

March 2024

Release Note: QIAcuity® Software Suite (v.2.5.0.1)

Dear valued customer,

The following changes were made in the QIAcuity Software Suite version 2.5 and in the QIAcuity Instrument Control Software (CSW) version 2.5.

Updating to QIAcuity Software 2.5 requires the update of both, QIAcuity Software Suite version 2.5 and QIAcuity CSW version 2.5.

New features

- Supports assay development by providing an essential temperature gradient functionality
- Offers bulk archiving of plates with the option to select individual plates or the option to select all filtered plates
- Provides calculation of initial concentration of sample (copies/μL) by using dilution factor for reaction mix dilution and concentration factor for sample pre-dilution
- Offers the option for conversion of concentration unit into various pre-defined or user-defined units for concentration results in dPCR reaction and of initial concentration of diluted sample
- Provides an integrity value and concentration value per group for up to 5-plex added to the multiple occupancy CSV file export, for example, for the evaluation of AAV (adeno-associated virus) assays and for drop-off assays
- Improves usability by vertical and horizontal presentation of result data, affecting the result display in all export files as well as graphs, for example, scatterplots
- Offers an option to automatically group all samples of identical sample definitions as hyperwells
- Simplifies the use of a free hand selection of partitions in 2D scatterplots by replacing the lasso selection by an editable polygon selection
- Extends information provided in reports by listing all dPCR parameter steps, including the software version of the QIAcuity Software Suite and CSW, the instrument ID, and the corresponding date and time
- Simplifies monitoring of changes in the audit trail by specifying differences between previous and new events, for example, threshold changed during result analysis.
- Increases security by an automatic log-out of users from the QIAcuity Software Suite after 15 minutes of inactivity

Improvements

- Improves performance of the software by reducing the initial loading time and the time for recalculation of 1D/2D scatterplot and for signal map images
- Improves performance of the software by reducing the initial loading time for plate upgrades from previous software versions
- Increases visibility of the plate status, for example, of upgraded plates and of read-only plates in Plates Overview and Archive Overview
- Improves usability by showing sample names in 1D scatterplots and the targets used on the 2D scatterplot axes
- Improves usability by presenting 1D scatterplots from all channels and targets at one page
- Offers the option to present 1D scatterplots in vertical or horizontal orientation
- Expands information provided in plate definition via CSV import, including sample names, targets, reaction mixes, conversion factor, dilution, etc., resulting in identical formats for import and export files.
- Increases security by an automatic software log-out after 3 incorrect password attempts during report signing
- Extends presented result digits for all second level analysis plug-ins from 2 to 4 digits
- Increases audit trail data integrity by including all plate related audit trail entries within the plate. Those audit trail data will be preserved in exported plates.
- Offers distinct priming profile for probe based and for EvaGreen[®]-based (RT) reaction mixes to improve the overall filling of all Nanoplate types
- Enhances customer interaction during troubleshooting by means of a troubleshooting page
- Increase security by updating the PostgreSQL Database to version 15.2

Bug fixes

- In some cases, the channels chosen in the QIAcuity CSW were not correctly displayed in the QIAcuity Software Suite.
- When a plate is about to be imported into a QIAcuity Software Suite and a plate with the same name already exists, a wrong message (Error 409) was shown. Instead, the message “Cannot import plate because this plate already exists in the system. To be able to import this plate, duplicated plate needs to be removed from the system” (Error 400) is now shown.
- In case plate archiving fails, the Audit trail event of successful archiving was created in former versions. After fix, a separated audit trail event “Archive plate – failure” is being created within version 2.5.
- Audit trail tracking was still being done even the audit trail tracking was turned off. In version 2.5, if audit trail tracking is disabled, no tracking is being done.
- In case password is changed by the user in version 2.5, an audit trail event is being created. Prior version 2.5, an event was only created if the password was changed for a different user than the one logged in.
- In case a run is aborted (manually or automated), the plate status will change in version 2.5 accordingly.

Updating the QIAcuity Software Suite

Update to this Software Suite version may be done from QIAcuity Software Suite version Suite v2.1.8.23/CSW v2.1.8.30 or Suite v2.2.0.26/CSW v2.2.0.8.

Caution: All older versions than Software Suite version 2.1.8 are not supported for a direct upgrade to version 2.5. Refer to the corresponding sections in the user manual for upgrade instructions.

Not following the instructions may result in a loss of your previous plate data!

Visit www.qiagen.com and go to the Software section of the QIAcuity product page to check for the latest QIAcuity Software Suite version and the latest user manual. On a computer running Microsoft® Windows®, download the software update. Locate the QIAcuitySuite.msi file and double-click it. The installation process starts. Follow the instructions given in the user manual.

The QIAcuity Software Suite is designed to work with Windows 10 Professional Edition. It is recommended to upgrade your Windows 10 operating system to the latest available build version from Microsoft. The following browsers are supported in the QIAcuity Software Suite:

- Mozilla® Firefox®: version 117.0
- Microsoft Edge®: version 116.0.1938.62
- Google Chrome®: version 116.0.5845.141

Known issues of the Software Suite version 2.5.0.1

- In a target-based 2D scatterplot analysis with selected wells that include multiple reaction mixtures, a channel-based analysis is displayed instead. As a result, fluorescence intensity signals shown are based on the two channels selected in the plate overview instead of the two targets selected for the 2D scatterplot. In case multiple reaction mixes have been selected, multiple targets are shown in this case. Hence, threshold changes via the common threshold or via the polygon usage will affect all of selected wells chosen for analysis and the analysis results may be unintentionally changed by the user. To avoid this issue, please only select wells including the same reaction mixture for a target-based 2D scatterplot analysis.
- In rare cases, it may occur that results of read-only plates originated from software version 2.0 or lower cannot be viewed with the QIAcuity Software Suite version 2.5. Please use QIAcuity Software version 2.2 for review of these data. However, plate upgrade of these plates is possible within version 2.5.
- In case the QIAcuity software was upgraded to version 2.5 including a configured archive and should be rolled back to software version 2.1 or 2.2, the archive is not accessible anymore, resulting in a failure to start the previous rolled back Software Suite. Please contact the QIAGEN Technical Support in case the QIAcuity Software Suite version 2.5 should be rolled back to previous software version.
- The export of the multiple occupancy CSV file is only possible if the wells selected for analysis have a uniform plate layout definition with regard to Reaction Mix and Sample and Controls. All selected wells to be analyzed must either not have a plate layout definition or have a defined plate definition. It is not possible to export the multiple occupancy CSV file if there is a mixed scenario in regard the plate layout (e.g., wells exhibiting reaction mix, and samples and wells without any definition).
- If the 1D scatterplot has been selected to be added to the PDF report, a line break will occur as soon as more than 12 wells have been selected. This does not lead to any loss of data. To avoid this, please select only 12 wells for the 1D scatterplot, add them to the report, and then continue with selecting more wells.

- In case a read-only plate gets upgraded and afterwards a report is created for this read-only plate, the detailed run information table list in the report file is empty. The corresponding upgraded plate exhibits all information of the run details in the report. Already existing reports of read-only plates are not affected. It is recommended to create first required report/s before continuing with the plate upgrade.
- In case a plate was aborted during the cycling step, a wrong plate status is displayed in the plate overview.
- If a plate exhibits multiple cycling steps with a mixed scenario, one cycling step with use of gradient functionality and one without, the result display including the result report contain all information on the applied temperatures.
- In case of long defined target names, the results in the list view are not aligned to the target name. However, the data are available.
- Detaching of the archive location while archiving is still ongoing displays the correct message that detaching the archive is not possible. However, an additional incorrect message that archive has been detached is displayed as well. This message can be ignored.
- If a plate was selected to be upgraded, it can take up to several seconds (depending on the plate size) until it is visualized that the upgrade process was introduced.
- When searching for plate names in the Archive, special characters such as !@# cannot be searched for.
- Every time a plate is exported, a plate audit trail is created which is part of the exported plate.
- In case identical target names were defined for different channels of several reaction mixes used within one run, indicated channels of heatmap and concentration diagram are wrong and result data are merged in one diagram.
- If multiple plates cannot be archived using the bulk archive function, not all of the affected plates are listed in the corresponding message.
- In case of a plate is about to be archived to a not anymore existing archive location, a wrong error message appears.
- If read-only plate results from initially Software Suite version 1.2.18 cannot be displayed, archive corresponding plate and restore it again to be able to get the read-only plate results. If no archive is defined, please export affected plate and import it again.
- In case of using the **Unlock plate** button, the **Save** and **Done** buttons are not active after edits in the plate layout. Please note that the **Unlock plate** button only in case the was stopped by an instrument error should be used.
- A report name can be up to 100 characters long, while the plate name can be up to 125 characters long. If you keep the default report name (the name of the plate) for report generation, the report generation will fail. For plate name exhibiting more than 100 characters, please change the default report name during report creation.

In case of no detected positive partitions (e.g., NTC sample) for the Multiple Occupancy CSV export file, the software displays a concentration of "0 cp/μL" as result instead of "0.000 cp/μL" as in previous software version. This can lead to Microsoft Excel® not recognizing a number when importing the CSV file. It is recommended to change the column type to Decimal Number during the CSV file import. Please see the detailed instructions in the user manual.

Best regards,
Your QIAGEN Team