. <p>This Service Release implements a quicksort algorithm that maintains the same order that was obtained using .Net 4.0.</p>
CM7-17151	UltiMate 3000 FLD-3000: The fluorescence field settings Response Time range was incorrectly defined and has been amended.
CM7-17159	TRACE 1300 GC: The Column K-Factor display in the ePanel was off by a factor of 10.
CM7-17196	Studio - Reporting: When exporting to PDF, only the active sheet was printed if the current injection was selected.
CM7-17240	TRACE GC Ultra: The ePanel did not provide a way to view or set the Aux Zone temperatures.
CM7-17242	Virtual Column: Due to a transcription error in the AS20 data set, at 35°C Formate was fully resolved from Methanesulfonate, and eluted before Fluoride. The data set has been corrected.
CM7-17249	Console - Data: If a sequence name contained certain special characters, it was not possible to restore the

	sequence from the deleted items folder.
CM7-17306	Administration Console - User Management: When administering an existing user to completely reset their passwords, if "Set the logon password" and "The user must change the password on next logon" are both set together, the password change was not enforced when logging on to the Chromeleon console. This has been rectified and now in order to logon the user must enter the temporary password and then must enter their new password before gaining access.
CM7-17325	AI/AS 1310: The value 'SamplerCheckingForVial' was incorrectly named due to an error in the firmware status description and has been renamed to 'SamplerDoorOpen'. All existing instrument methods will need to have this value amended.
CM7-17373	TRACE 1300 GC: In order to simplify switching between Gemini and single injection mode, an ePanel control has been added to facilitate changing this device parameter.
CM7-17374	Audit Trail: Triggered and manual commands are now supported in audit trail report variables
CM7-17380	Data Processing: When opening a composite scoring table in a processing method without a sequence an exception occurred. In this instance the reference to injection list information to populate the channel list has been resolved.
CM7-17471	Studio - MS Processing: Incorrect amount was reported for peak groups based on MS channels.
CM7-17473	Q Exactive: Manual hold commands resulted in an error that the mass spectrometer did not support the command. This only occurs now when the instrument state is 'Running' or 'WaitingForContactClosure'. In all other states, the message is no longer displayed.
CM7-17529	Surveyor Plus: When attempting to connect to any Surveyor Plus module from the ePanel an error message, "Error in preflight event handler", was reported.
CM7-17536	<p>Studio: When viewing query results in the Studio that have grouping, the grouping is toggled in the navigation pane of Studio and the injection list increases again and again. The grouped injection list was not removed but stayed until the studio session was restarted. The injection list in the studio navigation area is rebuilt and now always shows the injection list of the Console.</p> <p>Note: You can toggle the grouping option either in the Console or the navigation area of the Studio. The observed behavior is always the same.</p>
CM7-17553	Non-Chromeleon Data Import: The Non-Chromeleon data importer has been updated to include workbook additions that were introduced in the libraries of the recently released Atlas 8.3 SR3.
CM7-17574	Studio - MS Processing: Target ion ratios were computed based on height even when calculated ion ratios were based on area.
CM7-17580	AS-AP: An exception could occur if the instrument volume range was set wider than the one saved in the sequence.
CM7-17597	Studio - Data Processing: When running the Component table wizard, if the component table already contained several entries and on the first wizard page the 'Overwrite assigned components' was disabled an unhandled exception was observed and the wizard had to be cancelled.
CM7-17619	Studio: Entering and editing values for Integration Area and Baseline Noise Range in the Cobra Wizard could occasionally result in the Processing Method experiencing an unhandled exception that would result in the Cobra Wizard becoming unresponsive until Chromeleon was restarted. Improvements have been so that changes that are made within the Cobra Wizard are handled better.
CM7-17621	Vanquish Autosampler: The static vial positions were displayed wrongly in the tray view of the VAS. Position 1 and 3 are now shown correctly.
CM7-17622	Studio - Data Processing: Signal noise and drift values were only reported with the Cobra algorithm when a custom time range was set. Noise and Drift values are now determined even when using auto range.
CM7-17722	Services: The Cache Service didn't consider extraction limits for MS component traces. The Cache Service has been updated so that now if changes are made to the extraction window of a component trace the resulting extracted signal is displayed.

6 Backward/Forward Compatibility Issues

6.1 Thermo Scientific TriPlus RSH

The updated driver for this instrument is incompatible with firmware older than version 2.0.1.

Note: It is necessary that the firmware is updated to the latest version in order to benefit from any future driver enhancements.

6.2 Thermo Scientific TriPlus 300 HS [CM6-22430]

The updated driver for this instrument is incompatible with firmware older than 2001.4.x.

Note: It is necessary that the firmware is updated to the latest version in order to benefit from any future driver enhancements.

6.3 Thermo Scientific TriPlus LS-100

The updated driver for this instrument, included in this Maintenance Update, is incompatible with firmware older than version 2.0.1.

Note: It is necessary that the firmware be updated to the latest version in order to control the instrument with this software release.

6.4 Thermo Scientific TSQ Quantiva

The driver version 1.1 QF1 for this instrument, included in this Maintenance Update, may not be compatible with existing TSQ Quantiva mass spectrometers running driver version 1.0 without a hardware update. Please contact your local MS service engineer before attempting to upgrade the unit.

Note: New TSQ Quantiva modules from the factory are not affected by this issue

6.5 Signed Sequences [CM7-16374]

Sequences that have been signed within Chromeleon 7.2 CDS SR2 will fail verification after copying within Chromeleon 7.2 CDS.

7 Appendix

This chapter contains general Information about Service Releases, Release Notes, Online Help, and Contributed Content.

7.1 Release Notes

The Release Notes list the new features and improvements of the current release. Included in these Release Notes are all of the functionality and bug fixes from Chromeleon 7.2 CDS SR1 MUa. For details about Chromeleon 7.2 CDS SR1 and other previous releases, refer to the relevant release notes, found on the Chromeleon 7.2 CDS SR2 DVD.

7.2 Online Help

In general, new features, updates and drivers that are introduced with this release are described in an updated Online Help that is distributed with the release.

7.3 Contributed Content

The Chromeleon 7 CDS disk contains a folder titled Contributed Content. This folder contains:

- Demonstration Material
- Localized Documents
- Localized ePanels
- Localized Report Templates
- eWorkflow Templates
- User Management Example

Note: The files in the Contributed Content folder have not been tested and validated according to Thermo Fisher Scientific Software Development Cycle guidelines modeled after ISO 9001:2008 standards. Thermo Fisher Scientific assumes no responsibility for any errors that may appear in the content provided in the Contributed Content folder.

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Australia +61 3 9757 4486
Austria +43 1 333 50 34 0
Belgium +32 53 73 42 41
Brazil +55 11 3731 5140
China +852 2428 3282
Denmark +45 70 23 62 60
France +33 1 60 92 48 00
Germany +49 6103 408 0
India +91 22 2764 2735
Italy +39 02 51 62 1267

Japan +81 6 6885 1213
Korea +82 2 3420 8600
Netherlands +31 76 579 55 55
Singapore +65 6289 1190
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Switzerland +41 62 205 9966
Taiwan +886 2 8751 6655
UK/Ireland +44 1442 233555
USA and Canada +847 295 7500

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