



RELEASE NOTES

BioLight Studio Software
Version 1.04.02





REQUIREMENTS

The following items are required for operation of BL Studio:

- PerkinElmer LS 45/50/55 Spectrometer
- or
- PerkinElmer Lambda Platform Spectrometer with serial interface (L2-L45)
- Operating System: Windows 8, Windows 7, Windows Vista, Windows XP

INSTALLATION

Start the installation by double clicking on SetupBLStudio.exe. Please note that you need Windows administration rights to run the installation.

If BLStudio has already been installed you will be asked if you want to uninstall the existing version. To update the version first uninstall it, then start SetupBLStudio.exe again.

Now follow the instructions. During the installation you can change the program and data directory. **Please ensure that all analysts will have read/write access to the data directory.**

KNOWN BUGS AND ISSUES

Generic:

- Exporting Reports fails on some systems for pdf, doc formats.
- Replicate measurements not implemented yet
- Routine frame has version number 1.04.03 instead of 1.04.02

Fluorescence:

- In autolamp mode the intensity can go down within the first minute
- 4 cuvette changer accessory calibration factors not implemented
- Spectrometer Events are not displayed
- No ratio data acquisition module implemented
- No ICBC calculator implemented
- Phos delay times > 3 seconds will not work properly

UV:

- Temperature control of 8 cell changer not supported yet
- External temperature sensor not supported yet

CONTACTS

In case of queries while using this software please contact:

BioLight Luminescence Systems GmbH.

Contact: www.BioLight.com

Support: Support@BioLight.com



REVISION HISTORY TABLE

Date	Revision	Description of Change Implemented
28.01.15	10.04.02	<p>Generic</p> <ul style="list-style-type: none">- Fixed Bug: In some cases localized strings were not converted correctly <p>Development</p> <ul style="list-style-type: none">- Fixed Bug: Report was not updated when calculation method changed <p>Admin</p> <ul style="list-style-type: none">- New: Added function to install patches- Fixed Bug: Deleting a user corrupted passwords <p>Routine</p> <ul style="list-style-type: none">- Fixed bug: Routine did not run on Windows 8 <p>FL Validation</p> <ul style="list-style-type: none">- Fixed Bug: Validation terminated when no instrument configuration was saved in Development <p>SamplePrep</p> <ul style="list-style-type: none">- Fixed Bug: Plate Name and Load Plate button are invisible in XY-Mode now <p>ConcCalc</p> <ul style="list-style-type: none">- New : Added post calibration calculations- New: Added save calibration button- New: If a calibration is loaded the AutoZero of the calibration is invalidated- Fixed Bug: Data reduction function was not reloaded correctly <p>DataCalc</p> <ul style="list-style-type: none">- Fixed Bug: Calculation setup dialogs displayed curve ids instead of curve names- Fixed Bug: If start WL is greater than end WL in setup dialog the values are swapped now <p>Report</p> <ul style="list-style-type: none">- Fixed Bug: Columns were not inserted correctly, when resulting table width exceeded document width <p>FL Scan</p> <ul style="list-style-type: none">- Fixed Bug: Fixed problem in synchronous Energy/WL scan mode <p>FL Timedrive</p> <ul style="list-style-type: none">- Fixed Bug: No data were recorded when time interval was longer than 1 second <p>UV Read</p> <ul style="list-style-type: none">- Fixed Bug: Clear method set method ordinate to "A" and manual ordinate to "T". Both are set to "T" now. <p>UV Timedrive</p> <ul style="list-style-type: none">- New: In parallel measurement mode the actual cycle time is measured. If it is longer than the given interval time the measurement is terminated and an error message is issued.- Fixed Bug: WL was not update correctly when method was loaded <p>UVScan3D</p> <ul style="list-style-type: none">- Fixed Bug: Show BG option was saved in method
13.10.14	01.04.01	<p>ConcCalc</p> <ul style="list-style-type: none">- Fixed Bug: Correlation factor displays 5 significant digits- Fixed Bug: Baseline point 1 and 2 update calculations when changed <p>Development</p> <ul style="list-style-type: none">- Fixed Bug: Baseline was not re-measured when results were appended to old



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Date	Revision	Description of Change Implemented
		calibration data. - Fixed Bug: Deleting sample results also deleted reference results - Fixed Bug: Removed debug menu entry. - Fixed Bug: Updated example methods
11.09.14	01.04.00	Generic - New : Single installation for FL and UV VerrSION - New: Multiple instruments Support - New: Different license keys for UV and FL - New: BioLight Logo changed - New: Long and double values can formatted as enumerations - Fixed Bug: Some captions and messages were not localized - Fixed Bug: String conversion of invalid long values was incorrect - Fixed Bug: Initial windows position was set incorrectly if program was terminated in minimized mode Development - New : Live display moved to bottom. It is visible on all pages now - Fixed Bug: Removed Debug-Line in Fct-Key dialogue - Fixed Bug: Changes in sample info structure were not always updated in Acquisition/Calculation modules (e.g. removing the dilution column caused problems in ConcCalc and Report) Routine - New : Added graph toolbar Freeform Calculator - New : Graph Layout is saved when application terminated and restored when restarted SamplePrep - New : UV Sipper support - New: UV Cuvette changer support (including multiple cassettes) - New: Cuvette changer and WPR offer parallel sample kinetic measurements - New: XYMode for WPR - Fixed Bug: Plate Name was not updated when method is loaded - Fixed Bug: AS-Tray Name was not updated when method is loaded - Fixed Bug: AS-Initialization failed sometimes UV Scan - Fixed Bug: Emergency stop did not send stop command to instrument - Fixed Bug: Module stopped working when Lambda sent too many data points UV KinScan - Fixed Bug: Emergency stop did not send stop command to instrument UV Timedrive - Fixed Bug: Emergency stop did not send stop command to instrument Data Calc - Fixed Bug: Fixed problem when function and variable had same name Conc Calc - New : Simplified Fit Function, added "Through Zero" option - Fixed Bug: Dilution column was not added/removed correctly StdExport - New : BatchID was not replaced correctly



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Date	Revision	Description of Change Implemented
		Spread - New : Improved Copy/Paste function: depends on selected rows/cols now
28.03.2014	01.03.02	Generic - Fixed Bug: License validation did not work on Systems using an other code page than Latin. - New : Enabled free of charge Add-Ons. - New: Updated example methods, added example report templates Validation: - Fixed Bug: Min/Max caption were reversed in report. SamplePrep - Fixed Bug: Sample list now displays required samples when result is loaded, even if they were not measured. Concentration: - New: Added point with reference and point with baseline reduction function, removed base reduction functions Report: - New: Report graphs are updated automatically when acquisition types/ranges are modified - New: Report graphs are updated automatically when calculation curves are added - New: Added field firmware revision - New: Vertical position of graph can be changed, graphs can be positioned side by side - New: Templates can be saved to file and re-loaded Graph: - New: Curve legends are updated when new curves are loaded
10.10.2013	01.03.01	Freeform Calculator - Fixed Bug: Adding an info in sample info dialogue caused corruption of sample info. StdExport - New: The method name can be selected as part of the filename now Routine - Fixed bug: Autosampler picture is displayed correctly now - Fixed bug: Live display did not update during acquisition - Fixed bug: Corrected caption on Load Method, Save Data dialogue SamplePrep - Fixed Bug: Fixed bug when sample info columns are resized Data Calculator - New: Show/Hide global curves directly accessible now Read - New: Temperature column is displayed only, if temperature sensor is fitted Manual: - New: Live display temperature is displayed only, if temperature sensor is fitted - Fixed Bug: Peltier temp was not read correctly due to firmware change Graph: - New: Grids can be enabled/disabled from graph scale dialogue



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Date	Revision	Description of Change Implemented
		Report: - Fixed Bug: Labels are correctly updated after Label Graph dialogue
16.08.2013	01.03.00	Routine: - New: Added new Routine application StdExport: - New: Added new StdExport module Acquisition: - New: Result GUID and result method GUID are changed automatically when result is saved - New: Method GUID is changed automatically when method is saved - New: Added range field for text fields in setup column dialogue for sample/standard information, allowing the user to define a selection list. - Fixed Bug: In sample and reference info tables the id and concentration fields were unlocked when methods/results were loaded. - Fixed Bug: On acquisition stop all unmeasured samples were removed from the sample list - Fixed Bug: Adding sample info to existing data caused an error sometimes Administration: - New: Added right group System with all rights, limited rights of group Administrator. - New: Duplicate login names or full names of users are now rejected, an error message is displayed. - Fixed Bug: BLStudio login mode was set to Windows login mode and vice versa when user login dialogue was displayed. SamplePrep: - New: Removed load sample button, added load sample info/save sample info entries to file menu instead. - New: SampleID column automatically expands when sample spread is resized - Fixed Bug: Reloading results restores the standards/samples positions correctly now on trays/plates. Data Calculator: - Fixed bug : ID of a new calculation step is set to the name of the step immediately now. - Fixed bug : The value of a global variable is correctly displayed when the global var edit dialogue is started. - Fixed bug : Exiting the edit global var dialogue does not disable the edit/remove buttons any longer. 3D Viewer: - Fixed Bug: Method parameters are hidden when no rights to edit method Report: - New : Added data fields Result Name, Result Creation Date, Result Created By, and Result GUID, removed Data Name. - Fixed bug : Process/method GUID is updated in report, when process/method is changed. Generic - New : Changed extension of resource files from .res to .rsc to distinguish



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Date	Revision	Description of Change Implemented
		from result files. - New: Added SetLastError and CheckErrorExt functions to BLEntry controls, - New: Tables now support auto-expand of any column when table is re-sized - Fixed Bug: In printer set-up dialogue long printer names were not recognized correctly.
01.05.2013	1.02.04	Acquisition: - New: Added TEM support - New: Implemented start modes: External contact, file - New: Sample lists can be stored - New: Routine user cannot edit/save instrument configuration, updated main toolbar for routine user (can only start/stop method) - Fixed Bug: Methods were always stored in the default (user) method directory, independent of the selection in the method save dialogue - Fixed Bug: Reports were always printed to the standard printer, independent of the printer selected in the print dialogue - Fixed Bug: Acquisition terminated when trying to save a result, when no results were available - Fixed Bug: Sipper accessory was not supported correctly - Fixed Bug: Duplicate Id's are detected now when entered in insert sample dialogue - Fixed Bug: Deleting a sample from a result and then adding a new sample inserted the sample instead of appending it - Fixed Bug: Selecting a result, changing the acquisition parameters, changing the tab, then saving the result caused the new parameters to be saved in the data - Fixed Bug: Saving a method updates method GUID correctly now - Fixed Bug: Saving a result updates the result GUID instead of the raw data GUID SamplePrep: - New: Standard table can be re-seized Timedrive: - Fixed Bug: In single read mode interval times > 3 seconds caused a time out 3D Viewer: - Fixed Bug: If y-axis displayed samples the graph became invisible when only one sample was available. - Fixed Bug: If y-axis displayed samples cuts were not calculated Concentration: - Fixed Bug: Exponent function returned wrong sample concentrations. - Fixed Bug: Quadratic and cubic function sometimes returned negative concentrations. Report: - New: Method variables are already populated when method is loaded - New: Data GUID displays result GUID instead of raw data GUID. Administration: - Fixed Bug: Administration terminated when minimized - Fixed Bug: LoginName, FullName and directories are locked when no user is selected Validation:

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Date	Revision	Description of Change Implemented
		<ul style="list-style-type: none">- New : Default y-axis ranges can be modified- New : Updated default set up- New : Removed frame in report- Fixed Bug: Changed mm to nm for slit widths in report- Fixed Bug: Loading an old result sets the old parameter ranges for documentation purposes. When Validation was closed the old ranges were stored, overwriting the current ranges. Freeform Calculator: <ul style="list-style-type: none">- Fixed Bug: User dependent configuration was not loaded correctly Generic <ul style="list-style-type: none">- New : Added min option to graph scale dialogue- Fixed Bug: Range Tooltips can be localized now- Fixed Bug: User rights were not set correctly in data server- Fixed Bug: Sometimes variable names were detected incorrectly in formulae (e.g. If Test was defined TestBlank was interpreted as Test and Blank)- Fixed Bug: Set "prompt overwrite" flag in file save dialogues
21.01.2013	1.02.02	Acquisition: <ul style="list-style-type: none">- New : Any changes to user information is recorded in the audit trail- New : Format of date string appended to the default result name has changed- Fixed Bug: Save result event was recorded twice- Fixed Bug: Exporting results does no longer change the result name Administration: <ul style="list-style-type: none">- New : Supports Windows and BLStudio Login- New : Supports 3 right groups Admin/Analyst/Routine (hard coded)- New : All actions concerning the user management are recorded in the audit trail- New : Adding a licence is recorded in the audit trail- Fixed Bug: Protocol is spelled correctly now Validation: <ul style="list-style-type: none">- New : Raw data are stored and can be re-loaded- New : Raman TD ex. and em. wl are user definable Freeform Calculator: <ul style="list-style-type: none">- Fixed Bug: Current user was not detected correctly and caused an error when saving curves SamplePrep: <ul style="list-style-type: none">- Fixed Bug: A user defined standard information col must be inserted behind expected conc InstServer <ul style="list-style-type: none">- New : Added stirrer control for 4 Cell changer- New : Added reverse pump direction for sipper Generic <ul style="list-style-type: none">- New : Modified file structure for data base compatibility- New : Add-Ons are localizable, resources can be re-loaded- New : Implemented right-groups/project-groups support- Fixed Bug: Replaced Windows 8 incompatible icons in toolbars
22.12.2012	1.02.01	Acquisition: <ul style="list-style-type: none">- New : Removed all command line parameters except load data/load result Administration:



Date	Revision	Description of Change Implemented
		<ul style="list-style-type: none">- New : Added User management- New : Supports user dependent method and data directories Read: <ul style="list-style-type: none">- Fixed bug: WL and Slit entries are validated correctly- Fixed bug: Spread toolbar was not updated correctly- Fixed bug: ExSlit format set to "0.0" Scan: <ul style="list-style-type: none">- Fixed bug: Scan range is set depending on scan type- Fixed bug: Slit entries are validated correctly- Fixed bug: ExSlit format set to "0.0" 3D Scan: <ul style="list-style-type: none">- Fixed bug: Slit entries are validated correctly- Fixed bug: ExSlit format set to "0.0" Timedrive: <ul style="list-style-type: none">- Fixed bug: WL and Slit entries are validated correctly- Fixed bug: ExSlit format set to "0.0" Report: <ul style="list-style-type: none">- Fixed bug: Data names were not replaced correctly- Fixed bug: Total pages were not reported correctly
03.12.2012	1.02.00	Acquisition: <ul style="list-style-type: none">- New: Added ranges for phos. parameters- New: Added parameter when calling correction functions Calculator: <ul style="list-style-type: none">- Fixed Bug: Qualified results (e.g. Blank.Int[]) were not recognized correctly.- Fixed Bug: Step results could not be used for further calculations. Concentration: <ul style="list-style-type: none">- Fixed Bug: Intensity field ID was not set correctly => in report the corresponding table column was not populated.- Fixed Bug: Dissolution factor and final result columns were always send to report, even if not defined in sample information. SamplePrep: <ul style="list-style-type: none">- Fixed Bug: 4-Cellchanger accessory did not work. Instserver: <ul style="list-style-type: none">- New: Moved Dark Current measurement from calibration to source set-up dialogue .- New: Added "Turn lamp on when instrument starts" option.- New: Tray and plate definition files can be loaded from accessory set-up dialogue now.
17.10.2012	1.01.06	Acquisition: <ul style="list-style-type: none">- New: Added automated correction functions (Autozero Baseline) for UV- Fixed Bug: An selected experiment result is unselected when new method is loaded (new method wrongly updated result method) Calculator: <ul style="list-style-type: none">- New: It is now possible to use array elements (e.g. Y[2])- Fixed Bug: Height was not correctly calculated for bases (negative peaks) Concentration: <ul style="list-style-type: none">- Fixed Bug: Concentrations format was not stored in methods. Generic:



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Date	Revision	Description of Change Implemented
		<ul style="list-style-type: none">- New: Added correction spectra (with collections dates) to reasults.- New: Added names for data queries
17.09.2012	1.01.05	3D Calculator: <ul style="list-style-type: none">- New: X and Y cuts can be displayed simultaneously- New: Improved speed data is loaded and displayed.- Fixed Bug: 3D correction data was not stored correctly Calculator: <ul style="list-style-type: none">- Fixed Bug: Fixed bug in Copy/Paste function Generic: <ul style="list-style-type: none">- New: Tabular data can now be saved to files directly from all tables.- New: Results store methods in datasets only, the result process references methods now, instead of keeping copies
23.08.2012	1.01.04	Acquisition: <ul style="list-style-type: none">- Fixed Bug: Experiment data are unselected when new method is loaded or created Calculator: <ul style="list-style-type: none">- Fixed Bug: Graph toolbar is displayed correctly now Concentration: <ul style="list-style-type: none">- Fixed Bug: Concentrations of standards were not updated correctly when entered during data acquisition. 3D Calculator: <ul style="list-style-type: none">- New: It is now possible to generate 2D cuts- New: Added correction functions Manual Control: <ul style="list-style-type: none">- New: Added emission correction Graph: <ul style="list-style-type: none">- Fixed Bug: Removed debug message appearing when labels were moved.- Fixed Bug: Cursor labels can now be formatted correctly
24.07.2012	1.01.02	Acquisition: <ul style="list-style-type: none">- New: All data collected during an experiment are displayed in a separate tab and can be accessed easily.- New: Experiment data can be saved and loaded as a single data set- New: The continue-mode was removed. The application automatically detects if acquisition parameters have changed and creates a new result if required, otherwise collected data are appended- New: Curves are not send to the calculator automatically any longer- New: Added option to save results in ascii format automatically- New: Curves can be overlaid in acquisition module- New: F2/F3 function keys turn instrument lamp on and off- New: Function keys support multiple instrument commands- New: Peak labels can now be located around the peak (before only above or below peak point was possible) Sample Preparation: <ul style="list-style-type: none">- Fixed Bug: Sample position is updated correctly in sample list- Fixed Bug: Blank position is set correctly now when sampling accessory is changed- New: Added default column "Comment" for Batch, Standard and Sample tables.



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Date	Revision	Description of Change Implemented
		<ul style="list-style-type: none">- New: Sample/standard ID is locked after sample was measured.- New: Sample information can be added to existing data. InstServer: <ul style="list-style-type: none">- New: Removed integration time from instrument setup Generic: <ul style="list-style-type: none">- New: Modules are now localizable- New: Auto scale option only rescales if data values are larger than max or lower than min.
10.01.2012	1.00.06	Acquisition: <ul style="list-style-type: none">- Fixed Bug: Toolbox start button was not updated to status "Continue" when data was loaded- Fixed Bug: Manual control was locked in continue mode- Fixed Bug: In new methods excitation correction was set incorrectly- New: User Group Analyst can be assigned in command line- New: Added function key handling Conc Calc: <ul style="list-style-type: none">- Fixed bug: Number of decimals were not updated correctly in result table Sample Preparation: <ul style="list-style-type: none">- Fixed Bug: SampleTable was not checked for invalid entries if automated sample accessory fitted- Fixed Bug: Loading data did not set the blank position correctly if automated sample accessory fitted Manual Control: <ul style="list-style-type: none">- Fixed Bug: WPR Alignment did not work properly InstServer: <ul style="list-style-type: none">- Fixed Bug: Tried to send command to non existing LS45 cutoff filter wheel- Fixed Bug: Response time 0 was not set properly in timedrive Installation: <ul style="list-style-type: none">- New : Graph, spread and report server are installed in Windows system directory now
28.11.2011	1.00.05	Acquisition: <ul style="list-style-type: none">- Fixed Bug: Export/Print buttons Report Toolbar were not deselected after dialog- Fixed Bug: Dependencies of data calculation method on acquisition method were not updated when run started- Fixed Bug: Check of license keys for add ons always returned valid- Fixed Bug: System configuration changes are synchronized to avoid clashes with Administration- New: Changed name (FlexStudio => Acquisition)- New: Changed About Dialog (new license key validation) Calculation: <ul style="list-style-type: none">- Fixed Bug: corrected captions, removed control-box from all dialogs- Fixed Bug: In Peak.Height invalid start-end is replaced by min, max of curve- Fixed Bug: In CurvePoint invalid start-end is replaced by min, max of curve- New: In Filter Width is set to 7 by default- New: Improved calculation of Golay-Savitzky filters at border points. Conc Calc: <ul style="list-style-type: none">- Fixed bug: Standard table/reduction parameter panel is updated correctly

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Date	Revision	Description of Change Implemented
		<ul style="list-style-type: none">- New: Added resize function for Calibration Graph- New: Added dilution handling- New: Display of standard table depends on calibration mode rather than on actual nr standards 3D Viewer: <ul style="list-style-type: none">- Fixed bug: Scan parameters are displayed correctly now in table view Report: <ul style="list-style-type: none">- Fixed Bug: Available fields, tables and graphs were not updated on LoadData InstServer: <ul style="list-style-type: none">- Fixed Bug: Events were not detected correctly- Fixed Bug: Ex,Em Filter position was not read correctly (+1)- Fixed Bug: Integration time was not set correctly in TD- Fixed Bug: Errors are now passed by ID rather than by code to avoid multi client clashes Administration: <ul style="list-style-type: none">- New: Added event protocol view- New: Modified license key validation (one key per package)- New: Changed name (registration => administration) Sample Preparation: <ul style="list-style-type: none">- Fixed bug: Tray/Plate reader definition files are imported via frame now => correct directories are selected- Fixed bug: Autosampler did not perform rinse, rinse pos was not detected- Fixed bug: Stirrer option was not displayed correctly for 4 cell changer- New: Added Load Sample Info Buttton Manual Control: <ul style="list-style-type: none">- Fixed bug: Excitation/Emission wavelength is displayed with one decimal now Validation: <ul style="list-style-type: none">- New: Individual slit and gain parameters are available for each test now.- New: Add button to set default parameters for corresponding spectrometer.- New: Updated SignalToNoise calculation. Configuration: <ul style="list-style-type: none">- Fixed bug: ExCorr was set to True instead to On in example methods
15.09.2011	1.00.04 (EVAL.)	Sample Preparation: <ul style="list-style-type: none">- Fixed bug: Cell changer invalid command- Fixed bug: Auto sampler invalid index error- Fixed bug: Sample table copy to/paste from clipboard- New: Moved Result info table on Samples page below sampler info panel Manual Control: <ul style="list-style-type: none">- Fixed bug: Auto sampler (wrong command for purge)- Fixed bug: Correct captions in sample accessory control dialogue InstServer: <ul style="list-style-type: none">- New: Instrument server is hidden now. Configuration: <ul style="list-style-type: none">- New: Added 3D example data.
15.08.2011	1.00.03 (EVAL.)	<ul style="list-style-type: none">- First evaluation version



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