Release Notes – Compass for SW software

Version 5.0.1

Released October 6, 2020

Recommended PC requirements

Operating System	Windows 10 64-bit
Processor	Core i5
Memory	8 GB
Free Disk Space	100 GB
Ethernet Ports	2 (1st port for Instrument, 2nd port for network access)

Installation

Open the installer file to start the installation.

NOTE: 'Check for Updates' feature in Compass software will not update from version 3.x to version 4.0.0 and higher. User will need to download installer from ProteinSimple website (http://proteinsimple.com/compass/downloads/) and perform a full installation.

5.0.1 Compass for SW
Improvements and Fixes

General

1. Fixed issue where calculated Molecular Weight values are incorrect for peaks detected in Probe 1 and Probe 2 in assays where ladder detection is set to Probe 2 (19257)

5.0.0 Compass for SW *Released July 21, 2020*
Features

1. Support for the new RePlex™ feature on Jess, providing the ability to run two immunoassays within the same capillary to get all your rich protein characterization data from just one sample!
   - Quantify expressed phosphorylated target and total target levels
   - Normalize your data with total protein expression data in the same capillary
   - Greater flexibility in immunoprobe selection
   - More data points per sample
   - Save time and money on consumables

   *NOTE: RePlex™ assays are not supported with Access Control enabled.

Improvements and Fixes

General

1. Capillaries table displays the aligned position value for Standard Peak 1 position, which is slightly different from the position index value displayed in the Peaks table (17605)
2. Sample fitted peaks for Run Report incorrectly display when user selects Baseline Fit option in View Menu for graphs (16986)
3. Fitted peaks are not displayed in Run Report, even though Fitted Peak option is selected (17734)
4. For Jess assays, automatically expand the Detection node by default to help the user review exposure and ladder settings (18122)
5. Exclude Ladder lane from contrast adjustment to accommodate where user was unable to see ladder peaks in Lane View when sample peaks are 30 times higher or lower (4566)
6. Resolved issue where Graph would show peak values when not selected in Graph Options (9825)
7. Removed Diagnostic option in View Menu for Capillaries table (18509)
8. Fixed issue where same peak label is displayed twice in Graph view (18441)
9. Assay Protocol for Wes Total Protein - "Primary Antibody Time" should be named as "Antibody Diluent Time" (17687)
10. Resolved issue where Standard Curve becomes empty when uses switches from Samples to Standards view (16055)
11. Resolved an issue where the PN Sample peaks corrected area values would change when Protein Normalization is disabled. This was incorrect, the value for these peaks do not change. This will not affect data when using the Protein Normalization feature in Jess (18805)
12. Analysis Settings for Peak Names - Loading Controls will present previously enabled loading controls as enabled in non-selected peak groups. (18938, 18903, 18986)
13. For Peggy Sue/Sally Sue/NP1000 assays, display warning message when sample load time is 0 in the assay protocol (18223)
14. Name Peak > New option should exclude ladder capillary (17953)

CFR

1. Audit Trail – improved message for Send Run to include same information as Send Logs (e.g. send_runfile | Uploaded run for [SN], [path] [*.cbz]) (18236)

Known Issues

General

1. IV Plot title for Jess non-RePlex run is "Cycle 1", not blank. (18962)
2. Help menu - Check for Updates, Export Logs & Send Run File are enabled during run. (18913)
3. History Log - Manual standard changes log message is not easily understandable. (18882)
4. Add Run - Scale incorrect when run files of different sizes are added. (18915)
5. Report will include legacy "Registration" Standards, although they are not used in analysis, nor are they visible in the Analysis Settings - Standards for Jess or Wes. (18836)

6. If the user creates a name of the form Cn in the assay template, that name cannot be used in the Caps filter for Peak Names in Analysis Options (18753)
7. Analysis Settings for Peak Names -> Standard Curves -> Concentration - units of precision do not match report. (18905)
8. Analysis Settings for Peak Names - Loading Controls may not match report. (18903)
9. Analysis Settings for Peak Names includes the Ladder Cap (18944)
10. Analysis Settings for Peak Fit - Apply Override range changes are not properly applied to selected caps. (19024)
11. Capillaries table: Peak Names that are not assigned to Loading control are incorrectly highlighted when Corr. Area is selected (18950)
12. It is possible for Peaks to be improperly labelled if user adds more manual peaks than there are ladder peaks. (18050)
13. It is possible for the check-mark next to a ladder cap to not be removed when ladder peak changes are removed (18996)
14. When trying to force a small/non-existent peak as a ladder peak, analysis will sometimes have issues finding the previous Ladder peaks
    Solution: Select Clear from context menu to remove the manual peak (19109)
15. Capillary Groups will display Rows & Channels for empty groups. (18967, 18969)
16. Electropherogram graph scaling issue when viewing multiple run files and one of the run files is not properly aligned to standards. (16351)
17. Start Assay and Blot dialogs can be displayed at the same time. (17467)
18. Plot Label display is cut off on left side of the plot when Ladder Capillary is set to 'None' and a single capillary is selected. This only applies for Wes and Peggy Sue run files. (16850)
19. ANDI export: In certain cases, peak positions may show slight difference between Compass for SW and Empower/Chromeleon due to peak detect/find algorithms with different software packages used for analysis (18873, 16048)

RePlex

1. Peaks table displays Probe 2 Total Protein data for ladder cap. (18966)
2. Plot colors for RePlex runs may not be in the order expected. (18943)
3. Graph - IR Probe 2 default color is the same as NIR Probe 1. (18993)
4. For RePlex assay data, Loading Controls can be used to correct the peaks of the same capillary, for both Probe 1 and Probe 2. When multiple Loading Controls are defined across Probes, corrected area results for some capillaries can be incorrect (18989)
5. Unable to make manual ladder changes for ladder capillary for RePlex assays with Total Protein when all channels are selected
    Solution: Temporarily unselect the Total Protein channel, then the context menu appears, allowing the user to make any necessary changes (19434)

Lane

1. Named Peaks are not displayed in Lane View when viewing multiple run files, even if the Named Peaks option in Lane Label dialog is selected. (16227)
2. Contrast enhancement tool in Lane View is currently implemented for single run file only, does not work as expected when viewing data from multiple run files via Add Run capability
   Solution: Use the same fixed contrast levels for added runs (16226)

2.0 Jess Instrument Software

*NOTE: Requires Compass for SW version 5.0 for RePlex assays. Compass for SW software versions 4.1.0 and lower cannot process Jess instrument run files from 2.0 embedded software

Features

1. Instrument support for RePlex assay (17721)
2. Create explicit cleanup cycle for RePlex assays, which will include an assay node to specify the polymer location (17723)
3. Add parameterized assay nodes and action blocks/units for RePlex Purge and Biotin Labeling to support ChemiIA+TP assay type (17766, 17815)

Improvements and Fixes

1. Increase low vacuum self-test summary data precision to 3 digits (17790)
2. When the door is open at power-on for the instrument, the light output from the High-Power LEDs can be less than expected. To mitigate this issue, the embedded software will now turn the HPLED on to 100% briefly when the instrument door closes (17876)
3. Include self-test module exceptions in log files when running tests (18091, 18107)
4. Save specific and unique filenames for each filter alignment test image to aid in troubleshooting (18367)

Known Issues

1. On rare occasions when attempting to close the door, the instrument will not properly recognize the hand sensor input and close (17590)

4.1.0 Compass for SW *Released September 25, 2019*
Features

1. Online User Guide and Release Notes (16920)
2. Added feature (Help -> Send Run File) that allows customers to send run files directly to ProteinSimple for Technical Support, utilizing a secure cloud storage location (17392)

Improvements and Fixes

General

1. Improved the Jess Start Run dialog for barcode warnings for plate and cartridge (16597)
2. Compass for SW now prevents multiple users or instances of the software from editing the same run file (*.cbz) (17120, 17537)
3. Resolved issue where user could not print Run Reports (16643)
4. Fixed issue where user modified (add/remove) baseline points and changes are not saved properly for Fluorescent channel data in Jess (16475)
5. Resolved issue where the user could not logout from the application when there is an issue with a user account that is currently logged in (17125)
6. Resolved case when Compass for SW software attempts to save an incomplete run file that has not been properly downloaded from the instrument. For this version, Compass will not allow the user to Save the file when it is incomplete (17124)
7. Compass for SW now prevents the user from overwriting an existing assay or run file via the File->Save As… menu operation (17068)
8. Resolved issue where access to Error logs option in instrument properties dialog is not present when connected to non-Jess instruments. To access these logs, click on Logs in the Instrument->Properties… menu option, then click 'All Logs' button to access list of all log files (16387)
9. Fixed issue where the Start run dialog would not recognize cartridge and plate barcodes if communication to instrument is lost and re-established (17267)
10. Fixed issue where the Start button in the Start Run dialog is disabled if communication to instrument is lost and re-established (16999)
11. Compass for SW will now detect and prompt user when any default assay file is manually deleted or modified (17047)
12. Fixed issue where Compass would display Null Pointer Exception (NPE) error when forcing Standards for the Ladder capillary (16634)
13. Fixed issue where Standards image capillary locations (yellow box) move when IR data channel is selected on Jess (16617)
14. Fixed dialog display title for '*Assay – Detection Profile*' (16697)
15. Improved consistency with '*Assay – Detection Profile*' title to display (Chemi), similar to (NIR) and (IR) (17401)
16. Fixed issue where reports cannot be generated for Peggy Sue, Sally Sue, and NP1000 completed run files with embedded software version 4.0 (17543)
17. Fixed Run Report issue where 4PL standard curves are displayed as Linear (17579)

18. Resolved issue when Ladder Capillary is set to 'None' for Peggy Sue or Wes run and changes made to the Peak Fit View region are not applied to the graph (16851)
NOTE – As the Lane View contrast calculation is based on the Analysis View region, Lane View images may look slightly different when compared to images in version 4.0 (17673)

CFR

1. Improved Authorization Server Audit Trail messages to include full file path for sign_off, save_assayfile, save_runfile, open_assayfile, and open_runfile events (17119)
2. Fixed issue where duplicate start run log entries are listed in Run Summary History (17450)
3. Fixed issue where Compass for SW starts an uncontrolled run file when Access Control is On. This happens if communication to instrument is lost and re-established when Start Run dialog is open (17122)
4. Start button for standard capillary cartridge assay in Start Run dialog is now disabled if a blot cartridge is present in the instrument (17438)
5. Compass for SW now records Export Uncontrolled action in History log and Audit Trail (17121)

Known Issues

1. Capillaries table displays the aligned position value for Standard Peak 1 position, which is slightly different from the position index value displayed in the Peaks table (17605)
2. Electropherogram graph scaling issue when viewing multiple run files and one of the run files is not properly aligned to standards (16351)
3. Start Assay and Blot dialogs can be displayed at the same time (17467)
4. Sample fitted peaks for Run Report incorrectly display when user selects Baseline Fit option in View Menu for graphs (16986)
5. Fitted peaks are not displayed in Run Report, even though Fitted Peak option is selected. **Solution**: Check option to un-select and select again (17734)
6. Plot Label display is cut off on left side of the plot when Ladder Capillary is set to 'None' and a single capillary is selected. This only applies for Wes and Peggy Sue run files (16850)
7. Named Peaks are not displayed in Lane View when viewing multiple run files, even though Named Peaks option in Lane Label dialog is selected (16227)
8. Contrast enhancement tool in Lane View does not work as expected when viewing capillary data from multiple run files (16226)

1.2 Jess Instrument Software
Improvements and Fixes

1. Added Fluorescence LED calibration routine (17070)
2. Prevent condition where Compass for SW can start a new Assay run. Jess instrument now ensures cartridge barcode image is completed before starting a new run (16581)
3. Resolved issue where some system log files were not being rotated properly (17067, 17034)
4. The Unregulated Vacuum Test can sometimes fail because a single calibration was being used for two vacuum sensors. Modified to calculate the calibration curve for both sensors independently (17045)
5. Improved reliability and robustness of closing the door for Jess instruments (17109)
6. Modified Lamp PWM range for Borofloat solarization effects on Jess (17110)
7. Fixed issue where calibration could not be performed on instrument the day before the Light Saber tool expires (16633)
8. Added capability to detect background artifacts from cartridge (17269)
9. Display Instrument name in service console browser tab page title for main page (17436)
10. Add log entry in embedded.log file for r-squared when determining pump curve in instrument high vacuum calibration routine (17434)
11. Modified high vacuum calibration routine to include additional venting and settling time when determining setpoint (17452)
12. Added log entries for any exceptions encountered in Camera Focus Calibration setup (17484)

Known Issues

1. On rare occasions when attempting to close the door, the instrument will not properly recognize the hand sensor input and close (17590)
2. On rare occasions, the Jess instrument will not boot properly after a power cycle, displaying purple on the instrument status light. Contact Technical Support for further troubleshooting and resolution (17040)

4.1 Peggy Sue/Sally Sue/NP1000 Instrument Software
Improvements and Fixes

1. Resolved issue where some system log files were not being rotated properly (17067, 17034)
2. Fixed issue where dark background images were not being cropped (17066, 17492)

4.0.1 Compass for SW *Released August 9, 2019*
Improvements and Fixes

1. New user guide has correct reference to EMC standard (17614).

4.0.0 Compass for SW *Released June 8, 2018*
Features

1. Support for Jess instrument – application support for two-color fluorescence detection, protein normalization, expanded self-test, cartridge information tracking, and traditional western blot imaging.
2. Analysis Options panel - Allows for easier access to channel exposure selection and peak naming from the Analysis view without having to open the preferences dialog.
3. Ability to name peaks from Graph/Lane view and Peaks table
4. Improved layout and organization of Analysis/Preferences dialog.
5. Support for multiple Standard Curves.
6. Ability to configure Auto Lock Inactivity timeout in Preferences. Default value is 20 minutes.
7. Display of peak name labels in Lane View
8. New Export logs feature, allowing the user to gather all logs from the instrument and Compass into a single file.
9. Improved grouping and configurability for generating Run Report.
10. Support for encryption of PDF file for Run Reports
11. For advanced users, ability to view multiple channel images.

Improvements and Fixes

1. Improvements to High Dynamic Range analysis - HDR 4.0 handles a wider range of burnout cases. HDR 4.0 is less sensitive to the level at which burnout occurs. When burnout occurred at a low level the classical HDR method had trouble picking the optimal exposure and interpolating between exposures (13882, 14941, 14856, 14963, 9905, 9794)
2. Improved Standards peak find – additional detection and correction of outliers (9469)
3. Peggy Sue/Sally Sue – support Ladder settings per cycle, so that user can have different ladder cap settings for different cycles. Allows user to fix data if the ladders for one or more cycles are bad or missing (4770, 4771)
4. Assay Protocol – removed user ability to modify wash related steps for Wes/Jess assays. This was done to prevent instrument failure when too many washes were specified by the user (10143)
5. Increase pI precision on graph and header to match Peak Table (13884)
6. Adjust Lane View contrast scaling to the current selected view region (8093)
7. Resolved NPE error where user was unable to analyze and display data for a Peggy Sue run with Capillary boxes empty error (10327)
8. Corrected immobilization wash load time for 13 cap assay (13943)
9. Resolved issue where grouping order shown in Peak Groups was not consistent with Cap Groups and Capillary Groups (9975)
10. Resolved issue where Charge Assay - Separation Type Voltage is not supported on Peggy Sue. User would see a Java NPE error upon changing the exposure time (14985)
11. Resolved issue where peak labels and peak results disappear for the ladder cap after adding a ladder peak on graph (14005)
12. Hide "Cycle" column in Experiment pane for single-cycle runs (3700, 4017, 4297, 15100)
13. Added support for fractional time zones (15902)
14. Resolved issue where Compass does not properly display the Instrument date and time after using 'Set to PC Time' function (15965, 15922)

NOTE: 'Check for Updates' feature in Compass software will not update to version 4.0.0. User will need to download installer from ProteinSimple website (http://proteinsimple.com/compass/downloads/) and perform a full installation.

3.1.8 Compass for SW *Released June 8, 2018*
Improvements and Fixes

1. Access Control – resolved issue where login button is enabled after user enters in a value in the password field and then removes the entry (15678)
2. Resolved issue where Lane View label font is corrupted after applying Windows 10, April 2018 update, version 1803 (15690)

3.1.7 Compass for SW *Released December 15, 2016*
Features

1. New High Dynamic Range (HDR) Detection Profile for size and charge assay (Wes, Peggy Sue, Sally Sue)

   The Detection profile is set as default and can be disabled from the Assay protocol and replaces the old Multi-Image Analysis. For Wes, the higher dynamic range is achieved by using a more effective algorithm to create the High Dynamic Range multi-image analysis, refresh substrate from the assay plate prior to each exposure and minimizing the time between substrate aspiration and Image. No substrate refresh takes place in Peggy Sue and Sally Sue.

   For Wes, the embedded or instrument software must be updated to v2.5 or higher.

   Old runs (performed with Compass for Simple Western v3.0 or Compass v2.7 or older) can be analyzed with the new algorithm for High Dynamic Range.

   The substrate refresh requires that 15 µL of substrate instead of 10 µL be loaded /well for all Wes assays. A window with a warning to check for correct volume pops up after the Start run button is pressed.

3.0 Compass for SW *Released August 15, 2016*
Features

1. New name and logo

   Old = Compass   New = Compass for Simple Western

2. Support for Low MW assay
   a. New assays for Low MW 2-40 kDa are added for Wes, Peggy Sue, and Sally Sue.
   b. Split buffer choice eliminated since it's the default buffer for all assays.

   NOTE: Embedded update to v3.4.29684 required for Peggy Sue and Sally Sue to run new Low MW assays

   NOTE: Low MW runs generated by v3.0 cannot be opened with Compass v2.7.

3. Multiple Exposure View

   Turn on "All Exposures" view from **Graph Options - c**hecking this option will overlay all the chemiluminescence exposure times acquired for a particular run. The peak that corresponds to the exposure time selected in the Analysis window under Images will be outlined in blue and the Peaks table below the graph window displays the data corresponding to the selected exposure time

4. Run Reports - run report in PDF

    a. New menu item – File > Run Report…

    b. Run Report dialog – options for report sections and report name

    c. A PDF report is created with the options specified.

5. History Details - Old and new values changed in Analysis Settings are logged

6. Command Log - Added "Save File As…" button to save the log file

7. Peak Fit View Options

    a. Added a "View" setting to control the default view to Full or Analysis.

    b. Added an "Apply" button to see analysis changes without closing the dialog.

    c. Removed the "Restore Original" button.

8. Grouping Options Moved to Preferences - Simplified the Grouping command to toggle the Grouping display without a dialog

9. Lane Contrast in Analysis window - Edit>Analysis>Lane Contrast

    Check the radio button for Fixed Level. The numbers displayed refer to the current White and Black levels for the run being analyzed. Change these settings and click Apply to see how they impact the contrast on the lane view. Once satisfied with the changes, click OK. When the you select Fixed Level, the slider tool is no longer available in the lane view.   Lane Contrast settings from the assay or run analysis windows can be exported to be applied to other assays or runs.

    NOTE: Files created or saved with the Lane Contrast feature locked cannot be opened by v2.7.

10. Raw Baseline

    Improvement in how the raw baseline is calculated. Raw baseline for the shortest exposures is shifted (typically lower than previously observed if you are looking at a data obtained with a prior version). That said, the peak area for all exposures will remain the same and will not be affected by the shift of the raw baseline. Area to baseline ration, on the other hand will change from previously calculated with earlier versions of the software.

11. Other Misc. Changes

    a. Allow size analysis without ladder peaks. Standards for fitting will be used for MW.

    b. Cleaned up peak table so only Standards or Registration peaks are displayed in peak table.

    c. Reduced the plot line width of exported graph.

    d. Renamed the view menu items and changed the corresponding icons on the toolbar.

        i.   View > Multiple View has been renamed as View > All

        ii. View > Single View has been renamed as View > Selected

    e. Added a Self Test Confirmation dialog.

    f. Added a "Save File As" button in Command Log dialog to save the log.

    g. Added the instrument software version to Comment in Command Log after software upgrade

2.7 Compass Software *Released August 31, 2015*
Features

1. Support for Split Running Buffer assays for Peggy Sue and Sally Sue and Wes size assays. Peggy Sue and Sally Sue also require embedded software v3.3 or newer

   a. "Split Running Buffer" will be displayed on the column header for split running buffer assays.

   b. "Upper RB" and "Lower RB" will be displayed in the Start Wizard for split running buffer assays.

   c. "Split Running Buffer" will be displayed in Kit Info for the runs with split running buffer assays.

   d. "Split Running Buffer" will be appended to the Plate S/N Info for Wes runs

2. Export and import assay template now supports *.csv and *.txt formats

3. Support copy and paste assay well contents from Excel and between Compass windows, including both names and attributes

4. Fixed bug to make it possible to create a view for Group Plot if the group statistics for one of the groups is zero

5. Fixed bug that created Duplicate Peak Name columns in Capillaries table when there are multiple identical peak names

2.6.8 Compass Software *Released July 24, 2015*
Features

1. Wes plate barcode is captured for runs with embedded software v2.2.25328 and newer. Plate S/N number is displayed after run is complete in the Run Status tab.
2. View Region – Lower and Upper values now reflect the option selected (Analysis, Full, or Custom). Previously only custom values are displayed.
3. Download and open last completed run if Compass was disconnected during the run.
4. Fixed bug that caused manual standards to be lost after reanalysis, if Analysis dialog was cancelled previously.

2.6.7 Compass Software *Released May 31, 2015*
Features

1. Support Pipet Wash for Sally Sue and Peggy Sue instruments, with instrument software v3.2 and up.
2. This release changes the default Size and Total Protein assays for Sally Sue and Peggy Sue to be compatible with Running Buffer 2 Rev B (Size and Total Protein assays 12-230 kDa). When File>New is selected, Rev. B assays will be created.

2.6 Compass Software *Released September 15, 2014*
Features

1. Support for new Total Protein Size assays.
2. Support for new 66-440 kDa Size assays.
3. Support for updating instrument software from Compass

2.5 Compass Software *Released January 31, 2014*
Features

1. Support for new instrument, Wes
2. Support for new instrument, Sally Sue
3. Support for new instrument, Peggy Sue
4. New Loading and System Control functionality
5. New standard curve fit functionality

2.4 Compass Software *Released June 28, 2013*

1. Support for 21 CFR Part 11

2.3 Compass Software *Released November 30, 2012*

1. Support for new instrument, Peggy

2.2 Compass Software *Released June 30, 2012*

1. Support for new instrument, Sally
2. New grouping and statistics functionality

2.1 Compass Software *Released November 30, 2011*

1. Lane view improvement for sizing data

2.0 Compass Software *Released October 31, 2011*

1. Support for new instrument, Simon.