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Release Note: QIAcuity® Software Suite (v3.0)

Dear valued customer,

The QIAcuity Software Suite version 3.0 and QIAcuity Instrument Control Software (CSW) version 3.0 are now available for download and installation.

Updating to QIAcuity Software version 3.0 requires the update of both QIAcuity Software Suite version 3.0 and QIAcuity CSW version 3.0.

New features

- Supports dPCR assays up to 8-plex by using six optical channels for six standard dyes and the additional use of two channel combinations for LSS (Long Stoke Shift) dyes, which can be selected from five different channel combinations. **Note**: This feature requires usage of a new master mix (QIAcuity High Multiplex Kit) that is planned to be launched in November 2024. dPCR assays up to 5-plex are supported using all other available QIAcuity master mixes.
- Supports the usage of the new QIAcuity High Multiplex Kit.
- Offers the option to create a custom cross talk matrix to address cross talk between neighboring channels for all multiplex assays.
- Supports a 2D scatterplot overview presenting individual 2D scatterplots of all selected wells.
- Provides separate merged 2D scatterplots for sample-based analysis of individual replicates.
- Presents all 1D scatterplots of one channel or one target on a single overview page.
- Provides a reaction mix template functionality for the creation of reaction mixes, including a custom cross talk matrix.

Improvements

- Offers the possibility to add all 1D and 2D scatterplots at once to the report PDF file.
- Increases the number of plots, graphs, and tables that can be added to a report from 70 to 300 items.
- Handles the report generation in the separate thread, avoiding blocking of the application by report generation.
- Enhanced multiple occupancy result output file, supporting assays up to 8-plex.
- Improved test connection functionality, providing information about ports that are not reachable or about missing certificates.
- Enhanced all CSV export files by adding the plate name, the reference dye, and the custom cross talk matrix information, if applicable.
- Targets/channels are assigned automatically for 2D scatterplot analysis when only two targets/channels are available.
- Improved several minor user interfaces, increasing usability (e.g., repositioning of the **Show results** button for target-based analysis).
- Enhanced cyber security.

Bug fixes

- Allowing the import, export, archiving, upgrading, and restoring of plates, larger than 2.5 GB.
- Removing a line break in the report PDF that occurred when more than 12 wells were selected for a 1D scatterplot.
- The issue where read-only plate results could not be viewed with older QIAcuity Software Suite versions, which originated from software 2.0 or lower, is now resolved.
- Users with the Technician role can no longer edit the “Plate Ownership” field.

Updating the QIAcuity Software Suite

The update to this Software Suite version may be performed directly from QIAcuity Software Suite v2.5.0.0, v2.5.0.1, or v2.2.

Caution: All versions older than Software Suite version 2.2 are not supported for a direct upgrade to version 3.0. 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 **Latest Software Version** section under the **Resources** tab 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, and unzip the file. Locate the **QIAcuitySuite.exe** file, and run it with full administrator rights in Windows. The installation process starts. Follow the instructions given in the user manual.

The QIAcuity Software Suite is designed to work with Windows 10 and Windows 11 Professional Edition. It is recommended to upgrade your Windows operating system to the latest available build version from Microsoft. The following browsers are supported in the QIAcuity Software Suite:

- Mozilla® Firefox®: version 128.0
- Microsoft Edge®: version 126.0.2592.102
- Google Chrome®: version 126.0.6478.127

Known issues in Software Suite version 3.0

- If an identical target was assigned and selected for different reaction mixes in a target-based analysis, the target is listed twice in the drop-down list of selections and, in the absolute quantification result display, the origin of the reaction mixture is not listed.
- In rare cases, instances where plates originated from software version 1.2.18 or lower, these plates cannot be exported, archived, imported, nor restored in QIAcuity Software Suite version 3.0. Use QIAcuity Software version 2.5 for reviewing these data.
- In case several wells are used for defining a hyperwell in combination with using the dilution function, the Software Suite does not round the decimal numbers for the template volume and displays the whole number.
- For multiple occupancy target based data analysis, all result data are presented, even if only some of the targets were selected for a target-based analysis.
- In case the plate layout was uploaded via CSV import, the plate edits and the plate definition modifications are not tracked in the audit trail information.
- In case the default report name was changed during report generation, this name is not updated in the separate report generation window. However, the correct report name is assigned to the report PDF file.
- For usage of temperature gradient function, the corresponding CSV result file of the absolute quantification result analysis does not exhibit the temperature indication for the wells. However, the data are present in the list view on the user inface as well as in the temperature map of the result report PDF.
- If a plate exhibits multiple cycling steps with a mixed scenario, such as one cycling step with use of gradient functionality and one without, the resulting display, including the results report, contains all information on the applied temperatures in one combined view.
- In case a plate was aborted during the cycling step, a wrong plate status is displayed in the plate overview.
- In case the reaction mix import function is used, the filtering for the reaction mix template of interest does not work when using capital letters. However, the search functionality works using lowercase letters, and the scrolling option then works as expected.
- In case of hyperwell usage, the hyperwells are not correctly reflected in the thumbnail of the plate overview for the heatmap and the concentration diagram in the report PDF.
- If labels are added to a plate, they are missing in the general data overview of the archived plate. After restoring the plates, all labels are available again.
- By default, the Y-scale setting on the point diagram of all second-level analysis options (Mutation Detection, Genome Editing, Copy Number Variation, and Gene Expression) is set to a linear scale. If the logarithmic scale view is selected and any changes are afterward applied (e.g., activation of the mean values for replicates option), the Y-scale is automatically set back to the linear scale.
- In case another well is added to an existing hyperwell or during definition of additional hyperwells to an already existing one, the color and hyperwell ID number of the selected hyperwell change. However, this has no influence on the data.
- If multiple plates cannot be archived using the bulk archive function, not all of the affected plates are listed in the corresponding message.
- 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.
- Every time a plate is exported, a plate audit trail, which is part of the exported plate, is created, resulting in multiple audit trails on the plate instead of one cohesive audit trail.
- 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.

- If a plate is selected to be upgraded, it can take up to several seconds (depending on the plate size) until it is visualized that the upgrade process has begun.
- 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 at all 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 to the plate layout (e.g., some wells exhibiting reaction mix while some samples and wells are without any definition).
- In case a plate is about to be archived to an archive location that no longer exists, a misleading error message appears.
- If read-only plate results cannot be displayed from a plate initially run using Software Suite version 1.2.18, archive this plate and restore it again to obtain the read-only plate results. If no archive is defined, please export the affected plate and import it again.
- In case identical target names were defined for different channels of several reaction mixes used within one run, the indicated channels of the heatmap and concentration diagrams are wrong and result data are merged in one diagram.

Best regards,
Your QIAGEN Team

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