Illumina LIMS (Laboratory Information Management System)

Release Notes

Illumina LIMS v5.0.0 to v6.1.2

For Microarray Processing

INTRODUCTION

This document describes the new features, defect repairs, and known issues that These release notes describe at a high level the new features and defect repairs that have occurred in the software since the version 5.0 release.

The table below provides a high-level summaryof the changes to each versions of Illumina LIMS since 4.8, listing new features added, the defects that have been repaired and the critical known issues. Details for each of these version follow the table.

I. Summary of changes between version 5.0 and 6.1.

Version	New features	Defect Repairs	Known Issues
6.1.2	N/A	The ability for GenomeStudio users to create project from LIMS has been restored. The current version of the software is now displayed on the splash screen and the Project manager Autocall no longer cease to operate when non sample section items are queued. The "Project Batches" tasks within Laboratory Manager now display data for MSA 7 and MSA8 workflows When batching 96-sample plates to the AMP5 workflow, the correct number of batch will be displayed to the user. BPM file stripe count is now verified both at initial accession and update.	

Version	New features	Defect Repairs	Known Issues
6.1.1	N/A	"Prepare Sample Batch" task can now process Product Part numbers starting with and containing letters.	The current version of the software (6.1.1) is not displayed consistently and correctly throughout the application.
6.1	"Prepare Sample Batching" functionality was re-implemented for some of the Infinium workflows. Installation process has been streamlined to limit possible downtime during Illumina LIMS updates. Application server and java versions were upgraded. Active Infinium workflows, reports and APIS have been updated in order to support the new serialization format.	Clarified the information presented to the user when DMAP accession errors out. Fixed the Robot Position Report to display all information properly for large or old datasets. Updated the install process to remove duplicate jobs that caused an issue in the Reagent Usage Report. Updated the default setting of Tomcat to not generate the stderr and stdout log files as these can fill drive space when not managed properly. Archiver now checks for access to all necessary target folders prior to archive execution. An updated version of the EULA is now available from the web client.	Minor issue details can be found in the version 6.1 section below
5.1.2	N/A	Repaired defect within image and decode file (DMAP) retention functionality Robot Position Report now returns report consistently when processing very high project count.	Robot Position report does not handle data correctly for large or old datasets.

Version	New features	Defect Repairs	Known Issues
5.1	MSA8 workflow added to support Infinium HTS Extra	Restored active Directory authentication for user accounts Fixed an issue in which LIMS reports were found to have missing data. Fixed an issue in which data was corrupted when multiple DNA plates are accessioned by multiple users simultaneously	There is an issue in the retention system preventing the automatic deletion of DMAP and image files The Robot Positioning report will not return a report in some situations when there is a very large number of projects
5.0	MSA7 workflow added to support Infinium XT Added support for Multi-species products Performance optimization to support higher throughput	Repaired the archiving functionality	"Prepare Sample Batching" functionality is no longer available for any of the workflows. (fixed in 6.1 for some workflows)

II.   Version 6.1.2 Release Notes

NEW FEATURES

N/A

DEFECT REPAIRS

- The ability for GenomeStudio users to create project from LIMS has been restored.
- The current version of the software is now displayed on the splash screen and the Project manager.
- Autocall no longer cease to operate when non sample section items are queued.
- The "Project Batches" tasks within Laboratory Manager now display data for MSA 7 and MSA8 workflows.
- When batching 96-sample plates to the AMP5 workflow, the correct number of batch will be displayed to the user.

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- BPM file stripe count is now verified both at initial accession and update.
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KNOWN ISSUES SINCE 6.1.1

- Details on issues found in the software can be shared upon request

III. Version 6.1.1 Release Notes

NEW FEATURES

N/A

DEFECT REPAIRS

- The "Prepare Sample Batch" task can now process Product Part numbers starting with and containing letters.

KNOWN ISSUES

- Critical or Major Issues:
    - None
- Minor Issues
    - The version of the software (6.1.1) is not displayed consistently and correctly throughout the application. The title bar of the application and the web client login both dispay the current version of the software, but in the incorrect format 6.1.1.1, while the splash screen for the LIMS project manager displays the previous version of the software, in the correct format 6.1.0.
    - In the "Institue Samples" task the user should only be able to select one row at a time. If multiple samples are highlighted, the "Plate Detail" sub-panel will be populated based upon the information of last sample highlighted.
        - In the event the LIMS system cannot access or create the archive folder during an otherwise normal archive, the files to be archived will be deleted and the system will wrongfully report the archive to be successfully completed.
    - An issue in the system causes portions of the EULA to not be visible in the LIMS Project Manager;
    - When retrieving Reagent Usage Report by Product, the system can run into memory limitations when products have more than 1M samples associated to them.

- Details on trivial issues found in the software can be shared upon request

IV.   Version 6.1 Release Notes

NEW FEATURES

- The "Prepare Sample Batching" functionality for the following Infinium workflows workflows was re-implemented:
  - Infinium HD Super (MSA1)
  - Infinium HD Ultra and Infinium HTS (MSA3)
  - Infinium LCG (MSA6)
  - Infinium HTS Extra (MSA8)
- The installation process has been streamlined to limit possible downtime during Illumina LIMS updates.
- The following Infinium workflows, reports and APIs were updated in order to support the new serialization format:
  - Infinium LCG (MSA6)
  - Infinium LCG Quad (AMP5)
  - Infinium HD Super (MSA1)
  - Infinium HD Ultra and Infinium HTS (MSA3)
  - Infinium HD Methylation (MSA4)
  - Infinium HTS Extra (MSA8)
  - Infinium XT HT and ST (MSA7)
- Application server and java were upgraded to Apache Tomcat 9.0.19 and Java 11.0.3 respectively.

DEFECT REPAIRS

- Clarified the information presented to the user when DMAP accession is not successful.
- Fixed the Robot Position Report to display all information properly for large or old datasets.
- Updated the installation process to remove duplicate jobs that caused an issue in the Reagent Usage Report.
- The heap size was increased to address issues reported in the field.

- Updated the default behavior of Tomcat to not generate the stderr and stdout log files as these can fill drive space when not managed properly.

- Archiver now checks for access to all necessary source and target folders prior to archive execution.

- An updated version of the EULA is now available from the web client.

KNOWN ISSUES

- Critical or Major Issues:

  - None

- Minor Issues

  - The Fragment MSA7 ST task in the Infinium ST workflow (MSA7) allows the user to process an MSA7 plate queued to Fragment MSA7 **HT**.

  - The "Project Batches" tasks within Laboratory Manager does not display any data for MSA7 or MSA8 workflows.

  - When incorrect data are entered for either "Coat BC2" or "Prepare Hyb Chamber" tasks in the Infinium HTS Extra (MSA8) workflow, unexpected behavior can occur when the user clicks on the verify button.

  - When batching 96-sample plates to use the Infinium LCG Quad product (AMP5), the dialog displayed to the user will indicate that only one batch was created when in reality two were. AMP5 batches have a maximum of 48 samples rather than 96, so each 96-sample plate always generates two batches.

  - In rare cases, long-running SQL transactions have been observed in large databases. This could impact the performance of the overall system.

  - Autocall will cease to operate when non-sample-section items are queued to Autocall.

- Details on trivial issues found in the software can be shared upon request.

V. Version 5.1.2 Release Notes

NEW FEATURES

- N/A

DEFECT REPAIRS

- Repaired defect within image and decode file (DMAP) retention functionality.

- Fixed the Robot Position Report to display all information properly for large or old datasets.

KNOWN ISSUES

- An issues exists within the Robot Position Report where plates or reagents shared across multiple projects will not display correctly.

- An issue exists within the Robot Position Report where the report may not display correctly if legacy projects (MSI, GGGT) are set to active within the database.

VI.   Version 5.1.0 Release Notes

NEW FEATURES

- Infinium HTS Extra (MSA8) automation protocols and tasks have been added in order to support high-throughput processing of 24 samples HTS array format beadchip. This new workflow:

    o   Enables tracking and input of HTS bulk and plate-based reagents.

    o   Enables Infinium HTS sample batches to be processed through either MSA3 (HTS) or MSA8 (HTS Extra) workflow.

DEFECT REPAIRS

- Restored active Directory authentication for user accounts.

- Fixed an issue in which LIMS reports were found to have missing data.

- Fixed an issue in which data was corrupted when multiple DNA plates are accessioned by multiple users simultaneously.

VII. Version 5.0 Release Notes

NEW FEATURES

- Infinium XT (MSA7) automation protocols and tasks have been added in order to support processing of 96 samples XT array format beadchips.

- o Tracking and input of bulk reagent has been enabled in this workflow.
- o All XT tasks were tailored for higher throughput processing.
- Updates were made to Illumina LIMS and downstream analysis software (Autocall and GenomeStudio) to support multi-species Infinium XT products. Illumina LIMS customers now have:
  - o the ability to provide multiple manifest and cluster files when processing multi-species products
  - o the ability to set the species at the sample level during batching.
- Performance enhancements to support higher throughput processing
  - o Infinium XT web tasks have been expanded to support higher throughput
  - o Simultaneous Imaging and metrics processing improves iScan performance
  - o Beadchip auto accession runs multi-threaded file copying

DEFECT REPAIRS

- Repaired the archiving functionality.

KNOWN ISSUES

- Critical/Major
  - o The "Prepare Sample Batching" functionality for the MSA1, MSA3, MSA6, MSA8 workflows is no longer available in all 5.x releases.
- Details on minor or trivial issues can be shared upon request.