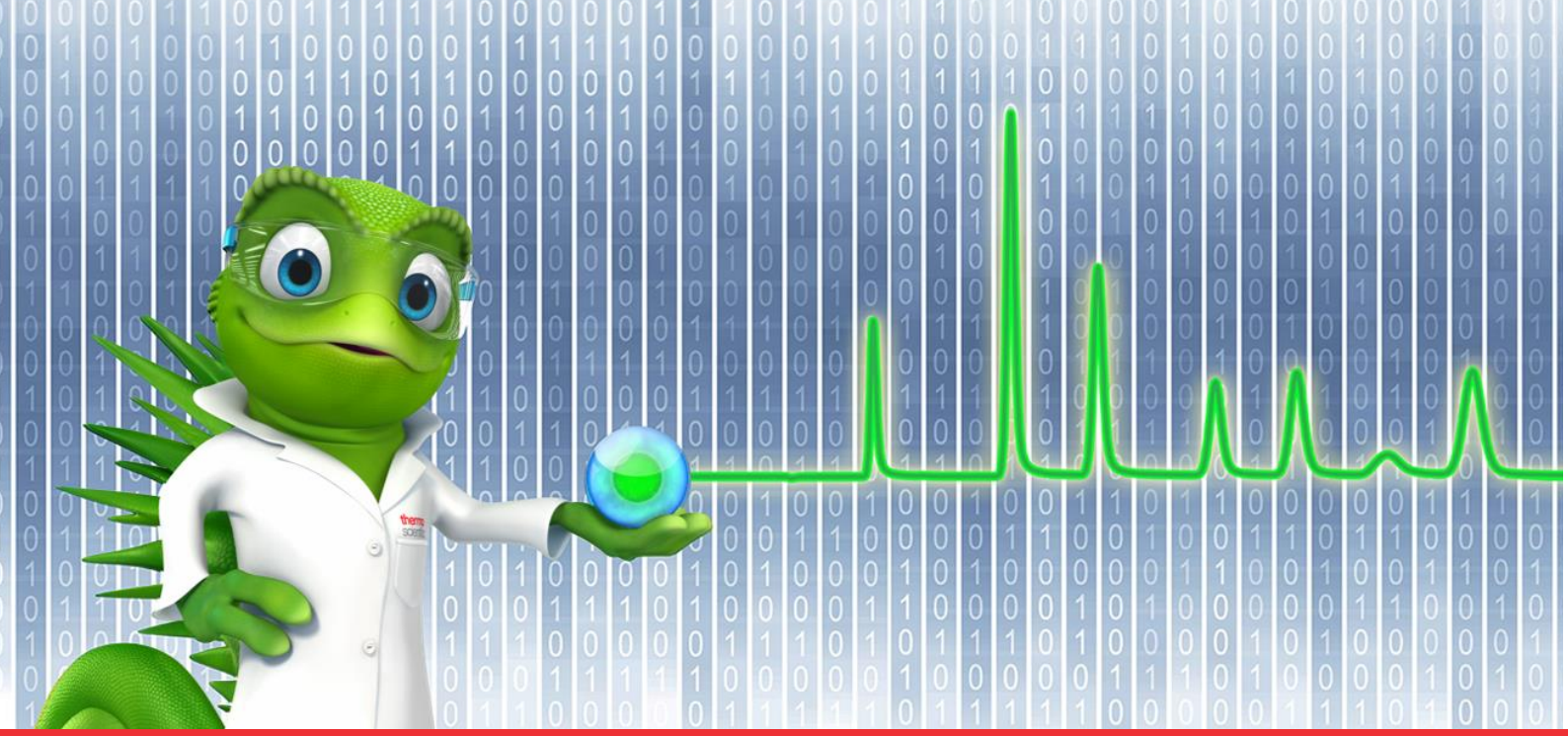

thermoscientific

Release Notes

Chromeleon 7
Chromatography Data System

Software Version 7.2.10 MUb, MUc and MUd • May 2021

thermoscientific

For Research Use Only. Not for use in diagnostic procedures.

Table of Contents

1 Maintenance Updates

Maintenance Updates (MU) contain the setup package with the files relating to Maintenance Updates only. Thus, with a Maintenance Update, it is necessary to have a full version of Thermo Scientific™ Chromeleon™ and the appropriate Service Release installed first.

1.1 Release Notes

These Release Notes list the new features and improvements of the current Maintenance Update release only.

For information on extensions and enhancements in previous Chromeleon releases, please refer to the Release Notes of the respective Chromeleon release.

1.2 Other Documentation

The following documents have been updated with this release:

- List of Supported Instruments - Chromeleon 7.2 10 MUd
- Online Help (distributed with this release)
- Supported Operating Systems - Chromeleon 7.2 10 MUd
- Installation Guide – Chromeleon 7.2 10 MUd
- Functional Specifications – Chromeleon 7.2 10 MUb

1.4 Installation

Before you install this Maintenance Update, verify that Chromeleon 7.2.10 MUa, 7.2.10 MUb or 7.2.10 MUc is installed. To install this Maintenance Update, run the following program from the distribution media:

Install.exe

2 What's New in Chromeleon 7.2.10 MUd

IMPORTANT: Shortly after the releases of Chromeleon 7.2.10 MUb and Chromeleon 7.2.10 MUc, several critical issues were found. These issues have been addressed in Chromeleon 7.2.10 MUd.

Due to the very limited distribution of Chromeleon 7.2.10 MUb and Chromeleon 7.2.10 MUc, these Release Notes will describe all changes in relation to Chromeleon 7.2.10 MUa.

This section provides a short overview of all new features of Chromeleon 7.2.10 MUb, Chromeleon 7.2.10 MUc and Chromeleon 7.2.10 MUd; for more details, refer to the Online Help.

2.1 Data Export and Reporting Updates

2.1.1 Option for CSV Raw Data Export [151182]

This release adds a new option to allow the export of Raw Data to comma separated values (*.csv) file format in addition to the tab separated (*.txt) option previously available.

2.1.2 Peak Ranking Report Variable [139951]

This release introduces a new report variable in the peak results category which returns the rank of a peak in the chromatogram based on a specific numerical peak property and an optional condition limiting the set of peaks for the ranking. The syntax of the formula is

peak.rank ("<RankingFormula>", "<Condition>")

with the 2nd parameter being optional. The ranking formula (default: peak.area) must return a numerical value for a peak to be considered in the ranking. The return value of "peak.rank" for the peak with the greatest ranking formula value is 1, for the 2nd greatest 2, and so on. The condition formula is optional and restricts the set of peaks in the chromatogram for the ranking.

For the MS Quantitation channel, the peak set for the ranking covers all quantitation XICs for all components.

2.2 Enterprise Improvements

2.2.1 Discovery Service Improvement [163064]

This release adds improvements to the discovery service polling mechanism to increase the robustness of the service in large Chromeleon 7 enterprise environments (those with hundreds of IPCs).

In order to realize this improvement, all Chromeleon PCs in the enterprise must be updated to version 7.2.10 MUc.

2.3 Client Updates

2.3.1 User Privilege to Manage Saving Manually Channel List Changes [151112]

This release adds a new user privilege in the "Injections" category called "Manually Create or Delete Channels". This privilege is a special exception to the existing "Modify Finished or Interrupted Injections" privilege. See below:

Changes to the Injection Record		
Channels were Created or Deleted	**Other Changes Were Made**	**Privilege Required**
Yes	Yes	“Modify Finished or Interrupted Injections”
No	Yes	“Modify Finished or Interrupted Injections”
Yes	No	“Manually Create or Delete Channels” OR “Modify Finished or Interrupted Injections”

2.3.2 Reset Date/Time Stamps for Data Objects Created via Save As [127949]

Prior to this release, if a data object (sequence, instrument/processing method, report template, etc.) is created via a Save As operation, the creation and last update date/time stamps and the corresponding users have been copied from the original data object. With Chromeleon 7.2.10 MUd, the creation and last update date/time stamps are set to the current date/time, the corresponding user is set to the user who did the Save As operation. The data audit trail record for the Save As operation now also records the version number of the original data object in the Additional Info. field along with the corresponding data object path (see also 2.3.3).

Note: This change is not applied to Save As operations for sequences incl. raw data. In this case the original date/time stamps and the corresponding users are kept.

2.3.3 Record Used Version when Copying Versioned Data Objects into a Sequence [138770, 139186]

Prior to this release, if versioned data objects (instrument/processing methods, report templates) are copied into a new or an already existing sequence only the latest version of such objects is copied and the version number in the destination sequence was reset to 1.

With Chromeleon 7.2.10 MUd, the latest version number of the original data object is now also recorded in the Additional Info. field of the corresponding data audit trail record along with the full URL-path of the original data object. In addition, the data audit trail of the copied data object in the destination sequence is initialized with this copy operation along with the original version and the full URL-path of the original data object recorded in the Additional Info. field.

2.3.4 Updated Intact Protein Deconvolution Engine [139822]

With this release, the algorithm used for intact protein deconvolution has been updated to the same version used by BioPharma Finder 4.0. This algorithm now supports deconvolution of Triple Quadrupole (QqQ) data acquired from the Thermo Scientific TSQ LCMS family.

2.4 Operating System Support Updates

2.4.1 Windows Server 2019 Thin Client

This release adds support for use of Microsoft Windows Server 2019 with Terminal Services activated as a Thin Client.

2.4.2 Oracle 19c [134668]

This release adds support for Oracle 19c.

2.4.1 Microsoft SQL Server and SQL Server Express

This release adds support for use of the following versions of **Microsoft SQL Server** and **SQL Server Express:**

- Microsoft SQL Server 2019
- Microsoft SQL Server 2019 Express
- Microsoft SQL Server 2017 Express
- Microsoft SQL Server 2016 Express

Note that, if no version of SQL Server is currently installed, the Chromeleon 7.2.10 MUa Installation kit will install SQL Server Express 2014. In order to use a later version of SQL Server Express with Chromeleon 7.2.10 MUa (and subsequent MUs), this should be installed in advance of running the Chromeleon 7.2.10 MUa installation kit.

2.4.2 Microsoft Windows

This release adds support for the use of the following versions of **Windows 10**:

- Windows 10 version 2004
- Windows 10 version 20H2

2.4.3 Updated Cloud and Virtualization platform statements

The Supported Operating Systems document for this release includes updated statements allowing support of Chromeleon 7.2.10 MUc on a much larger range of Cloud and Virtualization platforms.

3 Resolved Issues

This chapter describes the issues that have been resolved with the release of Chromeleon 7.2.10 MUb and MUc.

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 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.

Note: The three ID numbers prefixed with a '*' have been addressed in Chromeleon 7.2.10 MUc and Chromeleon 7.2.10 MUd, but **not** in Chromeleon 7.2.10 MUb.

Note: The ID number prefixed with a '**' has been addressed in Chromeleon 7.2.10 MUd but **not** in Chromeleon 7.2.10 MUb or Chromeleon 7.2.10 MUc.

ID	Description
123987	Sequence cannot be uploaded to data vault server because of missing raw data on remote data vault hosted on a Windows 2016 based cloud machine. This is due to a change in the SMB protocol of the OS System. In this case the user needs to execute a "Manual Upload" or "Manual Move" operation. With Chromeleon 7.2.10 MUc the privilege actions are fully supported, and the user can set audit trail comments to document the "Manual Upload" operation.
125373	If the injection list of a running sequence was edited and saved, then it could happen that the Instrument Controller would start an already finished injection for the second time. This led e.g. to a second inject command for this injection and later to a wrong injection status "Interrupted".
126052, 141068	Peak Grouping: When using an integration or consolidated report table for multiple channels or multiple injections peak results for not identified peaks which were also members of a peak group have been reported even if the not identified peak was not present in one of the channels or injections. Instead of reporting n.a. in this case the report table showed the result of the corresponding peak group or n.r. if the peak was not included in the 'Filter Peaks' options of the report table. This bug was not present in Chromeleon releases up to 7.2.8. It could be only observed in Chromeleon 7.2.9 and later releases.
130330	Overlay Chromatograms via Command Line Parameters: Starting a Chromeleon 7 client via command line parameters to automatically open a Chromatography Studio window with two or more overlaid chromatograms didn't work. Only the first chromatogram in the parameter list has been shown in the chromatogram pane of the studio window.
130592	Licensing: In large enterprise deployments, it could happen that clients would report that the NFP license period had been exceeded and would terminate, even though the client was connected to the license server. The license server log file would report several 'heartbeat'-related error messages.
134826	Manual Integration of XICs: If XICs (Extracted Ion Chromatograms) have been manually integrated the first time the corresponding privileged action has not been applied. Although the privilege action has been enabled in the global policy section of the Administration Console the user could save the manually integrated XIC without getting the chance to enter a comment or being forced to enter his valid authentication password.

ID	Description
135733	Reporting MS Tune Data: when trying to report the MS Tune Data Set in the Report Designer sometimes the corresponding report table showed an error 'Cannot load data item ...'.
136878	Console: When MS data is opened in another application via the 'Open with' context menu item, the temporary RAW file name is now named “<SampleName>_<InjectionNumber>"
137497	Console: Selecting the 'Lock Client' menu item would cause an error if the 'Client Inactivity' lock option in the Administration Console was not enabled.
140151	Virtual Column: In the pane plotting the Resolution and Gradient, it was possible to adjust the splitter between the two plots downward, but not upward.
140152	Electronic Signature: when removing the electronic signature of a sequence the corresponding privilege 'Remove Signature when Submitted', 'Remove Signature when Reviewed' or 'Remove Signature when Approved' is checked depending on the signature state of the sequence. As yet, additionally the privileges 'Modify Sequence' and 'Create Electronic Report' have been checked as well. So, if these two privileges were not enabled in the logon role the user couldn't remove the signature of a sequence although the corresponding remove signature privilege was enabled. Now these two privileges ('Modify Sequence' and 'Create Electronic Report') are not checked anymore in this use case.
140413	Peak Signal to Noise Calculation: When using the factor 1 in the formula for the peak report variable 'Signal-to-Noise Ratio', e.g. peak.sn("Current", "XTimes", 1.0, 20.0 * peak.with(50)), the result computation did not work reliably due to rounding problems and often reported n.a. instead of the true S/N ratio value. The online help for this report variable has been improved to describe the noise calculation in a more detailed way including time range selection, possible obstacles, and workarounds.
140748	Studio: When reviewing a sequence that contained corrupted MS data, switching between injections would sometimes cause an error message "Error in sample changed event handler of object Chromatogram View"
141695	Component Table Online Help: the description in the online help has extended to explain the computation of the peak amount with more details when using the calibration option 'Calibration of other component' and a relative response factor != 1.0.
141862	Licensing: In large enterprise deployments, it could happen that clients would report that the NFP license period had been exceeded and would terminate, even though the client was connected to the license server. The license server log file would report several ‘heartbeat’-related error messages
142001	Reporting: With very large MS sequences, generating reports or PDF files (especially when library searching was included) could result in an “system out of memory” exception error.
142059	Privilege Checks for Lock/Unlock Injections: Using a logon role with a dynamically assigned access group the privilege checks for the commands Lock and Unlock Injection didn't consider that the logged-on user is automatically member of this assigned access group. If a folder has been restricted to such an access group, the user could access the folder but when executing the Lock or Unlock Injection command in a sequence a missing privilege message popped up although the corresponding privileges have been granted in the logon role.
142363	TRACE 1300 GC: For certain combinations of run time and acquisition rate, the Injection Audit Trail would erroneously report "Missing data points detected. Maybe the run was aborted on the GC."

ID	Description
142808	Sequence Property Last Update: when working with MS sequences using processing methods with components XICs one could observe that the last update property of the sequence became different from the last update which is recorded in the data audit trail of the sequence. In this case the last update of the sequence had a newer date/time stamp than the last update in the data audit trail. This bug has been already fixed for Chromeleon release 7.2.10.
143344	Administration Console: When renaming a role Chromeleon didn't check whether the new role name already exists in a different OrgUnit. Identical role names are not allowed even across different OrgUnits.
143688	Licensing: When Network Fault Protection (NFP) was invoked, the notification bar in the Chromeleon Console continuously reported that there were 6 days for the Grace Period time remaining.
144119	Administration Console: The Delete User operation wasn't possible although the user logged on to the Administration Console has been granted all user management operations.
144162	With 7.2.9 the user management introduced user database policies. One of these is 'Allow Delete User Accounts' in User Account Restrictions. Currently the Station PQ creates and deletes users using a fixed username as part of user management performance tests. If the user database policy 'Allow Delete User Accounts' is disabled, the deletion of users with a fixed name would violate this privilege. Another user database policy is 'Allow Reuse Usernames' in User Account Restrictions. Currently the Station PQ creates and deletes users using a fixed use name as part of user management performance tests. If the user database policy 'Allow Reuse Usernames' is disabled, the creation of users with a fixed name would violate this privilege. Therefore, PQ user management performance tests cannot be performed as part of the Station PQ A tooltip on the PQ user management checkbox is shown which states, why it is disabled.
146189	Vanquish Sampler: The Vanquish Sampler would inject a wrong volume if an injection volume exceeding the nominal loop volume (but below the loop volume) was specified.
147732	For an instrument method for an Agilent instrument using the ICF-based LC System driver, with a post time equal or greater than 2 minutes, the sequence would abort at 2 minutes post time.
144750	Reporting Formula Condition: If a report formula contained multiple conditions logically combined via AND- or OR-operators the evaluation of such a formula expression didn't work correctly in all scenarios. If one of the conditions could not be evaluated revealing a single "n.a." result, then the evaluation of the entire report formula became FALSE although some of the conditions might have returned a TRUE value. Example: the filter condition "component.name is not empty or peak.rel_area("total") > 10.0" for an integration report table should have been TRUE for all identified peaks (component.name is not empty) or any peak with a relative area greater than 10.0 %. Yet in this case only identified peaks passed the filter with TRUE. Unidentified peaks with a relative area greater than 10.0 didn't pass as the first condition component.name couldn't be evaluated for these peaks.
148153	Station Audit Trail: Under rare circumstances, a single Windows Update event was listed many times in the Station Audit Trail.
148482	IPD: If the "Output Mass Range" method parameter was too large, a "Could not connect to the Thermo Deconvolution Engine" error would be reported.
148621	Reporting result value for Peak Amount Deviation: Using different injection volume values in a sequence the computation of the report variable ‘Peak Amount Deviation’ need to consider these different values. Yet for methods which are using internal standard components the corresponding correction factor need to be omitted.

ID	Description
148733	Custom Variables: When copying an injection record from one sequence to another or a component record from one processing method to another the content of associated custom variables were not copied along. The default values were used instead.
149682	Chromatogram Plot, MS Quantitation Channel: When selecting the MS Quantitation channel, the chromatogram plot in the report designer didn't show all quantitation XICs for all components. Instead the error messages “Can’t read channel MS Quantitation from injection #[number] – [injection name]” and/or “This method or operation is not supported” were shown. This bug was not present in Chromeleon releases up to 7.2.10. It could be only observed in Chromeleon releases 7.2.10 MUa and 7.3.
151219	Import: When importing Empower data created as a .cdf file (AnDI format), the import could report an error or could result in no Chromeleon sequence being created.
151291	Console: Adding Custom Variables to a running Sequence would subsequently cause eSignature Verification to fail
153213	Incorrect Release Notes Text: Chapter 3.4.6 (Cobra Wizard - Defining General Parameters by Time) of the release notes for Chromeleon 7.2.7 tells that the general cobra detection parameters 'Smoothing Width', 'Baseline Noise Range' and 'Consider Void Volume' can be defined by time from now on. This information was and is still not correct. In fact, this is only valid for the parameter 'Smoothing Width'. The other parameters can be defined in the detection parameter set only once in the corresponding initial section.
162199	Studio: When reviewing a sequence that contained corrupted MS data, switching between injections would sometimes cause an error message "Error in sample changed event handler of object Chromatogram View"
162629	Reporting: Under some circumstances, when generating an Intact Protein Deconvolution report for multiple injections, the results in the IPD Component Results table would always be those of the first injection, regardless of the actual injection number.
162832	Sequence could not be uploaded to data vault server anymore because of missing raw data on remote data vault hosted on a Windows 2016 based cloud machine. Due to change in the SMB protocol of the OS System.
162850	Sequences: If a user did not have the 'Modify Sequence' user privilege, then changing the 'Read-only' status of the sequence from the Sequence properties dialog was not possible (A message was displayed indicating that the 'Modify Sequence' user privilege was required)
162902	Vanquish VWD: Turning on the UV or VIS lamp during data acquisition would result in an abort error. This is now rejected with an appropriate error message.
162908	Vanquish VWD: The flyover for the limit and warning limit for the UV Lamp Operation (Wellness properties UVLampOperationTime.Limit and UVLampOperationTime.Warning) indicated a range of [1…40000 hours]. This has been changed to the appropriate range [Off…40000 hours].
162909	Vanquish Core Diagnostics: If a diagnostic test was aborted immediately, the injection name in the diagnostic data would show a default name “Diagnostic Run” instead of the actual name of the diagnostic test (e.g. Intensity Test, Basic Tightness Test).

ID	Description
162910	If an instrument was deleted and another instrument with the same name set up, the new instrument would inherit the sequence queue and fluidic configuration of the previous instrument of the same name. Now the newly created instrument starts out with an empty sequence queue and the fluidic configuration needs to be initially set by the user. In particular, if a Run Smart Shutdown/Standby at the end of a queue and/or an Emergency Instrument Method had been selected for the queue of an instrument would result in these options also being set for the newly created instrument. Now for the newly created instrument the standard settings are used, that is, Run Smart Shutdown/Standby is not set and no Emergency Instrument Method is selected.
162992	ISQ-EC/EM Tuning: When User Mode (logins and privileges) was disabled, attempting to perform a manual tune failed with the error: "The command cannot be executed because you do not have the required privilege Execute On-Demand MS Manual Tune/Calibration.”
163736	IPD: If the selected channel in the Data Processing category of the Studio was not the TIC, then the component scoring and the injection scoring in the IPD category of the Studio would not be consistent.
164808	Processing Method, Save As with Fixed Calibration: Applying or updating a fixed calibration in a processing method a subsequent Save As of this processing method led to an error message. The Save As operation was not possible in this use case.
165158	Licensing: In an Enterprise environment, if there were brief network interruptions it could happen that sequence acquisition could be halted with an error stating “License error: License server unavailable”
165964	If an emergency instrument method stored in a Network Data Vault was changed, the local copy of the emergency instrument method was not updated. Now the remote emergency instrument method is downloaded locally when a sequence queue ready check or a queue start is executed. Please note that the download may take a few seconds. The downloaded emergency instrument method is assigned to the sequence queue once the download has completed and will be used for each queue ready check and sequence start / update.
165965	For instrument methods with very long run times exceeding 35790 minutes (~ 596 hours), setting a new flow ramp would result in repeating abort errors: “Cannot set a flow or flow ramp segment: Command was aborted.“ The ramp time for the UltiMate 3000 and Vanquish pumps is limited to 35790 minutes as a time step for a ramp. Now the Queue Ready Check for the Vanquish pumps indicates that the run time is limited to 35790 minutes.
166453	Import: If a sequence included injections with an MS RAW file > 2GB in size, then importing a cmbx file of the sequence would fail.
167220	Station Audit Trail: Due to a timing issue, it was possible that the audit trial would incorrectly report that "Integrity Check Failed" if the audit trail was being updated by another process. The message has been clarified.
167823	Console: If the 'When a user logs on, lock all other client sessions” option in the “Multi-User Logon” section of the Admin Console was enabled and the 'Client Inactivity' lock option in the Administration Console was not enabled, then when a second user logs on a “System.ArgumentOutOfRangeException” error is generated.
167926	Processing Method: When the ‘Update’ button was used to change values for XICs of a component, values for custom variables and calibration levels would disappear from the UI.

ID	Description
168804, 169228	Vanquish Autosampler: During a run in which the next injection has the same position as the current run, if the rack configuration is changed to become invalid (e.g., because the rack was turned around), the system now alerts the user that the position is invalid and the sequence stops. Similarly, if the first injection of a sequence to be started has the same position as the one currently set in the driver and the rack configuration for this position is invalid at the time of sequence start, the system alerts the user that the position is invalid and the sequence stops.
170404	Custom Variables in Chromeleon 6 Reports: Chromeleon 6 offers an option to automatically convert UDCs (custom variables) of type string to numeric values in any report formula evaluation. This option is stored in the variable "Convert UDC To Numeric" of the Windows registry key [HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Dionex\Chromeleon\Report]. When rendering reports for sequences in a Chromeleon 6 data vault using a Chromeleon 7 client or for Chromeleon 6 sequences imported to a Chromeleon 7 data vault result formulas using such UDCs (custom variables) showed either different results or no results compared to the corresponding report created by a Chromeleon 6 client. Note: Chromeleon 7 clients are now using the same registry key as Chromeleon 6 clients to determine whether the automatic conversion from values of type string to numeric is executed or not. This automatic conversion is also performed only for sequences located in a Chromeleon 6 data vault or for Chromeleon 6 sequences which have been imported into a Chromeleon 7 data vault. The registry key above needs to be installed on every computer which is used to create reports for such sequences.
170414	Signature Removal: if the electronic report is missing for a signed sequence, then the removal of the signature was not possible. Trying to do so resulted in the error message 'Value cannot be null'.
173872	Manual Upload: When manually uploading a sequence, it was not possible to add an audit trail comment.
174584 **198405**	Sequence: A user without the 'Delete Finished or Interrupted Injections" privilege could delete an injection by modifying the information in the injection row and then pressing "Ctrl+Shift+Delete" or "AltGr+Delete". UV Library: A user without the 'Delete Spectrum" privilege could delete spectra from a User UV Library by pressing "Ctrl+Shift+Delete" or "AltGr+Delete.
175243, 175688	For the Vanquish Dual Autosampler (VH-A40-A and VF-A40-A) PrepareThisInjection and PrepareNextInjection were not working. The run was aborted with an error message.
175699	TSQ LCMS: If the Serial Number field was manually edited to a Serial Number beginning with a letter, Chromeleon would not accept the input and instead interpret the input as an access key.
176183	Privileged Actions: The Privileged Actions dialog for modifying a sequence was not displayed if the sequence was modified while it was still acquiring.
176633	Instrument Audi Trail: During a copy/paste operation, Chinese characters were replaced by question marks
177152	AS-AP / Vanquish Autosamplers: With both an AS-AP and a Vanquish autosampler configured for one IC system, either autosampler can now be selected as the injector without aborting the run.
178793	Vanquish Core: A method with an IdleVolume assignment in the initialization part of the method and a PrepareNextInjection command after the Inject command would result in the sampling procedure being executed twice. As a consequence, the actual injection volume was twice the specified one. In some instances, the sequence would stop.

ID	Description
180019	"Manual Upload" feature in 7.2.10 MUa not fully compatible with 7.2.10 and/or CM7 SDK. In a mixed environment of clients <=7.2.10 & 7.2.10 MUa user might have logged into a client (<=7.2.10) and clicked on the "Retry upload" option in queue of a 7.2.10 MUa IPC. Afterwards it was observed that the acquired sequence data of a 7.2.10 MUa IPC got lost and cannot be restored anymore. To avoid this problem, it is required to use a pure 7.2.10 MUa client only to remove sequence from queue. If an automatic upload is not possible, then use the "Manual Upload" or "Manual Move" options of 7.2.10 MUa to save the sequence and remove it from queue. With a 7.2.10 MUc IPC the automatic upload operation from any client (incl. older <7.2.10 MUa) will not remove the sequence from queue in case of a broken synchronization until the "Manual Move" or "Manual Upload" operation has been used.
181434	For an instrument method for an Agilent instrument using the ICF-based LC System driver, with a post time equal or greater than 2 minutes, the sequence would abort at 2 minutes post time.
181547	After running a large number of injections (e.g. more than 15,000 injections) the Real Time Kernel might crash with an instrument audit trail error: "Fatal error [Preflight]: bad allocation". The underlying cause of this issue was a memory leak in the Real Time Kernel, which has been fixed.
181549	In the "Help" > "About Chromeleon" dialog, the product name was truncated.
181551	ICS-6000: When an Electrolytically Regenerated Desalter (ERD-500) was installed, the device was recognized, but it was not possible to select the model in the instrument method.
181553	ICS-6000 DC: The "None" selection for the ePanel suppressor settings was not displaying.
181554	DC-6000: Unplugging, then plugging in the same suppressor type and turning on the pump would in some cases block the user from proceeding and present the following error: „Abort: DC.Suppressor1 The suppressor configuration is changed. Please reconfigure the ICS-6000 DC module".
181724	Integrion: DRS suppressors are now set to constant current mode by default and either mode (constant current or constant voltage) will persist until reconfiguration or system reboot.
*** 183709**	Injection Query: In an Enterprise environment, if the results of an Injection Query included injections from a running or recently completed sequence, those injections might not appear when the query results were opened in the Studio or might have an incorrect name. In addition, opening the sequence containing that injection from the query results list would sometimes fail.
*** 188501**	Processing Method: When user mode was enabled, updating the fixed calibration standards from an external sequence incorrectly required the "Modify Finished or Interrupted Injections" privilege.
*** 190428**	Processing Method: When Using a Fixed Chromatogram Subtraction, the "Modify Finished or Interrupted Injections" Privilege Was Required to Enable Fixed Calibration Mode
**** 200458**	Privileges: It was possible to modify objects (Instrument Method, Processing Method, Report Template) stored outside a sequence without the corresponding user privilege (Modify Instrument Method, Modify Processing Method, Modify Report Template). In addition, related configured Privileged Actions were not enforced.

ID	Description
204377	The List of Supported Instruments for Chromeleon 7.2.10 MUb and 7.2.10 MUc shows firmware version 1.44 for the NCS-3500RS and NCP-3200RS. In both Chromeleon 7.2.10 MUb and 7.2.10 MUc the firmware version that is delivered with the NCS-3500RS and NCP-3200RS driver is firmware version 1.43 and this is also the firmware version listed in the Installation Qualification (IQ) report. The List of Supported Instruments for Chromeleon 7.2.10 MUd shows firmware version 1.43 for the NCS-3500RS and NCP-3200RS, which is consistent with the firmware version 1.43 that is delivered with the NCS-3500RS and NCP-3200RS driver and the firmware version 1.43 listed for the NCS-3500RS in the Installation Qualification (IQ) report.

4 Limitations and Known Issues

The comprehensive list of limitations and known issues affecting Chromeleon 7.2.10 ES are documented in the Chromeleon 7.2.10 MUa release notes.

New, updated and recently reported known limitations and issues identified during the development of Chromeleon 7.2.10 MUb, MUc and MUd are listed below.

4.1 Limitations with Thermo Scientific Instruments

ID	Description
139606	Vanquish Autosampler: When configuring a Vanquish Autosampler with the option "Support for external rack transfer" enabled (on the “Options” tab) and enabling the charger option (on the “General” tab), after switching from the “General” tab to the “Options” tab, it is no longer possible to uncheck the charger option. Workaround: When enabling the charger (on the “General” tab), confirm the charger option with OK before switching to another tab in the instrument configuration dialog.
142047	MS driver: TSQ Altis: There is no report variable available for the module serial number.
142180	ICS-3000: Occasionally a huge daily audit trail may be generated, resulting in a “System.OutofMemoryException” error when attempting to view it. This error has been seen when the audit trail was > 60MB in size.
162479	Vanquish Driver: For the Vanquish DAD and MWD the wellness properties for the UV/VIS lamp operation time limit and warning were transmitted enlarged by a factor of 4 to the instrument. Warnings and limits are now transmitted correctly to the instrument. If you have previously set limits and/or warnings for the Vanquish DAD or MWD lamp operation lifetimes, these will now be read out from the firmware at 4 times the intended value. If you wish to remain with the initial settings, you will need to adapt the values set for the UV/VIS lamp operation time limits and/or warnings in Chromeleon by reducing them to their initial value (25% of new value). Example: With Chromeleon 7.3 (or earlier), 7.2 SR5 MUk (or earlier) or 7.2.10 MUa, a setting of UV/VIS lamp operation time limit of 2,500 hours would be transmitted to the firmware as 10,000 hours. After an upgrade to Chromeleon 7.2.10 MUc, the value of 10,000 hours is read out from the firmware and set as the UV/VIS lamp operation time limit in Chromeleon. If the intended limit is 2,500 hours, you will need to adjust the limit in Chromeleon to 2,500 hours.
163499	In very rare cases the injection status of an injection stays on “Running” and subsequent injections are not started. Proceeding to the next injection requires a restart of the Instrument Controller. Upon restart of the Instrument Controller the status of the injection is changed from “Running” to “Interrupted” (although “Finished” would be appropriate).
164089	Trace 1310 GC: When running in Gemini mode, if a missing vial is detected on one sampler, both sequences are interrupted.
164111	With a TSQ Altis using APCI ionization in a Chromeleon Enterprise environment, sequence interruptions were seen. Sequences were interrupted with an error message: “Configuration mismatch. Please execute InstrumentConfiguration and reconfigure the Mass Spectrometer.” Workaround: The issue is fixed by a small upgrade of the software from Foundation 3.1SP7 to SP7QF1 and TSQ Tune 3.2 to 3.2SP1.

ID	Description
166994	UltiMate 3000 Autosampler: After changing the rack configuration on the ePanel for an UltiMate 3000 Autosampler it is not possible to write a sequence as the new rack configuration is not available. Workaround: In the instrument configuration manager confirm the configuration without making any changes and save it.
171456	When migrating from Chromeleon 6.8 to Chromeleon 7.2.10 (under Windows 10), UltiMate 3000 system(s) connected via USB may result in the PC to which these instruments are connected not starting. Workaround: Disconnect the USB cables for the UltiMate 3000 system(s) before starting the PC, start the PC, then connect the UltiMate 3000 system(s) via USB.
172740	There are known issues where saving or modifying MSQ Plus instrument methods or Tune files fail. This change in operation has been linked to applying monthly Microsoft Quality updates to Windows 10 and Windows 7 operating systems. Removing the Windows KB Updates will resolve the issues in most cases. However, in certain situations, it may be necessary to restore the system to an earlier point before the Windows Updates were applied. It is strongly recommended that automatic updates for Windows be disabled on systems running MSQ Plus instruments. Any Windows Updates that are planned for application on systems running these instruments should be tested at the installation site before they are installed on a system in active use.
175221	Vanquish Core Autosampler: If the sampler door is opened during the sequence run or the sequence was aborted and a new sequence is started immediately while a barcode scan is still running, the sequence is interrupted, and the sampler keeps waiting for module readiness. Workaround: Update to Vanquish Autosampler firmware version 2.03 to avoid the sequence from getting stuck in the Wait Ready statement. When stopping a sequence, wait for the restart of the queue until the pending barcode scan in the VAS has finished. If the Vanquish Autosampler door is opened/closed regularly during a queue run, add a time delay between sequences so that the barcode scan is completed before a new sequence start.
181727	Vanquish Core Autosampler: For a sequence with a method including PrepareThisInjection, if the IdleVolume is set to a different value than the one specified in the method before starting the sequence, the first injection is aborted with an error message “An error occurred during the injection preparation; run is aborted.”.
195521	GCMS Single Quadrupole instruments (ISQ and ISQ 7000 families) and GCMS Triple Quadrupole instruments (TSQ 8000/9000 families) provide several options (e.g. timed SRM mode) for which the permission to use the option is stored in the flash RAM of the MS hardware. If you purchase the option at the time of the MS instrument purchase, the flash RAM has the option included. If you purchase the option after the MS instrument purchase, Thermo Fisher ships you a small ini file, which you then upload to the MS flash RAM. If a Chromeleon instrument method requires such a GCMS instrument option, but the permission for the GCMS instrument option is not available in the flash RAM of the MS hardware, the Sequence Ready Check and Instrument Audit Trail show an error message. (For example: „Instrument method cannot be run: Timed mode is not allowed under the current license. To enable timed mode acquisitions, please upgrade your software to include time mode.“) This error message is somewhat misleading, as it is the flash RAM of the MS hardware that needs to be updated with the relevant permission, not Chromeleon itself.

ID	Description
198683	Vanquish: An instrument configuration with a large number of modules (e.g. 10 modules) results in an error “The content of System.TotalFluidics cannot be parsed”. Workaround: Remove modules until the issue is resolved from the configuration.

4.2 Limitations with the Waters Driver Pack

ID	Description
139353	With Waters Driver Pack installed, the title bar of the Chromeleon Studio window becomes invisible. This is a known issue that has been reported to Waters.
148624	Waters 2690/2695: In very rare cases, a sequence is interrupted with the error message: "Acquisition finished by Chromeleon before first data point could be transferred. Maybe the run time is too short in case of blank run."
163383	Waters ICS driver: Changing the instrument configuration of a Waters ICS driver is not propagated to Chromeleon. Workaround: Reboot the IPC after changing the instrument configuration.
167439	Waters Acquity: With Waters Driver Pack installed on an Operating System with regional settings other than English (US), opening the Chromeleon Instrument Method Editor to edit a method for a Waters Acquity system, the Chromeleon.exe may crash with a .NET Runtime error. Please ensure consistent regional settings for the client and the IPC. Please refer to the documentation for Waters Driver Pack or contact Waters Inc. to confirm if your language pack is supported with Waters Driver Pack. Workaround: Change Operating System to English (US) locale settings.
177703	When opening the Waters Acquity Console in a server environment on a client computer, the log view is not up to date. Workaround: In order to see an updated log view, use the Chromeleon audit trail or launch the Acquity Console on the IPC.
187273	Waters Acquity: When configuring the system on an Instrument Controller, the Acquity driver exits with an error: “Configuration plug-in could not read data from Instrument controller. Configuration is not possible. Please check that Instrument controller and the configuration plug-in support the same version (3.0)”. The .NET module needs to access a file in C:\Users\<username>\AppData\Local\Temp. The user account used to configure the system needs permission to access this location. Waters Acquity: It is not possible to create an instrument method for the Acquity system. In the Instrument Method Wizard, the solvent names for pump and sampler are not visible. Clicking on “Finish” in the Instrument Method Wizard results in Chromeleon closing. When installing the Waters Acquity driver using a Windows active directory account, ensure that the Windows regional format is set to English (US). In Windows "Region settings" > "Regional format" > select "English (United States).

4.3 Limitations with Agilent ICF

For a general overview regarding the Agilent Instrument Control Framework, please refer to the document Chromeleon and Agilent ICF – Quick Start Guide – Chromeleon 7.2 .pdf, found in the \Documents\ folder of the Chromeleon installation disk. For Agilent drivers, please refer to Agilent documentation.

ID	Description
143602	Agilent LC re-injects the same vial twice instead of going to the next one.
148279, 163945	When the HS 7697A connects to the software, occasionally the following superfluous error is reported: “An ICF Driver call failed. Ensure that the instrument is connected and powered on”. The message does not interfere with data acquisition and may be ignored.
165661	Agilent 1290 ELSD: For an Agilent 1290 ELSD controlled by Agilent ICF drivers, the sequence interrupts with an error message: “Error 155: An error occurred during data collection. Data integrity compromised.” This issue has been reported to Agilent.
165966	Using an Agilent LC system with a sampler and the Agilent LC-ICF Drivers on a Japanese, Chinese or Brazilian Portuguese O/S, the sequence wizard does not allow creating a sequence. Workaround: This issue is caused by a language satellite DLL provided by Agilent Technologies (Agilent.LCDrivers.Sampler.BusinessObjects.resources.dll). Removing this satellite DLL addresses the issue, while presenting the user interface in English language. For example on a Japanese O/S remove “C:\Program Files (x86)\Agilent Technologies\Instrument Control Framework\ja\Agilent.LCDrivers.Sampler.BusinessObjects.resources.dll”. Alternatively, use Agilent Chromeleon Drivers instead of Agilent LC-ICF Drivers to control the instrument.

4.4 Limitations with Agilent Drivers for Chromeleon

ID	Description
141833	When using the Agilent Driver for Chromeleon 2.2, it not possible to add injections when the last injection of the sequence is already running. The audit trail shows the following message (abort error) “A running sequence cannot be changed because the last run is already scheduled.” This limitation is documented in the user guide of the driver.
143713	Agilent 12xx LC: If an Agilent 12xx LC configuration includes the Agilent 1290 Infinity Flexible Cube, the Flexible Cube needs to be enabled in the instrument method. When creating an Instrument Method, Chromeleon provides an option (check box) to select if the Flexible Cube is used. If this check box is cleared, the sequence will interrupt. Workaround: Remove the Flexible Cube from the Instrument Configuration to run a sequence for which the Flexible Cube is not needed.
147898	Agilent 7890: The performance of the Agilent for Chromeleon driver is very slow compared to the Chromeleon native 7890 driver. Specifically, a) Switching from Overview to an instrument ePanel, b) Loading the instrument method and c) working on instrument methods and switching categories are slower than with the Chromeleon native 7890 driver.

ID	Description
162951	When creating an Instrument Method offline using Agilent Drivers for Chromeleon 2.2, the diagnostic channel commands for the Sampler and Column Compartment are truncated (e.g., Agilent.Samp.SAMPLER1_RunDiagnosticDa.AcqOn, Agilent.ColumnC.COLCOMP1_RunDiagnosticDa.AcqOn). When importing this method to a live instrument using the Chromeleon Method Translation Tool, Chromeleon suggests the appropriate modifications and corrects the diagnostic entries.
194220	ePanels: The “Connect” button on the Home and the Module ePanel is not working correctly when the Agilent Driver for Chromeleon is used in combination with non-Agilent modules. Workaround: The connection can be made using direct commands via F8. Changing from Agilent >Connected>Disconnected to Agilent>Connected>Connected will connect the instrument when the Non-Agilent module is configured and the connect button on the ePanel is unavailable. 7.2 SR5 MUL Workaround: Don't use the autocreated ePanel set. Create an ePanel set with modified panels for 'Agilent Home' and the Agilent modules. Link the connect switch of each of those ePanels to the correct Connect property of the Agilent instrument.

4.5 Limitations with Other Third-Party Instruments

ID	Description
128130	Perkin Elmer GC Clarus 690: Overloaded peaks result in spiked peaks above and below the baseline. Workaround: Prevent the signal from becoming too large by reducing either the signal amplification or the injection volume. For applications with very small and very large peaks in the same chromatogram: As there is a limit of 1/2^32 between the highest possible and the lowest possible signal that can be detected with the same range/attenuation settings, the only possible workaround is to switch attenuation/range during the run (at a time when there is no signal) and to take this into account when evaluating the peak heights.
141735	Shimadzu Prominence-i Series: A sequence is interrupted with the error “Abort Error: Timeout while waiting for the instrument to finish, the current injection will be aborted.” Workaround: The Release Notes provided by Shimadzu describe a workaround for LC driver version 2.20 or later: When the system is waiting to start a blank run, the data acquisition may be interrupted in some cases. As a workaround, please set injection volume to 0.0 and change the type to “unknown”.
148300	PerkinElmer Clarus 590 GC: Autozero does not set the signal to zero, instead the signal stays at about -2.5mV. This was observed at at DCR of 12.5 Hz.
144006	Agilent 6890 GC: On certain systems, sequence runs may abort with an error “Fatal error in Chromeleon Real Time Kernel: Access violation in module C:\Program Files (x86)\Thermo\Chromeleon\bin\CmDriver.exe” The cause is still under investigation.
149328	Agilent 6850 GC: On certain systems, sequence runs may abort with an error “Fatal error in Chromeleon Real Time Kernel: Access violation in module C:\Program Files (x86)\Thermo\Chromeleon\bin\CmDriver.exe” The cause is still under investigation.

ID	Description
161617	Shimadzu LC 20 native driver: If the flow rate for a pump has exceeded upper limit, the sequence aborts with an error “HPLC_System Fatal Instrument Error (-1073708575, 1).” The Shimadzu documentation states the following for the error code C00081E1 (hexadecimal converted from the decimal -1073708575): 0x81E1 | Pump: Flow rate has exceeded upper limit. | The binary/ternary gradient system is configured with pumps of different flow rate ranges. | Check the instrument configuration.
162078	PerkinElmer Clarus GC 580/590/600: The PerkinElmer Clarus GC 580/590 and all 600 series offer a new feature ‘RinseBeforeReady’. With the ‘RinseBeforeReady’ feature enabled, a missing vial results in an abort error “missing vial”, but does not interrupt the injection. In addition, if ‘SampleWash’ is also activated in the instrument method, the missing vial error specifies the wrong vial number (“Vial 2” instead of “Vial 1”). Workaround: a) Avoid ‘missing vial’ incidents when working with ‘RinseBeforeReady’, especially when rinsing includes a ‘SampleWash’. B) If ‘missing vial’ can’t be avoided, deactivate the ‘RinseBeforeReady’ feature.c) If this happens regularly although there is a vial at the specified position, this may be caused by erroneous ‘missing vial’ events, which may be caused by poor crimping of the tube caps or a decalibrated sensor.
168709	PerkinElmer Clarus 690 GC: Peaks in data collected with PerkinElmer Clarus 690 GC are not properly displayed. For an analysis where the diluent peak is saturating, negative response values are displayed. Workaround: The PerkinElmer Clarus 590/690 GC is equipped with a new FID detector type featuring a higher resolution than the previous generation FID. When transferring an instrument method created on a Perkin Elmer Clarus GC with the previous generation FID, the instrument method may need adapting to the new more sensitive FID. See also Incident ID 128130.
177733	Perkin Elmer Clarus 500 GC: In rare cases, it’s not possible to start an injection. An error message “Could not update setting for ‘Data_Collection_Rate’: Device reports ‘0ERROR: 92 GC BUSY’” is logged.
194996	Shimadzu 2030: When collecting UV data, in rare cases the signal drops to a very large negative number. Workaround: In the driver configuration set the signal factor for the PDA_Spectrum signal to 1.000 manually. Seems to be 1000 in some cases (most likely a localization problem on some systems with specific languages, in which separator and thousand separator are swapped).

4.6 Limitations With Setup

ID	Description
140699	Running Chromeleon while the windows option “Beta: Use Unicode UTF-8 for Worldwide language support” is enabled the following issues have been made observed: Creating a report template fails with an error message “MBCS environments (>2 byte/character) not supported or opening the Studio, Chromeleon crashes after showing an error message “object reference not set to an instance of an object”. Chromeleon does not provide any installation qualification error when this option is enabled., but it is highly recommended to disable this windows option by switching it off under “Control panel => Region => Administrative => Change system locale => Beta: Use Unicode UTF-8 for Worldwide language support”. IQ report does not report a warning / error when this option is active.

ID	Description
140874	Chromeleon 7.2.10 Mua ships with SQL Server Express 2014 SP2 for local DataVaults and Xvaults. As before, Chromeleon will only install SQL Server Express if not already present on the computer. If a previous installation of Chromeleon already installed SQL Server Express 2014 SP2 or older, an upgrade of Chromeleon will not automatically upgrade the SQL Server Express SP3 version. Please manually install and configure SQL Server Express 2014 SP3 first (see PSB.SW.2020.028).
167710	Chromeleon 7.2.10 MUa was released after Chromeleon 7.3.0 was released. Chromeleon 7.2.10 MUa has been upgraded internally and it contains a newer CM7 DDK Driver Version than Chromeleon 7.3.0. Therefore, it is not possible to upgrade from 7.2.10 MUa to 7.3.0 without any errors. It is highly recommended to fully uninstall 7.2.10 MUa on the machine before installing Chromeleon 7.3.0.
171988	Uninstall: When Agilent ICF is installed, un-install of either Chromeleon or Agilent ICF fails if the Instrument Controller is running: Failed to execute package Agilent Instrument Control Framework A.02.04. Another application has exclusive access to the file 'C:\ProgramData\Agilent Technologies\Instrument Control Framework\RCDriver.log'. Please shut down all other applications, then click Retry. To avoid this issue, stop the Instrument Controller before uninstalling

4.7 Other Limitations

ID	Description
169147	PDF-Export: After the installation of a Windows Feature Update attempting to export a sequence to PDF may fail with an error stating "Printer not activated, error code -30". To resolve this problem, rerun the Chromeleon setup, selecting 'Repair' on the opening screen of the setup program
138407	Auto Reporting: The user privilege "Modify Sequence Notification Settings" is required in order to change sequence Auto Reporting settings.
139315, 143825	The Station PQ cannot skip tests neither by using custom reference values nor by using the 'to be executed' option. Some additional observations are that Discovery Publish and Unpublish tests appear to ignore the Expected Values. Setting either the default (15000ms) for expected values or custom values (25000ms) via the Station PQ Wizard doesn't have any impact on the determination whether it is a failed iteration of the test or not. In the Qualification.log the record indicates that there are only 3 to 4 seconds between failed attempts. The discovery access log may contain a warning that "Name policy initialization timeout: published resources might not conform to desired policy".
141265	Chromeleon App Crash on Terminal Server: It has been reported that the Chromeleon Console App on a Citrix Terminal Server stops working sporadically, especially when editing instrument method linked to instruments from Agilent. There are currently no reliable procedures in place how such scenarios could be avoided.

ID	Description
142755	Worklist Import: When creating a sequence via a Worklist Import the template methods (Instrument/Processing Method, Report Template, …) are picked from the data item cache of the running Chromeleon Console. If such a template method is changed e.g. by a different Chromeleon Console session in the meantime the modified template method is not used during the Worklist Import if it has been already used in a previous Worklist Import run in the same Chromeleon Console session. Instead the previous version of the template method is used to create the sequence. Yet after restarting the Chromeleon Console the first Worklist Import is always using the most recent versions of template methods.
144165	Skipping test actions of the PQ by setting the weight to zero when using the custom reference values does not work. It is also not possible to use the 'to be executed' option to skip test actions of the PQ.
145131	User Management: Changing an Injection Custom Variable in a Sequence requires the user privilege "Data vault basics => Modify list of custom variables".
145433	System Suitability Report Templates: Using a SST report table from a Thermo Scientific Template, e.g. Default View Settings, Report Template 'Default' or 'Default DAD', the Total Result is computed via an Excel Formula referring Test results of every single SST in the report table. This excel formula is not correct. If a single SST cannot be evaluated and is configured to return a failed result (NA -> Failed) the Total Result still reports Passed. As a workaround either change the Excel Formula by replacing the term "n.a. -> Failed" by the correct "NA -> Failed" or use the Chromeleon formula injection.sst_result instead.
147026, 169685	When publishing the Chromeleon Data Vault Service information of Chromeleon clients or IPCs, it was observed that this information is published more than once. The domain controller contains duplicate data vault server entries of the Chromeleon stations, one with the primary DNS suffix and one with the connection-specific DNS suffix (for the same Org unit), and in rare cases two identical records. This leads to data vault service access conflicts – Chromeleon clients of Chromeleon services cannot access any data vault. In addition, the performance within the Chromeleon network deteriorates. Note: If this problem occurs, please contact your local Thermo Fisher representative for assistance with a discovery record cleanup procedure.
147045	Switching an IPC from one Chromeleon domain to another (e.g. Test to Prod) while a sequence is still queued, it is possible that this sequence can be discovered and accessed using Chromeleon clients of both Chromeleon domains. Chromeleon clients of the different domains use the same database connection string of the Xvault hosted on that IPC. Starting that sequence, the sequence appears to be running on both domains. Chromeleon does not clean up the sequence queue before switching from one Chromeleon domain to another. Chromeleon does not reject switching to another Chromeleon 7 domain in case of non-empty sequence queues. Workaround: Before switching an IPC from one Chromeleon Domain to another Chromeleon domain it needs to be checked manually that there are no sequences in any instrument queue. <u>All</u> instrument queues need to be empty before joining to a different Chromeleon domain.
147417	Report Variable 'Evaluate': The report variables peak.evaluate, chm.evaluate and injection.evaluate expect a formula in the invariant format (e.g. ',' as list separator, '.' as decimal symbol). The evaluation does not work if other regional settings (e.g. ';' as list separator, ',' as decimal symbol) are used in the formula text.
148088	NTMS: When using the peak intensity auto-compute feature, the peak intensity threshold is truncated instead of rounded to the nearest integer.
148732	Admin Console: In the Instrument Controller page of the License Manager, a connected instrument may be greyed as if offline. When an acquisition is started, the status will change to Online.

ID	Description
148927	Detailed Changes of Manual Chromatogram Integrations: for certain unknown manual integrations of a chromatogram one cannot view the detailed changes in the data audit trail. When pressing <Show Changes> for the corresponding data audit trail record Chromeleon runs into an error message “An error occurred while comparing the items”. It is also not possible to create an audit trail report including changes for the sequence or to open a read-only studio session for the sequence version which contains the problematic manual chromatogram integration.
150978	Console: Dragging the height of an injection row to make it too small for the text can result in the line being hidden, until the console is restarted. This behavior has been seen only intermittently and only on a few PCs.
153197, 167617	Sequence: Using copy/paste to duplicate a very large MS sequence can fail with a ‘System.OutOfMemoryException’ error. Workaround: Export and import the sequence instead of copying it.
162551	Instrument Audit Trail: If the Instrument Audit Trail cannot be saved because ChromeleonLocal cannot be accessed, the following error message is logged: “The audit trail was unavailable for some time. Several audit trail messages are lost. They have been logged to the file “Dionex\Chromeleon\Log\AuditTrailMessages.log” in the (common) application data folder.”. This error message is misleading in that the audit trail messages are not lost; they are written into the log file.
164174	Error on opening clipboard: In sporadic rare circumstances the Chromeleon Console opens an error window telling that “Chromeleon has encountered an unexpected error” and the additional information “Error on opening clipboard” although the user didn’t do anything related to the clipboard, e.g. copy or paste. This error message is harmless and can safely be ignored. Press <Ignore & Continue> and you can continue to work with the Chromeleon Console.
165516	NTMS: Obviously incorrect results (e.g. Ratio = 99999.9, PR Element = -1) may be reported in Chromeleon when The SIEVE engine generates errors. These errors may be seen in the SIEVE log file found in C:\ProgramData\Thermo\SIEVE\
166496	Terminal Server: When clicking on a sequence in the Console, an error message is occasionally displayed about an unhandled exception “Syncfusion.Windows.Forms.Grid.Grouping.GridMaxLengthSummary”. After dismissing the error message, the sequence can be loaded as expected.
169150	Administration Audit Trail: If an administration audit trail contains lots of records (> 100.000 and more) for a given time range the retrieval of these records in the Administration Console often runs into a timeout. In this case not a single audit trail record is shown.
169496	Studio: If an MS Channel is extracted and made permanent while a sequence is still acquiring, then right-clicking on an injection acquired after that event afterwards and selecting “”Keep as Channel…” will generate the error “[Channel name] already exists for at least one injection of the current sequence. Existing channels cannot be overwritten.” There are two workarounds: When extracting channel during sequence running, uncheck ‘Make channel permanent’, wait until sequence finished then perform ‘Keep as Channel…’. Note that this works only if you do not exit Studio, once exited, all temporary channels are gone. Before running the sequence, set an unconditional SST/IRC case in the processing method to extract the MS Channel

ID	Description
169879	In rare cases, a sequence finishes and some injections contain raw data, but the status shows “Interrupted” or “Idle” and the Inject Time field is empty. Raw data have been successfully acquired and stored on the local Instrument PC. The Injection Audit Trail on the Instrument PC contains complete information, including the missing details. Workaround: Remediation for this incident is manually re-executing the data upload from the local IPC to the Central Data Vault. Note: If you are affected by this problem, please contact your local Thermo Fisher representative for assistance with recovery of the missing injection details.
170391	Custom Formulas: In order to edit a custom formula, both user privileges ‘Modify Custom Formulas’ and ‘Allow Formula Customization’ are required. If only ‘Modify Custom Formulas’ is granted, it is not possible to edit custom formulas.
171391	Access to Chromeleon 6 Data: If a single folder in a Chromeleon 6 data vault contains hundreds of sequences – in one known case almost 2000 signed sequences – a Chromeleon 7 client cannot access any sequence in this folder. When selecting the folder Chromeleon does not respond any more or runs into an out-of-memory exception or a generic GDI+ error. There is no “normal” way to open a sequence in such folders. As a workaround one can create an injection query in a CM7 data vault which searches for injections in a sequence with a given name in the Chromeleon 6 data vault. After running the query, the context menu of the query result view offers to open the corresponding sequence in a separate Chromatography Studio window.
171871	Replication of sequences can be broken in case of missing transaction packages in the temp store of the data vault server. It has been observed that injection status and injection time have not been updated even when the sequence is completed and fully acquired on the IPC. In such a case the user needs to trigger the manual upload or manual move to update the data set on the central data vault server. Workaround: User can either choose the “Manual Upload” or the “Manual Move” operation to save the sequence on the network data vault.
175214	Reporting Retention Index for TIC channels: Computing the retention index for a peak using the option ‘Use detected retention time of’ and specifying a rule for the reference injection, e.g. injection.number=1, doesn’t work for the TIC channel. The report value is always n.a. As a workaround, you can use the Copy Channel command for the TIC channel. The retention index computation for the copied channel works as expected. Workaround: Copy the TIC channel to a new channel via the Copy Channel command, either manually in the Studio or via an automated IRC-step during data acquisition. For the copied channel, the evaluation works as expected.
175542	Report Designer: In the MS Components plot, using a relative retention time with a reference injection from another sequence will result in an Error “Operation is not valid due to the current state of the object”. To avoid this, either (1) turn off the component window display in the plot properties, or (2) use an absolute RT for the component. Workaround: Either (1) turn off the component window in the plot properties or (2) use an absolute RT for the component.
177135	Custom Filter Conditions and Report Formulas: If custom filter conditions in report tables are used with report formulas for the comparison value, the filter evaluation does not work if the report formula contains a list separator and/or a decimal separator, e.g. peak.area >= seq.injection(“by number”;1).chm.peak(“by number”;1).area*0,1. As a workaround put the formula into curly brackets, e.g. { seq.injection(“by number”;1).chm.peak(“by number”;1).area*0,1}, and the filter evaluation works as expected.
177677	Injection Query: When a custom variable is part of the query, multiple entries for some injections may be returned.

ID	Description
181792	Report Designer: After interactively printing using a report template, a message will appear prompting the user to save the modified print settings (though nothing was modified). Clicking 'ok' will not cause any problem, however the version number of the report template will be incremented.
182050	Blocking remote database connections to the local databases of the IPC will prevent saving any modifications to a queued sequence of that IPC from a remote client.
183757	Sequence: If a user lacks the “Modify running sequences” privilege, it is still possible to save changes to an instrument method in that sequence. It is also possible to create new Processing Methods, Report Templates and View Settings.
186226	Licensing: When using a temporary license file in lieu of a dongle-based license, the software will refer to this as a 'demo' license. This license is fully functional and suitable for normal use. More accurately, this is simply a 'time-limited' license.
187407	In the Studio, when the Component Table is displayed from a processing method which is not assigned to the current injection, clicking 'Show Properties' may sometimes display incorrect properties for the selected component. To avoid this problem, either edit the processing method outside of the sequence.
191115	Station Qualification - OQ: The Chromeleon Operational Qualification Report for the Instrument Controller shows a superfluous truncated GUID in addition to the Chromeleon version and build number.
191634	When the Autoreporting service is enabled, many ReportManager[n].log files may accumulate in the C:\ProgramData\Dionex\Chromeleon\Log\ReportManager\ folder, many of which are empty. These files may be deleted if desired.
193494	Studio: On rare occasions, in the Component list of the Navigation Pane, the icon representing the component detection state may not be updated when the corresponding MS component trace(s) is manually integrated. This is strictly a UI issue, which may be addressed by pressing F5.
195785	MS Components: When components are identified using Relative Retention Times, the XIC Display Range still uses the absolute RT, which can result in the peaks not being displayed (though they are still properly identified)
197688	Instrument Method Editor: Script Editor: Inserting a time step before equilibration stage is not possible. Workaround: Enter a negative time step in e.g. the pump gradient timetable or detector wavelength switching timetable.
200802	Import: Chemstation Data Import may fail with a 'System.OutOfMemoryException' error for large datasets.
202837	eWorkflows: If a user is logged in with a role that has the 'Modify eWorkflow' privilege but does not have 'Modify Spectral Library' privilege, then it is possible to edit a spectral library which is embedded in the eWorkflow. However, it is not possible to edit a spectral library which is linked to the eWorkflow. To avoid this problem, do not assign the above privilege combination to a role.
203099	Privileges: It is possible for a user logged in with a Role that does not include the “Modify Sequence” privilege, but *does* include the "Modify Finished Or Interrupted Injections" privilege to clear the assigned Instrument and processing method for injections in the sequence. This can occur if that user attempts to delete the assigned method from the Associated Items list. To avoid this problem, do not assign the above privilege combination to a role.

5 Backward/Forward Compatibility Issues

5.1 Chromeleon Enterprise Compatibility between Chromeleon Versions

In general, for customers with Enterprise Chromeleon systems, we do not recommend connecting clients or IPCs with different versions of Chromeleon into the same Chromeleon Domain.

Features available in newer versions, such as email notification, automated reporting, automated LIMS export, etc. may not work correctly with data created or acquired on an older client or IPC.

Similarly, if data that was created on a newer version of Chromeleon is accessed from a client running an older version, then the data can be opened, edited and saved without losing any parameters specific to the newer version. But any new parameters, like data processing enhancements or newer report variables will not be included in any data processing as they are 'invisible' to the older client, and may cause results or reports to be generated with different values to those which would be generated on the newer version.

Additional restrictions may also apply. If you have any questions or concerns, please contact your local Chromeleon support channel.

ID	Description
142181	Report Formula Calibration Point Status: If a component is calibrated by referring to another component or peak group, the result value for the report variable 'Calibration Point Status' was always 'Ok' for valid calibration points of the referred component or peak group up to Chromeleon release 7.2.8. For Chromeleon releases 7.2.9 and later the result value changed to 'n.a.' as the original component does not have any calibration point for its own.

www.thermofisher.com

Thermo Fisher Scientific Inc.
168 Third Avenue
Waltham, MA 02451
USA

thermoscientific