

Release Notes – guavaSoft™ Software version 2.7

Introduction

This document contains information about release 2.7 of EMD Millipore Corporation guavaSoft Software for your EMD Millipore Corporation easyCyte™ or easyCyte HT System. The contents of this document are:

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Important Notices

guavaSoft Software v2.7 is intended for use only on EMD Millipore Corporation easyCyte or easyCyte HT Systems. Do not install guavaSoft Software v2.7 on a Guava® PCA, Guava PCA-96, Guava PCA-96 AFP, Guava EasyCyte Mini, Guava EasyCyte, Guava EasyCyte Plus system computer for acquisition purposes.

To run guavaSoft Software v2.7 for acquisition purposes, you will need an EMD Millipore Corporation-configured Dell™ laptop running 32-bit Windows XP Professional or 32-bit Windows 7 Ultimate, and including Microsoft Excel®. (Minimum specifications: Intel Core Duo® processor T2400 (1.86 GHz), 4 GB RAM, 60 GB hard drive, 2 USB ports, CD or DVD drive, full screen display resolution of 1024 x 768 or wide screen display resolution 1280 x 800).

Summary of New Features, Changes and Enhancements since guavaSoft Software v2.6

Guava Incyte™ Software Module - New Features

- Support was added for Access Rights management (similar to that in older Guava assays), to aid compliance with 21 CFR 11 regulations.
- A new interactive batch printing feature allows easy selection of plots and samples per page, with preview and the ability to save to a PDF file.
- Many improvements to table printouts: better layout, number alignment, and other features to save paper.
- Heatmap Stats: You can now drag a stat from the Current Run Stats table to one of the sectors in the Pie Legend for the heatmap.
- Zoom and Pan for plots.
- Contour plots, with adjustable levels and smoothing.
- Histogram smoothing, with adjustable smoothing.
- New free-form polygon region (in addition to the existing octagonal polygon region).
- EC-50/IC-50 plots: you can now copy and paste concentration values back and forth between the EC-50/IC-50 Setup and an Excel spreadsheet.
- Maximum number of plot was increased to 24 (added 4x4, 4x5, 5x4 and 5x5 layouts).
- Maximum number of regions was increased to 24 (from 16 previously).
- When you delete an Analysed Group, the data group and Analysis Method it uses are also deleted automatically if no other group is using them.
- Improved the line resolution of regions when printing, and of elliptical regions when drawing.
- Stat units are now shown in tables.
- When copying plots to the clipboard, the font size of axis labels and other text is improved for better readability.

Guava Incyte™ Software Module - Issues Addressed

- Window locations are now retained properly after quitting the application (previously, some windows reappeared in slightly different locations each time the application was launched).
- When copying a histogram to the clipboard, the histogram is now properly clipped to the plot borders.
- A warning dialog is now shown before overwriting an existing plot corner label.
- Changing the name of a sample now updates the name in the original sample and in all of the groups that use it.
- Under certain conditions during Adjust Settings, the software could be slow to respond to gain adjustments. This has been fixed.
- Fixed a crash which could occur when deleting a data group referenced by multiple Analysed Groups.
- Fixed an issue with copy/paste in dot plots with a large number of points.
- In the Current Run Stats table, setup checkboxes would sometimes be shown even when not in Setup mode. This has been fixed.
- When printing multiple samples, fixed an issue in which the printout would only report the value of the first sample.
- Fixed a problem with auto compensation.
- Fixed a crash when trying to re-import an FCS 2.0 file which had been previously exported.

Guava Incyte™ Software Module - Issues Addressed

- Addressed item: A larger number of events may sometimes be indicated for some channels during acquisition of easyCheck replicates.

Installing guavaSoft Software v2.7

To install guavaSoft Software v2.7, perform the following steps.

1. Log into the computer with Administrative rights. This is the default at installation; consult your local system administrator if necessary.
2. If you have been using a previous version (guavaSoft Software v1.0, guavaSoft Software v1.1, guavaSoft Software v2.0, guavaSoft Software v2.1, guavaSoft Software v2.2.3 or guavaSoft Software v2.6), the previous version will be automatically uninstalled (the easyCheck log and event log files will be saved and copied to the new installation). In case Installation issues are encountered, please use the Windows Control Panel to uninstall the older guavaSoft program
3. Insert the CD-ROM into the computer and open its contents, where you will see a folder labeled "guavaSoft 2.7". You can use the contents of this folder to install the software on the laptop that is connected to the instrument. You may also install the software for off-line data analysis on any computer running, at a minimum, Windows XP; however, note the disclaimer at the end of this document.
4. Open the folder and double-click on the Setup.exe file to start up the installer.
5. You should then see a window titled "Welcome to the InstallShield Wizard" (in some cases, this window may be hidden behind other windows, so you may need to use the Windows task bar to bring it to the front). The InstallShield® Wizard will lead you through a series of screens for the various installation steps. Simply follow the instructions and accept the default settings by clicking the Next button. Note the following, however:
 - a. When the "License Agreement" window appears, EMD Millipore Corporation recommends that you read it carefully in case it has changed since the previous release. You must select the radio button that indicates your acceptance of the license terms before you can click on the Next button to continue.
 - b. If the "Customer Information" window appears, be sure to select the option to "Install this application for anyone who uses this computer (all users)," then click Next. Do **not** select the option to "Install the software Only for me" as the software may not install correctly.

- c. When installing the software for off-line data analysis on a computer not attached to an instrument, select "Skip" on the "Instrument detection" window in order to access the "Setup Type" window. Select the instrument type by clicking on the appropriate radio button.
6. After the software has been installed and the last screen appears, click on the "Finish" button to complete the process. You are now ready to use the new software.

Using guavaSoft Software v2.7

Please refer also to the User's Guide appropriate for your system which can be found on the software distribution CD-ROM. The following notes apply to all users of guavaSoft Software:

1. Running Excel, Internet Explorer, or any other program while using guavaSoft Software to acquire data from your system is not recommended. guavaSoft Software requires the full resources of your laptop during data acquisition; running other programs at the same time (even if you are not actively using them) may interfere with its ability to acquire data reliably.
2. When acquiring data with guavaSoft Software, always store the data onto the laptop's local hard drive. Do not use a remote file server on a network, as network connections are often intermittent or busy, and this may interfere with the software's ability to acquire data reliably. If you want to archive data to a remote file server, wait until the session is finished. Then exit the assay (i.e., return to the guavaSoft Software main menu), and copy or move the data to a remote file server.
3. For best performance, EMD Millipore Corporation recommends that you use the Medium flow rate, except for the Guava Cell Cycle Software Module, which uses Low or Very Low flow rates only. The Guava ViaCount, Guava Check, and guava easyCheck Software Modules allow samples to be run only at the Medium flow rate.
4. Always make sure the power is off for both the instrument and the laptop before inserting or removing the USB cable, otherwise damage or erratic operation may result.
5. EMD Millipore Corporation recommends that you re-boot the laptop at least once each day, e.g., in the morning before beginning to use your system.

Cautions

1. In order to view the Access Control screen, you must be a Guava Administrator. In order to change the settings, however, you must also be logged in a Windows administrator.
2. Setting the threshold too close to a population may cause some events close to the threshold to be rejected as noise.
3. In Analysis Mode, if you enter new values into the Dilution Factor or Total Volume fields in the ViaCount, ExpressPlus and ExpressPro Software Modules, the changes will not register until you click on a different item.
4. In Analysis mode, the ExpressPlus Software Module v3.6 (which is included in this installation) can convert files acquired in Express Plus Software Module v3.4 and earlier versions. In addition, files generated with guavaSoft Software v2.1 are compatible with earlier versions of software for the EasyCyte System (versions 3.0 and later), Guava PCA software (versions 2.1 and later), and Guava PCA-96 software (versions 2.5 and later) for ViaCount, Nexin, MultiCaspase, TUNEL and Cell Cycle. guavaSoft Software v2.2 will also correctly display and analyze data acquired on the PCA-96 or PCA even for the CellPaint, and CellToxicity Software Modules in which the fluorescence parameters used are different between CytoSoft Software v5.3 and v2.5.7 or v6.0.2
5. For more reliable operation, the shortcut keys have been disabled on some software modules.
6. On rare occasions, the software and the instrument may pause to resynchronize with each other. If this occurs, the system will pause for 20-30 seconds and a message will appear in the status bar at

the bottom of the screen indicating a "Tray Hold-Off." Although this is not serious and the system should resume again after resynchronizing, be aware that after the tray hold-off occurs, the tray may move without warning.

7. Unplugging a network cable when a network printer is installed and selected as the default printer will result in CytoSoft and guavaSoft Software Modules being unable to launch. This problem only occurs on laptops. An error message will appear stating that the application has generated errors and will be closed by windows. A workaround is to select "Fax" as the default printer.
8. All Errors and Warnings are noted in the Event Log. All Errors and Warnings that occur while a sample is being acquired will also be posted to the Errors and Warnings counter located at the bottom right of the acquisition screen and added to the appropriate column in the CSV file (for ExpressPlus and ExpressPro only). Errors and Warnings that occur after a sample acquisition has been closed will not be posted to the CSV file and may or may not be added to the Errors and Warnings counter located at the bottom right of the acquisition screen, depending on the type of error or warning.
9. The position of the histogram markers should be used to define populations and not the color of the events included in the marker. The color indicating events included in a particular marker can be offset by 1 or 2 pixels to the left of the marker ends and hence does not quite correctly indicate which events are included in the marker.
10. When in batch printing mode, even if double sided printing is selected through the "properties" button on the print dialog window, the printout will be single-sided only.

Disclaimers

Due to the wide variety of PC configurations, EMD Millipore Corporation does not warrant the use of guavaSoft Software to obtain results when used on platforms other than the supported laptop.

Export to the FCS 2.0 data format is provided for the convenience of our customers (see Appendix A). However, EMD Millipore Corporation has not validated the analysis of data from the system using third-party programs and cannot warrant that the results will be correct, nor does EMD Millipore Corporation provide any support for such analysis.

Customer Support Contact Information

For ordering information or technical support:

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In addition, Millipore and its distribution network will provide Guava® Products to all sectors of life science research in certain countries outside of North America and Europe. To find the office nearest you, go to www.millipore.com/offices

Field service for all EMD Millipore Corporation' instrumentation for all the geographies above will be carried out by EMD Millipore Corporation (www.millipore.com/techservice).

Appendix A. Analyzing Millipore easyCyte HT System Data Using FCS 2.0 File Export

The FCS file format is an open standard for the exchange of flow cytometry information. The original format was proposed by Bob Murphy of Carnegie Mellon University, and it has since been widely adopted in the industry.

EMD Millipore Corporation stores binary run data in the new FCS 3.0 file format. However, many third-party programs have not yet been upgraded to read this format. For increased compatibility, therefore, data acquired using guavaSoft Software may be exported in the older FCS 2.0 file format, so that you can use most third-party applications on either a PC or a Macintosh® to analyze and explore the data. Consult the *guava easyCyte System User's Guide*, *guava easyCyte HT System User's Guide* or *Guava EasyCyte Plus System User's Guide* for more details. When using third party programs to analyze exported data, please be sure to read the disclaimers in a previous section of this document.

When you acquire data in guavaSoft Software, all the runs in a session are grouped into a single file in FCS 3.0 format so that you can conveniently navigate between runs, and easily copy the entire session as a single file. However, when data is exported in FCS 2.0 format, a single file is produced for each run. The file name is a concatenation of the data set name and the run (or sample) number. Each FCS file exported is given the extension ".FCS" to identify it as an FCS data file. The files adhere to the FCS 2.0 standard.

On the PC, you can use WinMDI for analysis (WinMDI is freely distributed over the Internet). Other third-party programs are available on the PC for analysis of FCS data.

You can also transfer FCS files from the PC to the Macintosh (e.g., with a flash drive, or via a file server). However, the Macintosh does not automatically know which application is supposed to open FCS files, and you will need to use the File Exchange control panel to "assign" the FCS data files to the appropriate Macintosh application. This only needs to be done once, before the first time you want to analyze the data. Consult the Macintosh help guide for more details out how to do this.

If you experience difficulty when using the File Exchange control panel, you may need to "rebuild the desktop." Consult the Macintosh help guide for more information on how to do this.

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