

# BAX<sup>®</sup> System Q7 Version 5.1.0.28941 Features and Instructions

BAX System Q7 software release v5.1 contains several user interface features, new target options, and error logging improvements.

We strongly recommend that you install the latest version as soon as possible for optimal performance.

Please read all instructions thoroughly and ensure all required prerequisites are confirmed prior to beginning the installation of the software update.

If you currently have a Windows 7 computer system, please contact <u>techsupport@hygiena.com</u> or your local Hygiena<sup>®</sup> representative for Windows 10 upgrade support.

# This release is ONLY applicable for Windows 10 Operating systems.

# Software Assay Updates for Release v5.1.0.28941

- There are no changes to the analysis for BAX assays (vs. versions 4.21, 4.22 or 5.0)
- The addition of the 'SalQuant' option in the target dropdown menu. Select this option when analyzing samples using BAX SalQuant<sup>®</sup> protocols. Refer to 'BAX SalQuant v5.1 Instructions with SureTrend<sup>®'</sup> for additional details.
- One foodproof<sup>®</sup> assay with verified result interpretation (displayed as 'Certified' within the software):

Product Name	Product Number
foodproof <sup>®</sup> Salmonella plus Cronobacter Detection LyoKit	KIT230131

Note: foodproof assays with 'Certified' results interpretation do <u>not</u> require visual verification of the graphs. However, as a best practice, Hygiena<sup>®</sup> recommends customers review all results.

foodproof/microproof<sup>®</sup> assays with <u>improved</u> experimental analysis files for assistance with results interpretation:

Product Name	Product Number
foodproof <sup>®</sup> Aspergillus Detection LyoKit (Real-time only)	KIT230145
foodproof <sup>®</sup> Enterobacteriaceae plus Salmonella Detection LyoKit	KIT230137
microproof <sup>®</sup> Legionella Quantification LyoKit	KIT230119
foodproof <sup>®</sup> <i>Listeria</i> Genus Detection LyoKit	KIT230088
foodproof <sup>®</sup> Listeria monocytogenes Detection LyoKit	KIT230092
foodproof <sup>®</sup> Listeria plus L. monocytogenes Detection LyoKit	KIT230129
foodproof <sup>®</sup> Salmonella Detection LyoKit	KIT230099
foodproof® Salmonella Enteritidis & Typhimurium Detection LyoKit	KIT230106
foodproof <sup>®</sup> Salmonella Genus plus Enteritidis & Typhimurium Detection LyoKit	KIT230134
foodproof <sup>®</sup> Staphylococcus Detection LyoKit	KIT230103
foodproof <sup>®</sup> STEC Screening LyoKit	KIT230077
foodproof <sup>®</sup> Vibrio Detection LyoKit (Real-time only)	KIT230117
foodproof <sup>®</sup> Yeast and Mold Quantification LyoKit	KIT230112

**Important Note**: All foodproof and microproof assays with **experimental** kit analysis files are designed to assist with result interpretation but require <u>visual</u> <u>verification</u> of the graphs.

Additional information for viewing data from *experimental* analysis files:

□ Analysis files are now available for all assays (i.e., BAX, foodproof, microproof). By default, all assays with experimental analysis files will have the analysis file set to "None". The user can navigate to Operation → Analysis Settings to set the analysis file (Algorithm) to "Experimental" for targets that do not have verified analysis files. This setting enables improved assistance with results interpretation.



- □ All verified assays will have only one setting, which is displayed as "Certified."
- □ If you are using 4.22 or 5.0 to run foodproof assays, your selected analysis setting will remain the same. (Refer to the <u>video tutorial</u> for instructions on registering the instrument on SureTrend)

# Software Feature Updates for Release v5.1.0.28941

- Instrument Lamp / Bulb:
  - □ Bulb replacement warning message is displayed once lamp hours reach 1,800 hours.
  - $\hfill\square$  Lamp hours are included in the calibration report.
- Analysis settings from previous versions are preserved during installation.
- Target selection settings:
  - □ Target selection from previous versions is preserved during upgrades.
  - □ If a .bax file that contains results for an unselected assay is loaded, the software automatically selects the appropriate target and enables the selection in settings.
- Users can register the Q7 to the SureTrend<sup>®</sup> application available on the cloud:
  - □ Ability to review data online both graphically and by result status with the SureTrend software.
  - □ To use this feature, you must register a SureTrend account https://suretrend.hygiena.com/Register

# For BAX Q7 Users with SureTrend Premium Accounts:

Ability to view amplification curves during the run.



- Detection of empty wells, wrong target selection, and non-empty wells --- the software identifies common human errors saving time and avoiding re-runs.
- Indication of Premium Account status in the 'About' box.
- Validation of Premium SureTrend package.

# Additional integration with SureTrend:

- Status of connection to SureTrend displayed as 'Connected' in bottom right corner of program window.
- Display 'Registration Ready' and 'Registered' checkmarks on the status bar.
- Display registered Account ID, Site ID and Site Name for registered instruments in the About BAX® System window.

# **Software Upgrade Instructions:**

- 1. Required Prerequisites:
  - Regional Settings are in English.
  - Core Isolation setting should be turned off in Windows security settings.
  - Read/Write Permissions for the below file locations for all users.
    - □ C:\Program Files\MATLAB
    - □ C:\Program Files (x86)\BAX
    - □ C:\ProgramData\BAX Q7 System
      - All Power and Sleep Settings are set to Never.
      - Disable this setting in the 'Local Group Policy' Editor:

Local Computer Policy>Computer Configuration>Administrative Templates>Windows Components>Windows Update. Then select Enable>Apply the 'No auto-restart with logged on users for scheduled automatic updates installations'. Click OK.

- Obtain the HEX Calibration Kit (Product No.: KIT230340) from Hygiena if you plan to run foodproof/microproof assays that utilize the HEX dye (see kit instructions).
  - This additional calibration plate is a stand-alone product and is not included with other calibration kits.
  - Please visit the <u>Contact Us</u> page for ordering and technical support.

# 2. Calibration, Storage and Removal of Current Software:

# Back up the system's calibration file.

- □ Select Operations > BAX Maintenance > Export Calibration from the menu bar.
- $\Box$  Navigate to a new folder in which to store the backup file and click Save.
- □ Name the calibration file (example: Q7Cal\_date.bqc).

# Uninstall the previous version of the BAX Q7 application.

□ Navigate to Windows Settings and select Apps.

Settings								-	đ	×
			Windows	Settin	gs					
			Find a setting		٩					
旦	System Display, sound, notifications, power		Devices Bluetooth, printers, mouse		Phone Link your Android, iPhone		Network & Internet Wi-Fi, airplane mode, VPN			
Ę	Personalization Background, lock screen, colors		Apps Uninstall, defaults, optional features	8	Accounts Your accounts, email, sync, work, other people	。 A字	Time & Language Speech, region, date			
8	Gaming Xbox Game Bar, captures, Game Mode	Ġ	Ease of Access Narrator, magnifier, high contrast	Q	Search Find my files, permissions	A	Privacy Location, camera, microphone			
C	Update & Security Windows Update, recovery, backup									

Click on BAX System Q7, select Uninstall, and agree (click Yes) on the next window to initiate removal.



If updating from 4.21, 4.22, or 5.0, then removal of MATLAB is not required. If updating from any other previous version of BAX Q7 software, click on the MATLAB application, select Uninstall, and click Agree on the next window (this may take several minutes).



**Restart the Computer BEFORE Continuing to Step 3.** 

- 3. Download v5.1.0.28941 software by clicking this <u>link</u> or the button from the BAX Q7 Page on <u>www.hygiena.com</u> (the Hygiena website).
  - Transfer the download to a memory/USB stick if the computer doesn't have internet access.
     Click on the Q7 5.1.0.28941 icon and the program will automatically start executing the installation.
  - A 'Windows protected' screen may pop up. Select More Info, then select Run anyway.
     On the next pop-up, select Yes to allow installation to begin



# 4. Some Prerequisites May Need to Be Installed First to Prepare Your Computer for the BAX Application Installation.

If you see these, you may have to restart multiple times to get the prerequisites installed before MATLAB Runtime can install:

BAX System Q7 - InstallShield Wizard	
AX System Q7 requires the following items to be installed on your computer. Click Install	BAX System Q7 - InstallShield Wizard
to begin installing these requirements.	Q7 BAX System Q7 requires the following items to be installed on your computer. Click Install to begin installing these requirements.
Status Requirement	
Pending CheckMemoryIntegrity	Status Requirement
Pending Microsoft Visual C++ 2005 SP1 Redistributable Package (x86)	Pending Microsoft Visual C++ 2005 SP1 Redistributable Package (x86)
Pending Microsoft Visual C++ 2013 Redistributable Package (x86)	Pending Microsoft Visual C++ 2013 Redistributable Package (x86)
Pending Microsoft visual C++ 2015 Redistributable Package (X64) Pending MatlahBuntime 2020b	Pending Microsoft visual C++ 2015 Redistributable Package (x64) Pending MatlabRuntime 2020b
Install Cancel	Install Cancel

Checking memory integrity and Correct regional settings (not shown) are the first two prerequisites that need to be addressed or the application will not install successfully.

# 5. MATLAB Updates Will be Installed (After Prerequisites). Follow the Prompts Below and Select the Default Responses:

Note: a prompt to install Matlab will pop up if not already installed (such as on a new installation).



W Required Software						×
MATLAB Runtime is required.						
Choose installation folder:				M	ATL	AR
C:\Program Files\MATLAB\MATLAE	8 Runtime		Browse	1.1	RUNTIME	ID .
		Restore	Default Folder		R2020b	
				<		1
MATLAB and Simulink are registere mathworks.com/trademarks for a li be trademarks or registered traden WARNING: This program is protect 1984-2020, The MathWorks, Inc. Pr	d trademarks of The Math st of additional trademark narks of their respective hc ed by copyright law and i otected by U.S. and other	Works, Inc. Please see s. Other product or br plders. nternational treaties. Cc patents. See MathWor	e and names may opyright rks.com/patents			

License Agreement	-		$\times$
ne MathWorks, Inc.			^
ATLAB RUNTIME LICENSE			
IPORTANT NOTICE			
CLICKING THE "YES" BUTTON BELOW, YOU ACCEPT THE TERMS OF THIS LICENSE. IF YOU ARE	NOT WILLING	TO DO S	0,
ELECT THE "NO" BUTTON AND THE INSTALLATION WILL BE ABORTED.			
LICENSE GRANT. Subject to the restrictions below, The MathWorks, Inc. ("MathWorks") hereby g ou are an individual or an entity, a license to install and use the MATLAB Runtime ("Runtime"), sol urpose of running software created with the MATLAB Compiler (the "Application Software"), and	rants to you, ely and expre for no other j	whether ssly for th purpose.	e
is license is personal, nonexclusive, and nontransferable.			
LICENSE RESTRICTIONS. You shall not modify or adapt the Runtime for any reason. You shall no ecompile, or reverse engineer the Runtime. You shall not alter or remove any proprietary or other of the Runtime. Unless used to run Application Software, you shall not rent, lease, or Ioan the Runtime, provide service bureau use, or use the Runtime for supporting any other party's use of sublicense, sell, or otherwise transfer the Runtime to any third party. You shall not republish an	ot disassemble legal notices ne Runtime, ti of the Runtime by documenta	e, on or in me share e. You sha ition which	all h
ay be provided in connection with the Runtime. All rights not granted, including without limitativ	n rights to re	nroduce	~

Cancel 🥠 MathWorks•

Confirmation	- 🗆 X
Linnings Mattels Directions factally will be installed in	🖓 hygiena
C:\Program Files\HygienaMatlabRuntimeInstaller	
Hygiena Matleb Runtime Installer requires MATLAB Runtime R2020b.	
MATLAB Runtime R2020b will be installed in:	
C:\Program Files\MATLAB\MATLAB Runtime\v99	
< Back Install >	Cancol

🚱 0% Complete		-	
Installing			
	0%		
			Pause
		Cancel	

< Back Next >

1 Installation Complete	- 🗆 🗙
Installation completed successfully.	Hygiena'
	Finish

# 6. Following MATLAB Installation, the BAX Q7 Application Installation Will Be Initiated. Read the Prompts Carefully. Choose the Default Responses.

 $\Box$  Welcome Window – click Next.

🔀 BAX System Q7 - InstallShield	Wizard	$\times$
BAX®	Welcome to the InstallShield Wizard for BAX System Q7	
System	The InstallShield(R) Wizard will install BAX System Q7 on your computer. To continue, click Next.	
🕀 hygiena <sup>-</sup>	WARNING: This program is protected by copyright law and international treaties.	
	< Back Next > Cancel	

### Calibration File Warning

 $\Box$  Check the box and click Next.



### License Agreement.

□ Check Accept Terms box and click Next.



### Custom Setup.

□ Click Next.

💕 BAX System Q7 - InstallShield Wizard	×	
Custom Setup	(P) hygiena	
Select the program features you want installed.	<b>BAX</b> <sup>®</sup> System	
Click on an icon in the list below to change how a feature i	s installed.	
BAX® System Program Files	Feature Description	
Documentation     Q7InstrumentSettings	Files required for creating, editing and analyzing .bax files.	
	This feature requires 18MB on your hard drive. It has 1 of 1 subfeatures selected. The subfeatures sequire 8KB on your hard drive.	
Install to:		
C:\Program Files (x86)\BAX\	Change	
InstallShield		
Help Space < Back	Next > Cancel	

# Password Protection.

BAX default is disabled password protection. Choose an option for your lab, then click Next.

🛃 BAX System Q7 - InstallShield Wa	tard		3
BAX Security Enable Password Option		BAX	giena System
By default, password protection is disa application cannot be launched withou during amplification/detection, which p entered.	bled. If you enable pass t a password. This optio prevents interaction with t	word protection, the n automatically lock the system unless th	BAX(8) System s the workstation e password is
O Enable Password Protection			
Do Not Use Password Protection			
nstallShield			
	< Back	Next >	Cancel

# Ready to Install Program.

# Click Install. BAX System Q7 - InstallShield Wizard Ready to Install the Program The wizard is ready to begin installation. Click Install to begin the installation. Click Cancel to exit the wizard. InstallShield < Back Install Cancel Cancel

# Installing BAX System Q7 Software.

□ During installation, an Error Log Reporting window will pop up. We recommend NOT checking the box so the system can collect software and/or hardware errors in the Log Files to assist Technical Support in troubleshooting. However, please review and decide what is appropriate for your lab.

Note: 'Error reporting' only uploads errors and not the entire log file. Technical Support may ask you for logs even if you have error reporting enabled.

 $\Box$  Select Next to complete the installation.

BAX Syst	tem Q7 - InstallShield Wizard	P		BAX System Q7 - InstallShield Wizard	$\times$
Installing The pro	J BAX System Q7 gram features you selected are being installed.	BAX*S	no <sup>r</sup> /stem	Error Log Reporting	L.
15	Please wait while the InstallShield Wizard in several minutes.	nstalls BAX System Q7. This may	take	Check the option below if you DO NOT AGREE to upload log information to Hygiena so No PII will be uploaded and data will only be used for product improvement.	ervers.
	Status:			No, I do not want to upload log information	
InstallShield				InstallShield	
	< Bac	k Next >	Cancel	< Back Next > C	Cancel

# InstallShield Wizard Complete.

□ Select Finish.

🕞 BAX System Q7 - InstallShield	Wizard X
BAX®	InstallShield Wizard Completed
System	The InstallShield Wizard has successfully installed BAX System Q7. Click Finish to exit the wizard.
hygiena <sup>-</sup>	Show the Windows Installer log
	< Back Finish Cancel

 $\hfill\square$  Click on the desktop icon to initiate the program. The new open screen will display software version 5.1.0.28941.

Package 5.1	Package 5.1.0.28941				
Bax System	: 5.1.0.29075				
Bridge:	5.1.0.28938				
SDS:	1.3.1051.4				
Analysis:	5.1.389.28371				
·· - ·					

□ Enter the Instrument Name and Serial Number.

• This will appear on reports and should be utilized.

nstrum	ent Name and Serial Number	3
Instrun	ent Name	
Thi	Please enter a unique name for this instrument. will be used to identify it in documents, printouts and files.	
	Instrument Name	
Instrun	ent Number	
Instrun Pleas will t	ent Number e enter the instrument number from the Q7 instrument. This e used to identitfy calibration files used with this instrument. Number	
Instrun Pleas will t	ent Number e enter the instrument number from the Q7 instrument. This e used to identitfy calibration files used with this instrument. Number	

# 7. Check the System's Calibration

From the menu bar, select Diagnostics > Calibration to open the Q7 Calibration Diagnostics window

□ Click the Check Calibration button to determine the status:

- If calibration is available, no further actions are needed.
- If calibration is **NOT** optimal or **NOT** found:

Import the backed-up calibration file by selecting Operations > BAX Maintenance > Import Calibration from the menu bar and selecting the backed-up calibration file from step 2.

• To utilize many foodproof assays, additional calibration using the HEX calibration kit must be performed. Please follow the onboard instructions in the BAX Software to perform calibration.

Q7 Calibration Diagnostics	×	Q7 Calibration Diagnostics	×
Check Calibration	ОК	Check Calibration	OK
Calibration directory: C:\ProgramData\BAX Q7 System\Q7	]	Calibration directory: C:\ProgramData\BAX Q7 System\Q7	
Run "Check Calibration" to get results.	~	Cal files from 'C:\ProgramData\BAX Q7 System\Q7: ROI: Invalid, Header: Valid, Background: Valid, Uniformity: Valid, Corrected: No Dye cals Present: SYBR **** You MUST perform or restore an ROI calibration ROI last modified 18:00 12/31/1969 Cal last modified 16:21 03/07/2021 You DO NOT have dye coefficients for these assays: foodproof - RT Aspergillus foodproof - RT Salsonnella microproof - RT Egionella foodproof - RT Sal sop + Cronobacter foodproof - RT Sal sop + SE + ST foodproof - RT Salsop + SE + ST Real Time Staphylococcus aureus Real Time STEC Panel 2 O45,0103,0145 Real Time STEC Screen stx, eae 	× >
Create New Cal File Generate Cal Report		Create New Cal File Generate Cal Report	

# Appendix A: Algorithm Analysis Across Software Versions

The table below provides information to identify algorithm consistency more easily across software versions and validations. There have been no changes to the assay-specific algorithm since the analysis version listed.

Product Number	Assay	BAX Q7 Software Version with Same Algorithm as v5.1
KIT2000	BAX System Real-Time PCR Assay for <i>E. coli</i> O157:H7	4.0
KIT2001	BAX System PCR Assay for Cronobacter (E. sakazakii)	4.0
KIT2002	BAX System PCR Assay for <i>L. monocytogenes</i> 24E	4.0
KIT2003	BAX System PCR Assay for Genus Listeria 24E	4.0
KIT2004	BAX System PCR Assay for <i>E. coli</i> O157:H7 MP	4.0
KIT2005	BAX System Real-Time PCR Assay for L. monocytogenes	4.0
KIT2006	BAX System Real-Time PCR Assay for Salmonella	4.0
KIT2007	BAX System Real-Time PCR Assay for Shigella	4.0
KIT2008	BAX System Real-Time PCR Assay for STEC Panel 1	4.0
KIT2009	BAX System Real-Time PCR Assay for STEC Panel 2	4.0
KIT2010	BAX System Real-Time PCR Assay for Vibrio	4.0
KIT2011	BAX System PCR Assay for Salmonella 2	4.0
KIT2016	BAX System PCR Assay for Genus Listeria	4.0
KIT2017	BAX System PCR Assay for <i>L. monocytogenes</i>	4.0
KIT2018	BAX System Real-Time PCR Assay for Campylobacter	4.0
KIT2019	BAX System Real-Time PCR Assay for Genus Listeria	4.0
KIT2020	BAX System Real-Time PCR Assay for Staphylococcus aureus	4.0
KIT2021	BAX System Real-Time PCR Assay for STEC Screening	4.0
KIT2039	BAX System Real-Time PCR Assay for <i>E. coli</i> O157:H7 Exact	4.0
KIT230131	foodproof Salmonella plus Cronobacter Detection LyoKit	5.1