SoftMax® Pro Microplate Data Acquisition and Analysis Software

Version 5.4.5

Software Release Notes

October 2012



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Contents

Chapter 1 System Requirements for SoftMax Pro Software	5
Introduction	5
Chapter 2 SoftMax Pro Software Version 5.4.5 Software Release Notes	7
Introduction	7
Chapter 3 SoftMax Pro Software Version 5.4.4 Software Release Notes	۵
Introduction	9
Chapter 4 SoftMax Pro Software Version 5.4.3 Software Release Notes	
General Software Issue Addressed in SoftMax Pro Software Version 5.4.3	13
Chapter 5 SoftMax Pro Software Version 5.4.2 Software Release Notes	
Introduction	15 15 15
SoftMax Pro Software Version 5.4.2	
Chapter 6 SoftMax Pro Software Version 5.4.1 Software Release Notes	21
Introduction	21
SoftMax Pro Software Version 5.4.1	

Chapter 7 SoftMax Pro Software Version 5.4		
Software Release Notes	25	
Introduction	2!	
New in SoftMax Pro Version 5.4	25	
Modifications Made to SoftMax Pro		
Software Version 5.4	27	
General Software Issues Addressed in		
SoftMax Pro Software Version 5.4	2"	

The following topics give recommended and minimum system requirements for installing and running SoftMax® Pro Microplate Data Acquisition and Analysis Software, version 5.4.4.



Note: Customers who integrate with a robotics system, who need to open and use large data files (more than 20 plates per file), or who are using a FlexStation® reader or a StakMax® microplate handler are advised to use a computer system that exceeds the recommended requirements due to the additional cache, processor, and RAM needs for these special-use cases.



Note: For best system performance, Molecular Devices recommends that users with data files that contain multiple plate sections of kinetic data disable automatic recalculation by clicking **Edit > Suspend Recalculation**.

- Windows System Requirements on page 5
- Macintosh System Requirements on page 6

Windows System Requirements

Table 1-1 gives recommended and minimum system requirements for installing and running the current version of SoftMax® Pro Microplate Data Acquisition and Analysis Software on a Windows-based computer.

Table 1-1 Windows System Requirements

Windows Recommended System Configuration	Windows Minimum System Configuration
Intel Pentium 4 with a 2+ GHz processor or equivalent (2.8+ GHz required for the FlexStation 3 reader)	Intel Pentium 4 with a 1.6+ GHz processor or equivalent (2.8+ GHz required for the FlexStation 3 reader)
Microsoft Windows 2000, XP (SP2), or Windows 7 (32-bit or 64-bit)	Microsoft Windows XP, Vista (32-bit only), or Windows 7 (32-bit or 64-bit)
Color monitor with a 1024x768 resolution display	Color monitor with a 1024x768 resolution display
1 GB of RAM (2 GB recommended for the FlexStation 3 reader or StakMax microplate handler)	512 MB of RAM (1 GB minimum for the FlexStation 3 reader or StakMax microplate handler)
150 MB of available hard disk space	90 MB of available hard disk space
CD-ROM drive	CD-ROM drive
Available serial port (COM1 to COM 9)	Available serial port (COM1)

Macintosh System Requirements

Table 1-2 gives recommended and minimum system requirements for installing and running the current version of SoftMax® Pro Microplate Data Acquisition and Analysis Software on a Macintosh computer.

Table 1-2 Macintosh System Requirements

Macintosh Recommended System Configuration	Macintosh Minimum System Configuration
Intel Core Duo	PowerPC processor (G3 > 600 MHz)
Macintosh OS X 10.6	Macintosh OS X 10.4
Video support and color monitor capable of 1024×768 resolution display	Color monitor @ 800×600 resolution display
1 GB of RAM (2 GB recommended for the FlexStation 3 reader or StakMax microplate handler)	512 MB of RAM (1 GB minimum for the FlexStation 3 reader or StakMax microplate handler)
150 MB of available hard disk space	90 MB of available hard disk space
CD-ROM drive	CD-ROM drive
Available serial port (8-pin DIN)	Available serial port (8-pin DIN)
Keyspan USB-to-Serial adapter and v2.3 (or later) adapter software	Keyspan USB-to-Serial adapter and v2.3 (or later) adapter software



Note: Macintosh OS9 is no longer supported by SoftMax Pro Software.



Note: Macintosh OS X 10.7 is not compatible with SoftMax Pro Software for Mac, due to the removal by Apple of the dynamic translator software that is required to run SoftMax Pro Software on Mac OS X 10.6 and earlier.

Users of Macintosh OS X 10.7 and later can run SoftMax Pro Software for Windows using third-party virtual machine software that supports the Windows operating system.



Note: While GxP Administrator is a Windows-only application, the proprietary User Accounts (.edb) files generated can be used by Macintosh users of SoftMax Pro GxP Software either locally or from a network volume.

The SoftMax® Pro Software version 5.4.5 update is a minor release. The following is a summary of the changes incorporated in this update as compared to version 5.4.4, the last general release of the SoftMax Pro Software.

- New in SoftMax Pro Software Version 5.4.5 on page 7
- General Software Issues Addressed in SoftMax Pro Software Version 5.4.5 on page 7

New in SoftMax Pro Software Version 5.4.5

Peak Pro Analysis Operators Added to the Formula System

Peak Pro Analysis for kinetic reduction measurements are now supported in the SoftMax Pro Software formula system. These formulas can be used for applications which assay Ca++ in cardiomyocytes, neurons, and others. For more information, contact your Molecular Devices representative.

General Software Issues Addressed in SoftMax Pro Software Version 5.4.5

GxP audit trail identifies wrong instrument

Tracking ID: FB 3255

When using a SpectraMax M3 Reader, the GxP audit trail incorrectly reported the instrument as a SpectraMax M4 Reader. Also, when using a SpectraMax M4 Reader, the GxP audit trail incorrectly reported the instrument as a SpectraMax M3 Reader.

Resolution:

In the GxP audit trail, the SpectraMax M3 and M4 Readers are now identified correctly.

Impact of fix:

The SoftMax® Pro Software version 5.4.4 update is a minor release. The following is a summary of the changes incorporated in this update as compared to version 5.4.3, the last general release of the SoftMax Pro Software.

- Modifications Made to SoftMax Pro Software Version 5.4.4 on page 9
- General Software Issues Addressed in SoftMax Pro Software Version 5.4.4 on page 9

Modifications Made to SoftMax Pro Software Version 5.4.4

Protocol Modifications

The following protocol files were updated:

- SpectraMax L LM1
 - The SpectraMax L LM1 v102.ppr protocol file was replaced with the SpectraMax L LM1 v103.ppr file.
 - The tolerance on the specification for Mag2Ratio was changed from ±10% to ±20%.
- PicoGreen Fluorescence
 - The PicoGreen Fluorescence.ppr protocol file was replaced with a new version of the file.
 - The emission wavelength setting for the M-series and Gemini readers was corrected from 540 nm to 525 nm.



Note: In version 5.4.1, the protocol folder titled **MDS Analytical Technologies** was renamed to **Molecular Devices**.

General Software Issues Addressed in SoftMax Pro Software Version 5.4.4

A descriptive label is missing from methods in wavelength selections for the SpectraMax L reader

Tracking ID: FB 2313

A descriptive label for methods in wavelength selections for SpectraMax® L reader was removed in the previous versions of the SoftMax Pro Software.

Resolution:

The label was updated to include descriptions.

Impact of fix:

No support for the Seahorse Bios 24 Col Reservoir plate

Tracking ID: FB 2650

The Seahorse Bios 24 Col Reservoir plate is not supported.

Resolution:

The Seahorse Bios 24 Col Reservoir plate is now supported by the SoftMax Pro Software.



Note: If you are using a 16-channel pipettor head, Molecular Devices recommends using flat-bottom plates. Using V-bottom plates might cause the pipettor to touch the sides of the well and damage the pipettor or the plate. With an 8-channel pipettor head, you can use both flat-bottom and V-bottom plates.

Impact of fix:

This fix has no impact on current workflow or data.

Selecting a valid COM port on DELL Optiplex 780 causes the program to crash

The SoftMax Pro Software crashes when a valid COM port on a DELL Optiplex 780 is selected.

Tracking ID: FB 2686

Resolution:

The SoftMax Pro Software has been enhanced to check for port status if the operating system fails to communicate through a port.

Impact of fix:

This fix has no impact on current workflow or data.

The SpectraMax M2e FL1 protocol states the incorrect number of didymium peaks in the Certinfo comment

Tracking ID: FB 2730

The Certinfo comment in the SpectraMax M2e FL1 protocol states 6 didymium peaks, and then it lists only 5.

Resolution:

The comment has been corrected to state 5 peaks.

Impact of fix:

This fix has no impact on current workflow or data.

Auto-read for a kinetic fluorescence polarization read does not read the second plate section when the first plate has saturated wells

Tracking ID: FB 2736

The second plate section is not read when the first plate has saturated wells during a kinetic fluorescence polarization auto-read.

Resolution:

Reading a plate with saturated wells no longer halts the operation during autoread and automation.

Impact of fix:

Plate-error data will not get reported during auto-read and automation. The fix has no other impact on current workflow or data.

Actual and reported run times do not match for kinetic fluorescence polarization reads

Tracking ID: FB 2737

The reported run time for a kinetic fluorescence polarization doesn't match the actual run time.

Resolution

Performed empirical adjustment to make the interval calculation close to the actual minimum run interval.

Impact of fix:

This fix has no impact on current workflow or data.

With multiple protocols open, an incorrect file name is sometimes printed in the footer

Tracking ID: FB 3003

The SoftMax Pro Software uses the top-most document footer note to print. When multiple documents are open, the top-most document could be moved causing another document to become the top-most document. This can cause the incorrect footer information to print.

Resolution:

Printing now uses the same document throughout the printing process before switching to another document.

Impact of fix:

This fix has no impact on current workflow or data.

The data for only one wavelength is exported during automation

Tracking ID: FB 3020

In automation, the **ExportAs** command does not export all measured data to the specific file.

Resolution:

All the measured data is exported through the command line interface.

Impact of fix:

All the measured data is exported through the command line interface. This fix has no other impact on current workflow or data.

After a plate is read in automation, a read-completion status is not sent

Tracking ID: FB 3021

When a plate read is completed, a notification is not sent to the automation client.

Resolution:

At the completion of a plate read, the client is updated of the status.

Impact of fix:

The TaqMan.ppr protocol is missing

Tracking ID: FB 3043

The TaqMan.ppr protocol was inadvertently removed from the software release.

Resolution:

The TagMan.ppr protocol is included.

Impact of fix:

This fix has no impact on current workflow or data.

The FlexStation II and FlexStation III 384 readers are not supported in GxP

Tracking ID: FB 3044

GxP does not support the FlexStation II and FlexStation III 384 readers.

Resolution:

The FlexStation II and FlexStation III 384 readers are now supported in GxP.

Impact of fix:

This fix has no impact on current workflow or data.

The option to Suspend Recalculation resets to the off state when the program restarts

Tracking ID: FB 3094

Users who run multiple plate sections of kinetic data are required to reset the **Suspend Recalculation** option each time the software is restarted.

Resolution:

When the software is started, the **Suspend Recalculation** option remains in the on or off state that it was in the last time the program was closed.

Impact of fix:

Users who run multiple plate sections of kinetic data are no longer required to reset the **Suspend Recalculation** option each time the software is restarted. Users who want to restore automatic calculations must turn off **Suspend Recalculation** if it was previously turned on.

This fix has no impact on data.

Profile Method Confidence Interval is empty

Tracking ID: FB 3110

The curve fit parameter confidence interval calculated by the profile method intermittently produces empty results when the lower value and upper value are equal.

Resolution:

The method for determining the lower and upper values has been corrected so that they are no longer equal.

Impact of fix:

The SoftMax® Pro Software version 5.4.3 update is a minor release. The following is the only change incorporated in this update as compared to version 5.4.2, the last general release of the SoftMax Pro Software.

• General Software Issue Addressed in SoftMax Pro Software Version 5.4.3 on page 13

General Software Issue Addressed in SoftMax Pro Software Version 5.4.3

Circular Reference Error

Tracking ID: FB 2738

Running protocols often displays a circular reference error message.

Resolution:

This issue was caused by an error in the software which is now fixed in v5.4.3

Impact of fix:

The SoftMax® Pro Software version 5.4.2 update is a minor release. The following is a summary of the changes incorporated in this update as compared to version 5.4.1, the last general release of the SoftMax Pro Software.

- New in SoftMax Pro Software Version 5.4.2 on page 15
- Modifications Made to SoftMax Pro Software Version 5.4.2 on page 15
- General Software Issues Addressed in SoftMax Pro Software Version 5.4.2 on page 17
- How to Update to SoftMax Pro Software Version 5.4.2 on page 19

New in SoftMax Pro Software Version 5.4.2

Updated Support for Operating Systems

SoftMax Pro Software v5.4.2 is now supported for MAC OS v10.6, as well as Windows 7, 32-bit and 64-bit operating systems supported in the SoftMax Pro Software v5.4.1 release.

Additional Windows 7 installation considerations for the SpectraMax® L Microplate Reader, StakMax® Microplate Handling System, and the MDC FileServer are addressed in an insert to the *SoftMax Pro Software User Guide* included with the software.

Modifications Made to SoftMax Pro Software Version 5.4.2

Protocol Modifications

The following protocol files were added, removed, or updated:

- Assay Development
 - Fluorescence Optimization
 Updated the introduction and instruction sections to enhance clarity and usability.
 - Z Factor Assay Development Changed from FlexStation® 3 Reader type to FI mode, and updated reader suitability to enhance the protocol's usability.

Cell Signaling and Transport

- QBT Fatty Acid Uptake-Endpoint Removed and replaced with QBT Fatty Acid Uptake protocol
- QBT Fatty Acid Uptake-Kinetic Removed and replaced with QBT Fatty Acid Uptake protocol
- QBT Fatty Acid Uptake (added)
 Added to combine QBT Fatty Acid Uptake-Endpoint and QBT Fatty
 Acid Uptake-Kinetic protocols into a single protocol.

Early ADME-Permeability & Solubility

MScreen PAMPA
 Updated the introduction section to enhance clarity and usability.

ELISA-Kinetic

 HRP and ABTS-Kinetic Corrected group table reference in standard curve to ensure users get accurate results.

Molecular Devices

Calcium

Changed PMT to medium to accommodate firmware change and prevent PMT saturation with typical assays to improve user experience and avoid bad or lost data.

 QBT Fatty Acid Uptake-Endpoint Removed and replaced with QBT Fatty Acid Uptake protocol

QBT Fatty Acid Uptake-Kinetic Removed and replaced with QBT Fatty Acid Uptake protocol

QBT Fatty Acid Uptake (added)
 Added to combine QBT Fatty Acid Uptake-Endpoint and QBT Fatty Acid Uptake-Kinetic protocols into a single protocol.

Nucleic Acids

 PicoGreen Fluorescence Updated the introduction section to enhance clarity and usability.

Reporter Assays

GeneBLAzer

Improved readers suitability.

 Ready-To-Glow Secreted Luciferase Improved readers suitability.

Statistics

Z-Factor Determination
 Changed from FlexStation® 3 Reader type to FI mode, and updated reader suitability to enhance the protocol's usability.

TR-FRET

HTRF_Competitive
 Added a note to indicate that this protocol is for use with Europium reagents only.

HTRF_Immunoassay
 Added a note to indicate that this protocol is for use with Europium
 reagents only.

HTRF_Protease
 Added a note to indicate that this protocol is for use with Europium reagents only.

HTRF_Terbium Cryptate
 Added a new protocol for Terbium reagents from Cisbio.



Note: In version 5.4.1, the protocol folder titled **MDS Analytical Technologies** was renamed to **Molecular Devices**.

General Software Issues Addressed in SoftMax Pro Software Version 5.4.2

The "M3 M4 M5 M5e ABS1" and "M3 M4 M5 M5e FL1" validation protocols are not included in v5.4.1

Tracking ID: FB 2570

These two validation protocols are not included in the v5.4.1 release preventing the protocols from being used for validation.

Resolution:

The validation protocols are included in the v5.4.2 release.

Impact of fix:

This fix has no impact on current workflow or data.

The LM1 protocol on a SpectraMax L reader produces out-of-range results

Tracking ID: FB 2355

Running the LM1 protocol on a SpectraMax L reader produces out-of-range results due to incorrect calculations in the protocol.

Resolution:

The corrected calculations in the LM1 protocol now display values within the acceptable range.

Impact of fix:

If validation was performed using the uncorrected protocol, validation should be performed again using the corrected protocol. This fix has no other impact on current workflow or data.

Performing a multi-well read on the SpectraMax L reader returns all the same values for each well

Tracking ID: FB 2356

When performing a multi-well read on the SpectraMax L reader, the software returns all the same values for each well if the system calibration is incorrect.

Resolution:

When system calibration is incorrect, the software has been enhanced to prompt the user that the calibration values are not acceptable.

Impact of fix:

This fix impacts workflow to require system calibration if the system has incorrect calibration values. If reads were performed using a system with incorrect calibration, some of the data might be invalid.

Incorrect column formula for Vmax850 in Kinetic Baseline Noise group

The Kinetic Baseline Noise evaluation done in the Helma validation protocols Plus Helma and M Series Helma have incorrect Vmax reduction formulas that can lead to failures of the result to meet the specified limits for the instruments.

Tracking ID: FB 2442

Resolution:

The Vmax reduction formulas in these protocols have been corrected for the 850 nm and 405 nm wavelengths.

Impact of fix:

If validation was performed using the uncorrected protocols, validation should be performed again using the corrected protocols. This fix has no other impact on current workflow or data.

After multiple plate reads using a SpectraMax L reader, some of the data is not being displayed

Tracking ID: FB 2289

After multiple plate reads using a SpectraMax L reader, some of the data is not being displayed when the software retains data from previous reads.

Resolution:

The software is now forcing a recalculation in the background which enhances the capability to display all the calculated data.

Impact of fix:

This fix has no impact on current workflow. If multiple plate reads were performed using v5.4.1, some of the data might be invalid.

Exported data in .xml format when Plate kinetic data contains fewer than 96 wells does not contain all the data

Tracking ID: FB 2304

When exporting data in .xml format from Plate kinetic data that contains fewer than 96 wells, some of the data is not included in the exported .xml file.

Resolution:

The exported .xml file contains plate kinetic data for all the selected wells.

Impact of fix:

If incomplete data was exported using v5.4.1, the data can be exported correctly from the saved data file using v5.4.2. The fix has no other impact on current workflow or data.

After a reading in GxP, the saved data file does not retain the "read by" information

Tracking ID: FB 2082

After performing a read using SoftMax Pro GxP Software, the saved data file does not retain the "read by" information.

Resolution:

The saved data includes the "read by" information.

Impact of fix:

Fluorescence Polarization mode becomes disabled after a well scan read on a FlexStation 3 reader

Tracking ID: FB 1801

After performing a well scan read on a FlexStation 3 reader, the Fluorescence Polarization (FP) mode becomes disabled.

Resolution:

After a well scan read, the Fluorescence Polarization mode is enabled.

Impact of fix:

This fix has no impact on current workflow or data.

How to Update to SoftMax Pro Software Version 5.4.2

Within-version updates (such as from v5.4.1) are provided online at no charge to customers who have registered their previous software version with Molecular Devices. Please visit the SoftMax Pro Software home page for more information about registering your products. You will need your software serial number to complete the process.

http://www.moleculardevices.com/softmax



Note: To upgrade from version 4.x or older, please contact your local Molecular Devices representative.

The SoftMax® Pro Software version 5.4.1 update is a minor release. The following is a summary of the changes incorporated in this update as compared to version 5.4, the last general release of the SoftMax Pro Software.

- New in SoftMax Pro Software Version 5.4.1 on page 21
- General Software Issues Addressed in SoftMax Pro Software Version 5.4.1 on page 22
- How to Update to SoftMax Pro Software Version 5.4.1 on page 23

New in SoftMax Pro Software Version 5.4.1

Support for the Windows 7 Operating System

SoftMax Pro Software v5.4.1 is now supported for Windows 7, 32 and 64-bit systems. Additional installation considerations for the SpectraMax® L Microplate Reader, StakMax® Microplate Handling System, and the MDC FileServer are addressed in an insert to the *SoftMax Pro Software User Guide* included with the software.

SpectraTest® Validation Plate Protocols

For use with the SpectraTest LM1 Validation Plate for luminescence

Reader Validation-Plate Lum

- Flex 3 LM1 v100
- LMax II LM1 v101
- M3 M4 M5 M5e LM1 v101
- SpectraMax L LM1 v101

Protocol Modifications Made to SoftMax Pro Software Version 5.4.1

The protocol folder titled **MDS Analytical Technologies** has been renamed to **Molecular Devices**.

The following protocol files were updated:

- Assay Development
 - Z Factor Assay Development
- Cell Signaling and Transport
 - Calcium
- Molecular Devices
 - Calcium
- Nucleic Acids
 - PicoGreen Fluorescence
- Statistics
 - PLA Slope Differences

General Software Issues Addressed in SoftMax Pro Software Version 5.4.1

Issue: The **Shake** button on the software toolbar faulted when repeatedly clicked with the SpectraMax L Microplate Reader.

Fix: While proper use of the **Shake** button is to hold the button down for the duration of the desired mixing time, repeated sequential clicking is now allowed.

Issue: The audit trail in a SoftMax Pro GxP Software data file records a user as logging out of the system when the **Auto Log Off** prompt appears.

Fix: The appearance of the prompt is not recorded in the audit trail.

Issue: Remote logon to SoftMax Pro GxP Software failed when the user ID contained spaces.

Fix: Spaces are now allowed in the user ID for remote logons.

Issue: The software crashes when failing to print a large file that exceeds the print buffer.

Fix: When the print buffer is filled, printing will cease, but the software will remain open.

Issue: The "Median" formula applied to an array (such as column) containing numbers and NANs (the special "not a number" class in SoftMax Pro Software) included the NANs.

Fix: The "Median" formula has been corrected to find the median of only the numbers in the designated array.

Issue: When using the StakMax application in scripting mode, the remote command **Close All Documents** sent to the SoftMax Pro Software hid but did not close the open files.

Fix: The **Close All Documents** command no longer hides the open files but closes them.

Issue: The StakMax Software status window displays a different time than the computer clock.

Fix: The status window time is now synchronized to the computer clock and set time zone.

Issue: The StakMax software status window when scripting omits the "read plate" step; only the "put plate" and "return plate" events would be noted.

Fix: The complete sequence is now displayed in the status window.

How to Update to SoftMax Pro Software Version 5.4.1

Within-version updates (such as from v5.4) are provided online at no charge to customers who have registered their previous software version with Molecular Devices. Please visit the SoftMax Pro Software home page for more information about registering your products. You will need your software serial number to complete the process.

http://www.moleculardevices.com/softmax



Note: To upgrade from version 4.x or older, please contact your local Molecular Devices representative.

The SoftMax® Pro Software version 5.4 update is a minor release. The following is a summary of the changes incorporated in this update as compared to version 5.3.1, the last general release of the SoftMax Pro Software.

- New in SoftMax Pro Version 5.4 on page 25
- Modifications Made to SoftMax Pro Software Version 5.4 on page 27
- General Software Issues Addressed in SoftMax Pro Software Version 5.4 on page 27

New in SoftMax Pro Version 5.4

Support for the new SpectraMax M3 and M4 Multi-Mode Microplate Readers

The SpectraMax® family of multi-mode readers now offers upgradable reader configurations for 3 and 4 modes (Absorbance, Fluorescence, Luminescence, TRF/TR-FRET).

Support for new multi-detector SpectraMax L microplate luminometer configurations

The two and six channel versions of the SpectraMax L luminometer increase flash and glow luminescence throughput over conventional, single detector microplate readers and enable Bioluminescence Resonance Energy Transfer (BRET) assays.

Support for reading half area plates with the SpectraMax L microplate luminometer

The SpectraMax L luminometer was designed to capture the maximum amount of light from standard 96-well and 384-well plates. The use of non-standard plates (e.g. half area plates, strip plates, tubes) in the instrument can cause serious damage. A setting was added to safely read half area 96-well plates with the smaller 384-well aperture position.

Non-linear confidence interval calculation

For the 4-parameter and 5-parameter curve fits with and without parallel line analysis enabled, confidence intervals for the curve fit parameters can be calculated by one of three methods. Confidence intervals can also be calculated for the Relative Potency.

Assignment of weighting to individual plots

Weighting for the non-linear 4-parameter and 5-parameter curve fits can be applied to individual plots in the same Graph section. This option is selectable in the Fit Settings dialog box as a drop-down menu to select the plots for which weights are to be applied. For data files assigned weights in previous versions of the software (for example, v5.0.1, v5.2), the same weights will continue to be applied to all plots.

Student's t- and Fisher F-distributions

SoftMax Pro Software can calculate the probabilities for given F and tstatistics, and their inverses.

Extended luminescence integration time

For supported Flexstation® 3 instruments (minimum firmware requirements apply), the integration times of 3, 5, 7, and 10 seconds were added for luminescence read mode.

Instrument name display

The name of the selected/connected microplate reader by SoftMax Pro Software is now displayed on the tool bar.

"Positive" and "Negative" NANs

Two more functions were added to the NAN (Not A Number) class to report "Positive" and "Negative."

Random number function

A function was added to return a random number, normally distributed around a mean of approximately 0, and a standard deviation of approximately 1.

More SoftMax Pro Software protocols

To get you started more quickly, SoftMax Pro Software v5.4 has added several new methods from leading assay partners that can be used as-is or further customized to meet your needs.

- ELISA-Endpoint
 - Fluorescent ELISA Peninsula
 - Melamine ELISA_Abraxis
 - Melamine ELISA Beacon
 - Melamine ELISA Romer

Modifications Made to SoftMax Pro Software Version 5.4

Curve fit matrix inversion method changed

The matrix inversion method used in non-linear fitting has been changed. This might cause differences between the curve fit parameters in this version and those in previous versions. There is no consequence for meaningful curve fits as this change can affect only a failed or meaningless fit. The minor differences are deemed immaterial, because the output parameters are essentially identical for valid fits.

Protocol modifications

The following SoftMax Pro Software method protocols were revised in the updated software:

- Assay Development
 - Fluorescence Optimization
- Associates of Cape Cod
 - Chromo
 - Fungitell Vmean
 - Glucatell Diazo-Endpoint
 - Glucatell Onset Time
 - Glucatell Vmean
 - Pyrochrome Diazo-Endpoint
 - Pyrochrome Endpoint
 - Pyrochrome Kinetic
 - Pyrotell-T
- Reader Validation-Plate Abs
 - VersaMax1 ABS1 v101
- Reader Validation-Plate FI
 - Flex 3 FL1 v103

The following SoftMax Pro Software method protocol was removed from the updated software:

- Cell Growth & Viability
 - MycoAlert for non-SpectraMax L readers

General Software Issues Addressed in SoftMax Pro Software Version 5.4

"Save As" option crashes on the Macintosh with Chinese language selection

Fix—"Save As" is now enabled on Macs with different language selections.

Option to select "Duplicate Experiment" from the Edit menu was disabled

 $\operatorname{Fix-The}$ "Duplicate Experiment" option can now be selected from the Edit menu.

With parallel line analysis feature enabled in a Graph section, when the number of plots was reduced to one, there was no way to disable parallel line analysis

Fix —Parallel line analysis feature automatically disabled if only one plot is present in a Graph section.

Export of SpectraMax L indicated "Lmax" data, incorrectly indicating an instrument in a field reserved for the mode

Fix—The label in the exported data has been corrected to "Luminescence."

Group tables that exceeded one page were paginated incorrectly, resulting in a row being split between two pages

Fix—SoftMax Pro Software inserts a page break before a row is split between pages.