Release Notes – guavaSoft™ Software version 3.3
April 2017

Introduction

This document contains information about EMD Millipore guavaSoft™ Software version 3.3 for your 3rd generation EMD Millipore easyCyte™ or easyCyte™ HT System.

The contents of this document are:

Important Notices
Summary of New Features, Changes and Enhancements since guavaSoft™ Software v3.2
Installing guavaSoft™ Software v3.3
Using guavaSoft™ Software v3.3
Cautions
Disclaimers
Customer Support Contact Information
Appendix A. Analyzing EMD Millipore easyCyte™ HT System Data Using FCS 2.0 File Export

Important Notices

guavaSoft™ Software version 3.3 is only intended for Acquisition use on 3rd generation EMD Millipore Corporation easyCyte™ or easyCyte™ HT Systems with an EMD Millipore Corporation-configured Dell™ laptop running **64-bit** Windows 10 Professional edition.

3rd generation systems will have serial numbers prefixed by *8470, 8472, 8574, 8575, 8576, and 8577.* General serial number formats for these instruments are as follows:

- 8470xxxxxx
- 8472xxxxxx
- 8574xxxxxx
- 8575xxxxxx
- 8576xxxxxx
- 8577xxxxxx

*guavaSoft™ Software version 3.3 is **NOT** intended for use on 1st and 2nd generation EMD Millipore Corporation easyCyte™ or easyCyte™ HT 5, 6-2L, and 8 Systems* or other previous generation Guava systems.

1st generation systems will have serial numbers prefixed by *543* and *558.* General serial number formats for these instruments are as follows:

- GTI-543xxxxxxx
- GTI-558xxxxxxx

2nd generation systems will have serial numbers prefixed by *6735* and *6620.* General serial number formats for these instruments are as follows:

- 6735xxxxxx
- 6620xxxxxxx

Do not install guavaSoft™ Software version 3.3 on 1st and 2nd generation easyCyte™ or easyCyte™ HT system computers, or 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 v3.3 for acquisition purposes, you will need an EMD Millipore Corporation-configured Dell™ laptop running **64-bit** Windows 10 Professional edition **only,** and including Microsoft Excel®.   (Recommended configuration: Intel Core i7-5600U processor (2.6 GHz), 8 GB RAM, 500GB hard drive, minimum of 2 USB ports).

Summary of New Features, Changes and Enhancements since guavaSoft™ Software v3.2

guavaSoft™ Software v3.3 is intended for use on computers with 64-bit Windows operating systems only. guavaSoft™ Software v3.3 cannot be installed on computers with 32-bit Windows operating systems.

Guava Incyte™ Software Module - New Features and Addressed Issues

- *New Feature:* Introduction of Single Sample Analysis Mode which mitigates lengthy load and response times that occur when analyzing or appending to large FCS data files. Progress indicators added for file loading and statistics update.
- *New Feature:* Event Logging enabled in Analysis Mode.
- *Addressed Issue:* In Analysis Mode, Maximum Dilution factor value limit has been increased from 1,024 to 200,000.
- *Addressed Issue:* An issue was addressed in which analyzing and overwriting a data file originally acquired without regions or gating resulted in a corrupt data file.
- *Addressed Issue:* An issue was addressed in which attempting to open a data file which included samples with zero events was not successful and yielded a "could not be opened due to lack of sufficient memory" message.

Guava Clean Software Module – Addressed Issue

- *Addressed Issue*: Correct Capillary Shutdown position is now indicated if a new position is selected after completing a Clean & Shutdown cycle.

Installing guavaSoft™ Software v3.3

To install guavaSoft™ Software v3.3, 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, 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 guavaSoft Software USB flash drive into the computer and open its contents, where you will see a folder labeled "guavaSoft 3.3". 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 7 (64-bit); however, note the disclaimer at the end of this document.

4.   Open the folder and right-click on the Setup.exe file to start up the installer. Select the "Run as Administrator" option on the menu that appears.

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 v3.3

Please refer also to the User Guide appropriate for your system which is included with the guavaSoft installation. 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. The Access Control screen can be viewed by all users.. 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 ExpressPlus 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 v3.3 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. 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:

http://www.emdmillipore.com/reply/form/techservice

US and Canada
Phone: 1 (800) 645-5476
Fax: +1 (951) 676-9209

For additional contact information outside North America, visit www.merckmillipore.com/techservice.

For ordering information or technical service for customers in academic or government settings or research institutions, contact your nearest Millipore office. To find the office nearest you, go to www.millipore.com/offices . For technical service, go to www.millipore.com/techservice.

Appendix A. Analyzing EMD Millipore *easyCyte™ or 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 FCS 3.0 file format. However, some third-party programs have not 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 Guide, guava easyCyte HT System User Guide* or *Guava EasyCyte Plus System User 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.

EMD Millipore guavaSoft™ Software v3.3 is for Research Use Only. Not for use in diagnostic procedures.

Trademarks

Millipore, Guava, ViaCount, Guava Nexin, Guava Technologies, and the 3 cells logo are registered trademarks of EMD Millipore Corporation.

guavaSoft™, easyCheck, easyCyte, and RapidQuant are trademarks of EMD Millipore Corporation.

Microsoft, Windows XP, Windows 7, Windows 10, Internet Explorer, and Excel are registered trademarks of Microsoft Corporation.

Dell is a registered trademark of Dell, Inc.

Macintosh is a registered trademark of Apple, Inc.

Intel Core is a registered trademark of Intel Corporation.

InstallShield is a registered trademark of Flexera Software, Inc.

Printed in the USA.