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Release Notes

Chromeleon 7 Chromatography Data System

Software Version 7.2.10 MUh • March 2024

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1 Maintenance Updates

Maintenance Updates (MU) are not a full installation of their base software. They only contain files updated as a result of defect fixes relating to Maintenance Updates. However, maintenance updates are cumulative; that is, an MU also includes all the files and defect fixes of previous MUs. Thus, to install a Maintenance Update:

- It is necessary to have a full base version of Thermo Scientific™ Chromeleon™ installed
- It is not necessary (but causes no problems) to have previous MUs 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, including previous Maintenance Updates, please refer to the Release Notes of that release.

1.2 Other Documentation

The following documents have been updated with this release:

- List of Supported Instruments - Chromeleon 7.2.10 MUh
- Online Help (distributed with this release)
- Supported Operating Systems - Chromeleon 7.2.10 MUh
- Installation Guide – Chromeleon 7.2.10 MUh

1.3 Installation

Before you install this Maintenance Update, verify that Chromeleon 7.2.10 MUa or later 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 MUh

This section provides a short overview of all new features of Chromeleon 7.2.10 MUh. For more details, refer to the Online Help.

2.1 New and Updated Thermo Scientific Instrument Drivers

This chapter lists new and updated Thermo Scientific drivers added to Chromeleon 7.2.10 MUh. 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 7.2.10 MUh distributable.

2.1.1 Thermo Scientific Vanquish Refractive Index Detector – new driver

This release supports the Vanquish Refractive Index Detector (VC-D60-A). The Vanquish Refractive Index Detector is supported with Chromeleon 7.2.10 MUd (and higher).

Please note that the Vanquish Refractive Index Detector Driver is not included in the Chromeleon 7.2.10 MUh installation media and needs to be downloaded and installed separately. The Vanquish Refractive Index Detector Driver can be downloaded from the Digital Science Support Resource Center (<https://support.thermoinformatics.com/downloads/>) under Chromeleon > Related Drivers and from the Thermo Fisher Scientific Knowledge Base (https://knowledge1.thermofisher.com/Chromatography/Liquid_Chromatography/Vanquish/Vanquish_LC_Firmware_and_Release_Notes). Please contact your local Thermo Fisher Scientific representative to provide you with the driver.

2.1.2 Thermo Scientific Vanquish Binary Pump N – new driver

This release supports the Vanquish Binary Pump N (VN-P10-A) outside of Vanquish Neo Systems. The Vanquish Binary Pump N is supported with Chromeleon 7.2.10 MUd (and higher).

Please note that the Vanquish Binary Pump N driver is not included in the Chromeleon 7.2.10 MUh installation media and needs to be downloaded and installed separately. The Vanquish Binary Pump N driver package can be downloaded from the Digital Science Support Resource Center (<https://support.thermoinformatics.com/downloads/>) under Chromeleon > Related Drivers and at the IES Knowledgebase (https://knowledge1.thermofisher.com/Chromatography/Liquid_Chromatography/Vanquish/Vanquish_Neo/Vanquish_Neo_Firmware_and_Release_Notes). Please contact your local Thermo Fisher Scientific representative to provide you with the driver.

2.1.3 Thermo Scientific Vanquish System Controller – new driver

This release supports the Vanquish System Controller (6036.1130). The Vanquish System Controller is supported with Chromeleon 7.2.10 MUd (and higher).

Please note that the Vanquish System Controller driver is not included in the Chromeleon 7.2.10 MUh installation media and needs to be downloaded and installed separately. The Vanquish System Controller Driver is only distributed as part of the Vanquish Binary Pump N Driver Package, which can be downloaded from the Digital Science Support Resource Center (<https://support.thermoinformatics.com/downloads/>) under Chromeleon > Related Drivers and from the Thermo Fisher Scientific Knowledge Base (https://knowledge1.thermofisher.com/Chromatography/Liquid_Chromatography/Vanquish/Vanquish_LC_Firmware_and_Release_Notes). Please contact your local Thermo Fisher Scientific representative to provide you with the driver.

2.1.4 Thermo Scientific Vanquish Integral Fraction Collector FT – driver update [342923]

This release introduces support for an updated driver for the Vanquish Integral Fraction Collector FT (VF-F20-A). Chromeleon 7.2.10 MUh with Vanquish Fraction Collector driver package version 1.2 now supports many features originally only available in Chromeleon 7.3.1, among them:

- The user can set the fraction start position using a custom variable in a sequence.
- The Chromeleon AutoQ now provides tests for delay volume determination (DVD), carryover and fraction collection.
- It is possible to auto-set the method-specific delay volume and delay time in the Instrument Method Editor.
- It is possible to enable a needle flush after fraction collection.

For more detail, please refer to the Release Notes for Vanquish Fraction Collector driver package version 1.2.

Please note that the driver for the Vanquish Integral Fraction Collector FT is not included in the Chromeleon 7.2.10 MUh installation media and needs to be downloaded and installed separately. It can be downloaded from the Digital Science Support Resource Center (<https://support.thermoinformatics.com/downloads/>) under Chromeleon > Related Drivers and from the Thermo Fisher Scientific Knowledge Base (https://knowledge1.thermofisher.com/Chromatography/Liquid_Chromatography/Vanquish/Vanquish_LC_Firmware_and_Release_Notes). Please contact your local Thermo Fisher Scientific representative to provide you with the driver.

Please note that the Vanquish Integral Fraction Collector FT can be configured in Chromeleon 7.2.10 MUh with any Vanquish Fraction Collector driver package version 1.0 or higher. However, to take advantage of the above-mentioned features, Vanquish Fraction Collector driver package version 1.2 is required.

2.2 New and Updated Third Party Instrument Drivers

2.2.1 Agilent LC/Agilent GC – updated driver

This release introduces support for Agilent Drivers for Chromeleon version 3.0. More details are available in the release notes document provided with Agilent Drivers for Chromeleon version 3.0. Agilent Drivers for Chromeleon version 3.0 can be downloaded from the Digital Science Support Resource Center (<https://support.thermoinformatics.com/downloads/>) under Chromeleon > Related Drivers and from the Thermo Fisher Scientific Knowledge Base (https://knowledge1.thermofisher.com/Software_and_Downloads/Chromatography_and_Mass_Spectrometry_Software/Chromeleon/Chromeleon_7_Software%2C_Drivers_and_Release_Notes).

2.2.2 Shimadzu LC (3.21) and GC Drivers (2.40) – updated driver

This release introduces support for an updated driver provided by Shimadzu: Shimadzu LC Drivers for Chromeleon version 3.21 and GC Drivers for Chromeleon version 2.40. Shimadzu LC Drivers for Chromeleon version 3.21 and GC Drivers for Chromeleon version 2.40 can be downloaded from the Digital Science Support Resource Center (<https://support.thermoinformatics.com/downloads/>) under Chromeleon > Related Drivers and from the Thermo Fisher Scientific Knowledge Base (https://knowledge1.thermofisher.com/Software_and_Downloads/Chromatography_and_Mass_Spectrometry_Software/Chromeleon/Chromeleon_7_Software%2C_Drivers_and_Release_Notes).

2.3 New and Updated Features

2.3.1 Vanquish Autosampler – ePanel support for Large Volume Injection [328028]

The ePanel for the Vanquish Autosampler now supports large volume injection. For those instruments and firmware supporting large volume injection, loop sizes of 250 μL and 1000 μL can be set on the ePanel.

3 Resolved Issues

This chapter describes the issues that have been resolved with the release of Chromeleon 7.2.10 MUh only. For issues that have been resolved in previous MUs, please refer to the Release Notes of that release.

Other trivial and minor issues may 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.

ID	Description
148927	Detailed changes of manual chromatogram integrations: for certain unknown manual integrations of a chromatogram, one could not view the detailed changes in the data audit trail. Pressing "Show Changes" for the corresponding data audit trail record resulted in an error message "An error occurred while comparing the items". It was 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 containing the problematic manual chromatogram integration.
166994, 205589	Ultimate 3000 WPS Autosamplers: Changes to the tray configuration on the ePanel were not immediately relayed to the sequence wizard. When changing a tray configuration on the ePanel, the tray configuration in the sequence wizard was only updated after making another change to the tray configuration on the ePanel. Now the rack view and sequence table are updated immediately and correctly.
192725	Waters Acquity System Driver: A Ready Check for Alliance detectors with blank injections would result in an error even if no acquisition channel was selected. Note: This issue has been resolved with Chromeleon 7.2.10 MUa but had been omitted from the Chromeleon 7.2.10 MUa Release Notes.
244394	Data Audit Trail - Version Comparison: For sequences located on a multi-user data vault the version comparison of two sequence versions via the "Show Changes" button in the Data Audit Trail window could display the wrong version for the comparison if one of the selected Data Audit Trail entries belonged to an Instrument Controller operation (for example "Downloaded"), and the other to a user operation. As a result, changes were shown that actually belonged to a different Data Audit Trail entry.
251644	DDK Drivers: A Smart Startup during a sequence run that resulted in a failed equilibration would lead to an access violation.
275608	Sequence: If the sequence name contained a foreign character that was not part of the regional language code page (for example, "α" on an English-US system), the respective sequence could be started, but the sequence bar turned orange and showed "Disconnected."
278758	Injection Query: Position of Custom Variable Columns are not preserved or saved when re-executing the query. This behavior was changed to ensure position of Custom Variable Columns remains the same.
287469	Injection Query: Rerun of unsaved queries ended up with error.
288104	Calibration plot: After viewing the calibration plot for an undetected component, it could sometimes happen that the y-axis autoscale setting would become unchecked, causing improperly scaled plots. This applied to both the Interactive ('Data Processing') plot and the Report Designer plot.

ID	Description
294951	<p>Signature of Sequences with very big RAW-Files: If a sequence is submitted for the electronic signature Chromeleon 7 computes a hash-code for every raw-file in this sequence. This is done via a dedicated API-call on the Data Vault Service where the raw-files are located. For very big RAW-Files, e.g., greater than 3 GB, or if the computer where the Data Vault Service is running is occupied with other tasks the hash-computation could take too long. The Chromeleon Client which triggered the sequence signature would therefore run into a timeout and the electronic signature could not be completed for the sequence.</p> <p>With this release the API-call for the hash-computation on the Data Vault Service for large raw-files greater than 100 MB now returns in time to the Chromeleon client and completes the hash computation asynchronously. Once it is completed the client is notified and can continue the electronic signature.</p>
298674	<p>Method Translation from UltiMate 3000 to Vanquish: The temperature setpoint of the sampler cabin is correctly translated now. In previous versions the translation could be incorrect in case a temperature for the column compartment is set.</p>
300974	<p>SST/IRC: For a sequence with injections that have multiple components each with its own acceptable limits, IRC is set up to test each component against its limits and if any one component fails, the injection should be reinjected. However, if several components fail, a new sequence line is created for each failed test. Now if multiple tests fail for a single sample, the sample is only re-injected once.</p>
307368	<p>Method Translation: Method Translation would not recognize the difference between Orbitrap Exploris™ models. When opening a Chromeleon instrument method created on an Orbitrap Exploris 240 on an Orbitrap Exploris MX instrument, no warning was presented to indicate the difference between the model the instrument method was created for and the actual instrument. Instead, the Ready Check would fail.</p>
309295	<p>Export: The Allotrope export would fail if the channel name included a space. Now the Allotrope export works if the channel name includes a space.</p>
319155	<p>Query results table columns with (*) order jumble each time we execute the same query. This behavior has been fixed.</p>
324003	<p>Chromeleon Studio – Processing Method: When editing the expected retention time of a component within the processing method editor, the modified value may have populated in the component table grid, but the processing method was not marked as modified. The processing method with these changes could then be used to process results and create corresponding reports within the same Chromeleon Console. When closing the Chromeleon Console and restarting it or starting it on a different computer the original processing method was shown, and the previous results or reports may not have matched the results or reports created with the newly started Chromeleon Console. This is now fixed. Editing the retention time of a component in the component properties property dialog will always mark the processing method as being modified. Subsequent results or reports are clearly based either on unsaved changes or require the need to save the modified settings first before creating a report. The latter is controlled by the privilege 'Print or Export Unsaved Data'.</p>
344723	<p>UltiMate 3000 VWD-3x00 and Dionex ICS-VWD: On an UltiMate 3000 system with two detectors, an idle VWD-3x00 could cause a sequence interruption with an error message "No response from VWD-3000 @ USB-<ID> for 300.000000 seconds"). Similarly, for the Dionex ICS-VWD. This issue has been addressed with VWD firmware version 4.20.</p>
364515	<p>MS Component Pane: When displaying the XICs of a reference injection in a pane, the tile containing the XICs of the currently selected injection disappeared after the reference XICs were zoomed in. This does not happen anymore with 7.2.10 MUh. In this use case (zoom in reference XICs) the tile for the currently selected injection will be still visible in the MS Component Pane.</p>

ID	Description
365309	ICS-5000 UV: Following a Smart Shutdown, an error "Access violation in module (Unknown)" was reported in the audit trail.
366782	Updater Service: The Updater Status would occasionally switch from "Installing" to "Ready" to "Install". In addition, once the installation had completed, the Updater Status would change to "Ready to Install" although the install had completed successfully. Now the Updater Status changes to "Installed Successfully" once the installation has completed successfully.
367473	Upon application of a Maintenance Update on a Chromeleon station, a ChromeleonLocal data vault was created on the updated computer. Now, after applying an update via the updater service no data vaults are created.
367723	The Release Notes for Chromeleon 7.2.10 MUf stated that Chromeleon 7.2.10 MUf introduced the modification of the Needle Height in the Instrument Method Wizard and in the Instrument Method Editor for all Vanquish autosamplers. This was only true for the Vanquish Dual Split autosamplers (VH-A40-A and VF-A40-A). Starting with Chromeleon 7.2.10 MUg the modification of the Needle Height in the Instrument Method Wizard and in the Instrument Method Editor is possible for all Vanquish Horizon, Flex and Core autosamplers.
367982	Vanquish Autosamplers: In Chromeleon, the draw speed for the Vanquish Autosampler could be set in the range 0.050 – 20.000 µl/s (default value: 5.000 µl/s). However, the draw speed is limited by the firmware to 15.000 µl/s. This limitation was set intentionally in the firmware to ensure proper functioning of the metering device head. However, this limitation was not communicated to the user in the CDS. It was possible to manually set or define within an Instrument Method values up to 20.000 µl/s for the draw speed, and the audit trail documented the value for the draw speed, e.g., 20.000 µl/s. This affected all Thermo Scientific Vanquish Core, Horizon, and Flex Split and Dual Split Samplers, as well as Vanquish Split Samplers NT as part of Vanquish Neo systems. This was not a safety issue as the draw speed does not affect the analytical results and the true draw speed never exceeded 15.000 µl/s. However, this may be a potential compliance issue as the user entered a draw speed of e.g., 20.000 µl/s, the audit trail documents a draw speed of e.g., 20.000 µl/s, whereas the actual draw speed was 15.000 µl/s. With this fix, the draw speed range in the instrument method is limited to 0.050 – 15.000 µl/s. Legacy methods with a draw speed exceeding this limit will be refused by the instrument during the Ready Check, i.e., before starting a sequence.
369814	Studio: The chromatogram display in the Studio did not show the original unit for the y-axis for imported GAML data but showed millivolt (mV) instead. Now the original unit for the y-axis is shown.
371579	Locked Injections and Calibration Modes 'Group', 'Additional' or 'Bracketed': When using the calibration modes 'Group' or 'Additional' for locked injections Chromeleon couldn't compute any calibration or calibration dependent results, such as, the amount values for peaks in these locked injections. When using the calibration mode 'Bracketed' and the injection list has been changed after the 'Lock injection' command has been issued (e.g. by inserting new injections or removing existing ones) calibration or calibration dependent results were computed based on the modified injection list and not on the injection list when the injection has been locked. Using Chromeleon 7.2.10 MUh any calibration dependent processing and the corresponding results for locked injections are now based on the injection list of the sequence at the time the injection has been locked.
373652	Licensing: The NFP mode would exit before the connection to the license server was restored resulting in sequence interruption after a run due to the license server being unavailable. This has now been resolved.

ID	Description
37796, 436661	Submitting a sequence would fail with a System.OutOfMemoryException. It was not possible to apply an electronic signature to a sequence. The error message indicated "Cannot load data for item 'chrom://.../xxxx.smp/Audit.audit'." and the Data Audit Trail indicated: "ERROR Data.DbConnectionAdapter - [...] GetRawDataHash and Exception of type 'System.OutOfMemoryException' was thrown". The Instrument Audit Trail and the Injection Audit Trail contained an unusually high number of entries because an access violation was logged at a frequency of 100 Hz. Now the respective warning is only logged once.
379505	GCMS TSQ: Editing a scan list in the Instrument Method Editor, e.g. deleting a large number of entries, was slow.
383788	In case a sequence was running on a Vanquish LC stack during the time change caused by daylight saving time an error could occur that the pump gradient defined in the instrument method wasn't correctly executed. This error has been fixed. Now the gradient is executed as defined in instrument method.
385786	Discovery: The discovery service became unresponsive due to default network throttling settings. Serial processing of Discovery Update messages has been updated to run in parallel.
386554	SST/IRC: In the Injection Audit trail, %RSD using custom formula matches the "Passed" statement displayed in the Processing Method for SST/IRC and displays the value.
386971	In some instances, printing of report templates was not always captured in the audit trail. This has been resolved.
390735	Autoexporting: For injections/sequences greater than 60MB the Allotrope export would fail. Now, the injection/sequence can be exported in Allotrope format without any errors.
392410	When a user, who selected an instrument in the navigation pane, switches between the Local and Network instrument view, the screen is now updated properly to always show only instruments existing for the given view.
394848	Discovery: There was a potential prolonged start up time of the Discovery Service with systems that contain a larger number of discovery resources and have Host Name Resolution in Global Policies set to always use Fully Qualified Domain Name.
397133	Cobra Peak Detection, Consider Void Peak: Using the Cobra Peak Detection algorithm in the Detection Settings of the Processing Method with the detection parameter Consider Void Peak enabled and having the first component record with an empty retention time property value in the Processing Method, the Chromatogram Plot in the Studio Window showed an error message telling 'Can't read channel <channel name> from injection <nr> - <injection name>. Nullable object must have a value'. This is resolved now and the chromatogram with successfully detected peaks and a corresponding baseline is shown in the Chromatogram Plot.
405754	Audit Trails: For a missing or renamed raw data file, Chromeleon flags the raw file with an error icon in the console. However, entries were not being logged for such files in the Station Audit Trail. This has now been resolved and the information is captured in the Station Audit Trail.
407512	Custom Sequence Variable was not saved if modifications were made by user on a list-type custom sequence variable depending on the steps followed in the sequence editor from the Chromeleon console. This error has been fixed.

ID	Description
418333	<p>User Management: The performance of user management has been improved.</p> <p>If the User Service was busy, problems logging into the Admin Console or Chromeleon on the Domain Controller and performing user management tasks could be experienced by users.</p> <p>Poor performance of user synchronization tasks was observed.</p> <p>On a large Enterprise system after a re-start of the User Service, ManageUserProfiles was inefficient and took several seconds for changes to be updated. Users are now able to log into the Chromeleon Console and Admin Console without seeing an error and without delay.</p>
411849	<p>Import/Export: The online help for the WLEX import incorrectly described a Spike Group as an attribute for the Injection elements for the wlex file. This information has now been removed.</p>
412695	<p>Atlas: When an Atlas workbook using Internal Quantitation is imported into Chromeleon, previously an exception was thrown, and the import would fail. Now, the workbook is successfully imported. The Atlas Internal Quantitation mode isn't supported, but the Atlas results are available for viewing. A warning message is logged for each component indicating that the Internal Quantitation for the component cannot be set and is set to External Quantitation.</p>
417163	<p>Instrument reassignment workflow was hardened to require user to have "Modify Sequence" privilege in both scenarios: when user performs it via the "Assign Instrument" dropdown menu located at the top right corner of sequence editor and when user performs it via the sequence properties modal window. Furthermore, if privilege actions are enforced and user with "Modify Sequence" privilege is trying to Reassign the Instrument, user is always prompted to enter the Comment.</p>
419872	<p>Vanquish Binary Pump: Using Smart Shutdown or Smart Standby with a Vanquish Binary Pump prevented the system from calculating the eluent consumption for the Queue. This has been corrected.</p>
423861	<p>7.2.10 MUe + HF - local discovery cache removed and not built up again. Discovery Local Cache file backup is created once in 5 minutes to prevent this situation.</p>
435883	<p>UltiMate 3000 AFC-3000 Fraction Collector: On a system with a disconnected UltiMate 3000 AFC-3000 Fraction Collector, a sequence run stops after the end of the sequence with an error message: "AFC-3000 Fraction Collector: Error in preflight event handler: ...". There are three possible workarounds:</p> <ol style="list-style-type: none"> 1. Connect the device, change MoveToRinsePosOnSeqEnd = No, then disconnect the device. 2. Connect the AFC-3000 although it is not used. 3. Create an instrument configuration without an AFC-3000. This also requires a small adaption to the method: remove FractionCollector.FractionCollection.CollectFractions = No
445328	<p>Data upload to queue is not possible and sequence download fails between DV & IPC. This is the expected behaviour when Chromeleon Scheduler service is stopped and not running. Starting Chromeleon Scheduler service resolves the issue.</p>
446842	<p>Studio: The Elemental Composition calculator does not support non-US regional decimal settings. Calculated compositions in non-US regions may be inaccurate. This is a consequence of the regional setting set to use "," (comma) for the decimal separator and is to be expected.</p>

ID	Description
459417	<p>Sequence: A user without the 'Delete Finished or Interrupted Injections' privilege could delete an injection by modifying the information in the injection row and pressing 'Ctrl+Alt+Shift+Delete' or 'Ctrl+AltGR+Shift+Delete'.</p> <p>UV Library: A user without the 'Delete Spectrum' privilege could delete spectra from a User UV Library by pressing 'Ctrl+Alt+Shift+Delete' or 'Ctrl+AltGR+Shift+Delete'.</p>
496623	<p>Vanquish Integral Fraction Collector FT - Tube Labels in Chromatograms: Fraction Tubes can be visualized via coloured stripes in the Chromatogram Plot by enabling the option 'Show tubes' in the property page 'Fraction Tubes'. The tube stripes can be labelled by their corresponding position in the tray using the label formula "tube.trayPosition". Previously the Chromatogram Plot in the Chromeleon Studio showed numeric numbers (e.g. 1,2,3) in the stripes for the tube positions in the fraction tray. Now it shows the positions as they are labelled in the fraction tray view, e.g. G:A1, G:A2, G:A3.</p>

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 and subsequent MU release notes.

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

4.1 Limitations with Thermo Scientific Instruments

ID	Description
169323	<p>Licensing: License Details dialog reported that License Mode was in Dongle Grace Period, although dongle is present and a license file present. Workaround:</p> <p>REMEDY A - Install latest WibuKey software</p> <ol style="list-style-type: none"> 1. Stop Chromeleon and related Services: <ul style="list-style-type: none"> - Stop Chromeleon Client and Instrument Controller. - Stop all running Chromeleon 7 services (To open the Services tool type Services at Windows Start) 2. Install the latest version of the WibuKey driver manually from the 7.2.10 MUa disk. <ul style="list-style-type: none"> - Run D:\Packages\WibuKey Runtime\Setup64.exe - Reboot the PC. 3. Check if the problem is resolved. <ul style="list-style-type: none"> - If YES, great, go on with the VERIFICATION - If NOT, try Remedy B. <p>REMEDY B - Delete Licensing Cache</p> <ol style="list-style-type: none"> 1. Stop Chromeleon and related Services. 2. Remove the Dongle. 3. Delete the file Dfp.xml from C:\ProgramData\Dionex\Chromeleon 4. Start the Chromeleon 7 services which were running before 5. Connect the Dongle. Wait 2 minutes. <p>VERIFICATION</p> <p>To make sure, that the problem is permanently resolved, remove and reconnect the dongle again and check that Chromeleon picks up the license correctly.</p> <ol style="list-style-type: none"> 1. Stop the Instrument Controller (we want to simplify things) 2. Remove the Dongle while the Client is open. Wait 2 minutes. 3. Close the Client. Wait 2 minutes 4. Start the Client. Check that the License Mode went to Dongle Grace Period (License Details dialog). 5. You can keep the License Details dialog open 6. Connect the Dongle 7. Wait a few minutes. Check that the License Mode returned to Standard.
172751	<p>Vanquish Autosampler: The option "External Rack Transfer" is not compatible with Chromeleon User-Defined Programs (UDP's).</p>

ID	Description
192721	<p>Vanquish TCC: Pre-heater Temp Ctrl On does not work in easy mode of the Instrument Method Editor / Wizard when the column chamber temperature control is switched off.</p> <p>Workaround: Activate the advanced mode in the Instrument Method Editor / Wizard and set the temperature control for the pre-heater to the desired value.</p> <p>Note: This issue was accidentally listed under "Limitations with the Waters Driver Pack" in the Release Notes for Chromeleon 7.2.10 MUe.</p>
296042	<p>Vanquish Core DAD: In very rare cases, when two Vanquish instruments are configured with a Vanquish Core Diode Array Detector each, switching off one of two DAD detectors may lead to a negative interference with the second DAD. The second DAD may stop sending data, and the chromatogram stops to display detector data. As a consequence, the sequence may abort after a time delay.</p>
379007	<p>Orbitrap Exploris: With the Exploris Method Editor, a full scan MS method created in Quan view may result in incorrect scan range settings during method execution. For instance, while a Full scan MS instrument method includes a scan range of m/z 100-500, the instrument executes the acquisition with a range of m/z 100-1000. This is seen with Orbitrap Exploris Series driver 4.2 and planned to be addressed with Orbitrap Exploris Series driver 4.3.</p>
412695	<p>Atlas: When an Atlas workbook using Internal Quantitation is imported into Chromeleon, previously an exception was thrown, and the import would fail. Now, the workbook is successfully imported. The Atlas Internal Quantitation mode isn't supported, but the Atlas results are available for viewing. A warning message is logged for each component indicating that the Internal Quantitation for the component cannot be set and is set to External Quantitation.</p>
454660	<p>Exactive 2.13 driver - Workstation with installed Chromeleon: After installing the Exactive driver 2.13 using the option 'Workstation with installed Chromeleon' creating an Instrument Method or editing an existing one for a corresponding Chromeleon instrument will run into an error message window telling "Can not load assembly ThermoFisher.Foundation.IO". After pressing <Ok> for this error message the creation wizard or the editor session can be continued without harming the content of the Instrument Method. Yet the so-called Chromatogram control in the dialog pages of the creation wizard or the editor of the Instrument Method isn't showing anything.</p>

4.2 Limitations with the Waters Driver Pack

ID	Description
139353, 190365	<p>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.</p>

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
	None reported.

4.4 Limitations with Other Third-Party Instruments

ID	Description
256522	<p>Bruker Scion GC: The drivers for the Bruker Scion 430 GC and Scion 450 GC are provided on the Chromeleon installation media. Installing these drivers causes a number of warnings in the Chromeleon IQ Report stating "The file was not installed by any of the known packages." These warnings can safely be ignored.</p> <p>SCION 450 GC: Warnings for the following files in the directory C:\Program Files (x86)\Thermo\Chromeleon\Bin\DDK\V1\Drivers\SCION\450GC: 450GC_20.bmp, 450GC-Help-en.chm, ACE.dll, DDK.dll, DriverCert.xml, ECC.dll, ECC_Client.dll, GC450_Node.dll, General.dll, iconv.dll, libxml2.dll, log4net.dll, lua5.1.dll, lua51.dll, MultiLanguage.dll, Node.dll, Node_Client.dll, NodeView.dll, NodeXML.dll, Observer.dll, OSX_Layer_ACE.dll, SCION450GC.Common.dll, SCION450GC.ConfigUI.dll, SCION450GC.DDKInterface.dll, SCION450GC.Driver.dll, SCION450GC.Shared.dll, and zlib1.dll and errorLogDescriptions\english.txt, and for the following files in the directory C:\Program Files (x86)\Thermo\Chromeleon\Bin\DDK\V2\Drivers\SCION\450GC: 450GC-Help-en.chm, DriverCert.xml, log4net.dll, SCION450GC.Common.dll, SCION450GC.EditorPlugin.dll, and SCION450GC.Shared.dll.</p> <p>SCION 430 GC: Warnings for the following files in the directory C:\Program Files (x86)\Thermo\Chromeleon\Bin\DDK\V1\Drivers\SCION\430GC 430GC_20.bmp, 430GC-Help-en.chm, DriverCert.xml, log4net.dll, SCION430GC.Common.dll, SCION430GC.ConfigUI.dll, SCION430GC.Driver.dll, and SCION430GC.Shared.dll, and for the following files in the directory C:\Program Files (x86)\Thermo\Chromeleon\Bin\DDK\V2\Drivers\SCION\430GC: 430GC-Help-en.chm, DriverCert.xml, log4net.dll, SCION430GC.Common.dll, SCION430GC.EditorPlugin.dll, and SCION430GC.Shared.dll.</p>
357361	<p>PerkinElmer Clarus/Autosystem GCs: While the Cryo option for the PerkinElmer Clarus/Autosystem GCs is not supported, experimental Cryo support is available starting with Chromeleon 7.2.10. Experimental support in the Autosystem/Clarus GC driver can be added by starting the instrument configuration tool with the /debug option. Hence the experimental support for the Cryo option can already be evaluated at customers using Chromeleon 7.2.10 as well as Chromeleon 7.3.1.</p>

4.5 Limitations With Setup

ID	Description
	None reported.

4.6 Other Limitations

ID	Description
267233	<p>ePanels: ePanels spontaneously change the background color of Edit Field controls to LightPink and sometimes the Edit Field controls look empty.</p> <p>Workaround: Pressing F5 refreshes the Chromeleon Console and populates the value in the Edit Field.</p> <p>The following actions were reported to temporarily (e.g. for a few days) solve the problem:</p> <ul style="list-style-type: none"> • Type a value in the Edit Field or click inside the Edit Field and then click ESC, and the correct value becomes visible. This has to be repeated for every affected Edit Field on the affected ePanel. • Close and re-open Chromeleon. <p>Note: This issue had been reported in the Release Notes for Chromeleon 7.2.10 MUe. It is reported here again because it has become clear that it is more frequent than originally reported. In addition, a workaround is reported here.</p>
315678	<p>To prevent sequence upload from failing with error message "client received an invalid WCF command result type.", it is required that the temp folder of the raw data storage is excluded from the scan/usage of other external tools.</p>
429916	<p>If the user has 2 or more roles associated, the user cannot access the data vault properties within Chromeleon Administration Console, these can be only accessed from Chromeleon Console (Data vault properties). Query selection in the Scheduler editor is affected as well. These limitations only apply when using special set of access groups for data vault access control. The limitation will result in the following message: "You are not in any of the access groups."</p>

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.

5.2 CMBX File Compatibility between Chromeleon Versions

CMBX files are used for transferring data and data objects between separate Chromeleon systems.

CMBX files may be considered 'Forward compatible'; that is, a CMBX file generated by an earlier Chromeleon software release is always readable in newer releases of the software.

However, the reverse is not true, that is, a CMBX file generated by a newer release of Chromeleon software should **NOT** be imported into older releases of the software. CMBX files generated by newer software releases may contain database schema extensions which are unrecognizable in older software releases, causing significant problems and/or damage to the data vault of the older release.

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

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